



# Attitude of the Dental Undergraduate Students and Interns towards Dentistry Post COVID-19

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J Health Allied Sci<sup>NU</sup> 2023;13:400–403.

## Abstract

**Introduction** The period of coronavirus disease 19 (COVID-19) is a significant period from various aspects such as world health and socioeconomic considerations. The majority of the hospitals involved in dental education had previously limited their clinical practices to dental emergencies, but now are geared up for nonemergent conditions. As teaching modalities shifted to online platforms, students have reported to be anxious with regard to accomplishment of required clinical skills, patient care, and forthcoming graduation. Fresh graduates have reported a delay in the drive, which they would have been able to achieve in the initial stages of their profession.

**Objectives** To assess the attitude of the dental undergraduate students and interns toward dentistry post-COVID-19.

**Results** The majority (80.2%) were prepared for the challenges lying ahead before beginning to work on patients. Also, 16% were willing to treat patients, 28% did not want to treat patients, while 44% were willing to handle emergency cases. Next, 67.8% were scared of infecting themselves while administering dental treatment and 78.9% were concerned that there could be more such pandemics. In total, 21.6% of the respondents who wished that they chose an alternate profession whereas 70.5% of participants felt that the scope of dentistry has not diminished. Also, 90.7% were interested to pursue postgraduation, and 86.3% felt that this was a passing phase and things would be normalized soon.

**Conclusion** With second and third waves being rampant, novel coronavirus has become a public health crisis. Because dental services cannot be stopped for a long time, it is essential for dental students to be well trained to limit the spread of the disease. Owing to the present scenario, appropriate donning and doffing of PPE (personal protective equipment) is a pivotal step in direct patient care, and simulation-based training may help ensure that these skills are acquired by them.

## Keywords

- ▶ attitude
- ▶ COVID-19
- ▶ dentistry
- ▶ students

## Introduction

The period of coronavirus disease 19 (COVID-19) is a significant period from various aspects such as world health and socioeconomic considerations. Dentists who operate with close proximity with the patient and are susceptible to infection via aerosols had to revise the operating protocols to safeguard their team from the risk of infection. Also, a large part of the population avoided dental treatment due to fear of contracting infectious diseases.<sup>1</sup> Majority of the hospitals involved in dental education had previously limited their clinical practices to dental emergencies, but now are geared up for nonemergent conditions. As teaching modalities shifted to online platforms, students have reported to be anxious with regard to accomplishment of required clinical skills, patient care and forthcoming graduation. Fresh graduates have reported a delay in the drive, which they would have been able to achieve in the initial stages of their profession. Students should be encouraged and guided with timely communication with their respective mentors along with accessibility of counselling sessions to get along this situation.<sup>2</sup> There was a need to assess the attitude and preventive awareness of the dental students with the purpose of reinforcing prevention and measures to combat the disease in the dental scenario. This survey was done with the objective of assessing the attitude of the dental undergraduate students and interns toward dentistry post-COVID-19.

## Materials and Methods

The present study was performed among undergraduate dental students (3rd BDS and 4th BDS) and interns of a tertiary dental institution in South India ▶ **Tables 1 & 2**. Ethics clearance was obtained from the Institutional Ethics Committee (**Cert. No. ABSM/EC.43/2020**). A structured online self-administered questionnaire comprising 10 close-ended questions was formulated via Google forms for the purpose of data collection for this cross-sectional survey. A pilot study was conducted among 15 subjects to check the flaws and feasibility of the study.

An online questionnaire was prepared by utilizing Google forms. This questionnaire's online link was made available on social media platforms (Twitter and WhatsApp) and email. The survey was conducted using a validated questionnaire, which was tested for its content and face validity that was done by a group of expert evaluation. The expert gave their concerns about the ease, relativity, and importance of the instrument. The study instrument demonstrated adequate reliability, as indicated by Cronbach's  $\alpha$  (0.8). The questionnaire was divided into two parts. The first part comprised demographic data and the second part explored about the attitude of the undergraduates and interns toward dentistry post-COVID-19 pandemic. Their participation in this study was voluntary. Digital informed consent was taken. Any details pertaining to identification was not be mentioned anywhere on the questionnaire. Statistical analysis was done using IBM SPSS Version 22.0. IBM Corp., Armonk, NY. Descriptive statistics were applied.

## Results

A total number of 227 subjects responded to the questionnaire with a mean age of  $21.10 \pm 1.57$  years. Also, 80.2% were prepared for the challenges lying ahead before beginning to work on patients. In total, 89.4% of them were updating their knowledge regarding the safety and use of adequate personal protective equipment (PPE) while administering dental treatment. Also, 67.8% were scared of infecting themselves while performing a dental procedure and 59% would be hesitant in administering dental treatment to a patient who has just recovered from COVID-19. In total, 86.3% were positive that this is a passing phase and within a matter of time things will be normalized, whereas 90.7% wished to pursue postgraduation, and 21.6% wished they chose an alternate profession.

## Discussion

The continuance of education has been heavily impacted globally due to COVID-19. Though online learning modules were going on, it could not compensate the practical experience gained during personal interaction with patients. Globally, colleges have faced the disastrous effects of the pandemic outbreak. Lockdowns in clinical scenarios, restrictions in access to clinical training for students along with nonavailability of patients for treatment are just to name a few. Furthermore there have been crumbing of research programs, grants, losses of income, cancellation of academic conferences along with convocation ceremonies. The psychological impact on this has had detrimental effects on the faculty as well as students.<sup>3</sup>

Despite the scenario, the majority (80.2%) were prepared for the challenges lying ahead before beginning to work on patients. This was in contrast to the study conducted by Almulhim et al, where only 16% were willing to treat patients and 28% did not want to treat patients and preferred tele-dentistry, while 44% were willing to handle emergency cases ▶ **Table 3**.<sup>4</sup>

Also, 84.6% were eager to join back their course. This indicated that they were familiar with PPE (personal protective equipment) usage and the protocol followed during treatment, as 89.4% responded positively to updating their knowledge regarding the same ▶ **Table 3**.

However, 67.8% were scared of infecting themselves while administering dental treatment ▶ **Table 3**. This is in agreement to a study conducted by Alwaiet al, where 89% admitted the fear of transmitting virus to their families.<sup>5</sup> This could be attributed to the fact that it could be uncomfortable and physically challenging to perform certain procedures in the required PPE. Dental treatments generate large volumes of aerosols which land on the treating clinician's face, head and neck.

Nonspecific clinical manifestations, the uncertainties of viral transmission, indecipherable range of mortality rate were responsible for creating knowledge voids. Since its inception, COVID-19 has been trending on social media platforms as the posts on its transmission and pathogenesis

**Table 1** Distribution of study subjects based on the year of under graduation

Year	Frequency	Percentage
3rd BDS	71	31.3
4th BDS	69	30.4
Intern	87	38.3

**Table 2** Distribution of study subjects based on gender

Gender	Frequency	Percentage
Male	51	22.5
Female	176	77.5

**Table 3** Attitude and preparedness toward dentistry amidst COVID-19 pandemic

Questions	Yes n (%)	No n (%)
Are you prepared for the challenges lying ahead before you begin working on patients?	182 (80.2)	45(19.8)
Are you updating your knowledge regarding the safety and use of adequate personal protective equipment (PPE) while administering dental treatment?	203 (89.4)	24 (10.6)
Are you eager to join back and resume your course?	192 (84.6)	35 (15.4)
Are you scared of infecting yourself while you are performing a dental procedure?	154 (67.8)	73 (32.2)
Will you be hesitant in administering dental treatment to a patient who has just recovered from COVID 19?	59 (26.0)	168 (74.0)
Are you positive that this is a passing phase and within a matter of time things will be normalized?	196 (86.3)	31 (13.7)
Do you wish to pursue postgraduation?	206 (90.7)	21 (9.3)
Did you wish that you chose an alternate profession?	49 (21.6)	178 (78.4)

have created a phenomenon called “infodemic.”<sup>6,7</sup> This was evident in the fact that 78.9% were concerned that there could be more such pandemics

There have been adverse effects on the psychological well-being of dental health care professionals.<sup>8</sup> Also, the unpredictability of the pandemic creates an uncertainty regarding when the dental institutions will fully resume back to normal.

This situation has been an obstacle to the hands-on learning experience of dental students owing to University lockdowns.<sup>2</sup> Hence this could be the reason behind 21.6% of the respondents who wished that they chose an alternate profession.

Also, 70.5% of the participants felt that the scope of dentistry has not diminished. This was in accordance to the study conducted by Guo et al concluded that despite the large scale transmission, the demand for urgent dental treatment decreased by only 38%.<sup>9</sup>

In total, 90.7% were also interested to pursue postgraduation and 86.3% felt that this was a passing phase and things would be normalized soon. This indicates that the need for urgent dental care despite the pandemic will always be essential.

## Conclusion

With second and third waves being rampant, novel coronavirus has become a public health crisis. Since dental services cannot be stopped for a long time, it is essential for dental students to be well trained to limit the spread of the disease.

Because the attitude of the students was positive, it is a constructive sign that participants may significantly contribute even in patient screening programmes if trained adequately. The study concluded that majority of the students had a positive attitude toward dentistry post COVID-19.

Owing to the present scenario, appropriate donning and doffing of PPE (personal protective equipment) is a pivotal step in direct patient care, and simulation-based training may help ensure that these skills are acquired by them. Dental professionals were always vulnerable to infections even before the novel corona virus. Hence appropriate measures must be taken to restart and resume the learning and training in dental institutions.

### Ethics Clearance

Ethics clearance was obtained from the Institutional Ethics Committee (**Cert.No. ABSM/EC.43/2020**).

### Presentation

This paper was presented at the AIMST International Dental e-conference, AIDEC 2021 on June 27, 2021.

### Conflict of Interest

None declared.

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