

# Assessment of Knowledge Among Dentists Towards Coronavirus Disease (COVID-19): A Cross Sectional Survey

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## ABSTRACT

**Introduction:** COVID-19 pandemic crisis is definitely of worldwide concern. Dental specialists are presented to the enormous danger of COVID-19 contamination during this pandemic. This study evaluates the knowledge of general dentists towards Coronavirus Disease.

**Material and methods:** An online study using google forms was carried out which included the questionnaire about the knowledge and treatment with regards to covid19. The questionnaire was distributed among various active general dentists through social media such as whatapp group and email ids. Data on socio-demographic characteristics, information, practice, and extra data required concerning COVID-19 were gathered.

**Results:** Outcome of the study revealed that the most of the general dentists from various cities of India had good knowledge, and nearly half of the respondents had a good practice regarding COVID-19. Among 45 males and 55 females (total 100 study sample of general dentists) awareness regarding corona virus was assessed. Of which 45 were males and 55 were females. Cough and fever were the most common symptoms. The majority of the dentists agreed that RT-PCR test is the reliable diagnostic test. Most of participants agreed that it can be prevented by proper hand-washing, wearing appropriate masks, and by maintaining distance.

**Conclusions:** General dentists uncovered great information with regards to COVID-19. However, dentists had limited comprehension of the extra precautionary measures that protect the dental staff and patients from this virus. Our findings have significant connotation for the growth of strategies suitable for improving the level of practice among dentists and enhance prevention programs.

**Keywords:** COVID-19; Coronavirus; Dental Health Care Worker ; Practice; Vaccine

direct/close contact with their patients but also being open to the aerosols, droplets and saliva splashing out of their patients' mouth while performing the dental treatment.<sup>4</sup> The dentists, if infected with virus, pose a risk to themselves, their families and to other non-infected patients as well; hence the issue is of great concern.<sup>5</sup>

The American Dental Association(ADA) expressed a few safety measures to diminish the danger of transmission of the corona virus, notwithstanding the standard disease control convention, which incorporate recording the temperature of the patient prior to any dental treatment and flushing with 1% H<sub>2</sub>O<sub>2</sub> before any dental treatment planning or protocol is started.<sup>6</sup>

As an outcome of this pandemic, alert in dealing with patients in the dental lounge area and during treatment by utilizing individual PPE, personal protective equipment, has been advised. During the lockdown, numerous nations advised their dental specialists to stop temporarily elective dental treatment and to limit their practice to urgent care only.<sup>7</sup>

Center of Disease control and prevention (CDC), and the American Dental Association (ADA) gave provisional guidelines which have laid out a cascade of measures/precautions for infection control including required instruments and best practices to prevent the infection transmission.<sup>8</sup>

As of now, while nations are battling with the Corona virus pandemic, dental specialists need to change their routine clinical perspectives and practices. In the light of the rules followed/advised till date, dental specialists must have fundamental/basic knowledge about the Corona virus and its transmission so as to the decrease level of danger of cross-contamination between the patient and dental specialist, thus dental specialists have a huge role in controlling the further spread of corona virus.<sup>9</sup>

Taking these reasons into consideration, the current study is expected to assess the information/knowledge levels of

## INTRODUCTION

December 2019 had witnessed the sudden outbreak of novel corona virus (2019-nCoV), which initiated from the city of Wuhan in China and had rapidly spread to other parts of the country.<sup>1</sup>The World Health Organization (WHO) has recently announced it to be pandemic, as the number of people suffering from the Coronavirus disease (COVID-19) has increased globally.<sup>2</sup> Experts have regarded it to be more concerning than SARS-CoV and MERS-CoV. The patients suffering from corona virus disease (COVID-19) have symptoms which include fever, cough, myalgia or fatigue, headache, and hemoptysis.<sup>3</sup>

As far as Dentists are concerned, they always have high chances of getting infection not only because of being in

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dental specialists concerning the preventive measures that ought to be taken prior and then after any dental treatment/procedures and those dental procedures that should be avoided during the pandemic.

## MATERIAL AND METHODS

### Study Design

This was a questionnaire based cross-sectional, observational study carried out in the month of April 2021, among general dentists of different cities of India. Informed consent was taken from the dentists and they were reached through Google forms to assess their knowledge and awareness regarding Coronavirus Disease (COVID-19) and the required precautionary measures. A convenient sample of 100 dentists participated in the study. Self designed online questionnaire by the investigators which was pre-tested and comprised questions pertaining to a general awareness of COVID-19, disease diagnosis, symptoms, and prevention methods. Dentists who were practicing in Government or private clinics and were willing to participate on a voluntary basis were included in the study and the participants whose responses were incomplete were excluded from the study. An online pre-designed and pre-tested proforma was created by using Google forms, with a consent form attached to it for voluntary participation. The link of the proforma was sent through e-mails and WhatsApp groups of the participants. Encouragement via social media platforms to the study subjects were made so that they complete the survey. As soon as they received the concerned questionnaire link, they clicked the questionnaire link, the participants got auto directed to the information about the study and informed voluntary consent. They filled up the details after they accepted to take the part in the survey, which had a set of questions split into three sections, which appeared sequentially for the study participants to answer easily.

### STATISTICAL ANALYSIS

Data was statistically analyzed using SPSS (Statistical Package for the Social Sciences) version 19. The distribution of responses was presented as frequencies and percentages.

### RESULTS

A sum of 100 general dental specialists responded back and participated in the study. The participants were between the age of 25-45 years.

Table 1 depicts the Awareness of COVID-19 diagnosis, symptoms, and prevention. When asked some information about the side effects, most of them thought was cough. 94% and 92% dentists thought that fever was also one of the symptoms if the patient is covid19 positive. 85% realized that the infection can be screened and analyzed by RT-PCR. Another question asked was about If somebody among the family members and friends acquires the disease, the treatment preference was allopathy doctor (80%) followed by Ayurveda 20%.

Hand-washing and following cough etiquette were the most

common modes of prevention 96% followed by wearing mask and social distancing. When questioned about their knowledge regarding curability, 73% dentists told that it can be cured.

When asked some information about the attitude toward Corona virus positive patients, 98% of the study participants were of the assessment that an corona virus positive individual should remain inside and 02%) believed that patients should be put on dietary limitations.

### DISCUSSION

Dental specialist's are perpetually at a higher danger of contracting Corona virus. The motto of this study was to explore the current information on Corona virus among the Dental specialist's and to.<sup>10</sup>

Due to inconclusive latency period of corona virus (ranging from day 1 to day 14) and delayed appearance of symptoms, the COVID-19 outbreak escalated rapidly and has been declared as a global public health emergency on the 30th of January 2020.<sup>11</sup> The report published on the 27th of April 2020 indicated that more than two million people worldwide are currently affected. Transmission of COVID-19 most commonly occurs when an infected patient sneezes, coughs, or even talks, then droplet from his mouth/nose is inhaled by another individual, which indicates that saliva can transmit the disease.<sup>12</sup>

Most of the dental specialists who participated in present study were females (67%). This condition is due to the fact that many female students worldwide prefer dentistry due to its working hours and conditions. Similar to our results many earlier studies conducted on the same subject reported that female dentists participated more in their study<sup>13</sup> though which was in contrast to other studies conducted prior to our study conducted on health workers and revealed that the female-male ratio was almost same.<sup>14</sup> Dentists below age group of 30 years last with five years graduation degree completed were the majority who participated in the study. however, some studies in the literature reported that the majority of study subjects had less than 5 years of professional experience.<sup>15</sup>

Human to human droplets, saliva, or direct contact are proven transmission routes of COVID-19. However there is no classic information about other transmission routes, such as blood or air.<sup>16</sup> therefore in the present study, when dentists were asked about the transmission routes of COVID-19, the results showed that most of the study subjects knew the correct and appropriate answers as approximately half and one third of study subjects replied that air and blood were transmission routes, respectively of corona virus. This situation revealed that even though the definite transmission routes were well-known, the dentists suspected other routes of transmission, and were more concerned because of the pandemic. In line with the results of this survey, studies in the literature noted that the transmission routes of the disease were correctly known by most dentists.

Questions	Percentage
Q1: Common symptoms of corona virus infection?	
Fever	95%
Cough	94%
Bodyache	63%
Diarrhea	26%
Burning micturition	10%
Q2: Lab diagnosis for covid 19?	
Hemagglutination test	09%
Reverse transcriptase-polymerase chain reaction	97%
ELISA	07%
Peripheral smear	01%
Q3: How much minimum time of exposure is required for getting infected with covid19?	
20 minutes	60%
15 minutes	28%
10 minutes	10%
30 minutes	86%
Q4: Treatment preferred for covid 19 patients is?	
Allopathy	93%
Homeopathy	15%
Ayurveda	21%
Ayush	08%
Q5: Mode of prevention of covid infection should be?	
Maintain distance of 1 m	89%
Mask usage	90%
Drug prophylaxis/medicines	10%
Hand washing frequently/cough etiquette practice	85%
Vaccines	87%
Q6: Mode of transmission?	
Water	84%
Respiratory droplets	97%
Air	88%
Other body fluids (blood, semen)	86%
Q7: Risk group?	
Young adults	22%
Women	27%
Infants	10%
Adolescents	88%
Pregnant	45%
old age	90%
Q8: Main clinical features of covid are?	
Loss of taste	99%
Loss of smell	96%
Body aches & fever	100%
Abdominal pain	38%
Breathlessness	89%
Q9: HRCT lungs should be recommended for every covid 19 infected patients?	
Yes	55%
No	45%
Q10: In a covid designated 10 bedded ward Good ventilators at least 12 cycle/min or 16 cycles of air/second/good cross ventilation is required?	
Yes	62%
No	38%

**Table-1:** Frequency distribution of responses of the participants to the questionnaire

## CONCLUSION

It is essential that Dental specialist/dental surgeon need and should understand the implications of potential transmission

of the COVID19 virus in a clinical setup so that to prevent further spread of the infection in the society and thus behave in a very responsible manner. It is also recommended that dentists need to keep themselves updated with any new

information regarding this covid19 disease

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