



## PERCEPTION OF FACULTY TOWARDS ONLINE CLASSES DURING COVID-19 PANDEMIC

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### ABSTRACT

**Background-** Coronavirus Disease 2019 (COVID-19), a contagious disease, caused by SARS-CoV-2 led to one of the most significant global health crises in modern history. In an effort to contain the disease, a step-by-step lockdown strategy was adapted by India. It led to a significant challenge in medical education. All the medical teaching institutes are left with no other option than to go ahead with online teaching. This change in teaching and learning methods was not only new to the students but also to many of the teachers. The perception of faculty is considered an important factor in determining the quality of online classes. So, this study is an attempt to know the perception of faculty towards online classes in the midst of this pandemic. **Methods and Materials:** A cross-sectional study was conducted among 50 teaching faculty of ESIC Medical College, Gulbarga, from all the pre-clinical, para-clinical, and clinical departments that were regularly involved in online teaching during the initial phase of the pandemic. They were involved in the study after getting approval from the institutional ethics committee. After obtaining informed consent, data was collected by a predesigned, pretested, and validated questionnaire. Analysis of the data is done by comparisons of the median scores of positive and negative subsets of questions designed to know the perceptions of faculty towards online classes. **Results:** The study found that the majority of study participants were in the age group of 25–35 years, 21 (42%) were clinicians, and the majority had taken 3–5 online classes. There is no variation in the median scores between the age groups, department, teaching experience, and number of classes taken by the faculty. The higher median score for negatively sub-scaled questions (35) compared to the median score of positively sub-scaled questions (26) indicates overall dissatisfaction among medical teachers. **Conclusion:** Faculty showed overall dissatisfaction with online classes. Technical problems and communication with students are the most common barriers perceived by the faculty.

Keywords: Covid-19; SARS-CoV-2, online teaching, perception.

## INTRODUCTION

One of the worst global health emergencies in modern history is Coronavirus Disease 2019 (COVID-19), an infectious disease caused by SARS-CoV-2. In March 2020, COVID-19 was declared a global pandemic by the World Health Organization.<sup>[1]</sup> To contain the spread of the COVID-19 pandemic, governments across the world implemented movement restrictions that included visa restrictions, border closures, domestic travel restrictions, and local curfews, generically referred to as lockdown.<sup>[2]</sup> In India, the government adopted a step-by-step lockdown strategy to contain and prepare for a possible surge in cases when the pandemic is forecast to peak in the coming weeks.<sup>[3]</sup> At the same time, the government started temporarily closing all educational institutions, including medical colleges, in the second week of March in an effort to stop the spread of infection.

During this lockdown, one of the most affected fields is the smooth conduct of teaching activities. It was a crucial time and a real challenge to continue medical education, which has tested the readiness of academic institutions to deal with such an abrupt crisis. In view of this, many other universities, including Rajiv Gandhi University of Health Sciences, Karnataka, insisted that all medical colleges start offering online classes for students. It was an optional method of teaching, depending on the availability of resources before the pandemic. However, the pandemic has transformed the centuries-old chalk-talk teaching method into a technology-driven online teaching method, and hence, all the medical teaching institutes are left with no other option than to go ahead with online teaching. A teacher is the most crucial part of the delivery of online teaching. This change in teaching and learning methods was not only new to the students but also to many of the teachers. The perception of teaching faculty is considered an important factor in the quality of online classes.<sup>[4]</sup> In the Indian scenario, for most of the teachers in the medical field, there was a sudden shift in teaching methodology. Hence, this study was conducted to assess the perceptions of teaching faculty and perceived barriers towards online classes in the midst of the pandemic.

## METHODS AND MATERIALS

The study was a cross-sectional study conducted among 50 teaching faculties of ESIC Medical College, Gulbarga. The purposive sampling methods was used to recruit the required participants. All the pre-clinical, para-clinical and clinical departments who were regularly involved in the online teaching during the initial phase of pandemic willing to participate in the study were recruited. After obtaining the informed consent, data was collected by a predesigned, pretested, validated self-administered questionnaire which includes identification details of the faculty. The questionnaire consists of 18 questions to know the perception of faculty with a 5-point Likert scale. The total questions designed to know the perceptions has equal number of positively and negatively sub-scaled questions. Collected data was entered in excel sheet. Analysis of the data was done by comparisons of the median scores of positive and negative subsets of questions designed to know the perceptions of faculty towards online classes. For analysis, we considered strongly agree and agree as agree and strongly disagree and disagree as disagree. Perceived barriers by the faculty during the conduct of online classes was recorded as multiple responses and results were expressed as proportion.

## RESULTS

We enrolled 50 teaching faculties for the study. Among these faculties, half of them aged 25-35 years, half of them had less than five years of teaching experience, more than half of them had taken 3-5 online classes in the pandemic and 21(42%) of the them belonged to clinical departments. Characteristics of teaching faculties were described in Table 1. The study found that, no variation in the median scores in between the age groups, department, teaching experience and number of classes taken by the faculty (Table 1).

Among the 50 teaching faculties, 38 (76) % of the participants agreed that online teaching would provide flexible environment to access online classes from anywhere in the world, around 32 (64%) of the participants agreed that online teaching would provide an opportunity to stay connected with the students during pandemic and 41 (82%) of the participants agreed that pandemic had provided an opportunity to learn new method of teaching. At the same time, 42 (84%) of the participants agreed that online teaching method would too difficult to know that students are really understood the subject and 40 (80%) of the participants agreed that online teaching method would be difficult to motivate the students than in the traditional setting. Table 2 & Table 3 depicts percentage agreement on each of positively sub-questions and negative sub-questions.

In the study, the highest median score of 4 was expressed for all the negative sub-questions except Q15 (requires more time for preparation) where as in positive sub-questions, only Q1 (Provides flexible environment), Q12 (Students can be connected during pandemic), Q18 (Learned new method of teaching) was expressed as highest median score of 4. Fig.1 & Fig.2 depicts median scores for positively sub-scaled questions and negative sub-scaled questions. The higher median score for negatively sub-scaled questions compared to median score of positively sub-scaled questions indicates overall dissatisfaction among medical teachers towards online teaching method. Technical problems (42%) and communication with students (23%) were the most common barriers perceived by teaching faculties in online teaching method in the study.

Figure 3 depicts perceived barriers by the faculty towards online teaching methods.

Table 1: Profile of study participants and variation in median score

Characteristics of study participants		No (%)	Median scores for Positively sub-scaled questions	Median scores for Negatively sub-scaled questions
Age in years	25-35	25(50%)	3	4
	35-45	17(34%)	3	4
	45-55	8 (16%)	3	4
Department	Clinical	21 (42%)	3	4
	Para-clinical	15 (30%)	3	4
	Pre-clinical	14 (28%)	3	4
Teaching experience	< 5 years	25 (50%)	3	4
	≥ 5 years	25 (50%)	3	4
No. of classes taken	≤ 2	9 (18%)	3	4
	3-5	29 (58%)	3	4
	≥ 6	12 (24%)	3	4

Table 2: Percentage of agreement on positive sub-scaled questions towards online teaching.

Q.no	Questions	Agree N (%)	Neutral N (%)	Disagree N (%)
1	Online teaching provides me the flexible environment, where my students can access my online course from any place in the world	38 (76)	5 (10)	7 (14)
5	Students are more enthusiastic about their learning through online classes as compared to classroom teaching.	2(4%)	20 (40)	28(56)
7	The level of my interaction with students in the online class is higher than in traditional classes	1(20)	5(10)	44(88)
9	It is easier to get feedback from students in online classes.	15(30)	16(32)	19(38)
12	Online teaching is gratifying because, it connected me with my students during this pandemic	32(64)	11(22)	7(14)
14	It is easier to assess students in online classes than in traditional teaching	3(6)	5(10)	42(84)
16	I am satisfied with the use of tools in online teaching.	27(54)	15(30)	8(16)
17	I feel, online teaching should be continued even after the pandemic	10(20)	12(24)	28(56)
18	This pandemic has given me the chance to learn this new method of teaching	41(82)	8(16)	1(2)

Table 3: Percentage of agreement on positive sub-scaled questions towards online teaching.

Q.no	Questions	Agree N (%)	Neutral N (%)	Disagree N (%)
2	Online classes require more resources as compared to classroom teaching	32(64)	9(18)	9(18)
3	To take online classes, I require proficient computer knowledge and internet skills	27(54)	10(20)	13(26)
4	Online teaching is often frustrating because of technical problems	31(62)	12(24)	7(14)
6	Online classes hinder students to learn effectively as they feel disconnected from their classroom environment	37(74)	9(18)	4(8)
8	It is difficult to know whether the students are really understanding the subject during class	42(84)	5(10)	3(6)
10	It is difficult for me to motivate my students in the online environment than in the traditional setting.	40(80)	4(8)	6(12)
11	It is difficult to control my students in the online environment.	34(68)	13(26)	3(6)
13	I need to be more creative to take online classes	32(64)	10(20)	8(16)
15	To prepare for online classes, it takes more time.	16(32)	12(24)	22(44)

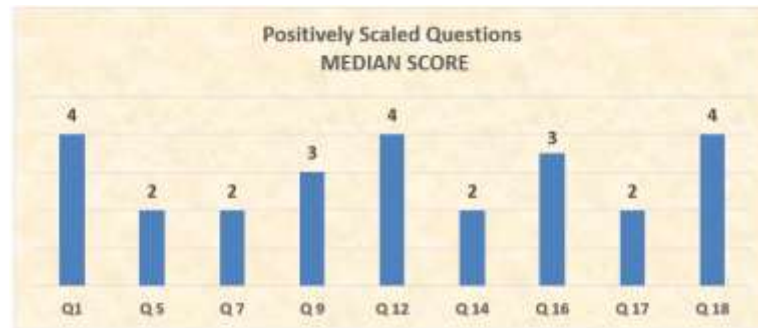


Figure 3: Distribution of median scores on positive sub-scaled questions towards online teaching

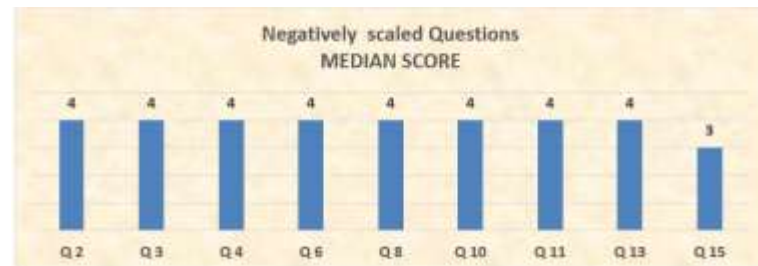


Figure 2: Distribution of median scores on positive sub-scaled questions towards online teaching



Figure 3: Proportion of perceived barriers towards online teaching

**DISCUSSION**

In this era, technology has become an integral part of almost every aspect of lives. The COVID-19 pandemic brought a serious challenge in almost every sector including medical education. Before the pandemic, medical education was largely based on traditional chalk-talk teaching method. However, COVID-19 pandemic led to suspension of in- person classes. Hence, online teaching method became an only reliable option for medical education. Since the method is newly implemented in our medical education system after pandemic its perception by teaching faculty yet be ascertained. This study has helped gain some perspective of teaching faculty in medical college.

Our study found that, 76% of the participants perceived that online teaching would provide flexible environment to access online classes from anywhere in the world. Previous studies also shows that online teaching in medical education provide an opportunity to assess the medical education from anywhere and at any time [5,6,7]. The study also found that, 80% of the participants perceived that online teaching method would be difficult to motivate the students than in the traditional setting. Participation by students through online teaching method has multiple effects including an increased potential for distraction, less active learning and content retention, and a decreased ability of instructors to know if students were comprehending course materials which leads to decreased motivation to attend the class [8,9]. In our study, median score for negative sub-scaled questions was higher compared to positive sub-scaled questions suggests that participants perception in the study shows the advantage of traditional method over online methods like teachers and students to interact and build a rapport, ensures moral development of learners, encourages social interaction and inculcates social acceptance, strikes a balance between physical and mental well-being with the help of an appropriate mix of activities and provides hands-on experience to the learners and teachers, thereby helping them apply their knowledge<sup>[10]</sup>. The previous studies found that students are reluctant to accept online learning and find it hard to engage with <sup>[11,12]</sup> and many students felt disconnected,

distracted, bored, or socially disconnected during tutoring<sup>[13]</sup>. In our study, technical problems and communication with students were the most common barriers perceived by teaching faculties in online teaching method. Technological problem is also perceived as barrier for online teaching method found in the previous studies<sup>[14,15,16]</sup>.

### Strength and limitation

we adopted a cross-sectional study among all departments in a medical college and used a 5-point Likert scale to assess perception of faculty towards online teaching methods, which were the strength in the study. However, perception of students towards online teaching methods was not assessed in the study will be the limitation in the study.

### CONCLUSION

In the study, the teaching faculties shown overall dissatisfaction towards online classes and technical problems and communication with students are the most common barriers perceived by the faculties. However, faculties found that online teaching is the only solace in midst of pandemic to stay connected with students.

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