

Dentists Awareness, Perception, and Attitude Regarding COVID-19 and Infection Control - A Survey Study Conducted in a Sample of Indian Dentists

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ABSTRACT

Aim: The aim of this survey study is to assess the level of awareness, perception, and attitude regarding COVID-19 and infection control amongst Indian dentists.

Method: A survey study was conducted in a sample of 485 Indian Dentists to gather information regarding the awareness, perception, and attitude regarding COVID-19 and infection control.

Result: Considerate percentage of dentists was aware about the incubation periods and the steps to be taken in their clinics to prevent the spread of the disease. Marked percentage of people believed that there has a need to change infection control methods in their clinics.

Conclusion: By the information collected from the survey, there has been noted that considerate percentage of dentists were refraining to treat a person suspected to be infected by COVID-19. The awareness can be spread amongst dentists regarding the personal protection steps to be taken in order to provide treatment to the most needy.

BACKGROUND

Corona Virus Disease (COVID-19) has become a deadly pandemic disease since its spread from Wuhan, China in December [1]. Despite the availability of prevention guidelines and recommendations on infection control, many dental practices lack the minimum requirements for infection control [2]. There are in detail mentioned guidelines by the AIIMS, NEW DELHI, regarding proper protocols to be followed by a health care professional in times of COVID-19. The FDI World Dental Federation have also provided with the infection prevention and control guidelines in dental practice to be followed strictly during these times. The CDC Centers for Disease Control and Prevention have also mentioned in detail the steps that dental facilities postpone elective procedures, surgeries, and non-urgent dental visits and prioritize urgent and emergency visits and procedures now and for the coming several weeks [3,4]. Upon understanding the lack of proper infection control protocols in many clinics, proper maintenance of the sterilization and disinfection need to be carried out in order to

prevent the spread of the virus. Awareness amongst all the dentists is very important regarding the symptoms and incubation period of COVID-19 in order to refer the patient to a proper testing and also manage the patient with proper infection control techniques and asking the patient to maintain social distance from the rest patients [3-5].

Table 1: Survey Questionnaire.

Sr. No.	Entity	Score
1	Gender	Male Female
2	Age	<30 Years > 30 Years
3	Year of clinical experience?	Less than 5 5-10 Years More than 10 Years
4	Health sector	University clinic Private clinic Public sector
5	Incubation period	1 to 14 2 to 7 7 to 14 7 to 21 7 to 21
6	Symptoms of COVID-19 infection	Fever Cough Shortness of breath Diarrhoea Vomiting Running nose Sore throat Red eyes Skin rash Joint or muscle pain
7	Mode of transmission	May present with no symptoms Coughing/Sneezing Hand shaking Touch inanimate surfaces
8	Measures necessary to be taken to prevent transmission from patients	Frequently clean hands by using alcohol based hand rub or soap water Routinely clean and disinfect surfaces in contact with known or infected person PPE such as dental goggles, masks and gloves Put face mask on known suspected person Avoid moving and transporting patients out of there area unless necessary All staff members wear protective clothing Place known or suspected patients in adequately ventilated single rooms
9	Is it important to change mask and glove both regularly to decrease the possibility of transmitting infections?	Yes No May be
10	Preparation of COVID-19 infection	Very dangerous Moderately dangerous Not dangerous
11	Is it important to educate the population to prevent spread of disease	Yes No
12	Precautionary measures to be taken in dental clinic	Ask patients to sit far from each other Wear masks while in waiting room Wash hands before sitting on dental chair No such measures as it will cause panic
13	Attitude towards patients sneezing or coughing in the clinic	Refer the patient to the hospital without treating them Refuse treating the patients and ask them to leave Treat the patient and than refer them to the hospital
14	Is it mandatory to check the temperature of every staff and patient as a routine procedure?	Yes No
15	Would you allow your dental assistants to work with patients if they had flu like symptoms?	Yes No
16	Would you prefer treating a patient who is suspected patient of COVID-19?	Yes No
17	Do you think the infection control procedures should be changed post lockdown?	Yes No
18	How important is a dentists role in spreading information and awareness regarding COVID-19?	Very significant Moderately significant Insignificant

MATERIAL AND METHODS

This survey study was conducted amongst Indian dentists. A questionnaire was made using Google forms and was disseminated via social media. The dentists participating in the survey were informed about their confidentiality and also were told about the purpose of the study to be conducted. Total 485 responses were rendered. The questionnaire included 18 questions with multiple choice questions/options. The evaluation was done electronically using the interphase provided by the common survey software on the internet.

RESULTS

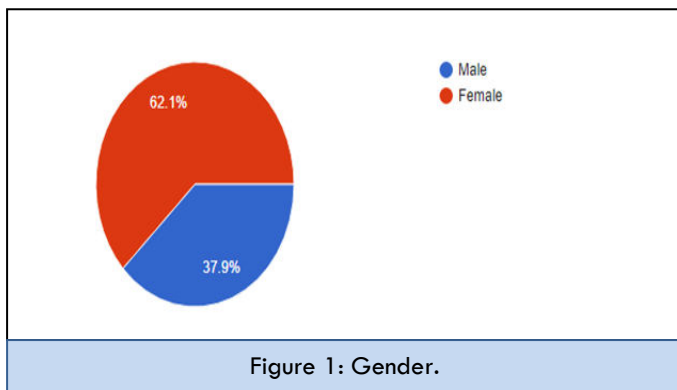


Figure 1: Gender.

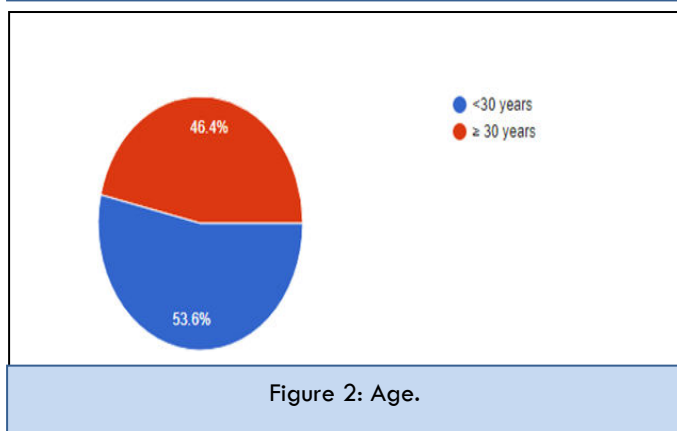


Figure 2: Age.

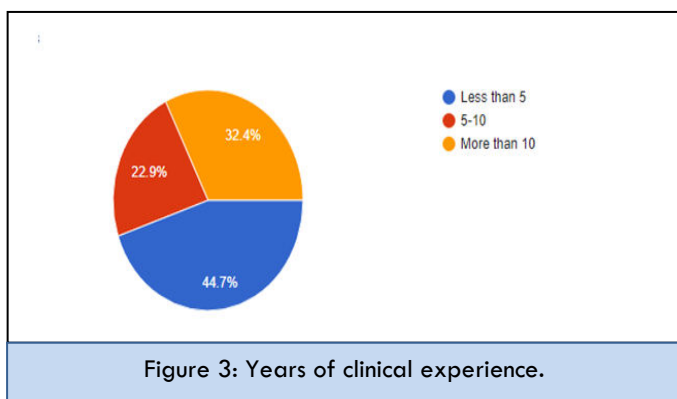


Figure 3: Years of clinical experience.

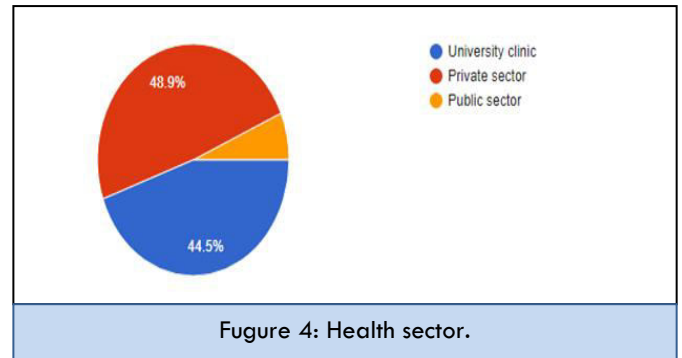


Figure 4: Health sector.

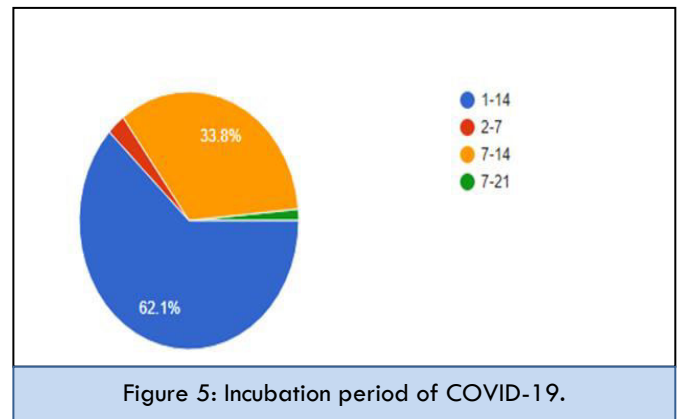


Figure 5: Incubation period of COVID-19.

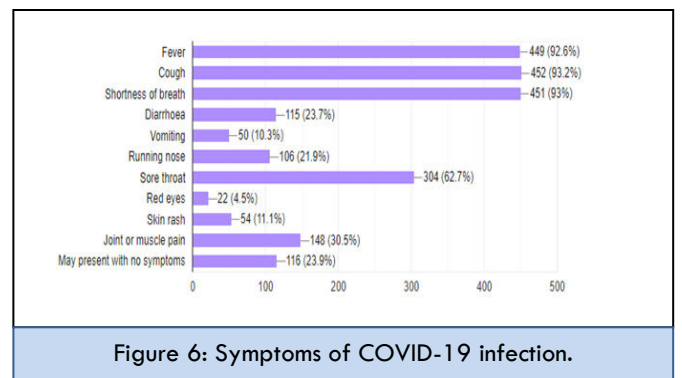


Figure 6: Symptoms of COVID-19 infection.

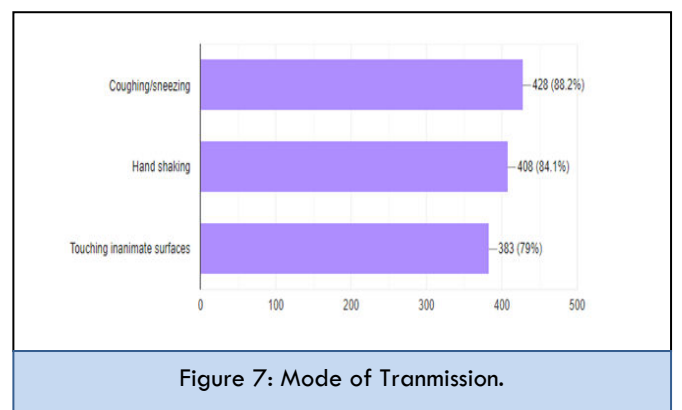


Figure 7: Mode of Transmission.

Frequently clean hands by using alcohol based hand rub or soap water	95.5%
Routinely clean and disinfect surfaces in contact with known or suspected patients	93%
Personal protective equipment such as dental goggles, masks, and gloves	94.2%
Put facemask on known suspected patients	71.3%
Avoid moving and transporting patients out of their area unless necessary	74.2%
All health staff members wear protective clothing	87%
Place known or suspected patients in adequately ventilated single rooms	73%

Figure 8: Mesures necessary to be taken to prevent transmission from patients.

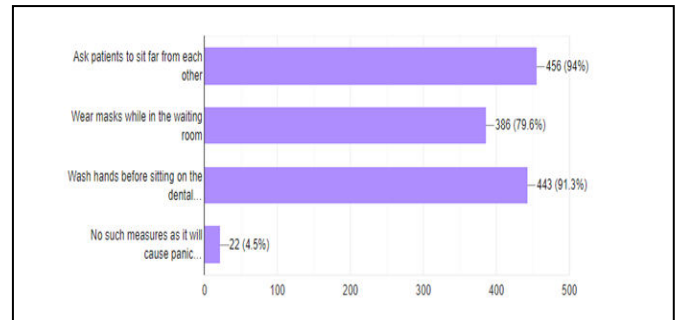


Figure 12: Precautionary measures to be taken in dental clinic.

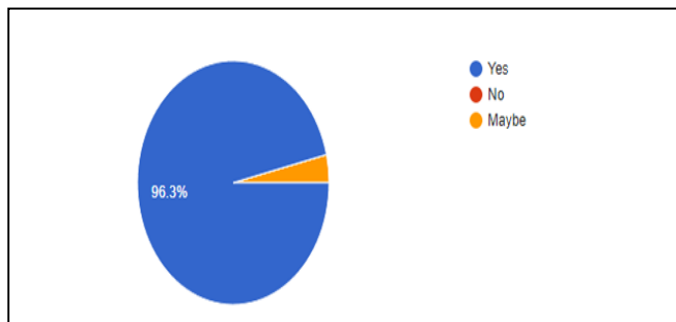


Figure 9: Is it important to change masks and gloves both regularly to decrease the possibility to transmit infections.

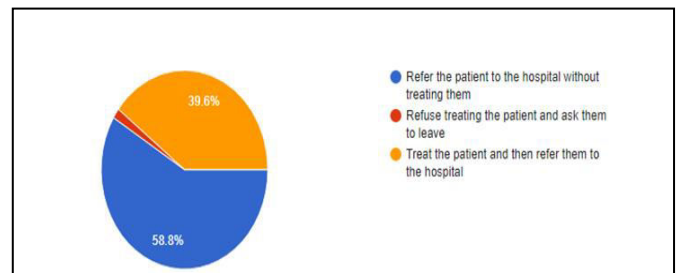


Figure 13: Attitude towards patient sneezing or coughing in the clinic.

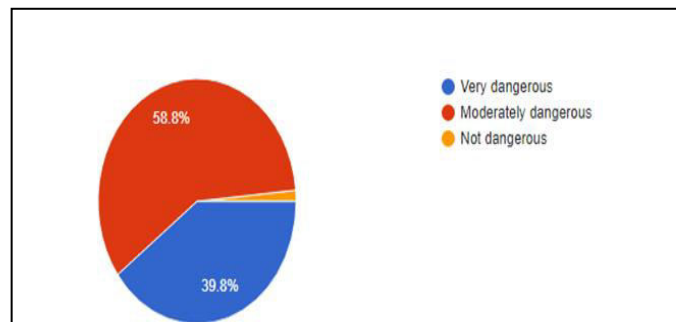


Figure 10: Perception of COVID-19 infection.

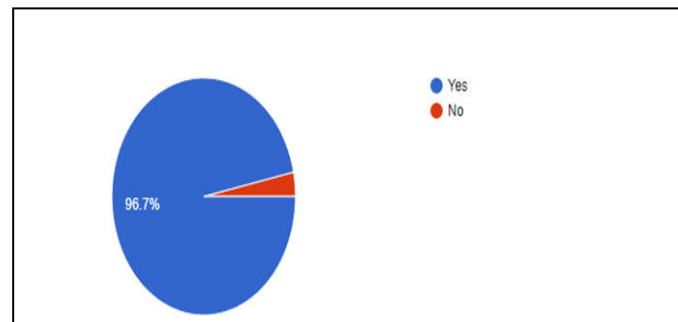


Figure 14: Is it mandatory to pre-check temperature of every staff and patient as a routine procedure?

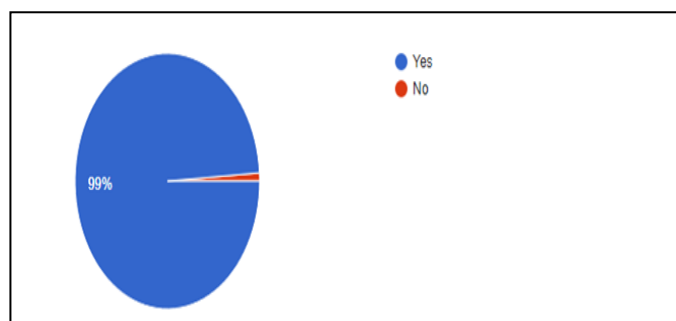


Figure 11: Is it important to educate the population to prevent spread of disease?

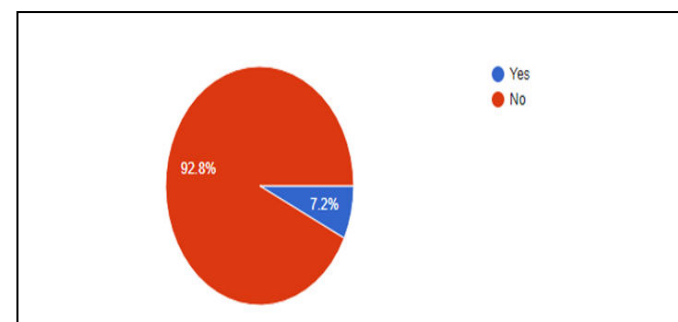
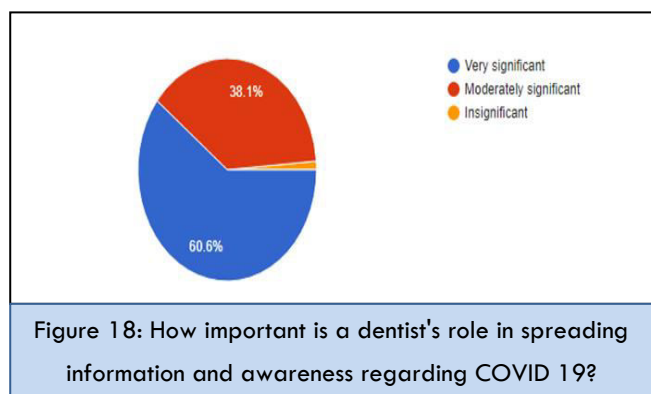
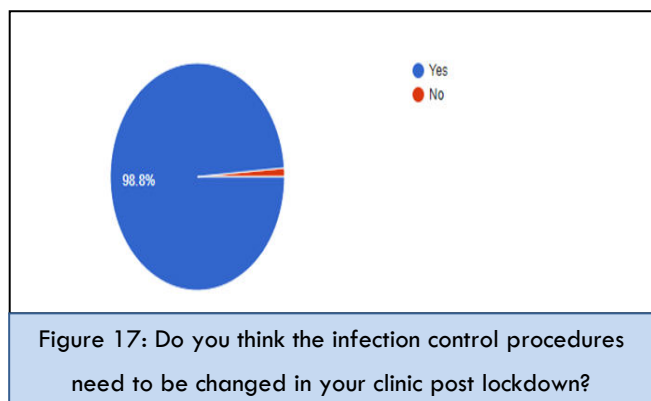
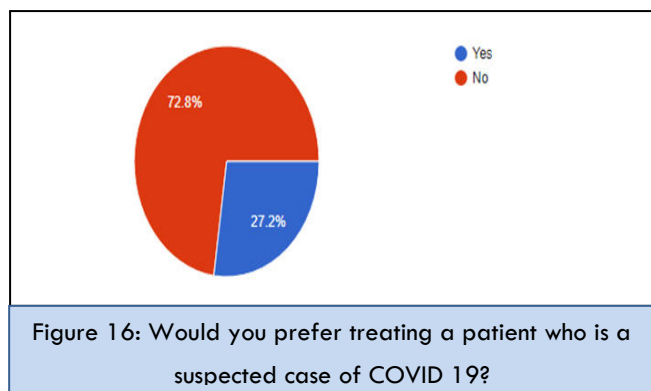


Figure 15: Would you allow your dental assistants to work with patients if they has flu-like symptoms?



(Figure 1) - 62.1% were females and 37.9% were males. (Figure 2) -53.6% was below 30 years and 46.4 were above 30 years. (Figure 3) - 44.7% had less than 5 years of clinical experience, 22.9% 5-10 years of experience and 32.4% more than 10 years of age. (Figure 4) - 44.5% worked in university clinic, 48.9% in private sector. (Figure 5) - 62.1% knew the incubation period of COVID-19 to be 1-14 days and 33.8% believed incubation period to be 7-14 days. (Figure 6) - for the symptoms of COVID-19 around 92.6% chose fever, 93.2% cough, 93% shortness of breath, 23.7% diarrhea, 10.3% vomiting, 23.9% running nose, 62.7% sore throat, 4.5% red eyes, 11.1% skin rash, 30.5% joint or muscle pain and 23.9% believed symptoms may or may not be present. (Figure

7) - regarding mode of transmission of the disease, 88.2% believed it is through coughing/ sneezing, 84.1% hand shaking and 79% believed by touching inanimate surface. (Figure 8) - measures necessary to be taken, 95.5% believed by washing hands, 93% by cleaning and disinfecting surfaces, 94.2% by PPE, 71.3% by putting mask on infected person, 74.2% by avoiding moving patient unless necessary, 87% to all staff members wear protective clothing, 73% by putting patients in adequately ventilated single rooms. (Figure 9) - 96.3% believed it is important to regularly change masks in order to prevent spread of infection and 3.7% believed not important. (Figure 10) - 39.8% believed that COVID-19 is very dangerous and 58.8% believed it is moderately dangerous. (Figure 11) - 99% believed it is important to educate the people to prevent the spread of the disease. (Figure 12) - precautionary measures, 94% believed ask the patient to sit far from each other, 79.6% believed ask patient to wear mask while waiting in waiting room, 91.3% ask patient to wash hands before sitting in dental chair and 4.5% believed no such measures should be taken which will cause panic. (Figure 13) - 39.6% would like to treat the patients and then refer them to hospital if suspected to be infected and 58.8% will refer patient to hospital without treating them. (Figure 14) - 96.7% believed it is mandatory to check the temperatures of staff and patients as a routine procedure. (Figure 15) - 92.8% would not allow the dental assistants to work with patients if had flu like symptoms and 7.2% believed they would allow the assistants to work with patients. (Figure 16) - 72.8% would not prefer treating a patient suspected of COVID-19 and 27.2% will prefer treating. (Figure 17) - 98.8% believed that the infection control procedures should change in their clinic post lockdown. (Figure 18) - 60.6% believed that a dentist's role in spreading awareness is very significant and 31.8% believed it is moderately significant.

DISCUSSION

Keeping in mind the importance of awareness regarding COVID-19 for every health care worker, this study has been conducted to assess the level of awareness amongst Indian dentists [6]. As the Dentists deal directly with the oral cavity, exposing themselves directly to the respiratory droplets, it is very important for the dentists to know the basic guidelines of infection control and prevention mentioned by the DENTAL

COUNCIL OF INDIA and other such reliable bodies for the steps to be conducted in order to prevent the spread [3-5]. Upon receiving the results of the survey, it is clear that the awareness regarding the control and prevention of spread amongst the dentist regarding COVID-19 is remarkable and also the possibility of providing the treatment to the person suspected to have been infected. The methods to be carried out in the clinic to prevent the spread are also known to considerate percentage of dentists.

A survey study conducted in Jordan by Yousef Khader et. al [7], study included a total of 368 dentists aged 22-73 years. 30.4% dentists had completed a master or residency program in dentistry, 53.0% had received training in infection control in dentistry, and 7.6% had attended training or lectures regarding COVID-19. 36.1% dentists reported that the incubation period is 1-14 days. The majority of dentists were aware of COVID-19 symptoms and ways of identifying patients at risk of having COVID-19, were able to correctly report known modes of transmission, and were aware of measures for preventing COVID-19 transmission in dental clinics. 74.7% believed that it was necessary to ask patients to maintain social distancing from each other, wear masks while in the waiting room, and wash hands before being seated on the dental chair to decrease disease transmission. Another study conducted by Rhea Vivek Kashid et al. showed results that a total of 560 dental students from different colleges of india participated in this survey study, correct responses were lowest for Modes of transmission of disease (33.2%), diagnosis of disease (33.9%), treatment (31.1%), pandemicity (32.7%) and disaster management (23.9%). The remaining components showed more than 50% of correct responses of the students; with the highest correct responses of epidemiology and prevention of the COVID-19 disease. The present study was conducted in a sample of 485 Indian dentists and cannot be concluded for all Indian dentists. More studies need to be conducted in larger Dentist sample size.

CONCLUSION

Within the limitations of this study, it is clear that spreading awareness amongst the dentists regarding maintaining personal protection steps in order to help treat the patients in emergency is not adequate since , the fear amongst the dentists to treat the patient can be avoided. The steps mentioned by

the Indian Dental Association (IDA) are to be followed strictly by the dentists and awareness regarding the IDA and DCI guidelines need to be spread amongst the dentists.

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