

# A Survey on Awareness of COVID19 Situation and Associated Practices Measure Among Dental Practitioners in Jaipur City, Rajasthan

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## **Abstract**

Covid 19 is a life-threatening disease which has put complete world in a state of emergency. Thousands of lives are in dangerous and many have lost their lives. The aim of study was to assess the awareness of covid 19 situation and associated practices measure among dental practitioners in Jaipur city, Rajasthan. Total 315 participants were included in this study. A self-designed questionnaire was prepared using google form and that the participants can be reached via online. The questionnaire consisted of demographic statistics (5) and the (13) awareness questions. The statistical evaluation was done using SPSS Version 22.0 software. The values were represented in Number (%) and Mean±SD. Specific variables had been presented with the aid by using frequency and percentage. The present study included 315 subjects out of which 44.7 % were male and female percentage were 55.3%. Percentage of general practices was 89.4%. 85% participant considered wearing disposable masks were not enough to protect patient from transmission. 93.6% participant were doing screening for symptoms related to corona. Participant were using disposable PPE kits. 85.1 % knew about doffing of PPE kits according to biomedical waste. According to 70.2% teledentistry holds future post this pandemic. Majority of participant were affected financially almost 87.2%. The present study concluded that level of

awareness and knowledge of the dentist who are working as a general practices in Jaipur about the covid 19 pandemic and its sign symptoms and precautionary measures.

**Keywords:** Pandemic, Awareness, Teledentistry, COVID 19, Doffing.

## INTRODUCTION

The word corona comes from Latin corona, that means "crown" and the morphologically it has spiky protrusion arising from their surfaces as seen in electron microscope. Name of corona virus was coined by June Almeida and David Tyrrell in 1966.<sup>1</sup>

But was accepted in 1971 as a genus name by the International Committee for the word of Viruses that is later renamed International Committee on Taxonomy of Viruses<sup>2</sup>. It has four genera:

Sr. No	Genera	Infected In	Origin	Natural Reservoir (Warm Blooded Flying Vertebræ)
1.	<b>Alphacoronavirus</b>	Mammals	2400 BCE	Bat
2.	<b>Betacoronavirus</b>		3300 BCE	
3.	<b>Deltacoronavirus</b>	Birds	3000 BCE	Bird
4.	<b>Gammacoronavirus</b>		2800 BCE	

Till now Seven strains of human coronaviruses are known. Out of that seven strain four strains produces minor symptoms and rest three produces severe symptoms (like Middle East respiratory syndrome-related coronavirus (MERS-CoV), severe acute respiratory syndrome coronavirus (SARS-CoV), Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) . COVID-19 is responsible of global pandemic. SARS-CoV-2 (COVID-19) was mainly identified in December 2019 in Wuhan China.

First case of COVID-19 in India was reported in the month of January 2020. Presently India has largest number of confirmed cases in Asia. Second largest number in world after USA<sup>3</sup>. COVID-19 pandemic has been a part of our daily lives since then. Airborne droplet, saliva or blood are possible mode of transmission of SARS-Cov 2<sup>4,5</sup>. The dental procedures as well as the close contact with patients increases the risk of COVID-19 transmission<sup>4,5</sup>. The disease has a prolonged incubation period ranging between 5 days to 14 days. Dentists, dental staff, and patients could be asymptomatic carriers at the time of the dental procedure, which could lead to cross-contamination of the disease.<sup>3-5</sup> Because of this cross transmission there is a significant limitations of clinical practices in the fields of dentistry<sup>6</sup>. That's

why it represents a impactful measure on economy of this sector. Once dental clinic open, they should follow the proper practical protocol guideline which is recommended by CDC and ADA to control the spread of COVID-19. Hence, the current study is aimed to assess the awareness of COVID-19 situation and associated practices measure among dental practitioners in Jaipur city , Rajasthan.

## MATERIALS AND METHOD

### 2.1. Ethical Clearance and Informed Consent

Ethical clearance was obtained from the concerned ethical committee of NIMS University Jaipur Rajasthan. Participates were informed about the questionnaire and written consent was obtained The data were kept confidential and the results did not identify the participates personally.

### 2.2. Study Population and Sample Size

The Present study was a cross-sectional(questionnaire) study. The study was conducted on dental practitioners as well as academicians in the Jaipur city Rajasthan state. The records regarding the dental practitioner, used to be amassed from IDA. A pilot study was done on 35 subjects for the study validity.

How much sample size is required for the study was calculated by this equation:

$$n = Z^2 t^2 - (\alpha/2) \times s^2 d^2$$

where Z is the standard normal score with 95% confidence interval (CI) ( $\alpha = 0.05$ ), S is the standard deviation of the variable, and d is maximum acceptable error. Taking account of potential errors and sample loss, a final sample size was estimated to be 315.

### 2.3. Research Instrument and Protocol

A self-designed questionnaire written in English language was once made via a research specialist for the study. The questionnaire was once pre-examined for validity and was revised in accordance to remarks. The final questionnaire consisted of demographic statistics (5) and the (13) awareness questions. The questionnaire used to be made reachable the use of online mode as Google file and the hyperlink was circulated among the participate

using mail Id's and what's app. The principal investigator had access to the study data and the Responses from only those participants who gave consent by answering the questionnaire inside restrict time frame of three week have been covered in the study about.

Total awareness score was calculated primarily based on participants responses. Each negative response was once given “0” and positive response was given “1” and whole score of the participant was once calculated through adding the sum of all responses, that ranged from 1 to 20. The expected maximum total knowledge score was 20 and a minimum score of 0. Based on Bloom’s criteria the sum scores, level of knowledge was:

S.No.	Level	Score
1	Low	0-7 (less than 60%)
2	Moderate	8-14 (60–80%)
3	High	15-20 (60–80%)

### 2.4. Statistical Analysis

The statistical evaluation was using SPSS Version 22.0 software. The values were represented in Number (%) and Mean±SD. Specific variables had been presented with the aid of using by frequency and percentage. ANOVA was used to find the significance of study parameter. The significance level was <0.05.

## RESULT

### Socio-Demographic and Professional Profile of the Participants

Socio-demographic and professional profile of the participants represented in graph 1. The present study included 315 subjects out of 55.3% of female participant rest were male. Most of participants (66%) are post graduate (MDS). Majority were doing general practice. Percentage of general practices was 89.4%.out of 315 participants only 10.6% doing academics.

### Participant Response to Question on General Knowledge of COVID-19

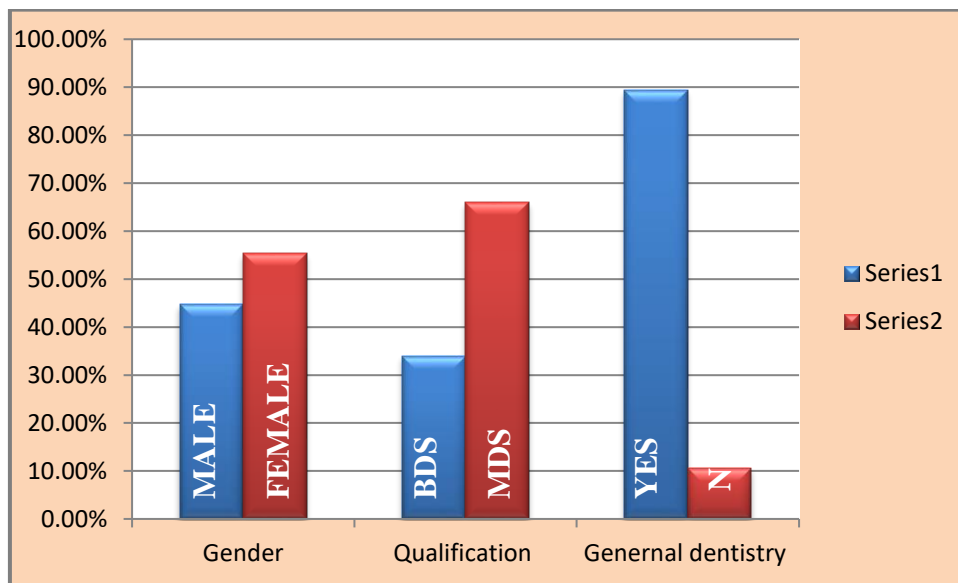
Participant response to question on general knowledge of COVID-19 was depicted in graph 2.

53.2% of participant were not aware about the virus. 95.7 % participants had knowledge about latest protocol of operating at dental clinic post pandemic. Everybody knew about various means of transmission of corona virus and they followed the disinfection protocol after operating procedure on a patient. According to the study consider the wearing 85% participant disposable masks were not enough to protect patient from transmission. 93.6% participant were doing screening for symptoms related to corona by using screening which provided by government. 89.4% of participant were using disposable PPE kits. Percentage of participant who were using separate PPE kits for different patients was 80.9%. 85.1 % knew how to about doffing of PPE kits according to biomedical waste. Everybody knew about hand hygiene protocol.

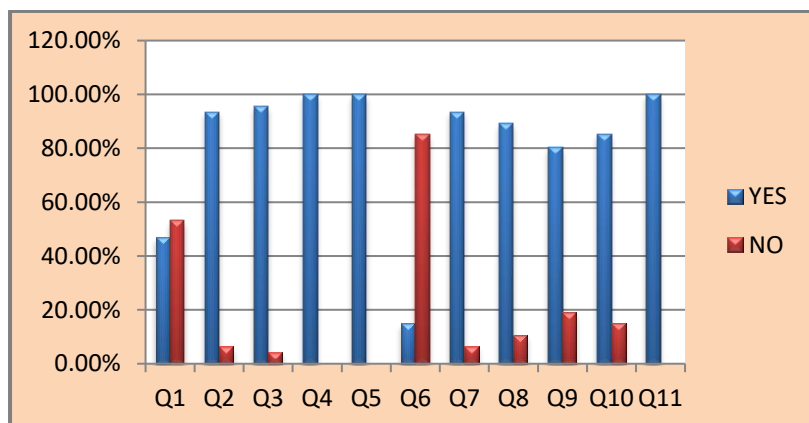
### Participant response to question on future aspects of COVID-19

Participant response to question on future aspects of COVID-19 were depicted in graph 3.

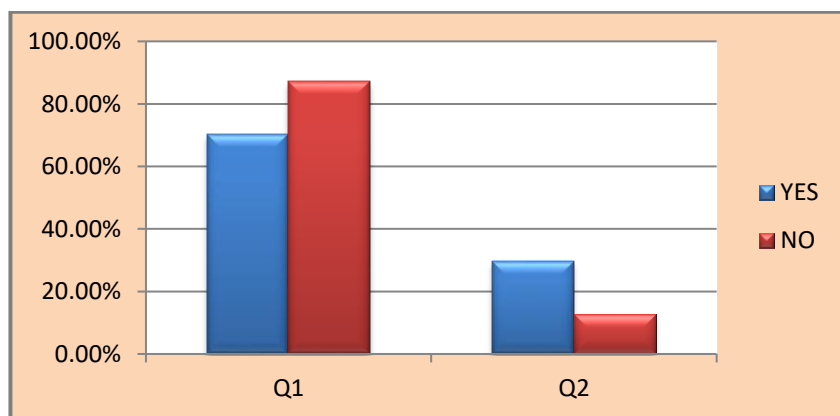
According to 70.2% teledentistry holds future post COVID -19 pandemic. Almost 87.2% participant were affected financially, whereas 12.8% did not get affected because of this COVID- 19 pandemic.



**Graph 1:** Socio-Demographic and Professional Profile of the Participants



**Graph 2:** Participant Response to Question on General Knowledge of COVID-19



**Graph 3:** Participant Response to Question on Future Aspects of COVID-19

**Table 1 Knowledge Scores of Participants Regarding COVID-19 (Bloom's Criteria)**

Knowledge Score	Number of Participant	Percentage	95% CI
HIGH	207	65.7	75.16-82.64
MEDIUM	105	33.3	32.25-37.17
LOW	03	9.5	05.87-12.12
<b>TOTAL</b>	<b>315</b>		

Knowledge scores of participants regarding COVID-19 (Bloom's criteria) Table 1 - 65.5 % of participant reported high knowledge regarding COVID-19. Only 9.5% participant did not know regarding COVID-19.

### DISCUSSION

COVID-19 which is discovered from China has caused a serious problem for every individual on the earth. Due to this WHO declared it a global pandemic. This global pandemic has rampant spread. To stop this pandemic lockdown is only solution. Because of this lockdown many problem raises in the Indian society<sup>7</sup>. The aim of study was to assess the awareness of COVID-19 situation and associated practice measures among dental practitioners in Jaipur city , Rajasthan. This is a first study in the state examining the awareness and measure among the dental practitioners with a large sample size of 315. In this study we used a close ended questionnaire in order to get quick response from the participant . In our study female ratio (53%) is more then the male ratio .reason for more female dentist is because of less working hour and favorable condition<sup>8</sup>. Similar to our results Khade et al<sup>9</sup>. but according to bhagavawthala shows a equal male and female ratio<sup>10</sup>.

In our study percentage of MDS(66%) is more than the BDS but most of participant were general practitioners (89.4%) only (10.6%) doing specialty practices. Recently a study concluded that asymptomatic patients and who are in the incubation period are also carrier of the corona virus. Which can be easily direct transmitted. More than 90% of dentist aware of clinical sign and symptoms occurring due to corona. Everyone follows the hand

hygiene protocol after every procedure. This result similar to khander et al<sup>9</sup>.

Most of the dentists participating in this study reported that surgical masks would not provide sufficient protection (88.8%). Similar to the results obtained from this study, Ahmed et al<sup>11</sup>. stated that 85% of the participants believe that surgical mask will not provide adequate protection. Surgical face masks provide approximately 80% filtration rate when worn correctly. The aerosolized particle sizes of COVID-19 are between 3-100 nm. Using an FFP3 mask provides a 99% filtration rate of all particles down to 0.6 µm in size.<sup>12,13</sup>

In addition, everyone aware of recent protocols which is issued by CDC,ADA in the prevention of disease transmission. However, there are some loopholes in the knowledge with regard to the use of Personal protective Equipment (PPE) kits and the prophylactic medications and their toxicity. ONLY 85.1% participant know how to doffing PPE kit according to biomedical waste protocol. We are in a learning phase, and new information's are being updated every second. Poor knowledge has led to the dependence primarily on the clinical indicators to diagnose COVID19. These findings are similar to that reported in previous research carried out among dental practitioner by **Ahmed MA et al**<sup>11</sup>. In our study 65.5 % participant knew regarding COVID-19, only 9.5% participant did not know about COVID-19 reason may be they are academicians. Almost all the participated in this study had the correct information about the incubation period of the virus, the cardinal signs of the disease (dry cough, dyspnea and fever), and the great importance of hand hygiene in the prevention of the disease. These results were similar to the results of the

Khader et al.<sup>9</sup>, Kamate et al.<sup>14,17</sup> and Kinariwala et al.<sup>15</sup>

The government of India as well as state has suggested that lockdown is a only precautionary measure to prevent the infection. This lockdown is also includes the dental practice. Most of the dentists depend upon the clinical source of income. In addition to, once the clinic open there may be a decrease in the patients flow, ultimately affecting the monthly income. 87.2%% of the participants felt pandemic effect the financial growth in the dental practices. According to participant this pandemic holds a future for the teledentistry post this pandemic.

There are few issues in our study, cross-sectional nature of the study and restrained time frame of data collection. This could result in sampling error and therefore, our results might not have accurately reflected the true levels of awareness of dental practitioner across Rajasthan state.

## CONCLUSION

The present study concluded that level of awareness and knowledge of the dentist who are working as a general practices in Jaipur about the COVID-19 pandemic fairly good and its sign symptoms and precautionary measures. However further studies required with larger sample size across the country.

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