

Original Research

Knowledge Awareness Fear and Practice among Dentists to Novel Coronavirus Disease: A Questionnaire Survey

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ABSTRACT:

Aim: The purpose of the study was to assess the awareness of dentists in handling their fear and apprehension as well as modification in their clinical practice due to coronavirus pandemic. **Methodology:** Our study enrolled 200 dentists as participants in the online survey. Of the total participants, 100 were BDS practitioners and 100 were speciality post graduate practitioners. They were sent a questionnaire based on their knowledge about COVID-19 pandemic. **Results:** The result clearly shows that 79% MDS dentists were far less apprehensive and anxious while providing treatment to patients who might have COVID-19 infection as compared to BDS dentists (66/100). A high number of BDS dentists (52/100) were afraid of getting quarantines, if they get infected at all, which shows their anxiety level as compared to only 12/100 MDS dentists having similar fear. 99% of all MDS dentists follow the universal precautions while handling patients so as to ensure their as well as patient's safety. **Conclusion:** Our study clearly shows that BDS dental practitioners were more apprehensive as compared to MDS practitioners, who were more confident to treat patients who had COVID-19 like symptoms. In reality, not much is known about coronavirus and misinformation generally creates a panic like situation. So, as more authentic information is relayed to health care providers then this anxiety and fear will also lessen.

Keywords COVID-19, Coronavirus, Dentistry, Fear, Precaution.

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INTRODUCTION

Coronavirus (CoV) infections are emergent respiratory viruses that are known to cause illness ranging from the common cold to severe acute respiratory syndrome (SARS). CoV is a zoonotic pathogen that can be transmitted via animal-to-human and human-to-human contacts. The current outbreak of coronavirus disease 2019 (COVID-19) in Wuhan City, Hubei Province, China, has emerged as a worldwide outbreak and noteworthy public health issue. On January 30, 2020, the World Health Organization (WHO) acknowledged COVID-19 a public health emergency of international

apprehension.¹ COVID-19 is spread by human-to-human transmission through droplet, feco-oral, and direct contact and has an incubation period of 2-14 days.² To date, no antiviral treatment or vaccine has been openly recommended for COVID-19. Consequently, applying preventive measures to control COVID-19 infection is the most critical intervention. Health care workers (HCWs) are the primary sector in contact with patients and are a vital source of exposure to infected cases in health care settings; thus, HCWs are expected to be at more risk of infection. By the end of January, the WHO and Centres for Disease Control and Prevention (CDC)

had published commendations for the prevention and control of COVID-19 for HCWs.³ The WHO also started several online training sessions and materials on COVID-19 in numerous languages to reinforce preventive strategies, including raising awareness and training HCWs in preparedness activities.⁴ In several instances, misunderstandings among HCWs have deferred regulatory efforts to provide necessary treatment, led to the quick spread of infection in hospitals, and put patient's lives at jeopardy.⁵ The healthcare professionals also directed lacks of social and physical contact with family members were recognized as particularly in depression. Quarantine within the home or between work and home, not being able to see friends, not being able to shop for basic necessities of everyday life heightened their feeling of distance from the outside world. Infection control measures forced not only the physical discomfort of having to wear a mask but also significantly contributed to the sense of isolation. There's a lot of misinformation going around, as well as sensationalistic coverage that only forges into fear and apprehension. This has led to lot of panic as well as negligence in dentists, who are one of the front-line people that can come in contact with positive or suspected cases of coronavirus.⁶ Dentists have been recommended to take several personal protection measures and minimize operations that can produce droplets or aerosols. Furthermore, the use of saliva ejectors with a low volume or high volume can decline the production of droplets and aerosols. The most permitted guidelines indicate that dentists should avoid the scheduling of any patient: only such vital dental diseases can be considered during the COVID-19 outbreak. This action will drastically limit the interpersonal contact, the waiting time of patients in dental cabinets and, in general, the conditions disposing patients to be infected. When the dentists treat patients, they should find the potentially infected

person before they reach the operating areas; for example, those with a fever measuring >37.5°C and the posing of a few questions about the patient's general health status in the last 7 days, and about the risk of having been in contact with other infected persons.⁷

With the presently mounting COVID-19 transmission raising tensions for everyone, including for health officials and health systems, an imperative question arises regarding how we manage information to help frontline HCWs in times of public health crisis. For this reason, we investigated dentist's knowledge and perceptions of the prevention and control of COVID-19 at the pandemic level.

AIM OF THE STUDY

The purpose of the study was to assess the awareness of dentists in handling their fear and apprehension as well as modification in their clinical practice due to coronavirus pandemic.

METHODOLOGY

Our study enrolled 200 dentists as participants in the online survey. Of the total participants, 100 were BDS practitioners and 100 were speciality post graduate practitioners. They were sent a questionnaire based on their knowledge about COVID-19 pandemic. The questions were in English language and in an open-ended format and were sent by email to them. (Table 1) It also assessed their fear as well as apprehension to carry out the treatment of patients in the wake of the spread of this deadly disease. They were also evaluated on their knowledge about various protective measures that need to be taken to safely carry out their treatment and ensure the safety of their patients and themselves. Their responses were recorded in a Microsoft Excel spreadsheet and were analysed with the help of descriptive statistics.

RESULTS

The result clearly shows that MDS dentists (79/100) were far less apprehensive and anxious while providing treatment to patients who might have COVID-19 infection as compared to BDS dentists (66/100). (Table 2)

Table 1- Questionnaire utilized in the study.

S.No.	QUESTIONS
1.	Are You Anxious When Providing Treatment to a Patient who is Coughing or Suspected of being Infected with COVID-19?
2.	Do You want to Close Your Dental Practice until the Number of COVID-19 Cases Starts Declining?
3.	Do You have Fear that You Could Carry the Infection from Your Dental Practice back to Your Family?
4.	Are You Afraid of Getting Quarantined if get Infected
5.	Are You Aware of the Mode of Transmission of COVID-19?
6.	Are You Updated with the Current CDC or WHO Guidelines for Cross-Infection Control regarding COVID-19?
7.	Are You currently Asking every Patient's Travel History before Performing Dental Treatment?
8.	Are You currently Taking every Patient's Body Temperature before Performing Dental Treatment?
9.	Are You Deferring Dental Treatment of Patients Showing Suspicious Symptoms?
10.	Do You Routinely Follow Universal Precautions of Infection Control for Every Patient?
11.	Do You Ask Every Patient to Rinse His/Her Mouth with Anti-Bacterial Mouthwash before Treatment?
12.	Are You Aware of which Authority to Contact if You Come Across a Patient with Suspected COVID-19 Infection?

Table 2- Data extracted in the present study.

Questions	BDS dentist's responses		MDS dentist's responses	
	Yes	No	Yes	No
1	34	66	21	79
2	63	36	18	82
3	15	85	08	92
4	52	48	12	88
5	94	06	98	02
6	55	45	74	26
7	98	02	99	01
8	93	07	98	02
9	56	44	23	77
10	83	17	99	01
11	61	39	94	06
12	18	82	42	58

Around 82/100 MDS are confident enough to run their clinic in the pandemic period as well. Around 15/100 BDS dentists had an apprehension that they may carry the infection from their clinical setting to their homes and in turn infect their family members. A high number of BDS dentists (52/100) were afraid of getting quarantined, if they get infected at all, which shows their anxiety level as compared to only 12/100 MDS dentists having similar fear. More than half of the BDS dentists are deferring dental treatment of the patients who might be having COVID-19 like symptoms. 99% of all MDS dentists follow the universal precautions while handling patients so as to ensure their as well as patient's safety. Only 18/100 BDS dentists are aware of authorities to contact, if they come across a suspected COVID-19 patient.

DISCUSSION

The disease, which is caused by a novel coronavirus termed the "SARS coronavirus," or SARS-CoV, mainly spreads through droplet infection and affects people of any age. It has a mortality rate ranging from 10 to 15 percent. A major hallmark of this disease has been the rate at which it has affected health care workers through nosocomial transmission; in some countries, up to one-fourth to one-third of those infected were in this category.⁸ Since COVID-19 was recently identified in saliva of infected patients, the COVID-19 outbreak is a reminder that dental/oral and other health professionals must always be meticulous in protecting against the spread of infectious disease, and it provides a chance to determine if a non-invasive saliva diagnostic for COVID-19 could assist in detecting such viruses and reducing the spread. The transmission via contact with droplets from talking, coughing, sneezing and aerosols generated during clinical procedures is expected. The origin of droplets can be nasopharyngeal or oropharyngeal, normally associated with saliva.⁹ The widespread spread of SARS-CoV-2 worldwide upsurges the likelihood that dental health care professionals will treat this subset of the patient population. Universal precautions are crucial to minimize the spread of this virus and its

associated disease. Health care providers must keep themselves up-to-date about this evolving disease and provide adequate training to their staff to promote many levels of screening and preventive measures, allowing dental care to be provided while mitigating the spread of this novel infection.¹⁰ Our study clearly shows that BDS dental practitioners were more apprehensive as compared to MDS practitioners, who were more confident to treat patients who had COVID-19 like symptoms. In reality, not much is known about coronavirus and misinformation generally creates a panic like situation. So, as more authentic information is relayed to health care providers then this anxiety and fear will also lessen.

CONCLUSION

Dental care providers need to be aware and prepared for tackling any impending infectious disease challenge as might be the case in the current outbreak of SARS CoV-2 transmission and its associated coronavirus disease, which can be life-threatening to susceptible patients. Health care professionals have the duty to protect the public and maintain high standards of care and infection control.

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