

Assessment of anxiety and fear of getting infected among dentists while working in current corona virus disease outbreak- A study

Vidyut Prince¹, Ankita Bhargava², Lubna Nazneen³, Ami Rawal⁴, Raksha Thakur⁵, Challagondla Bhargavi⁶

¹Assistant Professor, Department of dentistry, MGM Medical college and LSK hospital, Bihar;

²Lecturer, Department-Public health dentistry, Government college of dentistry, Indore, Madhya Pradesh;

³Senior Lecturer, Department of Oral Pathology, S.B Patil Institute for Dental Sciences and Research, Bidar, Karnataka;

⁴Senior lecturer, Department Oral Pathology and microbiology, Rishiraj college of dental science and research centre, Bhopal, Madhya Pradesh;

⁵Assistant professor, Department of Paediatric and Preventive Dentistry, Guru Govind Singh College of Dental Science and Research Centre Burhanpur, Jabalpur, M.P.;

⁶PG 3rd year, Department of Prosthodontics, Govt dental college and hospital, Kadapa, Andhra Pradesh

ABSTRACT

Background: Health care workers and dentists in particular are categorized as at high risk of catching Covid- 19 infection. The present study assessed anxiety and fear among dentists while working in current corona virus pandemic.

Materials & Methods: 150 dentists of both genders were provided with a questionnaire. Each positive response "Yes" was marked as "1" while "No" was marked with "0." The frequency of the positive/negative responses was used to assess the dentists' anxiety.

Results: Out of 150 subjects, males were 90 and females were 60. 70 were BDS, 80 were MDS, 50 were working in clinic, 60 in hospital and 40 in both, 95 were working in private sector and 55 in government sector. The anxiety of being infected with COVID-19 was seen in 67%, afraid of providing treatment for any patient was seen in 70%, anxious talking to the patients in close proximity in 65%, afraid that you could carry the infection from your practice back to your family in 84%, feel anxious when you hear that one of your co-workers or colleagues has been infected with COVID-19 in 80% and 72% knew the illness problems associated with COVID-19 virus. The difference was significant ($P < 0.05$).

Conclusion: Dentists had anxiety and fear while working in Covid- 19 pandemic.

Key words: *Anxiety, Dentist, Fear*

Introduction

Since the first confirmed case was diagnosed in December 2019 in Wuhan, China, coronavirus disease of 2019 (COVID-19) has exerted adverse impact on every aspect of daily life.¹ This disease is caused by severe acute respiratory syndrome coronavirus 2 (SARSCoV-2), and its transmission can occur after the close contact with infected individuals via their body fluids and the respiratory droplets and aerosols they produced through coughing, sneezing, talking and other activities. Many countries have shut down their teaching institutes, industries, sport activities, social gatherings, public events, and airports.²

Drastic measures such as individual self-quarantine and social distancing rules have been introduced in an attempt to control the spread of the infection. COVID-19 belongs to the Coronaviridae virus family, which is characterized by a single strand RNA structure.³ This virus has potential to cause severe respiratory tract infection and pneumonia among infected individuals, and can be easily transmitted via hand contact, saliva, nasal droplets and contaminated surfaces. Health care workers and dentists in particular are categorized as at high risk of catching this infection. This could be because their close contact with patients during routine dental procedures increases the possibility of infection transmission.⁴

World Health Organization (WHO) and American Dental Association (ADA) published specific precaution guidelines to be implemented by dentists during treatment of urgent and emergency cases only. These guidelines emphasized the use of the appropriate precautions including wearing personal protective equipment (PPE) during dental procedures.⁵ Providing a secure environment is of paramount importance for dentists and dental staff to conduct dental work in a safe working environment. The high infection rate of COVID-19 and lack of PPE might affect the anxiety of the dentist. The levels anxiety of dentists have shown a negative impact on decision making, quality of work, and burnout.⁶ The present study assessed anxiety and fear among dentists while working in current corona virus pandemic.

Materials & Methods

The present study was conducted among 150 dentists of both genders after they agreed to participate in the study.

Data such as name, age, gender, qualification, experience, location etc. was recorded. A questionnaire was prepared and distributed among dentists and the response was recorded. Each positive response “Yes” was marked as “1” while “No” was marked with “0.” The frequency of the positive/negative responses was used to assess the dentists’ anxiety. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

Results**Table I Distribution of subjects**

Total- 150		
Gender	Males	Females
Number	90	60

Table I shows that out of 150 subjects, males were 90 and females were 60.

Table II Demographic characteristics

Variables	Number	P value
Qualification		
BDS	70	0.15
MDS	80	
Workplace		
Clinic	50	0.92
Hospital	60	
Both	40	
Employment		
Private	95	0.05
Government	55	

Table II shows that 70 were BDS, 80 were MDS, 50 were working in clinic, 60 in hospital and 40 in both, 95 were working in private sector and 55 in government sector. The difference was significant ($P < 0.05$).

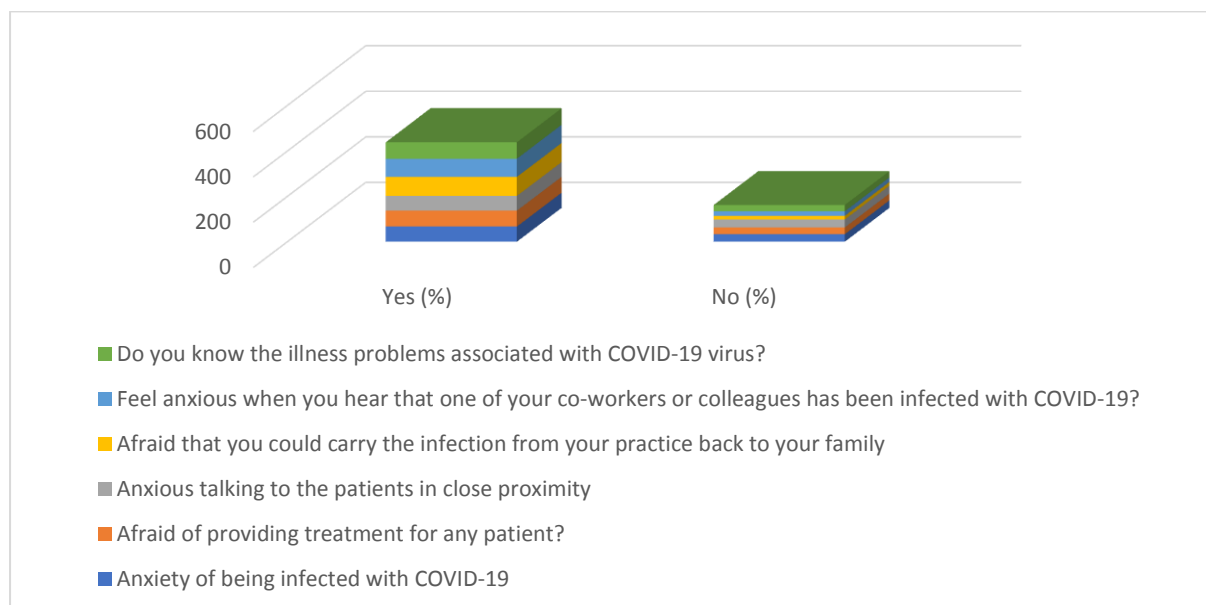
Table III Assessment of fear and anxiety among dentists

Questionnaire	Yes (%)	No (%)	P value
Anxiety of being infected with COVID-19	67	33	0.02
Afraid of providing treatment for any patient?	70	30	0.01
Anxious talking to the patients in close proximity	65	35	0.05
Afraid that you could carry the infection from your practice back to your family	84	16	0.01
Feel anxious when you hear that one of your co-workers or colleagues has been infected with COVID-19?	80	20	0.01
Do you know the illness problems associated with COVID-19 virus?	72	28	0.02

Table III, graph I shows that anxiety of being infected with COVID-19 was seen in 67%, afraid of providing treatment for any patient was seen in 70%, anxious talking to the patients

in close proximity in 65%, afraid that you could carry the infection from your practice back to your family in 84%, feel anxious when you hear that one of your co-workers or colleagues has been infected with COVID-19 in 80% and 72% knew the illness problems associated with COVID-19 virus. The difference was significant ($P < 0.05$).

Graph I Assessment of fear and anxiety among dentists



Discussion

As was known, dental treatments may involve the use of dental hand pieces, ultrasonic scalers, water-air syringes, etc., which normally generate aerosols, sprays, spits and splashes of saliva, blood or other transport media of SARS-CoV-2.⁷ Therefore, dental settings were closed for a period of time according to the lock-down policy in different areas, during which only urgent patients were treated and most cases had been postponed.⁸ After the spreading of SARS-CoV-2 had been curbed, each area gradually resumed dental services, and precautions (such as the sanitization of equipment and operatories, the use of the personal protective equipment (PPE) and the management of medical waste) have been enforced in accordance to the guideline issued by National Health Commission. Before returning to work, all dental staff are required to be trained with the basic knowledge of COVID-19.⁹ Moreover, some dental settings have followed the Level Tree Protective Measures (PM-3) (including medical uniform, gown, medical cap, N95 respirator, goggles, face shield, medical hazmat suit, gloves, and medical shoe covers) to minimize the harm to FDS which includes dental interns, dental nurses and general dentists. In addition, the use of antibacterial mouth washes, rubber dam, and high-volume suction during treatment procedures with frequent cleaning and disinfecting of surfaces of chairs, door handles and floors was highly recommended.¹⁰ The present study assessed anxiety and fear among dentists while working in current corona virus pandemic.

In present study, out of 150 subjects, males were 90 and females were 60. We found that 70 were BDS, 80 were MDS, 50 were working in clinic, 60 in hospital and 40 in both, 95 were working in private sector and 55 in government sector. Mahdee et al¹¹ in their study a total of

484 clinicians responded. The questionnaire was composed of open end, closed end, and Likert five-point scale questions to assess anxiety, awareness and financial impact of COVID-19 on dentists. The mean age of participants was 36.51 ± 9.164 years and the majority (75.2%) of these were graduate dentists only. More than 80% of participants reported anxiety of catching COVID-19. The recorded anxiety level was higher amongst younger dentists and females. Awareness and practice levels among these dentists of precautions and infection-control measures associated with COVID-19 (94%) was found to be high and to be statistically significantly affected by age, qualification and designation (except GP vs. Specialist). With respect to the economic impact, about 75% of practitioners, regardless of demographical variables, reported that their income had declined by about 50%.

We found that anxiety of being infected with COVID-19 was seen in 67%, afraid of providing treatment for any patient was seen in 70%, anxious talking to the patients in close proximity in 65%, afraid that you could carry the infection from your practice back to your family in 84%, feel anxious when you hear that one of your co-workers or colleagues has been infected with COVID-19 in 80% and 72% knew the illness problems associated with COVID-19 virus. Zhao et al¹² found that FDS were 4.342 (95% CI: 2.427–7.768) times more likely to suffer from anxiety disorders than the general public. The bivariate analysis showed that age, Level Three Protective Measures (PM-3), conflicts with patients and/or colleagues were moderately associated with the anxiety state of FDS. But the knowledge of COVID-19, the treatment to suspected or confirmed cases both had a weak association with the anxiety among FDS. Conversely, workload, the exposure to potential infectious substance and conducting aerosol generated performance were not significantly related to the anxiety of FDS. As the model indicated, an elder age and PM-3 protective measures could lower the anxiety state of FDS, whereas the conflict with patients or/and colleagues would worsen it.

Conclusion

Authors found that dentists had anxiety and fear while working in Covid- 19 pandemic.

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