

**Original Article****Attitude of Dental Students in Managing Emergency Care during the COVID -19 Pandemic – A Cross-sectional Study**

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**Abstract**

**Background:** The outbreak of the COVID-19 pandemic has become a major concern for the dental profession and the students working during this phase. **Aim:** The aim of the study is to assess the attitude of dental students in managing emergency care during the COVID-19 pandemic in Indira Gandhi Institute of Dental Sciences. **Materials and Methodology:** A structured questionnaire was used to evaluate the attitude of dental students in managing emergency care during the COVID-19 pandemic. A sample of sixty students were evaluated, and their response was recorded, tabulated, and analyzed. **Results:** Nearly 82.67% of the students showed a positive attitude in managing emergency care during the COVID-19 pandemic. **Conclusion:** It can be concluded from the study that the overall attitude of the dental students in managing emergency care during the COVID-19 pandemic is positive.

**Keywords:** Corona virus, dentistry, emergency care, observational study

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## **INTRODUCTION**

In December 2019, there was an outbreak of a virus called coronavirus, which became a pandemic and fatal to many parts of the world and people.[1,2] The mode of transmission of the virus is said to be through droplets from the eye, nose, and mouth. When an infected person coughs, sneezes, or talks, droplets or tiny particles called aerosols carry the virus into the air from their nose or mouth.[3-6]

Another way to catch the novel coronavirus is when you touch the surface that someone who has the virus has coughed or sneezed on. You may touch a countertop or doorknob that is contaminated and then you touch your nose, mouth, or eye.[5-8] Dental care settings invariably carry the risk of 2019 novel coronavirus infection due to specificity of its procedures, which involves face-to-face communication with patients; frequent exposure to saliva, blood, and other body fluids; and the handling of sharp instruments.[4]

The pathogenic microorganisms can be transmitted in dental settings through inhalation of airborne microorganisms that can remain suspended in the air for long periods.[3,9] The routes of spread of infection in a dental setting includes direct contact with blood, oral fluids, or other patient materials, contact of conjunctival, nasal, or oral mucosa with droplets and aerosols contacting microorganisms generated from an infected individual and propelled a short distance by coughing and talking without a mask, and indirect contact with contaminated instruments and environmental surfaces.[5,9,10] Hence, it is important to assess the attitude of dental students in managing emergency care during the COVID-19 pandemic.

## **MATERIALS AND METHODS**

### **Study type**

This is a cross-sectional study.

### **Study area**

The study area was Indira Gandhi Institute of Dental Sciences (IGIDS), Puducherry. Dentists are professionals who are in face to face contact with patients. Hence, it is necessary to assess the attitude of dental students who are dealing with patients even in the COVID-19 pandemic.

### **Study population**

The study population comprised dental students who are doing their internship and dealing with patients during the COVID-19 pandemic.

### **Inclusion criteria**

- Dental students doing internship in IGIDS, Puducherry.
- Interns dealing with patients in the COVID-19 pandemic.

### **Exclusion criteria**

- First-, second-, third-, and final-year dental students and postgraduates were not included
- Doctors, dentists, and nurses were also not included.

### **Ethical clearance**

- Prior to the start of the study, ethical clearance was obtained from the institutional ethics committee, IGIDS, SBV University
- Online informed consent was obtained from the study participants

- The anonymity of the participants was maintained.

### **Scheduling**

Data collection was scheduled in July and August, 2020. Sample size The sample size was calculated as 60 in accordance with the study.

### **Sampling technique**

A list of dental students studying in IGIDS was obtained. Convenience sampling technique was adopted. Sixty participants were selected conveniently.

### **Survey instrument**

A revalidated set of questionnaires was used for the survey purpose. The first section collected demographic information of the participants such as age and level of education. The second part of the questionnaire consisted of ten questions to assess the attitude of dental students in managing emergency care during the COVID-19 pandemic.

### **Survey methodology**

After a brief introduction on the purpose and intent of the study, a questionnaire in the form of Google Form was sent. The filled questionnaires were collected. Only completely filled questionnaires were considered for analysis.

### **Statistical analysis**

Data were entered in a Microsoft Excel spreadsheet and analyzed using SPSS software (version 2.0) IBM Corp. Released 2012. IBM SPSS Statistics for Windows, Version 21.0. Armonk, NY: IBM Corp. Descriptive statistics were used. For significance level,  $P < 0.05$  was considered statistically significant.

## **RESULTS**

The collected data revealed that in this crucial period of coronavirus pandemic, 45% of the students were willing to treat patients; but still among the sixty students, 45% were in a confused state to treat patients because of the fear of getting affected or they may affect their family members and another 10% of them were not ready to treat patients. Nearly 98.3% of the students were willing to carry out only emergency dental treatment because they found that by this way, they reduce the risk of exposure to coronavirus, and they think treating emergency cases is enough in this crucial period of corona.

Only 1.7% of the students were willing to treat preventive dental treatment by proper preventive measures, and they seem to be dedicated to their work even in this crucial period.[9] It is necessary to wear a mask in this situation, and there comes the question that which mask do the student prefers.

The data reveal that 88.3% would wear N95 masks because previous studies have reported that this mask prevents the entry of coronavirus, which makes the students feel being helped in this situation, 11.7% of them would wear surgical masks instead of N95 mask due to cost constraints, and for the dental profession, dentists tend to change mask for every patient.

It is not affordable, and hence during this period, there is less availability of masks everywhere, so very few prefers surgical masks over N95 mask. In this crucial period, while treating patient, mask alone is not enough to prevent from exposure so face shield is also important for the dentist as there is a face-to-face contact with the patient and has high exposure rate. The data revealed that 96.7% of them would wear a face shield while treating patient, whereas other students reported that they may wear or might not wear the shield.

In dentistry, there is high exposure to aerosols during treatment, so it is necessary to wear a personal protective equipment (PPE) during treatment, but it is quite expensive. From the collected data, it can be said that 86.7% of the students would wear PPE during patient treatment, 6.7% of them were in a dilemma of whether to wear or not, which may be due to cost of the PPE, and 6.7% of them reported that they will not be wearing PPE as they felt that masks are enough for protection. In every medical profession, before starting a treatment, dentists used to ask patients' complaints and their history, hence in this crucial period, there has to be a distance of 3 feet maintenance between a patient and the dentist.

Data revealed that 65% of the students would be maintaining 3 feet distance from the patient while questioning about their complaints, another 21.7% prefer 2 feet distance as it is more convenient for them, and 13.3% of them reported that they will maintain only 1 feet distance, which is risky in this crucial period [Table 1].

Questions	Options	Frequency (%)
Will you be willing to treat patients in this crucial period of coronavirus pandemic?	A. Yes	27 (45)
	B. No	27 (45)
	C. May be	6 (10)
What kind of dental treatment would you suggest public to get treated during this pandemic?	A. Routine dental treatment	0
	B. Preventive dental treatment	1 (1.7)
	C. Emergency dental treatment	59 (98.3)
What kind of mask would you wear during treating patients?	A. N95	53 (88.3)
	B. Surgical mask	7 (11.7)
	C. Cloth mask	0
Would you wear a face shield while treating your patient?	A. Yes	58 (96.7)
	B. No	1 (1.6)
	C. May be	1 (1.6)
Would you wear PPE while examining your patient?	A. Yes	52 (86.7)
	B. No	4 (6.7)
	C. May be	4 (6.7)
How distant would you be maintaining when you question your patient about his/her complaints? (feet)	A. 3	39 (65)
	B. 2	13 (21.7)
	C. 1	8 (13.3)
Would you suggest your dental assistant to wear PPE?	A. Yes	54 (90)
	B. No	0
	C. May be	6 (10)
Will you maintain a proper scheduled method of treatment appointments?	A. Yes	57 (95)
	B. No	0
	C. May be	3 (5)
Will you encourage your patient to use teledentistry to avoid crowd in your clinic?	A. Yes	57 (95)
	B. No	0
	C. May be	3 (5)
What kind of mask would you suggest your patient to wear?	A. N95	40 (66.7)
	B. Surgical mask	20 (33.3)
	C. Cloth mask	0

**Table 1 :** Attitude of dental students towards emergency care management during COVID-19 pandemic

## DISCUSSION

The rampant spread of coronavirus worldwide increases the likelihood that dental health-care professionals will treat their subset of patient population.[9] Universal precautions are crucial to minimize the spread of this virus and the associated diseases.[6] As presented in this review, further precautions are necessary for dental students while treating patients. This survey includes a sample of dental students who are doing their internship in IGIDS, Puducherry. The data were collected from sixty dental students who are doing their internship in IGIDS. The sampling was obtained by a method called convenient sampling.

After the questionnaires were evaluated, they were sent to them through online Google Forms, and the filled questionnaires were collected. As dentists are dealing with the oral cavity, there is inconvenience during treatment due to salivary production, and we follow a method called four-handed dentistry that is help of an assistant during treatment. Hence, in that case, treating patients with an assistant in this crucial period, the dentist should suggest them also to wear a PPE so that they can reduce the risk of exposure. From the collected data 90% of the dental students suggested their dental assistants to wear PPE and only 10% of them were not ready to suggest their assistants to wear PPE because of the affordability of the PPE kit.[6]

During the COVID-19 pandemic, there has to be maintenance of social distancing among people, and hence it is advisable to follow a proper scheduled method of treatment appointments. Ninety-five percent of the students were willing to follow proper scheduled appointments for the patients so that they can avoid crowding in dental care and maintain proper social distancing among patients. Only 5% of them were in a confused state of giving scheduled appointments.[5]

As technology has improved, several ways are available for a patient to consult a dentist. In that case, teledentistry is a method in which a patient can call a dentist through mobile phones and ask for their opinion and can also be prescribed with medicine for minor dental problems. Hence, in this period, dentists can encourage their patients with this idea of consultation to avoid crowd in dental care. The data revealed that 95% of the students were willing to encourage their patients to use teledentistry to avoid crowd in dental care. Only 5% of them were in a confused state to suggest this to their patients.

As coronavirus is also said to be an airborne disease, it is advisable for the patients also to wear masks with high resistance, but due to their economic status, most of them cannot afford to buy N95 masks. As dentists could see patients with cloth mask which is not filterable against virus entry, as a health-care professional, dentists should suggest their patients to wear a mask with high resistance against the entry of the virus.[3,4] Nearly 66.7% of the students reported that they would suggest N95 mask to their patients and other 33.3% reported that they would suggest surgical mask as it is quite affordable.[9]

## CONCLUSION

The mean value of the data collected was 82.67%, which indicates a positive attitude of dental students in managing emergency care during the COVID-19 pandemic in students doing their internship in IGIDS. This promising attitude prevailing among dental students must be encouraged and sustained in order to survive the humankind with dental services in this crucial period of pandemic.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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