

# EFFECTIVENESS OF ONLINE LECTURES AND WEBINARS ON INDIAN DENTAL STUDENTS DURING COVID 19 OUTBREAK - A CROSS SECTIONAL STUDY

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## Abstract:

### Objectives -

To determine the effectiveness of online lectures & webinars, to investigate advantages & Disadvantages of online lectures, to investigate student's perception towards online lecture Compared to traditional lecture and the drawbacks of online lectures & webinars on Indian Dental students during COVID 19 Outbreak.

**Materials and Methods** - 15 closed ended questions were prepared and organized by Google form application and those questions were circulated online to dental students all over the India. A total of 516 participants from 22 different dental institutions nationwide submitted the completed questionnaire. Data was calculated online in Google form application.

### Results -

The results reveal that, the dental students were not that contented with online learning education. 79.3% people found traditional lecture is a better learning tool compared to online lectures. 18% participants found online lectures & webinars extremely helpful in understanding the subject. 57% somewhat helpful, 19.1% not so helpful while 5.9% students found it not at all helpful.

**Keywords:** Dental student, e-learning, COVID 19, online learning.

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## INTRODUCTION:

In December 2019, the corona virus disease 2019 (COVID-19) broke out in Wuhan, the capital city of Hubei Province in China.<sup>1</sup> The cause of the disease was a highly contagious novel corona virus (SARS-CoV-2) that rapidly spread worldwide and in March

2020 was declared a global pandemic by the world health organization (WHO). Along with all other sectors, this disease has also shaken up the education sector, and this fear is likely to resonate across the education sector globally.<sup>1</sup> subsequently, the outbreak forced many schools and colleges to remain

closed temporarily. Several areas are affected worldwide, and there is a fear of losing this whole ongoing semester or even more in the coming future. Various schools, colleges, and universities have discontinued in-person teaching.<sup>2</sup>

According to some researchers, it is uncertain to get back to normal teaching anytime soon as social distancing is preminent at this stage, which is impossible to follow in traditional lectures. Hence, the academic units struggled to find options to deal with this challenging situation. These circumstances made people realize that scenario planning is an urgent need for educational institutions.<sup>3</sup> In dentistry, it was not possible to conduct practical's on patients during COVID 19 period. Also, there is an urgent need to protect and save students, faculty, academic staff, communities, societies, and the nation as a whole during this pandemic. As the online mode of learning is easily accessible and can even reach rural and remote areas, the government has decided to start online lectures in colleges & schools.<sup>3</sup> Online lectures & Webinars helped dental students to attend theory lectures while maintaining the social distancing at the same time. However, how the online education has affected the lives of dental students and teachers has not been thoroughly researched.<sup>4</sup>

There are many benefits of online lectures and drawbacks too. This survey aims to identify the effectiveness of online lectures & webinars in dental undergraduate & postgraduate students across India during the Covid 19 period.

#### METHODOLOGY:

The present cross-sectional study was conducted using an online survey questionnaire from 15th June 2020 to 27th October 2020; as it was not feasible to do a community-based national sampling survey during this difficult period, we decided to collect the data online. For this purpose, a well-constructed questionnaire was designed and circulated through WhatsApp & e-mails and received a response through online survey submission. The questionnaire was comprised of 15 close-ended questions related to online lectures. A bi-weekly reminder strategy was

used to inform the participants who had not completed the survey.

The study is based on quantitative data collected from postgraduate & undergraduate dental students. Consent is taken from all individuals before participating in the study. Out of 525 individuals to whom the survey was circulated, 516 were ready to participate in the study. A total of 516 participants from 22 different institutions participated and submitted the questionnaire. Statistical analysis was done on SPSS version 25. Data were calculated online in the Google form application.

#### RESULTS:

A total of 516 participants from 22 different institutions nationwide submitted the completed questionnaire with 15 questions. The responses were recorded from 22 institutions as follows: MIDSR Dental college Latur, YMT Dental College and Hospital Navi Mumbai, GDC Aurangabad, GDC Mumbai, M. A. Rangoonwala College of dental sciences and research center Pune, Terna dental college Navi Mumbai, Bharati Vidyapeeth Pune, Dr. D.Y Patil dental college Pimpri, SRM dental college, Ramapuram Chennai, PMNM dental college Bagalkot, CSMSS Dental College Aurangabad, SMBT dental college Sangamner, Triveni Dental College Bilaspur, Hitkarini dental college Jabalpur, RDC, PMT, PIMS Loni, MGVS KBH dental college Panchvati Nashik, YCMM & RDF's Dental college and hospital Ahmednagar, SDKS dental college Nagpur, Surendra dental college and research institute, Aditya dental college Beed, Hitkarini dental college Jabalpur.

Sr. No	Questions	Options	Respon ses (%)
1	Are you attending online lectures or webinars?	a. Yes b. No	91.2% 8.8%
2	How many	a. 1 to 5	64.1%

	online lectures or webinars do you attend weekly?	b. 6 to 10 c. 11 to 15 d. >15	20.1% 10.5% 5.3%				
3	Which a is better learning tool?	a. Traditional lectures. b. Online video conferencing	79.3% 20.7%	7	What are the advantages of online lectures and webinars for academics during Covid 19 crisis?	a. Time & cost efficient. b. Better communication c. Helping continuation of academics by making it safer with social distancing. d. All of the above	7.7% 2.4% 47.2% 42.7%
4	When are the online lectures and webinars more effective?	a. If the host's audio & video is on. b. If the host's audio is on but video is off. c. If both the host's & audience's video is on. d. If the speaker's video is on.	66% 7.7% 26.1% 3.2%	8	What are the disadvantages of online lectures and webinars?	a. Technical problems. b. Less personal interaction. c. Participants get easily distracted. d. All of the above	20.7% 3.9% 3.9% 71.5%
5	How helpful are the webinars & online lectures for learning and understanding of the subject?	a. Extremely helpful. b. Somewhat helpful. c. Not so helpful. d. Not at all helpful.	18% 57% 19.1% 5.9%	9	Are the online practical demonstrations helping you to improve practical skills?	a. Yes b. No	84.3% 15.7%
6	Do online lectures reduce your anxiety as compared to traditional lectures?	a. Yes b. No	53.6% 46.4%	10	Are the online practical/ demonstrations helping you to improve practical skills?	a. Yes b. No	27.6% 72.4%

11	Are you of the opinion that online lectures should be carried in the way along with traditional practical's post pandemic?	a. Yes b. No	58.4% 41.6%
12	Which conferencing app do you prefer for online meetings?	a. Zoom cloud b. Cisco Webex. c. Say Namaste d. Google meet. e. Google hangouts. f. Any other.	66.5% 3.9% 2% 21.7% 2% 3.9%
13	Do you think taking online exams will help to assess your practical and theoretical progress?	a. Yes b. No	37.2% 62.8%
14	How interactive are the online lectures?	a. 25% b. 50% c. 75% d. 100%	39.6% 39.8% 17.4% 3.2%
15	Are you facing any physical distress while attending online lectures?	a. Eye strain b. Headache c. Backache d. all of the above	35.8% 8.2% 4.9% 51.1%

19. Therefore many cities have turned into phantom cities, and its effects can be seen in schools, colleges, and universities. The Corona Virus has made institutions to go from offline mode to online mode of pedagogy. With the help of online teaching modes, teachers can sermonize many students at any time and in any part of the country.<sup>5</sup> during this outbreak, dental students, were not able to undergo any practical education performed on patients. Technology has permitted to conduct of online lectures at the institution level so that at least theory lectures can be conducted. During this challenging time, the concern is not about whether online teaching-learning methods can provide quality; rather, academic institutions will be able to adopt online learning in such a massive manner to help continue academics.<sup>6</sup>

Online learning is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning.<sup>7</sup> Flexibility is another interesting aspect of online learning; a learner can schedule or plan their time to complete courses available online. Combining face-to-face lectures with technology gives rise to blended learning; this type of learning environment can increase students' learning potential. Students can learn anytime and anywhere, thereby developing new skills in the process.<sup>8</sup> At the same time, there are certain drawbacks associated with online lectures. Accessibility, affordability, flexibility, learning pedagogy, Technical problems, Less personal interaction, Participants get easily distracted are some of the arguments related to online lectures; the issue of availability of learning resources has also come out strongly as one of the drawbacks.<sup>9</sup> In a situation where the students are not allowed to go to school & colleges, the alternative is to move from traditional to online education. In this case, the essential parts are internet coverage, computers, or smart phones in the population. In this survey, we have collected data from dental students to identify online lectures & webinars' effectiveness of undergraduate & postgraduate dental students across India.<sup>10</sup>

### DISCUSSION-

The major part of the world is on quarantine due to the serious outbreak of this global pandemic, Covid-

A total of 516 students have participated in the survey. Out of which maximum respondents were postgraduate students, 27.4%. 98% were from the age group of 20-30, while only 2% were from the 30-40 age group. Most of the respondents were female. Twenty-two different colleges have participated in the survey from other states of the country. Among the participants, only 5.3% of students were able to attend more than 15 webinars weekly. Maximum participants, around 64.1%, were attending 1-5 webinars per week. Maximum people (79.3%) found Traditional lecture is a better learning tool than online video conferencing. The online lecture would also be more effective & interactive if the host's audio & video is on. 18% of participants found online lectures & webinars extremely helpful in the understanding of the subject. 57% somewhat beneficial, 19.1% not so beneficial, while 5.9% of students found it not at all helpful. Students are less anxious while attending online lectures when compared to traditional lectures. There are many advantages of online lectures like time & cost-efficient, Good communicating tools, participants do not have to travel from their place. Therefore, it helps maintain social distancing, hence helping to continue academics during the COVID 19 pandemics. There are many disadvantages of online webinars & lectures, among which technical problems like sudden stoppage of electricity and disturbances in network connectivity are some of the major drawbacks. Also, there is no personal interaction; Participants easily get distracted while lessening; it is not an efficient learning tool for lessons. 84.3% of participants feel that pandemic will hinder their practical skills.

Due to fear of corona already, the patient flow is less & dental practitioners, dental students are also hesitating to perform all the dental procedures. The treatment has been focused more on emergency cases. 72.4% of students think that only practical demonstrations are not helping students to improve their practical skills. Instead, 58.4% of students are of the opinion that online lectures should be carried along with traditional practicals after the pandemic. Practical's will help students implement their knowledge, and online lectures help to save time,

anxiety, and fear among the students. For online meetings, 66.5% of students have preferred the Zoom cloud app, followed by Google meet by 21.7%. Other apps have also been used by students like Cisco Webex, Say Namaste, Google hangouts. The Indian government planned to schedule online theory and practical exams to avoid & minimize the spread of COVID 19. But, 62.8% of participants think that taking online exams will not assess their practical & theoretical progress. Only 3.2% found online lectures, 100% interactive. Due to a continuous seated position at one place & long time computer, laptop, mobile use caused Eye strain, Headache, and Backache in most students.

#### CONCLUSION-

In conclusion, most of the respondents belonged to 20-30 years of age, with all pursuing bachelors & masters in dentistry. The survey found out that the learners were not content with online learning education provided by dental Institutions. Based on the findings, it is clear students believe that online lectures should be carried along with traditional practicals after the pandemic period despite the few challenges identified. Under these circumstances, education had to adapt and evolve and must continue to do so. The process leaves behind traditional teaching methods and implements modern ones, such as e-learning, Web-based video platforms, webinars, and virtual reality learning and surgical simulators.

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