



Research Article

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## **Deferring Dental Treatments During Covid-19 Pandemic in India: A Survey Describing Patients' Perception**

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**ABSTRACT**

**Background:** Since the inception of the COVID-19 outbreak human life has been adversely affected globally, including oral health, which is a good indicator of overall health. This has resulted in decreased utilization of dental services and avoidance of the treatment in many countries including India. Despite active COVID-19 vaccination in the country, people are still delaying their dental treatments leading to the emergence of a variety of dental related issues.

**Aims and Objectives:** Fewer studies have examined patients' differing oral treatment during COVID-19 waves, especially in developing countries like India. Therefore, this study aims to shed light on how Indian patients cope with oral health-related issues during the COVID-19 pandemic specially after the second wave.

**Materials and Method:** Patients' perceptions were explored using a web-based questionnaire in a sample of 164 Indian patients. Participants were from different occupations and parts of the country. The survey consists of items related to socio-demographic information, oral health care, causes for delaying dental treatments amidst COVID19, and their future visit to the dental clinic. Next, the descriptive analysis of all the items was performed.

**Results:** The results tell us that 82% of patients believed in delaying their dental treatment during symptoms of Coronavirus while 18% participants have already delayed their treatment in fear of getting affected by the COVID-19 pandemic. This has implications in utilization dental services and in policy planning related to public health protocols in the light of pandemic situations like COVID-19.

**Conclusion:** The findings of this work clearly suggests that there is a clear tendency to defer their dental care needs among Indian patients during the COVID-19 pandemic phase.

**Keywords:** SARS-CoV-2, COVID-19, Aerosols, Dental treatment, perception

## Introduction

Coronavirus Disease 2019 (COVID-19) is a pandemic infecting human all over the world and hitting India with a population of more than 1.34 billion, being the second worst affected country after the United States. It first started as an epidemic in Wuhan City, China. It was declared as a pandemic by World Health Association (WHO) in March 2020 as it spreads rapidly across the globe. The first case of COVID-19 in India was identified on 30th January 2020 in Kerala. COVID-19 infection includes a wide range of symptoms; from asymptomatic to mild cases and severe forms. The symptoms include fever, sore throat, cough, difficulty in breathing, myalgia, pneumonia etc. It can also spread among people through coughing, sneezing and inhalation of coronavirus-containing micro-droplets from infected persons.

Like other countries, India also has started taking precautionary measures to prevent the rapid spread of the disease and decline the number of active cases. The Ministry of Health and Family Welfare (MOHFW) has raised awareness about the recent outbreak and considering this, almost all of the dental services were suspended and only emergency treatment was kept active. After all, dental treatment procedures are considered a high-risk procedure for both the dentist as well as the patient because many dental treatment procedures involve aerosol generation. There is a great concern over dental practice and coronavirus transmission all over the world including India. Collectively all these are leading to an observable change in health-seeking behavior during this pandemic. This study aims to find out the patients' perception regarding their dental treatment and how they are tackling their dental care needs.

## Methodology

A randomized selection of samples was done and a sample size of n=164 was recruited in the study. An online survey was conducted in the months of June-July 2021 for a period of 1 week, from 25.06.2021 to 02.07.2021 using the Google Form software to provide questions and collect and elaborate their responses. The participants were invited via Facebook, WhatsApp, e-mails and other social media platforms. The questionnaire was prepared by compilation of the information gathered from similar research and information and updates based on the current scenario in India due to the second wave of COVID-19 pandemic.

The questionnaire was divided into two parts and each part consists of questions in the form of multiple choice. The questions were in English and were framed in a very simple way so that the participants find that easy to understand. The first part of the questionnaire was related to the socio-demographic characteristics that were investigated, while the second part, which comprised the bulk of the questions, was concerned with people's attitude, behavior and perception about the dental treatment procedures and the utilization of dental practice during COVID-19 pandemic.

The questionnaire maintained the privacy and confidentiality of all the information collected in the study and the ethicality of the study were preserved, as the data were treated at an aggregate level. The questionnaire was available for accepting responses for one week. All the questions were mandatory to answer. Only one response from each participant was accepted to visualize the actual mindset of the participants and to avoid duplication of responses.

## Result

In this sub-section, we have enumerated the results of this study. The demographic profile of the respondents has been shown in the following table 1. Further, the figures present respondents' attitudes toward differing dental treatment using pie charts (mention figure number range).

| Categories                   | Male = 85<br>(51.8%) | Female = 71<br>(48.2%) | Total = 164<br>(100%) |
|------------------------------|----------------------|------------------------|-----------------------|
| <b>Age</b>                   |                      |                        |                       |
| 18-25 yrs                    | 42                   | 55                     | 97                    |
| 26-35 yrs                    | 30                   | 23                     | 53                    |
| 36-45 yrs                    | 03                   | 04                     | 07                    |
| 45+ yrs                      | 04                   | 03                     | 07                    |
| <b>Education</b>             |                      |                        |                       |
| Undergraduate                | 10                   | 21                     | 31                    |
| Graduate                     | 39                   | 28                     | 67                    |
| Post Graduate                | 21                   | 24                     | 45                    |
| Doctorate and Higher Degrees | 13                   | 08                     | 21                    |
| <b>Living Area</b>           |                      |                        |                       |
| Urban                        | 73                   | 62                     | 135                   |
| Rural                        | 14                   | 15                     | 29                    |
| <b>Work Status</b>           |                      |                        |                       |
| Student                      | 42                   | 54                     | 96                    |
| Part-Time                    | 10                   | 3                      | 13                    |
| Full-Time                    | 25                   | 11                     | 36                    |
| Non-working                  | 5                    | 14                     | 19                    |

**Table 1:** Respondents' demographic details

Out of 164 participants, 85 participants were male and 71 were female. The respondents have actively participated and have given their responses as per their choice and conditions. The maximum no. of participants belongs to the age group of 18-25yrs followed by 26-35yrs in both male and female groups. The participants were majorly Graduate on both male and female sides with the majority living in urban areas.

| Questions   | Yes (%) | No (%) |
|---|---------|--------|
| 1. I had observed difficulty in maintaining oral hygiene during the COVID-19 Pandemic.                  | 55%     | 45%    |
| 2. I know the causes of the spread of COVID-19 infections.  | 93%     | 7%     |
| 3. I am aware that most dental procedures involve Aerosol or splatter production.                       | 46%     | 54%    |
| 4. I know the risk associated with the spread of Coronavirus during dental treatment procedures.        | 85%     | 15%    |
| 5. I had observed increasing tooth-related problems (decaying teeth etc.) during the COVID-19 Pandemic. | 38%     | 62%    |
| 6. While visiting the Dentist from now onwards, I'll check whether my dentist is vaccinated or not.     | 82%     | 18%    |
| 7. I'll suggest my friends/ relatives to get their dental treatment done on time during this pandemic.  | 69%     | 31%    |

**Table 2:** Showing respondents' perceptions

According to 55% of the total participants, they have observed difficulty in maintaining oral hygiene during the COVID-19 pandemic and 93% of the total participants knew the cause of infection of this infection. 54% of respondents knew that most of the dental procedures involve splatter production and 85% knew the risk associated with the spread of Coronavirus during dental treatment procedures. 38% participants have observed increasing tooth-related problems like decay/cavity in tooth etc. during this pandemic. It is very evident from this survey that patients will check from now onwards, whether their dentist is vaccinated or not as 82% participants have opted for the same in the questionnaire while 69% participants will suggest their friends/ relatives to get their dental treatment done on time.

Q8. I am feeling..... while going to the Dentist-

- a) Safe (40%)
- b) Unsafe (60%)

Q9. Mode of consultation that I'll choose for my dental problems during COVID-19 pandemic-

- a) Physical (in-person) (42%)
- b) Virtual (58%)

Through this survey in India, it is found that 60% of the patients are feeling unsafe while visiting the dental clinic in this pandemic due to the spread of the infection. COVID-19 pandemic has increased online consultation and telemedicine and this is very evident from the responses of 58% of participants who have given the opinion of going for virtual consultation during the COVID-19 pandemic.

Q10. I know that COVID-19 infection can spread through-

- a) The saliva of an infected person (4%)
- b) Coughing and sneezing of infected person/droplet infection (9%)
- c) By contact with aerosols produced during dental treatment procedures of infected persons (2%)
- d) All of the above (85%)

85% of participants have said that they know that COVID-19 infection can spread through the saliva of an infected patient, coughing or sneezing of infected patients and through contact of aerosols produced during dental treatment of infected patients.

Q11. I believe in delaying dental treatments if the following symptoms are present-

- a) Fever (9%)
- b) Cough/sore throat (7%)
- c) Difficulty in breathing (2%)
- d) All of the above (82%)

It is observed that 82% of patients believed in delaying their dental treatment during symptoms of fever, cough and cold, difficulty in breathing etc.

Q12. I had faced tooth-related problems during the COVID-19 Pandemic and I-

- a) Had visited the dentist and got my treatment done (22%)
- b) Had tried self-medication including home remedies (19%)
- c) Had virtually consulted the Dentist (13%)
- d) Didn't visit the Dentist at all (46%)

46% participants didn't visit the Dentist even they have faced tooth-related problems during COVID-19 pandemic while 19% have tried self-medication including home remedies whereas 13% have consulted the dentist via online mode. Only 22% of the total respondents have visited the dentist and got their treatment done.

Q13. I had an appointment for my dental treatments during COVID-19 Pandemic and me-

- a) Had visited my Dentist on time (19%)
- b) Had scheduled my appointment (10%)
- c) Had delayed my treatment in fear of getting affected by Coronavirus (18%)
- d) Wasn't having any appointment (53%)

18% participants have delayed their treatment in fear of getting affected by Coronavirus while 10% have re-scheduled their appointment.

Q14. In case of my non-emergency dental treatments like a routine check-up, cleaning, follow up, etc.-

- a) I'll not delay in going to the Dentist as per my schedule (18%)
- b) I'll delay my treatment due to fear of getting an infection of Coronavirus (14%)
- c) I'll delay my treatment as long as I don't feel any discomfort (27%)
- d) I'll delay my treatment till I'll be fully vaccinated (41%)

It is clearly understood from the responses of 41% of participants that they believe in delaying their dental treatment till they become fully vaccinated

Q15. In case of any dental emergency, I'll-

- a) Not delay my treatment (42%)
- b) Consult the Dentist virtually (37%)
- c) Take some medicines on my own to get relief (7%)
- d) Try home remedies to get relief (14%)

42% of the respondents have marked that they'll go to the dentist without delaying only in case of dental emergency while 37% will consult via online mode.

Q16. I am planning to visit the Dentist-

- a) In next month (19%)
- b) Within next 3-4 months (24%)
- c) Next year (6%)
- d) Not at all, until I'll require any emergency treatment (51%)

51% participants will not go to the dentist in this pandemic until and unless there will be any emergency.

### **Conclusion**

COVID-19 has not only created a threat to humanity but also has damaged the lives of individuals and/or families in different ways- be it professionally or psychologically. This study was carried out immediately after the end of the second wave in India (25.06.2021 to 02.07.2021). The aim was to understand through this, how concerned dental patients were about the possibility of contracting an infection in the dental practice and if this may affect their visit to the dentist. The present questionnaire was designed trying to reduce the chances of the errors in answers which might be induced by misinterpretation of questions, by asking a limited number of simple and clear questions; nevertheless, limitations of such surveys are mainly related to the difficulties in conveying feelings and emotions into multiple-choice answers. In the present case, however, all questions were answered and the results were never contradictor, showing overall good compliance from participants.

In more than half of the participants (55%), it is found that they had observed difficulty in maintaining their oral hygiene while 45% of them haven't observed any difficulty for the same during this pandemic phase. In fact, 85% of the participants knew the risk associated with the spread of Coronavirus during dental treatments and 60% of the people are feeling unsafe while visiting the dentist. 58% of the

participants will choose teledentistry or virtual consultation to the dentist for their dental problems during this pandemic while 42% of participants will go to the dental clinic.

There is a clear-cut tendency of delaying dental treatment is revealed from this survey because 42% of the participants have faced tooth-related problems during the COVID-19 pandemic but they didn't visit the dentist while 19% and 11% had virtually consulted and tried home remedies for the same respectively. Only 22% of them had visited the dental clinic for treatment. Despite having an appointment for their dental treatment, 18% of participants have delayed their treatment due to the fear of getting affected by Coronavirus while 10% have re-scheduled their appointment.

Therefore, correct communication between patients and dental practitioners is of utmost importance to remove this fear of getting infected by Coronavirus from the patients' minds. On the other hand, the dentist should follow proper sterilization and disinfection procedures to avoid the chances of infection and should reduce the number of scheduled appointments per day. There is a need to initiate some programs from the government side along with health care workers for the counselling of the patients and making them more aware about dental treatments and clearing their myths and queries. The introduction of tele-dentistry, paying attention to infection control measures, and the development of isolated emergency dental care centres are pragmatic and effective ways to maintain and enhance oral health among the public.

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