

Impact of Covid - 19 Pandemic on Academics & Clinics of Dental Students

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Abstract:

Aim: The aim of this study was to evaluate the impact of COVID-19 on the academics & clinics of dental undergraduate students and to explore the efficacy of online education from student's viewpoints. **Material & methods:** An online questionnaire was circulated through Google forms to undergraduate (UG) dental students at MIDSR Dental college, Latur. The questionnaire consisted of total 10 close ended questions.

Results: Among the 128 students that participated, 55.3% participants were third year students, 43.8% were final year students of which 11.7% were males and 88.3% were females. The study revealed that 76.3 % students found online classes better than offline, 75.4 % students stated that they faced connection problems while attending online classes. A total of 94.6 % students said that online practical classes have caused loss in terms of their clinical skill training on patients. The psychological issues they faced while attending online classes 56.3 % responded with increased headache. When asked if online teaching had affected their teacher-student bond, 77.7 % responded positively. Students also said that they would prefer offline classes but online as per covid situation if they were given a choice.

Conclusion: It appears that the pandemic has had a detrimental effect on the students. While some have adjusted to the sporadic use of technology in the curriculum, the majority do not embrace the change to online learning. Additionally, the underdevelopment of their practical abilities is one of the areas that is most affected.

Keywords: online classes, covid 19, dental education, pandemic.

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INTRODUCTION

The Corona virus Disease (COVID-19), a novel disease that originated in Wuhan, China in 2019 spread globally and was officially recognized as a pandemic by the World Health Organization (WHO) on March 11, 2020¹. This outbreak has presented significant challenges for healthcare workers worldwide and has certainly impacted dental

practitioners, not just in their day-to-day work but also in their research and dental education efforts².

The pandemic has significantly impacted traditional classroom learning, leading to the shift of courses and assignments online due to the necessity for ongoing curriculum as outlined by DCI guidelines^{3,4}. This transition was somewhat unplanned. Restrictions on campus include lockdowns in preclinical and clinical settings, limited access to hands-on clinical education for students, and the

absence of patient treatments, posing significant obstacles in dental education⁵. Consequently, dental programs have been moved entirely online, which was further complicated by the limited skills of educators in online teaching. However, online education has been a topic of practice for quite some time, higher education institutions began offering online courses as early as the 1990s beginning with the start and mid-decades⁶. Technological advancements have made online education more available and varied. To be fair, e-learning has emerged as a valuable supplementary tool, affecting both the educational environment and its students positively and negatively⁷.

There is a paucity of research evaluating the impact of this shift in Indian dentistry schools from in-person to virtual instruction. The purpose of this study is to investigate the effectiveness of online education from the viewpoints of students and to evaluate the effect of COVID-19 on the academics and clinics of undergraduate dental students.

MATERIAL & METHODS

The cross-sectional clinical study was conducted on 72 final year students and 58 interns at MIDSR Dental College, Latur. Affiliated with Maharashtra University of Health Sciences, Nashik. The study was carried out in the month of February 2022. The participants were split into two groups, one for males and one for females, based on the gender distribution of the population. The Institutional Ethics Committee approved the study once it was presented with its protocol and design. The Helsinki Declaration was followed in the study. Before commencement, the goal of the study was explained to the participants, and each one provided signed informed consent. Third year and final year students were briefed about the study and questionnaire. The students who were willing to take part were included in the study. Students were given an online questionnaire related to the study

INCLUSION CRITERIA:

1. Both male and female students
2. Third year and final year students of MIDSR Dental college, Latur in academic year 2022

EXCLUSION CRITERIA:

1. Participants refusing to give consent for the study.

DATA COLLECTION METHOD:

A cross sectional type of online survey was designed which was approved by the Institutional Ethical Committee.

The online survey consisted of 10 close ended questions with 3 options of which 5 questions had multiple choices & 5 questions were dichotomous type.

The data was collected, tabulated and statistically analyzed.

RESULTS

According to the demographic data as seen in table no. 1, a total of 128 students participated in the study of which 15 were male and 113 were females. The study population comprised of 72 third year and 56 final year students studying in MIDSR Dental College, Latur, Maharashtra.

A total of 10 close ended questions in a structured questionnaire were asked to the participants of which 5 questions had multiple choices & 5 questions were dichotomous type.

The results of the study are cumulated as follows in the below bar graphs and pie charts.

PROFILE			
GENDER	MALE	15	11.7%
	FEMALE	113	88.3 %
YEAR OF STUDY	THIRD YEAR	72	55.3%
	FINAL YEAR	56	43.8%

Table No. 1: Demographics

Questionnaire:

1. What do you find good regarding online classes?

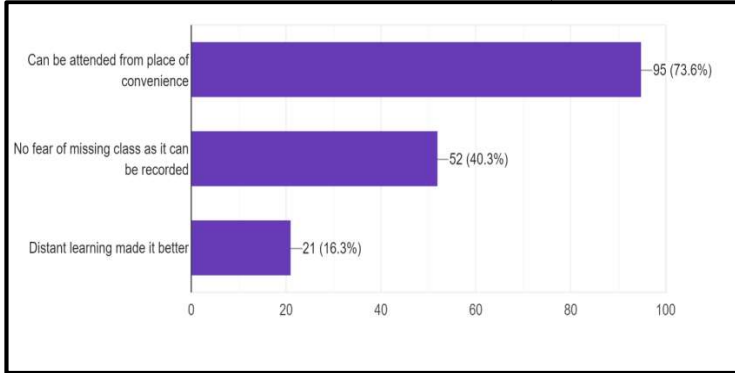


Fig No. 1

2. What are the problems that you have faced during online classes?

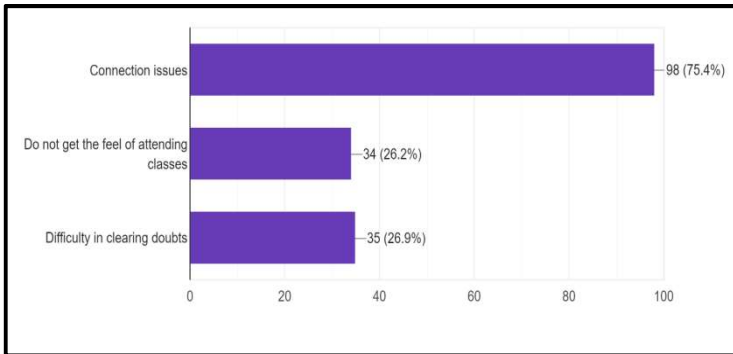


Fig No. 2

3. According to you what are the disadvantages in online classes?

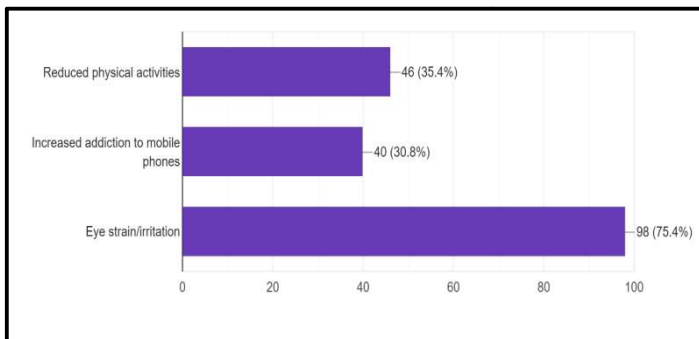


Fig No. 3

4. Which classes according to you have high tendency for distraction?

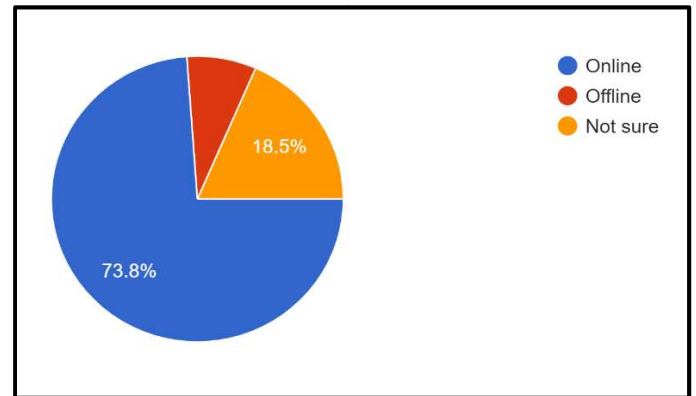


Fig No. 4

5. Do you think, online practical classes have caused loss in terms of clinical skill training on patients?

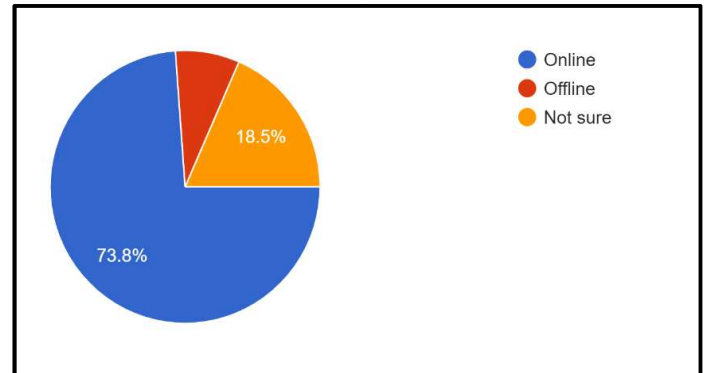


Fig No. 5

6. What are the psychological issues that you have faced while attending online classes?

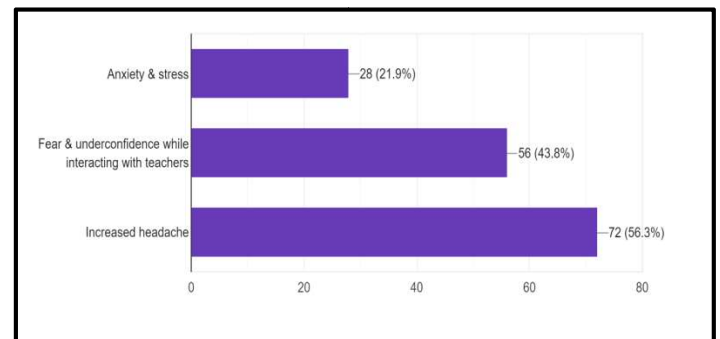


Fig No. 6

7. Which of the following factors make offline classes better?

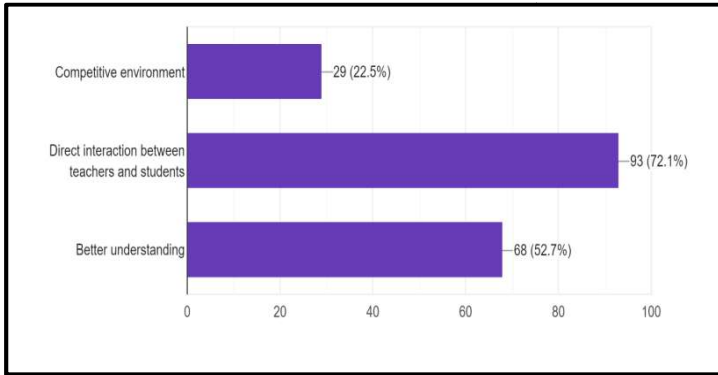


Fig No. 7

8. Which of the following factors make offline practicals better?

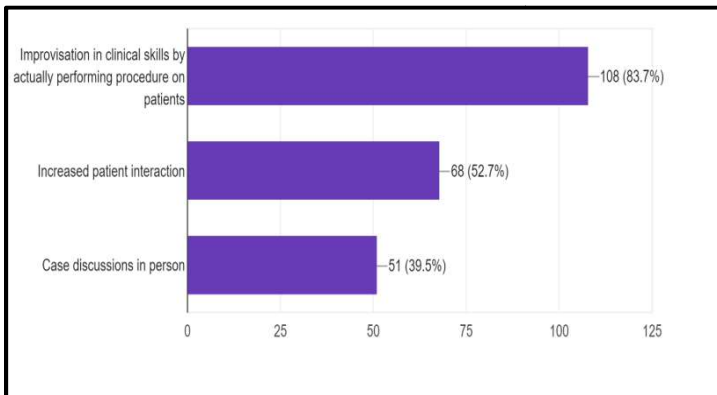
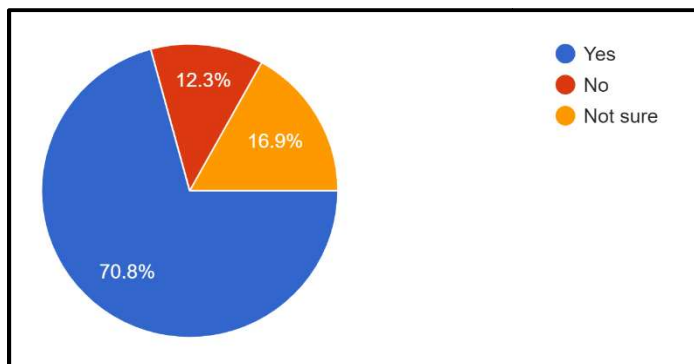


Fig No. 8



9. Do you feel that online classes has affected teacher-student bond?

Fig No. 9

10. If you are given choice regarding attending classes which one will you prefer?

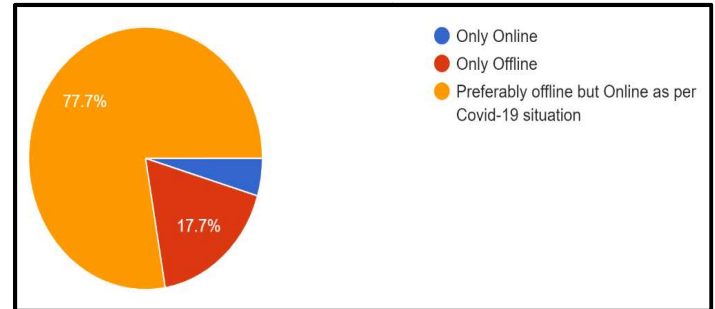


Fig No. 10

DISCUSSION

E - Learning was already being used at many universities across the globe, including the majority of Indian medical and dentistry colleges; still it was a novel experience for learning⁸.

This study was designed to investigate the effectiveness of online education from the viewpoints of students and to evaluate the effect of COVID-19 on the academics and clinics of undergraduate dental students.

The study revealed that 76.3 % students found good that online classes can be attended from place of convenience. The fact that online classes have made distant education easy is considerable but it may not provide the atmosphere that is needed for apt learning. When asked about the disadvantage of online classes, 75.4 % students stated that they faced connection problems while attending online classes which can disrupt the continuity of teaching or even leading to missing certain parts while the connection disappeared. A total of 75.4 % student responded that they experienced increased eye strain while attending online classes due to excessive screen time. A research carried out in Rajasthan in 2022 in final year dental students found that their health has been greatly impacted by the online lectures. For 76.8% of kids, increasing screen usage directly resulted in headaches and strained eyes¹².

When evaluated, 73.8% students stated that online classes had high tendency for distraction as the study

environment was highly impacted due to disturbances from family members or even the student's own thoughts. When asked whether online practical classes have caused loss in terms of their clinical skill training on patients, 94.6 % students responded positively as they did not get the chance their clinical skills on patients which might develop under confidence while practice. The students faced psychological issues while attending online classes of which 56.3 % experienced increased headache which may be due to continuous screen time. Students were asked what made offline classes better, to which 72.1 % responded direct interaction between teachers and students enabled better understanding and doubt clearing sessions. For practicals, 83.7 % responded that gaining confidence in clinical skills by actually performing procedure on patients made offline practicals better as it boosted their confidence. This may not affect in long term as the third and final year students can catch up and improve their skills in internship but it might not be true for interns. In 2021, Ilic et al. did a study on final-year dentistry students, and the results showed that there was a substantial decrease in self-confidence and that the students felt less confident in their clinical skills than the control group¹³. In case of teacher-student bond being affected by online classes, 70.8 % students responded positively as they were not able to communicate with their teachers. Students were asked which type of classes they would prefer between online and offline if given a choice to which 77.7 % student said that they would prefer offline classes but online as per covid situation.

Conversely, students appear to recognize the value of online learning to a certain extent, particularly in relation to theoretical and clinical topics⁹. According to studies evaluating students' experiences with online learning, most of them have a generally positive opinion of it and anticipate that it will be a major factor in their future dentistry education¹⁰. Students can now listen to lectures and review them anytime, anywhere, thanks to the smart gadgets and apps that are currently available, which promotes educational autonomy. On the other hand, the substantial shift to the internet should also aid in the development of sensible digital laws that are more reasonably priced and secure.

CONCLUSION

The pandemic's effects on the world brought us to a new understanding that allowed us to discover ways to make up for students' missed classes and guarantee that they gained the required clinical experience. The pandemic's effects were seen in the fields of research, finance, and psychology in addition to education and health care. Even though students understood they would lose out on many learning opportunities, they still believed that in-person clinical practice could not be replaced by the new system with its e-lectures and discussion forums.

CONFLICTS OF INTERESTS: Nil

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