

Covid-19 Pandemic and Dentistry: Perception of Dental Trainees from Peshawar Regarding their Mental Health

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Abstract

The aim of this study was to find out the impact of COVID-19 pandemic on mental health of House Officers (HO) and Postgraduates (PG) dental trainees. A cross sectional study was conducted on 380 participants. A total number of 194 HO's and 186 PG trainees from all the teaching dental hospitals of Peshawar, Khyber Pakhtunkhwa participated. The time duration of this study was December 2020 till March 2021. A self-administered questionnaire was used that comprised of closed ended questions on perceptions of trainees regarding their mental health. The data was recorded and analyzed using SPSS statistical package 26.0. A total number of 380 Trainee dentists participated in the study and half of them (48%) reported to be tested positive for COVID-19 previously. During the peak of the pandemic, the overall mental health (90.8%) of the participants was compromised. The most common reasons reported were financial issues (58.9%) and psychomotor skills (52.1%). Fear of putting family in danger (94.2%) was also a significant factor adding to mental health deterioration. It was also reported in our study that the females were more psychologically affected as compared to their male counterparts with P-Value less than 0.05. This study shows the impact of COVID-19 pandemic on the mental health of house officers and postgraduate dental trainees. Our research concluded that majority of internees mental health was negatively affected by the COVID-19 pandemic, with a significant incidence of fear, anxiety, and concern, among other psychological symptoms.



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Introduction

Throughout history, significant illness outbreaks have occurred, but the emergence of the novel coronavirus disease 2019 (COVID-19) has been lethal and destructive, posing a challenge to healthcare systems including the dental health service system. In December 2019, the first COVID-19 outbreak was detected in Wuhan, China. It has since spread over the globe. The World Health Organization declared the COVID-19 outbreak a pandemic on January 30, 2020. Given that COVID-19 is an airborne disease with the virus being detected in salivary and nasopharyngeal secretions in humans and can be transferred through direct contact or respiratory droplets. Dentists are thought to have the highest potential vulnerability to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) due to the level at which they work with others and disease exposure. It was proposed that proper infection control measures must be implemented to prevent nosocomial coronavirus infection. In the majority of dental offices and hospitals, all elective treatments were postponed. Only emergency measures were carried out with considerable caution.

All of the American Dental Association's (ADA) accredited dentists were advised to postpone any elective treatment. However, in order to relieve burden on hospital emergency departments, it was advised that patients receive emergency dental treatment, until the COVID-19 pandemic was brought under control. The COVID-19 pandemic had a significant impact on dentist's practice.² A survey conducted on dental students in the United States reported that their clinical training was negatively impacted by a lack of familiarity with virtual learning, as well as restrictions on hands-on practice and clinical experience. Dental training disruptions caused anxiety among students, who were forced to adjust to new educational instruction methods while also fearing for their safety and health. The COVID-19 outbreak created a number of challenges for healthcare workers (HCWs) around the world, including a lack of personal protective equipment, a shortage of life-saving resources, frustration, isolation, and the risk of infection in themselves and their families. All these factors are likely to increase psychological distress among the HCW's. Recent literature also suggests that HCWs are highly susceptible to emotional discomfort during COVID-19. In recent cross-sectional

surveys performed in many countries, dentists have expressed concerns about lawsuits, family welfare, and overall unease about the influence of the COVID-19 pandemic on dental practice. The objective of the present study was to investigate the psychological impact of the COVID-19 outbreak on HO and PG dental trainees of teaching dental hospital Peshawar. The main aim of this study was to look at aspects of health and well-being of dentists in training, as a result of the uncertainties around the impact of COVID-19, using a cross-sectional approach. The impact of COVID-19 and the accompanying ambiguity must be investigated immediately, as this will considerably aid our understanding of who reacts to the situations they find themselves in, who appears susceptible, and how extra support and training can be devised and delivered.

Methodology

A cross sectional analytical study was conducted on 380 dental trainees (194 House Officers and 186 Postgraduates). The time period of this study was from December 2020 till March 2021. Ethical approval was obtained from Ethical committee of the Gandhara University. The study was carried out in all 4 dental teaching hospitals of Peshawar. A self-administered questionnaire was developed to assess the aspect of COVID-19 pandemic on mental health of dental trainees. The questionnaire comprised of close-ended questions. All the trainees (HO's and PG's) who were present at the time of data collection were included in the study. An informed consent was taken from the participants. A pilot study was carried out on 10% of the population. A convenient sampling technique was used. Descriptive and inferential analysis were applied on the recorded data. SPSS version 26.0 was used.

Results

A total number of 380 participants were selected in the study from all the 4 teaching dental Hospitals of Peshawar. The demographic data of the participants is mentioned in table-1. Almost half of the participants in our study (48%) said they had previously tested positive for COVID-19. According to statistical analysis, the overall mental health (90.8%) of the participants was negatively impacted, with postgraduates accounting for the majority of those affected. Females (93.2%) were more affected mentally as compared to their male counterparts

(88.3%). As dental practice was severely impacted by the pandemic, it was a leading source of psychological health impairment in 81.6 % of the participants. The majority of the participants (82.6%) were concerned about their practice and training due to the potential of coronavirus infection leading to cognitive impairments. In our research, 94.2%

of the dental trainees were worried that they may put their families in danger because of their dental practicing environment. The trainees' financial crises during the pandemic's peak was another element that contributed to their mental health deterioration (58.9%).

Table 1: Demographic Variables of Dental Trainees

Demographic Variable		f (%)
Gender	Male	188 (49.5%)
	Female	192 (50.5%)
Marital Status	Unmarried	267 (70.3%)
	Married	113 (29.7%)
Socioeconomic Status	Low	26 (6.8%)
	Middle	299 (78.7%)
	High	55 (14.5%)
Occupation	House Officers	194 (51.1%)
	Postgraduate Trainees	186 (48.9%)

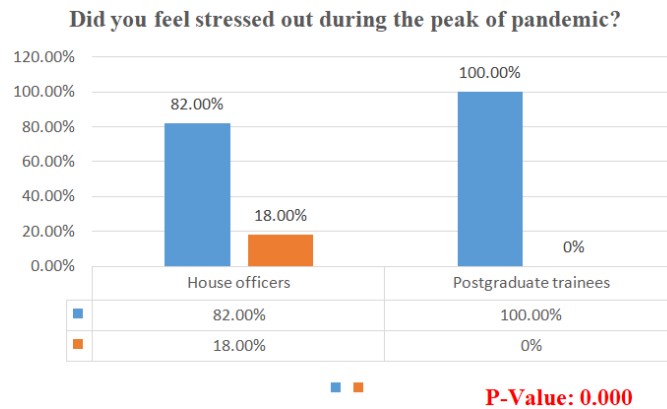


Fig. 1: Perception of Mental Health of Dental Trainees

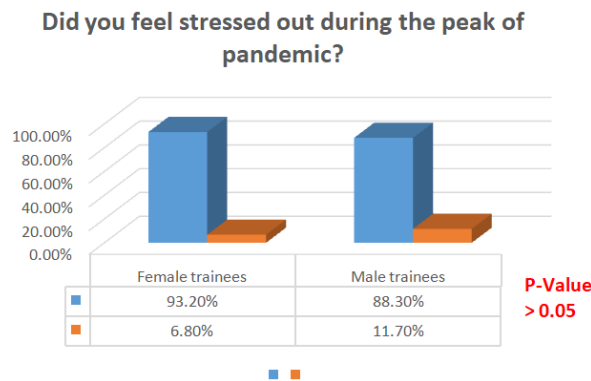


Fig. 2: Association between gender and perception of Dental Trainees regarding stress due to COVID-19

Table 2: Perceptions of participants regarding COVID-19

S.No	Questions	Answers	
		Yes	No
1)	Have you ever tested positive for COVID-19?	47.9%	52.1%
2)	Do you think COVID-19 affected your dental practice?	81.6%	18.4%
3)	Were you concerned about your practice and training because of the risk of coronavirus infection leading to cognitive impairments during the peak of the pandemic?	82.6%	17.4%
4)	Was your mental health affected by the probability that your dentistry practice may put your family in danger during the peak of the COVID-19 pandemic?	94.2%	5.8%
5)	Did financial issue during the peak of pandemic affected your mental health?	58.9%	41.1%

Discussion

According to our study (n=380) 90.8% felt stressed out during the peak of pandemic which included 82% House officers and 100% Postgraduates. In a similar research of mental health among dental trainees in Washington, 69% of participants said COVID-19 had a negative impact on their overall mental health. A study in Pakistan also reported the prevalence of depression and anxiety to be high among the PG trainees. It was observed in our study that, fear of contracting the coronavirus, suspension of routine dental procedures, strict lockdown, lack of clinical skills application, less patient inflow/exposure, high cost and lack of availability of Personal Protective Equipment (PPE), fear of infecting friends and family were all perceptions that led to mental health deterioration in dental trainees during the peak of the pandemic.

It was also reported in our study that the female (93.2%) were more psychologically impacted due to COVID-19 as compared to their male counterparts (88.3%), the results of which were similar to a survey conducted on German dentists claiming that females experienced significantly higher levels of anxiety and stress than males during the peak of the pandemic. Female dentists had claimed that clinical abilities, such as technical skills, were more stressful. Previous studies had reported that females were more responsive and expressive to a stimuli than males, which could explain the disparities. This may be due to the fact that females

are more likely than males to develop anxiety, stress, and depressive disorders, as well as Post traumatic stress symptoms, during adulthood.

Around 81.6% of the participants in our study reported that the pandemic had a negative impact on their dental practice while 82.6% were concerned about their training and practice because of the risk of coronavirus infection during the peak of pandemic. The suspension of regular dental practice, which resulted in reduced involvement with patients and limited use of clinical abilities, could be the primary justification for this. A study of Italian dentists found that being younger and having fewer years of dental practice were linked to higher levels of depressive symptoms. This is relevant to our research since the House Officers postgraduates had less years of dental practice and were still learning. They experienced increased stress during the pandemic as a result of the suspension of routine dental practice and were concerned about their professional advancement. Other studies have reported similar findings that coronavirus had a detrimental impact on the clinical abilities of dental trainees.

Majority of the participants (n=358) 94.2% in the current study were worried about putting their families in danger because of their dental practice, during the peak of pandemic. Day-to-day social disruption, fear of contracting the virus and isolation, lack of PPE, seeing/hearing about colleagues

becoming infected and being on a ventilator, and fear of spreading the virus to family and friends have all been reported as potential explanations for negative mental health consequences.

A study conducted in US revealed another legitimate concern among dentists, the transmission of virus from their workplace to their families. Another research conducted in Riyadh, Saudi Arabia claimed that Fear of contagion and infecting family members and friends mentally impacted the dental students.⁴ Regional study conducted in India revealed that around 90% of the participants in the study were concerned about spreading infection back home.

According to our study, 58.9% of the participants reported that they suffered/ had financial issue during the peak of pandemic, affecting their mental health. As staff of private dental clinics had to deal with the lockdown and lack of patients during the pandemic produced a financial dilemma for many dental practices, which is regarded one of the leading causes of mental stress among dentists.

Due to reduced work hours and limited dental procedures, the COVID-19 pandemic caused financial stress for dental practitioners, according to a research conducted in Germany. According to a research conducted in Iran, 97% of the dentists claimed their financial income has decreased since the Coronavirus outbreak. This indicates

that the COVID-19 pandemic had financially impacted dentists.

Conclusions

Our research concluded that majority of internees mental health was negatively affected by the COVID-19 pandemic, with a significant incidence of fear, anxiety, and concern, among other psychological symptoms. Furthermore, the female dentists reported to be more affected psychologically as compared to their male counterparts.

The findings of this study can help universities analyze and treat existing levels of stress and anxiety, as well as plan and execute mental health initiatives to reduce the number of traumatic events caused by the COVID-19 pandemic.

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Conflict of Interest

The authors do not have any conflict of interest.

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