

Survey data on dental treatment during the covid-19 outbreak at Patna in the state of Bihar, India

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Abstract:

It is of interest to assess the level of knowledge on dental treatment during the COVID-19 pandemic at Patna, Bihar, India. The study population consisted of Indian subjects with a minimum qualification of high school. An online questionnaire was sent to a group of subjects consisting of both male and female in March 2020. The questionnaire comprised of a series of questions about subjects' demographic characteristics; their awareness of the COVID-19 and their perception towards dental treatment. This study included a total of 650 members aged 20-70 years (mean 36.9 years with a standard deviation of 10.5 years) participants. A total of 446 subjects responded to questionnaire. Data shows that 29.1% subjects had completed their master (graduate) degree, 52.2% had knowledge of corona virus from news, and 30.5% had read about COVID-19 from several official websites. A total of 71.3% participants showed reluctance in undertaking dental treatment during the pandemic. The majority of participants (60.5%) believed that dental setups could be a potential source of infection of COVID-19 and thus avoided visiting dentists. Many of them (69.7%) adhered to medicines instead of dental treatment. However, most of them (96.6%) agreed not to hide any symptoms of COVID-19 from the dentist. 54.7% agreed to undergo a screening test for the virus. 93.7% participants refrained from cosmetic and aesthetic procedures during the pandemic and 54.7% believed that the cost of dental procedures would be increased during the pandemic. Data shows that subjects were aware of COVID-19 symptoms, mode of transmission of the virus, screening test and in-home precautions/measures to be taken. However, subjects had limited comprehension of the extra precautionary measures that protect them during dental procedures. Thus, a majority of them refrained from visiting dentists and avoided aesthetic procedures in Patna, Bihar, India.

Keywords: COVID-19, dental service

Background:

The coronavirus disease (COVID-19) originated in Wuhan, China and is a pandemic around the world. It has been witnessed that the rapidly spreading corona virus is more contagious than severe acute respiratory syndrome coronavirus [1]. The exact mode of transmission has been speculated by researchers worldwide. A suggested mode of transfer or route of human-to-human transmission is via airborne droplets, touching or coming into contact with an infected person or a contaminated surface. Moreover, other routes such as blood or saliva have yet to be explored. These routes of transmission increase the concern about a similar route of transmission for COVID-19 in the dental setting [2]. There are practical guidelines recommended for dentists and dental staff by the Centres for Disease Control and Prevention (CDC), the American Dental Association (ADA), and the World Health Organization to control the spread of COVID-19 [3]. Like with other contagious infections. These recommendations include personal protective equipment, hand washing, detailed patient evaluation, rubber dam isolation, anti-retraction hand piece, mouth rinsing before dental procedures, and disinfection of the clinic. In addition, some guidelines and reports have provided useful information about the signs and symptoms of the disease, ways of transmission, and referral mechanisms to increase dentists' knowledge and prevention practices, so they could contribute, at a population level, in disease control and prevention [3-8]. Therefore, it is of interest to document a survey data on dental treatment during the covid-19 outbreak at Patna in the state of Bihar, India to glean insights for dental service.

Materials & Methods:

A total of 446 subjects between the age group of 20-70 years who were willing to participate and comply by the inclusion criteria were included in the survey.

Inclusion criteria:

- 1) Subjects between age group 20-70 years.
- 2) Subjects must be Indian.
- 3) All the subjects who have access to internet through mobile phones or computers to undertake the online survey
- 4) Subjects with minimum qualification of high school.
- 5) Subjects who volunteered themselves and were not urged/compelled to take the questionnaire.
- 6) Dentists (Graduates and Post-graduates) too were included.

Exclusion criteria:

- 1) Foreign nationals/NRIs

- 2) Subjects without any basic qualification
- 3) Subjects with no access to electronic media.
- 4) Subjects participating in any alternative dental survey related to COVID-19 pandemic simultaneously.

Model:

This was an online survey conducted using Google Forms. A total of 446 subjects participated in the study. The link for the survey was mailed to the subjects using E-mail.

Questionnaires:

- 1) Gender (M/F)
- 2) Educational qualification
- 3) Are you aware of Covid-19 pandemic?
- 4) Are you willing to go for dental treatment during this pandemic?
- 5) Do you find a dental hospital to be a potential source of Covid-19?
- 6) Which oral/dental disease are you encountering these days?
- 7) Will you prefer being on medicine rather than going for the dental treatment during Covid-19 pandemic?
- 8) Would you mind going through a screening for Covid-19 before dental treatment?
- 9) Amid Covid-19 pandemic what extra precaution/care are you taking of your oral/dental health?
- 10) To get your dental treatment done will you hide any details from your dentist/doctor during Covid-19?
- 11) Do you think Covid-19 will affect the dental treatment modalities in future?
- 12) Will you prefer going for any cosmetic treatment during Covid-19 pandemic?
- 13) Will an increment in the cost of dental treatment bother you during pandemic situation?

Results and Discussion:

Insights on the level of awareness, perception, and attitude of patients regarding dental procedures during COVID-19 pandemic are gained using the data presented in **Figure 1**. A total of 446 responses were received from subjects comprising of 57.6% male and 42.4 % female participants. Majority of subjects had a minimum qualification of intermediate accounting for 58.1% of total participants and 29.1% individuals were postgraduates. 52% were already aware of COVID-19 pandemic through news channels and 30.5% received basic knowledge about the pandemic from official websites.

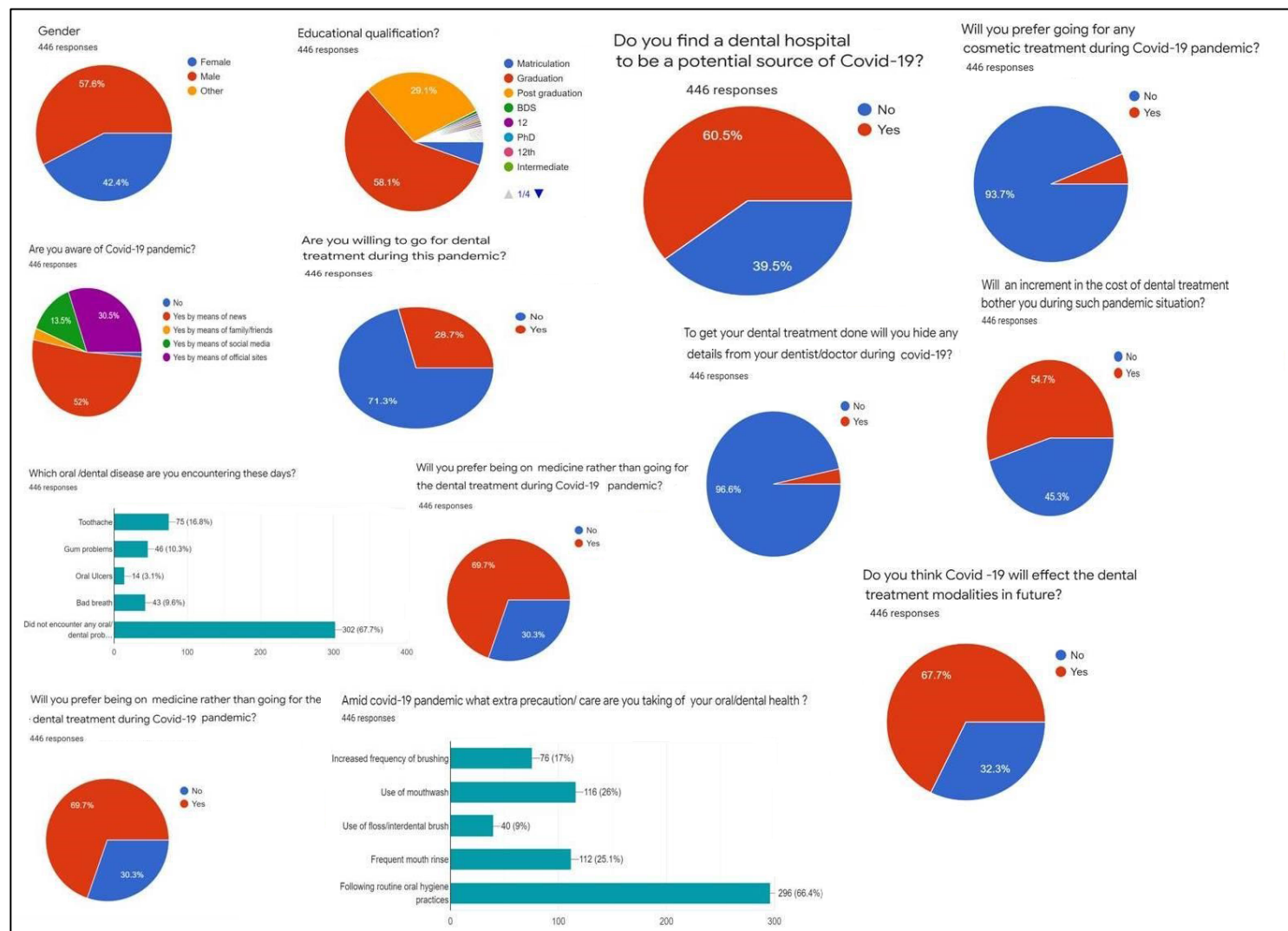


Figure 1: Distribution of survey data collected from the subjects for each parameter

Besides 13.5% used social media to get daily updates about corona virus. It should be noted that 71.3% of participants showed their reluctance in undertaking dental treatment during this pandemic. 60.5% subjects were of the opinion that dental operatories can be potential source of COVID-19 thus they refrained from getting treated. 67.7% didn't encounter any dental or oral disease during these days. Subjects rather opted for systemic medications than dental treatment with 69.7% showing preference to medicines over

dental visits and treatment modalities. 54.7% did not object for a screening test for COVID-19 while 45.3% showed reluctance in undertaking a swab test or RT-PCR. An attempt was made to analyse if subjects were taking extra precautions of oral health with 66.4% following routine oral hygiene practices, 26% frequently rinsing with regular mouth wash, 25.1% swishing properly, 17% increased frequency of brushing and 9% even used flosses and interdental toothbrushes. A total of 96.6% subjects agreed to

transparency without hiding any details related to corona virus or any other systemic involvement during dental check-ups. 67.7% of participants believed that pandemic will affect the dental treatment modalities in future. 93.7% responded that they would avoid aesthetic or cosmetic corrections during this pandemic. 54.7% reported that an increment in the cost of dental treatment would be a cause of concern for them. There has been no evidence-based specific treatment for COVID-19, and management of COVID-19 has been largely supportive [3]. The current approach to COVID-19 is to control the source of infection; use infection prevention and control measures to lower the risk of transmission; and provide early diagnosis, isolation, and supportive care for affected patients [9].

Limitations:

Despite the findings inferred here, it is important to stress that this online cross-section survey had limitations, including the relatively low response rate, which resulted in a smaller than expected sample size as 650 participants were included but only 446 responded. This could have been caused by the short period of data collection. However, this is considered a moderate sample size. Moreover, this pandemic has caused many to be busy with watching the news and taking care of personal affairs. This means that those who were active on social media during the short period of data collection were the only ones that had the chance to

participate in the study. This could result in selection bias and sampling error, which prevents the ability to generalize our results.

Conclusion:

Data shows that subjects were aware of COVID-19 symptoms, mode of transmission of the virus, screening test and in-home precautions/measures to be taken. However, subjects had limited comprehension of the extra precautionary measures that protect them during dental procedures. Most of them refrained from visiting dentists and avoided aesthetic procedures. Therefore, it is important to implement sound prevention measures in dental clinics and to increase the level of awareness among patients as well as dentists to prevent spread of virus. Hence, this study helps to assess the level of knowledge and apprehension among Indian population regarding COVID-19 in dental treatment at Patna in the state of Bihar, India.

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