

RESEARCH ARTICLE

Effect of nationwide lockdown due to coronavirus disease-19 pandemic on daily activities and study pattern of the 1st MBBS students

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ABSTRACT

Background: The 1st year medical students are in a daily habit of attending college and being utterly preoccupied with lectures, practicals, studies, and examinations. This year with the introduction of new concept of competency-based medical education students was exposed to hospital set up by early clinical exposure. Since the news of a nationwide lockdown was announced from March 26, 2020, in response to the spread of the coronavirus disease-19 virus, not only it created a drastic change in the functioning of the country but also imparted a great impact on the 1st year medical students. To complete scheduled curriculum, online teaching-learning sessions were initiated by medical colleges. Students tried their best to cope up with new online learning sessions, completing assignments, and appearing for vivas. This situation was completely unexpected and they had to attend online sessions with family members around them. **Aims and Objectives:** The study was planned in, first MBBS (Phase I) students to analyze study pattern, perception toward various aspects of online teaching and daily activities during nationwide lockdown period. **Materials and Methods:** This study was undertaken among the 1st MBBS (Phase I, Block III) student volunteers in a local medical college. After approval by the Institutional Ethical Committee, a Google Form was designed, specifically based on the daily routine, perception toward various aspects of online teaching, time spent on studying and study pattern of Phase I students. The data was represented as mean±standard deviation. The responses were tabulated in percentage. **Results:** About 93.9% of the students were primarily engaged in studies and 79.2% of students were involved in exercise at home. About 84% of students were satisfied with online teaching sessions. About 70.5% and 59.7% of the students felt an increased sleep duration and screen time on mobile respectively, while only 26.2% of the students felt that their study time was increased. They were involved in various health related activities and hobbies and had quality time with parents. **Conclusion:** This lockdown had a positive effect toward the optimistic thought processes of the students while engaging in family bonding and revisiting hobbies for a short duration. It is seen to be effective and helpful to the students having online lectures.


KEY WORDS: Nationwide Lockdown, Coronavirus Disease-19 Pandemic, Online Classes, Daily Activities, Study Pattern

INTRODUCTION

The outbreak of coronavirus disease (COVID)-19 has been declared a Public Health Emergency of International

Concern and the virus has now spread to many countries and territories.^[1] It has not only created a drastic change in the functioning of the country but also has greatly impacted the citizens with special reference to health care workers and medical students.

Experience with pandemic (H1N1) 2009 in many countries has demonstrated the importance of planning of framework to reduce transmission in wider community. It has documented the importance of avoiding mass gatherings, social distancing, and strategies regarding personal hygiene.^[2]

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Transmission of epidemic in educational institutions can be explosive and fast moving, affecting a sizeable proportion of students and staff. The WHO has prepared a framework which is applicable to all levels of education.^[3] Students educational advancement could be jeopardized if they miss key examinations or long periods of classwork without any alternative learning strategies. Pandemics also can have psychosocial effects of the school closure on the students' families.^[4,5]

Nowadays, since the medical schools are closed due to COVID-19 pandemic, a very different wave has been struck among medical students who are in a daily habit of attending college and being utterly preoccupied with lectures, practicals, studies, and examinations. To cope up with syllabus and to prepare students for Phase I, final university examinations online teaching has started in medical college.^[6] With the college being shut down and students being confined to their home, this unique situation has affected the daily routine and study pattern.

Thus, the study was planned to analyze the changes that this lockdown has had on daily routine activities and study pattern in Phase I, first MBBS students.

The objectives were to record data from students regarding their daily activities and study pattern to understand the perception of students toward classroom teaching methodology and the new online teaching patterns during the pandemic and to analyze the percentage of students involved in health-related practices, their perception toward various aspects of online teaching, time spent on studying, and involvement in various other arenas.

MATERIALS AND METHODS

This study was undertaken among the first MBBS (Phase I) student volunteers in a local medical college. The study was approved by the Institutional Ethical Committee. A Google Form with multiple-choice questions and either one word or short one liner questions was designed, specifically based on the daily routine, perception toward various aspects of online teaching, time spent on studying, and study pattern of the 1st MBBS students.

The link of the designed Google Form was shared with 1st MBBS students, which consisted of both sexes and aged between 17 to 23 years. It was shared 2 months after lockdown was commenced in the country. The study was conducted in the last week of May 2020. Time of 3 days was given to fill and submit the form.

A total of 149 students participated in study. The data was represented as mean \pm standard deviation. The responses were tabulated in percentage.

RESULTS

Mean age of the students was 18.9 ± 0.82 years. About 61.7% of the student volunteers were female and 38.3% were male. About 97.9% of the students were found to be living at their homes and 2.1% at the hostel since they could not go home as interstate transport was stopped.

About 99.3% of the students felt that it was a wise decision to shut down learning institutions as a necessary step to have a favorable outcome of pandemic. About 81.2% personally experienced a change in the quality of life with respect to day-to-day activities while 14.8% did not feel that it had any particular effect on the same. Almost all the students (98.7%) felt that this pandemic made them more aware of the profession they had commenced and made them realize its importance.

About 90% of the students accessed latest news regarding COVID-19 from news channels, websites like www.covid19India.org and The World Health Organization, mobile apps such as Aarogya Setu and social media.

The various activities in which the students were indulged during the lockdown are depicted in Table 1. Students were primarily engaged (93.9%) in studies as online classes were started by medical college.

Distribution of students involvement in various health-related activities [Table 2] showed that 79.2% of students were involved in exercise at home. About 70.5% and 59.7% of the students felt an increased sleeping duration and screen time on mobile, respectively, while only 26.2% felt that their study time was increased [Table 3].

The majority (55.7%) felt that the lockdown has had an impact on their bond with parents and in cultivating hobbies, while a considerable proportion (36.9%) felt that it did not have a particular effect [Table 4].

Table 1: Distribution of students indulged in various types of activities

Questions	Type of responses	Number of respondents (%) (n=149)
In which all activities are you indulged in currently during the lockdown	Studying	136 (93.9)
	Social media	122 (81.9)
	Electronics and gaming	74 (49.7)
	Sports	39 (26.2)
	Sleeping	124 (83.2)
	Hobbies	119 (79.9)
	Spiritual practices	30 (20.1)
	Family time	127 (85.2)
	Home management	68 (45.6)
	Any other	31 (20.9)

Table 5 shows that 88.6% of students felt that there was a change in a study pattern due to the online teaching sessions. Approximately 62% of students were studying 2–4 h daily [Table 6].

Table 7 shows that 47% of students rated that online teaching was better than classroom teaching. All the students complained of less practical depiction and a lack of human interaction leading to difficulty in understanding of practicals. Laboratory tests, practicals, and performance tests are difficult to conduct online. Students who do not have an internet facility or have technical issues were at a clear disadvantage while attending classes and during appearing for assessments.

Students were satisfied (56.4%) with online teaching. This platform was helpful to get study material, teachers guidance

Table 2: Distribution of students' involvement in various health-related activities

Question	Type of response	Number of respondents (%) (n=149)
Are you involved in any healthcare related practices like yoga, meditation, and religious/spiritual practices at home with/without your family?	Exercises	118 (79.2)
	Yoga	36 (24.2)
	Meditation	37 (24.8)
	Religious/spiritual practices	30 (20.1)

Table 3: Distribution of students about sleep duration

Question	Type of response	Number of respondents (%)
Which out of the following in your routine has increased ever since colleges shut down?	Mobile screen time	89 (59.7)
	Study time	39 (26.2)
	Sleep duration	105 (70.5)

Table 4: Distribution of students having impact on family bonding and hobbies

Question	Type of response	Number of respondents (%) (n=149)
Do you think this COVID-19 pandemic has affected you in relation to your bond with your parents, family, and in cultivating long lost hobbies and habits?	Very much	83 (55.7)
	Somewhat	55 (36.9)
	Not at all	11 (7.4)

COVID: Coronavirus disease

Table 5: Distribution of students study pattern in lock down

Question	Type of response	Number of respondents (%) (n=149)
Has there been a change in pattern of your study with the online teaching?	Yes	132 (88.6)
	No	17 (11.4)

and discussions on class group. 68.5% students mentioned that they had better understanding of the topics [Table 8].

DISCUSSION

The present study showed that the COVID-19 pandemic definitely has had an effect on study pattern and daily activities in Phase I (first MBBS) students. About 88.6% of students felt that there was a change in study pattern due to the online teaching method. About 62% of students were studying 2–4 h daily and 47% of students rated online teaching was better than classroom teaching. The majority (55.7%) felt that the lockdown has had an impact on their bond with parents and in cultivating hobbies, while a considerable proportion (36.9%) felt that it did not have a particular effect.

Similar to the results of Jarquin *et al.*^[2] and contrary to the findings of Johnson *et al.*,^[4] most students were in compliance

Table 6: Distribution of time spent on studying by students

Question	Type of response	Number of respondents (%) (n=149)
How many hours do you study daily?	Less than 1 hour	4 (2.7)
	1–2 hours	33 (22.1)
	2–3 hours	49 (32.9)
	3–4 hours	46 (30.9)
	More than 4 hours	17 (11.4)

Table 7: Distribution of students' perception toward online classes in comparison to classroom teaching

Question	Type of response	Number of respondents (%) (n=149)
In comparison to classroom teaching how would you rate these online lectures taken by teachers?	Much better	30 (20.1)
	Somewhat better	41 (27.5)
	Neutral	60 (40.3)
	Somewhat poor	17 (11.4)
	Very poor	1 (0.7)

Table 8: Distribution of students' perception toward various aspects of online teaching

Aspects of online teaching	Type of responses (n=149)		
	Unsatisfied (%)	Neutral (%)	Satisfied (%)
Topics covered	6 (4)	59 (39.6)	84 (56.4)
Understanding	5 (3.3)	42 (28.2)	102 (68.5)
Study material	7 (3.9)	43 (28.8)	99 (67.3)
Revision purpose	7 (3.9)	53 (35.6)	89 (60.5)
Teachers' guidance	5 (3.3)	57 (38.2)	87 (58.5)
Query and answers	10 (6.7)	83 (55.7)	56 (37.6)
Discussion on class group	16 (1.1)	68 (45.6)	65 (53.3)

with the decision of taking preventive measures in the form of shutting down of learning institutions and following government laid protocols. Due to this lockdown, local medical college has cancelled upcoming annual gathering, sports events, and workshops related with cultural activities for indefinite period. Probably due to this uncertainty, the majority students felt anxious about their college activities as they were ready to do these things whole heartedly in college tenure.^[7]

Most of the students personally experienced a change in the quality of life with respect to daily activities such as cultivating hobbies [Table 1] and a change in the bond with their parents. It is very difficult to be with family when one gets admitted to medical college as they have to undergo strenuous vast curriculum and evaluation during the course of M.B.B.S. Due to this, they are under stress and they neither have time for exercise or hobbies nor they can spend time with parents.

One of the positive aspects of this pandemic is that students spent quality time with family. Around 79% of students were engaged in exercise, meditation, and yoga at home. This may be due to a greater availability of unscheduled time and lesser preoccupation with college and routine activities as a result of disruption of the daily cycle. Its proven that β -endorphin secreted by exercise may also influence the release of dopamine and therefore activate pleasure and satisfaction areas causing sense of well-being.^[8]

The majority spent maximum time on studying, sleeping, on social media, and with family members during the lockdown. About one-fourth reported an increase in study time whilst three-fourth reported increased sleep time [Table 3]. Many reported an increase in both screen and sleep duration, which is contrary to the findings of Christensen *et al.*^[9]

Possibly, the reason behind an increased screen time can be correlated with viewing of online lectures, more involvement in social media and unnecessary usage of devices for entertainment purposes due to excess of unscheduled time. In relation to proving this fact, it was also seen that most of the students acquired the latest news regarding COVID-19 from news channels, mobile app, and the WHO website, thereby also contributing to their increased screen time.

The increase in sleep time might be due to no compulsion on completion of targets related to studies such attending daily classes in the stipulated time, journal completion, submissions and decreased responsibility toward self-maintenance activities of daily living. This finding can also be supported by the fact that majority of the students viewed the online lectures according to their convenience.

In our medical college, for this batch, the college has provided automated software in the form of E-PASS.

About 93.3% of students' felt that it was better to have online classes. Teachers take online classes on Microsoft teams and upload recorded lectures on E-PASS software so that if at all any student wants to listen and understand he can go through at his own time after the lecture.

Maximum students felt that the online teaching sessions had a positive impact with respect to better understanding, a greater concentration span, and ease of accessibility of the lecture according to their schedule and for doubt clearing purposes making it a much more convenient way of learning [Table 8].

This resulted in a changed study pattern since students are dynamic and are capable of learning through the online platform,^[10] which may be indicative of a positive change. About 65% of students discussed topic on class group and 89% of students were satisfied with online teaching as it can be used for revision purpose.

However, some students complained about distractions at home, having a casual attitude leading to procrastination apart from various technical issues. In addition, the transition to online mode has had its disadvantages in the capability of the students in learning and faculty in teaching through such means too.^[10] Transition from classroom teaching to online methods can have serious impact on assessments.^[11] Students were unfamiliar about the procedure for various types of assessments^[11,12] and technical issues such as poor internet connectivity hampered the submission of answers in given time duration. It is a fact that online learning cannot be a substitute for the classroom teaching in medical field.^[13-15] Majority felt neutral about the online teaching sessions although greater percentage of people felt online classes were more feasible.^[16]

The time dedicated by students toward study per day ranged from <30 min to >4 h, implying the varied capabilities of students and their interests toward grasping subjects apart from other external distractions. Most of the students studied for a duration of 2–4 h [Table 6]. These findings will guide learning institutions to modify their teaching methodologies such as making online teaching and learning an important addition to their curriculum to deal with future pandemic policies.^[17]

Scheduling classes according to the students' self-regulation and metacognitive ability are also necessary^[18] and the majority of the students in this study were compliant with this, in the fact that they attended the online lectures as per their convenience. Thus, flexibility in learning practices, typical of the adult learning methodologies, could bring about the best in students.^[17,19]

Thus, the decision of either teaching new concepts or revising prior lessons could also guide as to how these distance learning programs should progress. Most of them felt online

classes helped them in proper time utilization to keep them on track so that the course gets covered well within time and their studies do not suffer because of the lockdown.

For the 1st MBBS students, colleges are hubs of social activity and human interaction and are essential to learning and development. Management of mental health is also an important aspect which can be ensured by creating virtual communities and addressing various psychosocial problems in case of such a pandemic. As quoted earlier, majority of the students were involved in exercise at home and also in yoga, meditation, and spiritual activity, which is purely indicative of the fact that this lockdown has no doubt and had a positive impact on their physical health. Acceptance, persistence, and adaptability among students during COVID-19 pandemic are extremely necessary to cope up with the situation.^[20]

Strength and Limitation(s)

Students were very enthusiastic in filling the survey form. The study was conducted in only one institution; thus, there is limitation in number of participants and number of questions which are included in the free version of Google Forms.

CONCLUSION

This lockdown may have had a positive effect toward the optimistic thought processes of the students while engaging in family bonding and revisiting hobbies for a short duration. It is seen to be effective and helpful to the students having online lectures. All the efforts taken by college authorities in providing supportive infrastructure and teachers planning and preparation of recorded lectures will benefit the students.

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