

# A CROSS SECTIONAL STUDY ON PERCEPTIONS OF MEDICAL STUDENTS TOWARDS ONLINE TEACHING DURING COVID-19 PANDEMIC

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## Abstract

**Introduction:** The spread of Covid-19 pandemic to India and the pandemic guidelines issued by the government to stop offline classroom teaching posed a big challenge to all educational institutes including medical colleges. Online teaching which was never a part of medical education suddenly assumed importance and was the only viable mode of teaching available during the pandemic. Hence the present study was taken up to assess the perceptions of first year MBBS students about the online teaching.

**Aim:** To assess the perceptions of first year MBBS students about the online teaching during covid-19 pandemic.

**Materials and methods:** A cross sectional study was carried out among first year MBBS students of 2019-20 batch of Sri Siddhartha Medical College. A self-structured questionnaire was administered to all study participants and the responses were recorded.

**Results:** Majority of the students reported that accessibility to record lectures which they can use to revisit any of the lecture classes and clear their doubts as one of the major advantages of online teaching. 84.66% of the students reported their liking to online classes because of the convenience and flexibility to attend classes in a familiar and comfortable environment in home. 30.66% of the students reported internet connectivity issues as one of the problems in distant mode of teaching. 42.66% of the students reported less student teacher interaction as one of the major drawbacks of online teaching. 64% of the students reported curriculum content issues like having no practical demonstrations and no clinical visits to hospital as one of the major limitations of this mode of teaching. Majority of the study population displayed adequate knowledge to effectively use the technology to attend online classes.

**Conclusion:** Improved quality of internet connectivity and enhanced student teacher interaction would improve the learning experience of the students in online teaching.

**Keywords:** covid-19 pandemic, online teaching

## Introduction

Learning which is considered as one of the components of societal changes involves acquisition of knowledge, development of skills and performance of the skills acquired [1, 2, 3]. With the advent of various technologies in the recent past learning through virtual classes or online learning has increased globally with an estimated 7 million students enrolling for online courses each academic year [4]. The spread of Covid-19 pandemic to India and the pandemic guidelines issued by the government to stop offline classroom teaching posed a big challenge to all educational institutes including medical colleges [5]. Online teaching which was never a part of medical education suddenly assumed importance and was the only viable mode of teaching available during the pandemic [5]. Online teaching offers some degree of flexibility in conducting the classes and also offers students a convenient environment in the form of comfortable settings at home to study [6, 7]. The success of online classes also depends on the devices used to deliver the lecture and social environment [8]. Numerous studies conducted on online learning also point out that the students may feel isolated and also have difficulty in comprehending text-heavy lectures [9]. It has also been reported that motivation becomes a major limiting factor while students are allowed to complete their assignments leisurely when compared to completing them under time constraints [10, 11]. Time framed monotonous lecture classes in offline or online setting generates some degree of dissatisfaction and students always expect some innovative modes to be introduced in lecture classes and make them more student centric [12]. The pandemic guidelines which made online classes as the only mode of teaching poses various challenges to both students and faculties. Limited availability of literature on online teaching in medical schools in our country warranted that this study was undertaken to look at the perceptions of first year medical students during the pandemic. Hence the present study was undertaken to assess the perceptions of first year MBBS students about the online teaching at Sri Siddhartha Medical College, Tumkur which is a composite college of Sri Siddhartha academy of higher education, a deemed to be University.

## Materials and Methods

A cross sectional study was carried out among first year MBBS students of 2019-20 batch of Sri Siddhartha Medical College, after obtaining the approval of institutional Ethical Committee. The nature and the purpose was explained to all the students and informed consent was taken. Confidentiality was maintained during the entire process of this survey. All 150 students participated in the survey after the start of offline classes. A self-structured questionnaire was constructed after review of literature. Feedback from both students and faculty members was taken to check for appropriateness of the questionnaire and was restructured based on the feedback received.

### Statistical analysis

Data was tabulated using Microsoft office excel sheet and the response were expressed as total count and percentages distribution. Data was analyzed using EPI INFO (Version 7).

### Results

All the 150 first MBBS students were included in the study and we achieved 100% response rate. Table 1 shows the students demographics which includes age and gender distribution as a total count and percentage. The mean age of the study population was 18.52. Females formed 53.33% of study population, males participants were 70 in number forming 46.66% of study group.

Table 2 shows the devices students used to access online classes were in 55.33% of the study group were using both laptops and mobile phones. 39.33% of the study group exclusively used only laptop to access the classes. 6% of the study group were reported to be using only mobile phones to access the online classes.

Table 3 shows the perceived benefits of online classes were in majority of the students reported accessibility to record the lectures as the major benefit of online classes.

Table 4 shows the perceived limitations of the online classes were in 64% of the students quoted content issues like lack of demonstrations during practical classes and longer screen time as the disadvantages of the online teaching.

**Table 1:** Age and gender distribution

	Mean	Standard deviation
Age	18.52	0.27
Gender	Frequency	Percentage
Female	80	53.33
Male	70	46.66

**Table 2:** Device used to access online classes

	n	Percentage
Both laptop and mobile	83	55.33
Laptop	59	39.33
Mobile	9	6

(N-total count)

**Table 3:** Perceived benefits of online classes

	n	Percentage
Accessibility to recorded lectures	115	76.66
Convenience to attend classes	127	84.66
Better concentration as no distraction by classmates	23	15.33
More time for self-studies	67	44.66
No benefits	18	12
Confidence in asking questions and answering	12	8
Means to complete portions	8	5.33
Others (quiz, multiple choice questions at the end of the class)	49	32.66

(N-total count)

**Table 4:** Perceived limitations of online classes

	n	Percentage
Internet connectivity issues	46	30.66

Lack of concentration	52	34.66
Less student-teacher interaction	64	42.66
Content issues (non-clinicals/practical's, long screen time and lectures)	96	64
Health issues (headache, eye problems, backache and lack of physical exercise)	38	25.33
Nil	6	4
Lack of knowledge to effectively use technology	5	3.33

(N-total count)

## Discussion

The spread of covid-19 pandemic and the guidelines issued by the government to cancel regular offline teaching posed the great challenge to students and the faculties of the medical colleges. As the shift to online mode of teaching was done it became imperative for the faculty to collect feedback from the students to look at the benefits and the limitations of online teaching. This study attempts to assess the perception of first year MBBS students to online classes conducted during the covid-19 pandemic.

Females form 53.33% and males form 46.66% of the study group were in most of the study group spent 5 to 6 hours per day in attending online classes.

Our study showed that majority of the students used a combination of laptop and mobile phone to gain access to online platforms to attend classes. Similar findings were reported in a recent study.<sup>[5]</sup>

Majority of the students reported that accessibility to record lectures which they can use to revisit any of the lecture classes and clear their doubts as one of the major advantages of online teaching. 84.66% of the students reported their liking to online classes because of the convenience and flexibility to attend classes in a familiar and comfortable environment in home. Similar findings were reported in another study done by Lall and Singh were in 74% of students liked the online classes for their flexibility in place of study and time <sup>[13]</sup>. Another study done by Abbasi S at a private medical college reported contradictory findings were in 77.4% students reported a negative perception towards online learning <sup>[14]</sup>. 15.33% of the students felt that they were able to concentrate better without the distractions by their classmates and 44.66% of the students felt the conduction of online classes provided them more time for self-studies. Similar findings were reported in another study done by Sharma and Agarwal were in they looked at learners perception on the impact of online education in the Indian context <sup>[15]</sup>. 5.33% of the students reported that given the situation of the pandemic the online mode of teaching offered them a viable means to complete their portions. 32.66% of the students reported their liking for quiz and multiple choice questions which were given to them at the end of each lecture session.

30.66% of the students reported internet connectivity issues as one of the problems in distant mode of teaching. Student teacher interaction is one of the most important component of learning <sup>[16]</sup>. In our study 42.66% of the students reported less student teacher interaction as one of the major drawbacks of online teaching. Similar findings about limitations of less student teacher interaction in online mode of teaching were reported in few other studies done elsewhere <sup>[7,17]</sup>. 64% of the students reported curriculum content issues like having no practical demonstrations and no clinical visits to hospital as one of the major limitations of this mode of teaching. 25.33% of the students reported various health issues like headache and backache after spending 5 to 6 hours in front of the screen to attend online classes. Similar health issues were reported in another recent study done on medical students <sup>[5]</sup>.

Majority of the study population displayed adequate knowledge to effectively use the technology to attend online classes. The finding of our study are similar to few other recent studies done to look at the effectiveness of online teaching<sup>[18]</sup>.

## Conclusion

Convenience to attend online classes in the comfortable environment of home and accessibility to revisit the recorded lecture classes and availability of more time for self-studies were reported as the benefits of online classes. Reduced student teacher interaction and internet connectivity issues along with no practical demonstrations were reported as the major limitations of online mode of teaching.

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