

Research Article

## Knowledge, Practices and Perceptions Regarding Covid-19 in Patients Reporting to Dental OPD at IIDC

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### Abstract

**Introduction:** COVID-19 was declared as a pandemic by World Health Organization on March 11, 2020. Since then, several awareness campaigns have been run by health authorities and healthcare professionals to minimize the transmission of the disease. Proper knowledge, attitude and practices are necessary to prevent the transmission of Covid-19. Similar to health care professionals, dental health care professionals and dental patients are also exposed to COVID-19 because of the nature of their job.

**Objective:** The main objective of the study is to assess the knowledge, attitude and practices of dental patients regarding the transmission of COVID 19 in dentistry.

**Methodology:** An online-based and paper-based questionnaire was filled from patients with a minimum age of 18 that came to dental OPD at Islamic International Dental College, Islamabad.



**Significance:** This will help in designing awareness campaigns especially targeting dental-related knowledge of transmission of Covid-19 and precautions against it general population.

**Results:** A total of 141 patients participated in the study above the age of 18. 69.9 % were non-health care related and 30.9 % were healthcare-related individuals. 92.8 % had the idea that Covid-19 is a contagious disease. The majority of the patients had also the idea as to what precautions needed to be taken during the pandemic. However, when the dental-related questions had a considerable drop in percentage in regards to knowledge. 36% did not know about aerosols. 33.6% answered that COVID-19 was not transferable by aerosols and aerosol-generating procedures in dental treatment. 53.3% said that the dentist wore a hazmat suit for his own protection and 25.5% said that the hazmat suit adorned by a dentist is for the patient's protection. 40.9 % said that N95 was mandatory for people not related to the health care profession.

**Conclusion:** The knowledge regarding signs, symptoms and treatment in patients was ample because of the awareness campaigns run in hospitals and media. However, as for dental-related transmission and protection against COVID-19, the knowledge and practices in the population are not appreciable. More needs to be done in regards to the dental awareness regarding COVID-19 transmission.

**Keywords:** COVID-19, Infection Control, Knowledge, Practices, Dental Patients.

## Introduction

Covid-19 has emerged as a respiratory disease that is caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China. The transmissibility and infectivity of this disease are high, with chief complaints include dry cough, fever, myalgia, fatigue and shortness of breath. Now it has been spread to more than 150 countries of the world. (1) This virus primarily transmits through respiratory droplets produced by coughing or sneezing by an infected person or it can be transmitted by touching contaminated objects or surfaces followed by touching the nose, mouth, or eyes. (2)



Protection of health care providers and non-healthcare population needs adequate knowledge regarding transmission, source, symptoms and preventive options. Lack of awareness and knowledge as well as misunderstanding and misconceptions among healthcare providers and the population is responsible for late diagnosis, the transmission of infection and inadequate infection control measures. (3)

This pandemic brought all elective medical health care to a halt, especially the treatments which involve aerosol-generating procedures. The oral health care sector has emerged to be one of the worst-hit, as almost all dental procedures involve aerosol generation. (4) Dental procedures aerosolize saliva and may lead to airborne contamination as the oral cavity harbors bacteria and viruses from the nose, throat, and respiratory tract. (5) Educational campaigns increased COVID-19 awareness but it is unclear to what level this campaign of knowledge can be implemented practically and helped in the reduction of COVID-19 infection. (6)

The present study aims to get an insight into the patient's viewpoint regarding the knowledge of COVID-19 and its transmission, cross-infection in the dental hospital.

## Materials and Methods

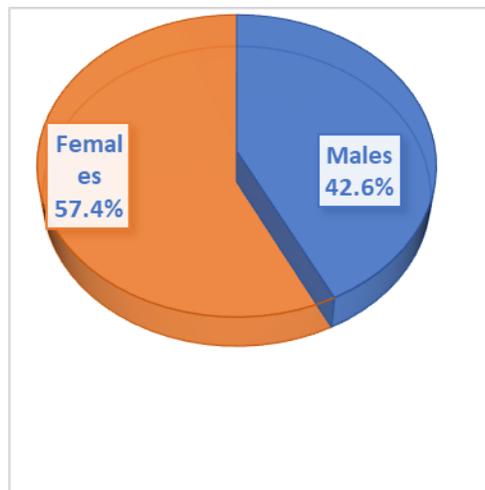
Ethical approval was taken from the ethical committee at IIDC, Islamabad. This study was conducted through an online survey form as well as paper and oral survey forms. Participants were described regarding the questionnaire. For those who were unable to participate online, a paper-based questionnaire was given for participation. The questionnaire consisted of two parts, including demographic information and knowledge and perception sections.

## Results

A total of 141 people participated through online and paper-based questionnaires. The ratio of females was higher than males, with and 57.4% and 42.6 respectively. People from all groups participated, with the highest participation ratio among 18 – 25 years 41.4%. Participation of non-healthcare individuals was 69.1% as compared to healthcare individuals 30.9%. Level of education found in highest number was Bachelors 52.1%. In the knowledge and perception section, it was observed that 96.5% of people heard about COVID-19. Majority of people 92.8% agreed on the fact that COVID-19 is a contagious disease; while 4.3% did not agree on the statement. The percentage of gender is summarized in **Table 1**. Knowledge and Perception regarding prevention and transmission in general, and in dentistry were various among people and are summarized in following **Table 2**.

**Table 1:** Gender Distribution (n=141)

Gender	Number	Percentage
Male	60	42.6%
Female	81	57.4%
Total	141	100%



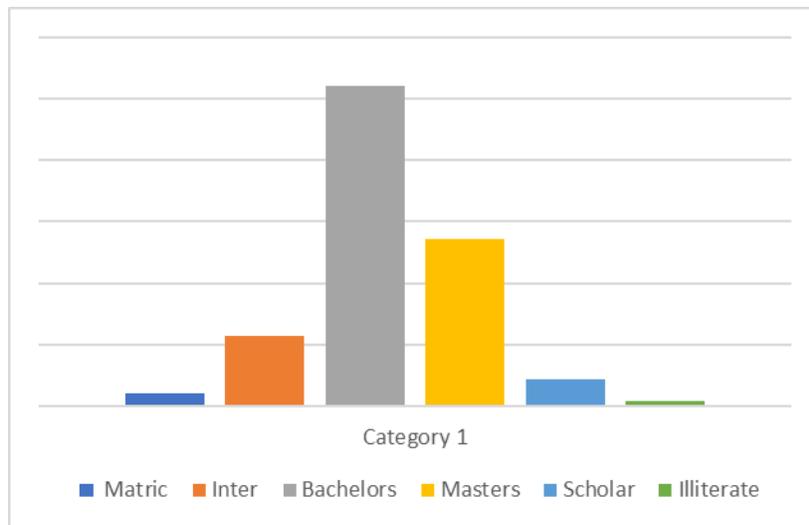
**Figure 1**

**Table 2**

Characteristic	Category	Number	Percentage
Age	18 – 25 years	58	41.4%
	26 – 30 years	45	32.1%
	31 – 35 years	14	10%
	36 – 40 years	8	5.7%
	>40 years	9	6.4%
<b>Profession</b>	Healthcare – Related	43	30.9%
	Non-Healthcare-Related	98	69.1%



<b>Marital status</b>	Married	53	37.6%
	Single	88	62.4%
<b>Number of household</b>	<5	41	29.3%
	5	46	32.9%
	>5	50	35.7%
<b>Level of education</b>	Matriculation	3	2.1%
	Intermediate	16	11.4%
	Bachelors	72	52.1%
	Masters	38	27.1%
	Scholar	6	4.3%
	Illiterate	1	0.7%



**Figure 2**

**Table 3:** Percentages of Education Level

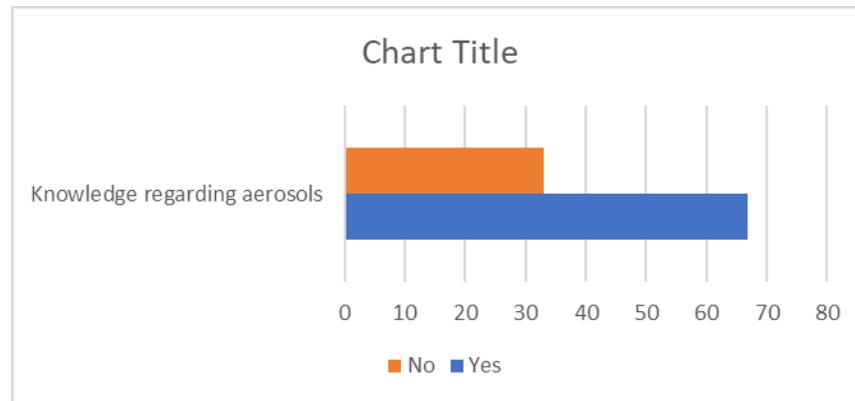
Question	Category	Number	Percentage
<b>Did you hear about COVID-19?</b>	Yes	136	96.5%
	No	5	3.5%
<b>Is COVID-19 a contagious disease?</b>	Yes	128	92.8%
	NO	3	2.1%
	I don't know	2	1.4%
<b>What is the cause of COVID-19?</b>	Virus	134	95%
	Bacteria	2	1.4%
	Other	5	3.6%
<b>What is the incubation period of COVID-19?</b>	2-5 days	5	3.6%
	3-14 days	128	91.4%
	1-14 days	1	0.7%
	I don't know	5	3.6%
<b>What is the treatment of this disease?</b>	Anti Viral	38	34.3%
	Anti Biotics	6	4.3%
	No Treatment	66	47.1%
	I don't know	5	3.6%
	Other (Isolation etc)	31	10.7%
<b>In which circumstances the disease can become dangerous ?</b>	In healthy individuals	8	5.6%
	Individuals with weak immune system	117	83.6%
	I don't know	15	10.6%
<b>Fever is the symptom of COVID-19</b>	Yes	134	95%
	NO		



		5	3.5%
<b>Cough is the symptom of COVID-19</b>	Yes	134	95%
	No	7	5%
<b>Sore throat is the symptom of COVID-19</b>	Yes	127	90.4%
	No	13	10.6%
<b>Diarrhea is the symptom of COVID-19</b>	Yes	80	57.1%
	No	55	39.3%
	I don't know	6	3.6%
<b>Body pain is the symptom of COVID-19</b>	Yes	125	88.7%
	No	16	11.3%
<b>Headache is symptom of COVID-19</b>	Yes	103	73%
	No	35	24.8%
	I don't know	3	3.1%
<b>Do you know what are aerosols ?</b>	Yes	93	66.9%
	No	46	33.1%
<b>Is virus transferable through aerosols of dental procedures?</b>	Yes	89	66.4%
	No	45	33.6%
	I don't know		
<b>Why do you think the dentist wears the white protection suit for?</b>	Protection of both i.e the dentist and the patient.	76	53.3%
	For Dentists protection	35	25.5%
	For patient's protection.	30	21.2%
<b>Disease can be transmitted directly through contact with soiled (with aerosols, cough droplets etc) surfaces</b>	Yes	124	89.2%
	No	10	7.2%
	I don't know	6	4.2%
<b>Disease can be</b>	Yes	132	95%



<b>transmitted directly through contact with infected individual (handshake, hugging)</b>	No	7	5%
	I don't know	2	1.4%
<b>Should I be visiting dentist if it is not an emergency during the pandemic?</b>	Yes	89	63.1%
	No	52	36.8%
<b>In suspecting infection with COVID-19, I will measure fever</b>	Yes	136	96.4%
	No	5	3.6%
<b>In suspecting infection with COVID-19, I will visit physician</b>	Yes	119	84.3%
	No	6	4.2%
	Other	16	11.3%
<b>COVID-19 can be treated at home</b>	Yes	97	70.3%
	No	34	24.6%
<b>Dental Health education can prevent COVID-19</b>	Yes	127	91.4%
	No	10	7.4%
<b>In order to prevent contracting and spreading COVID-19, when do you use protective masks?</b>	Most of the time	127	92%
	Always	7	4.9%
	Never	6	4.3%
<b>Do you think N95 mask is mandatory for non-health professionals?</b>	Yes	56	40.9%
	No	77	56.2%
	I don't know	6	4.2%



**Figure 3**

## Discussion

The attitude, knowledge and perception of specific illness caused by infectious agents can be affected by different factors e.g. depth of illness, the severity of transmission and rate of fatality. Attitude, knowledge and perception of COVID-19 are continuously growing day by day since it was announced as Pandemic by WHO (7). Complete outcome and clinical features of COVID-19 are still not completely understood; although cough, fever and dyspnea are among the most commonly associated symptoms (8). Clinical Oral health care workers, particularly the dentist, are exposed to fluid and aerosols, particularly from the oral cavity during a common dental procedure such as dental scaling, restoration, and extraction. (9) Of the respondents, over 96% had knowledge of causes and symptoms regarding the cause and transmission of COVID 19. Over 92% also said that they wear a mask most of the times. However, when they were asked about the relation between dentistry and COVID-19, around 33% said that the virus was not transferable through dental procedures. Regarding hazmat suit, 53% of respondents said that it was for the protection of both the dentist and the patient. 63.1% of individuals replied that they can visit a dentist even if its, not an emergency.

Respondents 83% had also a good idea about the circumstances in which the disease was dangerous i.e weak immune system. As for the treatment, the ratio was divided between antivirals, antibacterials and isolation. 91.4% agreed that dental health education can help educate people about the transmission and prevention of COVID-19 in dentistry.

As per various findings in the study, it will not be incorrect to come up with good efforts in knowledge delivery, attitude measurement and various perspectives among the population. Particular facts of dentistry like aerosols, aerosol-generating procedures (AGPs) and how they help in the transmission of the disease can be highlighted in media and dental campaigns. Moreover, patients reporting to dental



OPDs must be told about the AGPs and the danger of transmission related to it. By providing correct awareness about the disease in largely populated areas and various communities, it may improve the measures against its prevention.

The back draw of the study was that it was conducted in an urban area where most of the patients were Urban residents. Data related to rural areas are lacking in this regard.

## Conclusion

The study showed that good knowledge, attitude and perception against the disease were high in the majority of the population towards COVID-19. However, knowledge of dental-related transmission of the disease was not sufficient. Campaigns need to be run for awareness. Keeping in mind the rapidly changing situation of the COVID-19 pandemic, it may be argued that the concerns and knowledge might change. For this purpose, the population must be updated on the guidelines against COVID-19 on a regular basis.

## ACKNOWLEDGMENT

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## DISCLOSURE

**Ethical approval:** The research was approved by the ethics committee at IIDC, Islamabad (Reference no. IIDC/IRC/2021/001/005). All procedures performed in this study were in accordance with the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

**Informed consent:** Informed written consent was obtained from all the participants included in the study.

**Conflict of interest:** The authors declare no conflict of interest.

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