

# Perception of Second M.B.B.S. Students regarding Pathology Online Teaching during COVID-19 Pandemic

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**Abstract:** In this cross-sectional educational study, second MBBS students were oriented about the study. 140 students (Third and Fifth semester) gave written informed consent for participation in the study. Various Pathology live lectures and practical sessions were taken online by Pathology teachers by sharing Power-point presentation on the screen. After completion of teaching sessions, a prevalidated Google questionnaire form regarding perception of students about online teaching was circulated. The questionnaire consisted of various items like quality, benefits, barriers of online teaching, comparison between online and conventional teaching and overall perception of the students. A five-point Lichert scale was used to record the responses of the student. 91 students responded to Google form. Majority of the students rejected online teaching as the only mode of teaching. The students felt online teaching should be additional to conventional face to face teaching. There are certain barriers in online teaching – learning activity which can be reduced strategically by the administrators, to make it more interesting, acceptable & enjoyable by the students.

**Keywords:** Conventional teaching, COVID-19 pandemic, Online teaching, Pathology, Perception

## 1. Introduction

In COVID 19 pandemic, the contribution of information technology gained momentum due to closure of educational institutions that raised challenges for student's learning. Information technology served the solution for the learning process during quarantine time. <sup>(1,2)</sup> The second wave in India led to suspension of all off-line educational activities like face to face teaching, practical sessions and examinations. As per university and National Medical Commission guidelines, all medical colleges decided to conduct online teaching or E- learning to cover the syllabus in stipulated time in order to avoid academic loss of the students. Howlett et al have defined Electronic (e) or online learning as the use of electronic technology and media to deliver, support & enhance both learning & teaching and involves communication between learner & teachers, utilizing online content <sup>(3)</sup>. Additionally, medical education has been affected as a result of social isolation, the most successful preventive measure since the advent of COVID-19 due to the fact that it entails attending in person didactic lectures and tutorials, exposure to clinical rotations, laboratory experiences, and watching and helping with pertinent medical and surgical operations. <sup>(4,5,6)</sup> In recent years, E- learning in the form E-conferences, Webinars, E-learning platform, Youtube lectures have been widely adopted by many universities and colleges all over world. In India, it was never considered as a part of formal education by majority of institutions until the COVID 19 pandemic. The implementation of online teaching activity was very

difficult due to lack of awareness, interest and technical knowledge among both teachers and students. Lack of technical resources and technical support in the college was also a major hurdle. In spite of all hurdles and limited resources, both teachers and students got adapted to this new teaching methodology. However, the timely and appropriate feedback of students based on their experiences of online teaching activity is of utmost importance to improve this newer teaching methodology. Based on feedbacks of various stakeholders like students & teachers, colleges and universities must decide about utility and inclusion of online teaching in addition to conventional teaching in curriculum in the future.

## 2. Methodology

The cross-sectional observational study was conducted in a Tertiary care hospital attached to medical college in the Department of Pathology to assess the student's perspective about Pathology online teaching during COVID-19 pandemic, in the Second year M.B.B.S students. (Third semester and fifth semester students who agreed to participate in the study).

Total 140 students of Third semester and fifth semester were enrolled in the study after taking consent.

- 1) Institutional review board & Institutional Clinical Ethics Committee permissions were taken before starting the study.
- 2) Various Pathology lectures and practical sessions were planned for third semester students as in similar way

Volume 12 Issue 4, April 2023

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conducted for earlier batch in year 2020.i.e 5<sup>th</sup> semester. The Pathology teachers took lectures and practicals with the sharing of power-point presentation on the screen.

- 3) A detailed questionnaire of perception of students about online teaching was prepared. The questionnaire was validated by 2 faculty members and 10 second year M.B.B.S. Students.
- 4) The questionnaire consisted of various items like Demographics, Gadget preference, Quality of online teaching, Benefits & Barriers of online teaching, Comparison between online & conventional teaching and overall perception of students. A 5-point Lichert scale was used to determine the responses of the students. A Google questionnaire form was prepared.
- 5) The day was finalised for circulating the Google questionnaire form.
- 6) Before circulation, the details of study like purpose and procedure of filling of questionnaire were explained.

The students were assured regarding voluntary participation in the study and that the data collected would be non-identifiable & would only be used for research purposes. An informed consent was taken by mailing the form.

- 7) A pre-validated Google questionnaire form was emailed to students on a selected date and sufficient time was allotted to fulfil the response. Out of 140 students only 91 students responded.
- 8) The data collected from Google form was compiled in the MS-Excel 2010 sheet and analysed subsequently. Based on data collected, percentages were calculated.

### 3. Results

The table no 1 shows the questions along with data comprising of opinions or responses given by students.

**Table 1: Survey questions and answers given by students**

Questionnaire Questions	Options				
	Strongly Disagree n (%)	Disagree n (%)	Neutral n (%)	Agree n (%)	Strongly Agree n (%)
<b>A) Quality of online teaching</b>					
• Do you feel that online teaching is total waste of time	4 (4.39%)	38 (41.75%)	37 (40.65%)	9 (9.89%)	3 (3.29%)
• Are you satisfied with the online teaching activity	4 (4.39%)	13 (14.28%)	39 (42.83%)	30 (32.96%)	5 (5.49%)
• Did you enjoy online teaching session	4 (4.39%)	21(23.07%)	35 (38.46%)	27 (29.67%)	4 (4.39%)
<b>B) Future preference</b>					
• Do you feel such sessions should be repeated in future for your juniors	13 (14.28%)	18 (19.78%)	22 (24.17%)	31 (34.06%)	7 (7.69%)
• Do you like to recommend MUHS to include online teaching in curriculum	15 (16.48%)	24 (26.37%)	19 (20.87%)	23 (25.27%)	10 (10.98%)
<b>C) Benefits of online teaching</b>					
• Do you feel that online teaching saves the travelling time	2 (2.19%)	2 (2.19%)	10 (10.98%)	58 (63.73%)	19 (20.87%)
• Do you feel that online teaching is more interactive	16 (17.58%)	30 (32.96%)	32 (35.6%)	9 (9.89%)	4(4.39%)
<b>D) Barriers of online teaching</b>					
• Do you feel that family distraction affects online learning	5 (5.49%)	10 (10.98%)	18 (19.78%)	42 (46.15%)	16 (17.58%)
• Do you feel that internet connection can create problem in online learning	2 (2.19%)	3 (3.29%)	12 (13.18%)	38 (41.75%)	36 (39.56%)
• Do you feel that an unavailability of isolated and dedicated space at home can create problem in online learning	3 (3.29%)	8 (8.79%)	20 (21.97%)	39 (42.85%)	21 (23.07%)
• Do you feel that having technical knowledge regarding gadgets and apps will enhance online learning	1 (1.09%)	6 (6.59%)	18 (19.78%)	44 (48.35%)	22 (24.17%)
<b>E) Comparison of Online teaching vs Conventional teaching</b>					
• Do you feel that online teaching is better than conventional face to face teaching	20 (21.97%)	28 (30.76%)	27 (29.67%)	13 (14.28%)	3 (3.29%)
• Do you feel that online teaching can replace conventional teaching	21 (23.07%)	27 (29.67%)	23 (25.27%)	18 (19.78%)	2 (2.19%)
• Do you feel that online teaching should be in addition to conventional teaching	3 (3.29%)	17 (18.68%)	21 (23.07%)	39 (42.85%)	11 (12.08%)
• Do you feel that online teaching can impart more practical knowledge of pathology than conventional face to face teaching	28 (30.76%)	29 (31.86%)	22 (24.17%)	9 (9.89%)	3(3.29%)
<b>F) Overall perception</b>					
• Do you feel that online teaching will make you well prepared for examination	14 (15.38%)	33 (36.26%)	29 (31.86%)	13 (14.28%)	2 (2.19%)
• Do you feel that online teaching will make you well prepared for profession	26 (28.57%)	30 (32.96%)	25 (27.47%)	8 (8.79%)	2 (2.19%)

Out of the 91 students who were enrolled in the study, 42 students (46.15%) disagree that online teaching is total waste of time.

strongly agree that they are satisfied with the online teaching. 27 (29.67%) students agree that they enjoyed online teaching.

30 students (32.96%) agree, while 5 students (5.49%)

31 students (34.06%) agree, while 7 students (7.69%)

strongly agree that such sessions should be repeated in the future. 23 students (25.27%) agree and 10 students (10.98%) strongly agree to recommend MUHS to include online teaching in curriculum.

Further agreement that online teaching saves the traveling time was agreed by 77 students (84.06%). 46 students (50.54%) disagreed that online teaching is more interactive and 32 students (35.16%) were not sure. The fact that, family distraction affects online learning, agreed by 58 students (63.73%). 74 students (81.31%) agreed that Internet connection can create problem in online learning.

Unavailability of isolated and dedicated space at home can create problem in online learning was agreed by 60 students (65.93%). 66 students (72.52%) replied that having technical knowledge regarding gadgets and apps will enhance online learning. 48 students (52.74%) disagreed that online teaching is better than conventional face to face teaching. Only 18 students (19.78%) agree that online teaching can replace conventional teaching. 50 students (54.94%) agreed that online teaching should be in addition to conventional teaching.

Only 9 students (9.89%) agree and 3 students (3.29%) strongly agree that online teaching can impart more practical knowledge of pathology than conventional face to face teaching. 47 students (51.67%) disagree while 29 students (31.86%) were not sure that online teaching will make them well prepared for examination. Online teaching will make students well prepared for profession, was disagreed by 56 students (61.53%).

#### 4. Discussion

The study conducted highlights the perception of second MBBS students regarding Pathology online teaching during Covid-19 pandemic. The feedback in the form of questionnaire was collected from the students after online teaching activity. The questionnaire form consisted of major aspects like quality, barriers of online teaching, comparison of online teaching with conventional face to face teaching, future preferences and overall perception about online teaching. According to study by Verma A et al, 92% of students felt these online teaching classes as a good utilization of time and time saving.<sup>(7)</sup> 57% students felt that classes were enjoyable and comfortable which is comparable to our study.

In our study 50.54% of respondents felt that there was lack of interaction while attending online learning which is comparable to findings of Lyngdoh M et al, and Singh K.V et al.<sup>(8,9)</sup> Most of the students reported various barriers like unreliable internet connection, unavailability of isolated space at home, family distraction and lack of technical knowledge regarding gadgets which can create problem in online learning. As per study by Dhawan S, technical difficulties & distractions were barriers reported.<sup>(10)</sup> In study done by Gismalla et al, most of the students found that lack of computer and technical skills were the barriers for the delivery of E-learning.<sup>(11)</sup>

In our study, 52.73% students prefer conventional face to

face teaching over online teaching and suggested that online teaching should be additional to conventional teaching. As per study by Vishwanathan et al, majority of the students (41.7%) found e- learning methods to be average as compared to traditional methods.<sup>(12)</sup> 62.62% students report that online teaching fails to impart practical knowledge of Pathology. This is because during face to face practical sessions, there is a direct interaction and immediate doubt solving. It is also said that 'What you read, you might forget. What you see (in Practical session), you will always remember', which is harder to achieve in the online practical sessions.

Most of the students felt negatively about the utility of online teaching in preparation of summative examination. 36.25% students agreed to include online teaching as a part of curriculum which is comparable with study done by Verma et al. i.e 47%.<sup>(7)</sup> In study done by Singh et al, 94.6% of students were not in favour of online classes. A study in France by Motte E et al, only one third student wanted to continue online teaching after the end of Covid 19 crisis which is like our study.<sup>(13)</sup>

Thus, online teaching cannot replace conventional face to face teaching, rather it is complementary. The administration must devise strategies to remove barriers & challenges which will make online teaching more acceptable to students.

#### 5. Conclusion

This study addresses perception of students towards online teaching in Covid 19 pandemic. It highlights preference of conventional face to face teaching over online teaching due to various barriers and challenges. Once these challenges and barriers are addressed properly, the online teaching will be accepted by students easily.

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Volume 12 Issue 4, April 2023

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