



Knowledge, Attitude and Risks Associated in Treatment among Dental Practitioners of Ghaziabad Regarding COVID-19 Pandemic

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INTRODUCTION: COVID 19 was first reported in Wuhan China, in December 2019 and it soon spread to the entire globe involving millions of people. It was declared as a global pandemic on 11th March 2020 by WHO. The symptoms ranged from mild to deadly and often included fever, cough, breathing difficulty, loss of taste, loss of smell. Severe cases resulted in pneumonia, dyspnea, shock, multi-organ failure and death. Transmission is chiefly through droplets thus pose a significant risk among dental professionals.

AIM: to assess the knowledge about Covid-19 among dental practitioners in Ghaziabad and the preventive measures used for the treatment of the patients.

MATERIALS AND METHOD: An online survey was carried out among the dental practitioners of Ghaziabad from November 2020 to January 2021. A snowball sample of 250 dentists was selected and a predesigned questionnaire was mailed to them. Response was recorded via a second email sent by them.

RESULTS: The study showed that majority of dentists 95% had good knowledge about Covid and the primary source of information was World Health Organization through television, radio and social media. About 85% were fearful of the being infected by suspected patients, and transmitting the disease to their homes and 61% were afraid of the impact it will have on dentists livelihood. It was witnessed that dentists having more than 10 years experience had a positive attitude towards the virus. Infection control protocols seemed insufficient and needed improvement and assistance.

CONCLUSION: the study concluded that though the knowledge was good, the practice scores were poor. Our findings have important implications in need for a special training program for dentists to deal which such pandemics.

KEYWORDS: Covid-19, Dentists, Ghaziabad, Knowledge, Practice.

INTRODUCTION

The virus causing COVID-19 is a severe acute respiratory syndrome (SARS)- like coronavirus that had previously been reported in bats in China. The virus is zoonotic that has a tendency to be transmitted between animals to humans and humans to humans.¹ COVID-19 caused a global pneumonia outbreak and has become a major challenge to public health in almost all countries of the world. It and was declared as a pandemic on March 11, 2020, by the World Health Organization (WHO).

The spread of the newly emerged coronavirus has created panic and chaos worldwide and changed the landscape of the health sector.² As of July 2, 2020, a total of 10,357,662 cases of COVID-19 have been reported throughout, with approximately 4.91% of the mortality rate.^{3,4} COVID-19 is likely to cause severe acute respiratory infection amongst infected people, which is usually transmitted from person to person through hands, saliva, nasal drops, and superficial

contact.⁵ This viral infection involves several systems such as respiratory, enteric, hepatic, neurologic, and vascular systems.^{6,7} Dentists are at the highest risk of getting infected, as droplets are the primary source of transmission of the disease and dental clinical settings could act as a possible place for the transmission of the virus when an infected person (symptomatic or asymptomatic) gets dental treatment. Evidence shows that SARS-CoV-2 has been detected in saliva samples, and thus saliva can act as a potential source of transmission.^{8,9,10}

The aim of this study was to assess the knowledge, attitude and practice regarding coronavirus among dental practitioners and determine the preventive strategies in use.

MATERIALS AND METHODS:

An online survey was carried out among the dental practitioners of Ghaziabad from November 2020 to



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January 2021. Ethical approval was taken from the ethical clearance committee of D.J college. A snowball sample of 250 dentists was selected and a predesigned questionnaire was mailed to them. Response was recorded via a second email sent by them. Approval was taken from the ethical review committee of D.J college. The questions addressed the attitude, knowledge and practice of dentists about coronavirus.

RESULTS

The response rate was 97%, the data collected collected and analyzed. Data was entered into SPSS version 21. The knowledge was measured using a six questions and dichotomized into good and poor knowledge based of a 60% cut off of the domain. The study showed that majority of dentists 95% had good knowledge about Covid and the primary source of information was World Health Organization through television, radio and social media. About 85% were fearful of the being infected by suspected patients, and transmitting the disease to their homes and 61% were afraid of the impact it will have on dentists livelihood. It was witnessed that dentists having more than 10 years experience had a positive attitude towards the virus. Infection control protocols seemed insufficient and needed improvement and assistance (table 1). The questions used in the questionnaire are shown in table 2.

DISCUSSION

The findings of the current survey demonstrated that the majority of dentists had good knowledge (95%). Our result is consistent with a multinational study (92.7%) conducted by Kamate et al.¹¹ and another study conducted by Saqlain et al.^[12] in Pakistan (93.2%). We also found that 75.57% of dentists used official government websites such as the World Health Organization as the main source of information about COVID-19. The majority of the dentists participating in this study were male (60%), which is in accordance with a study conducted by Almulhim et al.¹³ and Mustafa et al.¹⁴ The virus remains asymptomatic for sometime, but continues to be infectious and the disease can spread before any symptoms are detected. Therefore, it is recommended to increase the level of awareness in preventive measures in order to control its spread. All of the prevention measures—ranging from social distancing, hand washing to protective equipment, including surgical masks, face shields, gowns, and gloves—are important as protection measures for dental professionals in triage areas. In line with the results of previous studies, infection with

AGE	Percentage (%)
20-30 years	34
30-40 years	38
40-50 years	24
50-60 years	4
GENDER	
Male	60
Female	40
LEVEL OF EDUCATION	
BDS	58.14
MDS	48.16
EXPERIENCE IN YEARS	
1-5 years	12.8
5-10 years	26
10-20 years	34.8
> 20 years	26.4

Table 1. Sociodemographic characteristics of Dental practitioners (n=250)

COVID-19 through patients or colleagues, treatment of suspected patients, nonobservance of social distance with patients, the possibility of transmitting the infection to family members, post-infection quarantine, and treatment costs due to COVID-19, as well as news related to mortality were the main causes of dentist's fear and anxiety in this study.

CONCLUSION

In general, dentists of Ghaziabad who were involved in the current survey showed satisfactory knowledge and a positive attitude toward COVID-19 during the outbreak. However, there is still scope for recommendations to improve the knowledge level among dental staff. In addition, it is recommended to increase the dentists access to materials provided by dental health-care authorities and to specify the best and safest approaches while dealing with COVID-19 patients during and after the outbreak.

REFERENCES

1. Zhou P, Yang XL, Wang XG, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature* 2020; 579(7798): 270-3.

2. Sohrabi C, Alsafi Z, O'Neill N, Khan M, Kerwan A, Al-Jabir A, et al. World Health Organization declares

Questions regarding knowledge about coronavirus. (open-ended questionnaire).

- Q1. What is the correct incubation period of coronavirus?
 Q2. What are the main symptoms of covid-19?
 Q3. How is Covid mostly transmitted?
 Q4. Can covid be transmitted from an asymptomatic person?
 Q4. How can surfaces be cleaned if suspected to be contaminated?
 Q5. Covid 19 is more dangerous and life threatening in which individuals?
 Q6. What is the correct PPE donning and removal sequence?

Questions regarding attitude, practice and fear of Covid -19 among dental practitioners (close-ended yes/no response).

- Q1. Is it important to educate people about covid19 to prevent its spread?
 Q2. Do you prefer to avoid working with a patient suspected to have covid19?
 Q3. Would you let the staff work if they experience flu like symptoms?
 Q4. Do you know what to do if you experience symptoms of covid 19?
 Q5. Do you think dentist has a significant role in preventing spread of covid 19?
 Q6. Have you limited procedures that result in aerosol production?
 Q7. Do you think covid has an impact on livelihood of dentists?

Table 2. Questions regarding knowledge, attitude, practice and fear of Covid -19 among dental practitioners (close-ended yes/no response).

global emergency: a review of the 2019 novel coronavirus (COVID-19). *Int J Surg.* 2020;76:71–6. <https://doi.org/10.1016/j.ijssu.2020.02.034>.

3. WHO. Coronavirus disease (COVID-2019) situation reports. 2020. Available from: https://www.who.int/docs/defaultsource/coronaviruse/situation-reports/20200623-covid-19-sitrep-155.pdf?sfvrsn=cao1ebe_2.

4. MOH. [Internet]. COVID 19 Dashboard: Saudi Arabia. 2020. Available from: <https://covid19.moh.gov.sa/>

5. Peng X, Xu X, Li Y, Cheng L, Zhou X, Ren B. Transmission routes of 2019-nCoV and controls in dental practice. *Int J Oral Sci.* 2020;12(1):1–6. doi: 10.1038/s41368-02000759. [PubMed:32127517].

6. Chan JFW, Lau SKP and Woo PCY. The emerging novel Middle East respiratory syndrome coronavirus: the “knowns” and “unknowns.” *J Formos Med Assoc* 2013; 112(7): 372–381.

7. Zumla A, Chan JFW, Azhar EI, et al. Coronaviruses — drug discovery and therapeutic options. *Nat Rev Drug Discov* 2016; 15(5): 327–347.

8. Fini MB. What dentists need to know about COVID-19. *Oral Oncol.* 2020;105:104741. <https://doi.org/10.1016/j.oraloncology.2020.104741>.

9. Li Y, Ren B, Peng X, Hu T, Li J, Gong T, et al. saliva is a nonnegligible factor in the spread of COVID-19. *Mol Oral Microbiol.* 2020;35:141–5. <https://doi.org/10.1111/omi.12289>.

10. Schwendicke F. Saliva is a potential source of Covid-19, and appropriate protection measures should be applied /in dental practice. *Evid Based Dent.* 2020;21(2):62. <https://doi.org/10.1038/s41432-020-0101-y>.

11. Kamate SK, Sharma S, Thakar S, Srivastava D, Sengupta K, Hadi AJ, et al. Assessing knowledge, attitudes and practices of dental practitioners regarding the COVID-19 pandemic: a multinational study. *Dent Med Probl.* 2020;57(1):11–7.

12. Saqlain M, Munir MM, Ur Rehman S, Gulzar A, Naz S, Ahmed Z, et al. Knowledge, attitude, practice and perceived barriers among healthcare professionals regarding COVID-19: a cross-sectional survey from Pakistan. *medRxiv.* 2020:2020.04.13.20063198.

13. Almulim AI, Ahmad I, Sarkar S, Chavali M. Consequences of COVID-19 pandemic on solid waste management: Scenarios pertaining to developing countries. *Remediation* 2021;1–11.

14. Mustafa A, Safi M, Opoku MP, Hamdan AM. The impact of health status on attitudes toward COVID-19 vaccination. *Health Sci Rep* 2022;5:e744

15. Salman M, Mustafa ZU, Asif N, et al. Knowledge, attitude and preventive practices related to COVID-19: a cross-sectional study in two Pakistani university populations. *Drugs Ther Perspect* 2020:1–7.

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