

Covid-19 Pandemic and Dentistry: Perception of Dental Trainees Regarding their Professional Skills and Career Change How Covid-19 Impacted Professional Skills and Career Plans

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Abstract

Objective: The aim of this study was to find out the impact of COVID-19 pandemic on professional skills and career plans of House Officers (HO) and Postgraduates (PG) dental trainees.

Methodology: 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. The time duration of this study was December 2020 till March 2021. A self-administered questionnaire was developed to assess the psychological impact of COVID-19 on the HO and PG dental trainees. The questionnaire 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.

Results: A total number of 380 Trainee dentists participated in the study and half of them (48%) reported to be tested positive for COVID-19 at some point. During the peak of the pandemic, 90.8 % of the participants' reported that their mental health was compromised, with the most common reasons being financial issues (58.9%) and psychomotor skills (52.1%). The Postgraduate Trainees were more concerned about their dental practice and impact on their mental health as compared to the HO's and the difference was statistically significant, financial issue being the major reason.

Conclusion: This study shows that the COVID-19 pandemic affected the mental health, professional skills and financial issues of the house officers and postgraduate dental trainees.

Keywords: covid-19; pandemic; dentistry; mental health; psychological impact

Introduction

The most serious health catastrophe that 21st century faced so far is the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) also known as COVID-19, which was declared as a global public health emergency by the World Health Organization (WHO) on 30th January 2019 [1]. This disease, which has flu-like symptoms, was first detected among residents of Wuhan, Hubei Province, China, tremendously impacting all aspects of life around the world [1]. Dentists are regarded to be the most vulnerable to the coronavirus disease [1]. Due to direct exposure to saliva and blood [1]. It was proposed that proper infection control measures must be implemented to prevent nosocomial coronavirus infection [2]. Direct patient treatment was observed to be disrupted nearly everywhere due to COVID-19 [2]. In majority of dental clinics and hospitals, all elective treatments were postponed. Only emergency

procedures were carried out, with strictly following all the safety protocols [2]. The American Dental Association (ADA) were instructed to postpone any elective procedures. However, until the COVID-19 pandemic was brought under control, it was recommended that patients receive emergency dental services to reduce the pressure on hospital emergency rooms [1]. The COVID-19 pandemic had a significant impact on regular educational activities for undergraduate and postgraduate dental students all across the world [1]. The unprecedented lockdowns and fear of contracting the infection reduced the number of patients attending hospitals. These events ensued in a severe decline in the "clinical material and patient footfall," affecting HO and PG students' training and clinical experience [1]. The abrupt spread of coronavirus infection had a variety of consequences on dentistry education and training [1]. Hands-on learning is the foundation of the education of HO and PG residents [1]. In the midst of lockdown

and elective dental treatment, it was difficult for them to accomplish this milestone [1]. It was difficult to conduct online simulated training and clinical skill training. Putting a stop to house job and clinical training during the pandemic had a negative impact on dental HO/PG students' confidence and competence. If clinical activities are suspended for an extended period, their clinical skills may deteriorate [1]. The forced closure of dental clinics and limited capacity upon reopening, along with public apprehension about visiting their dentists, resulted in a large drop in income at a time when infection control expenditures had risen. Many dentists were considering abandoning their profession due to financial and workload concerns. Another major concern among dental professionals considering leaving their profession was a post-graduation delay or extension due to a decrease in opportunities for students to get clinical experience during the pandemic, which influenced their training [1]. The long-term implications of COVID19, such as reduced pay and less job opportunities, as well as the danger of altering regulatory limits, were all external factors that influenced students' career plans [1]. These students highlighted COVID-19-related job concerns, citing delays in licensure. A research study on student perceptions regarding clinical training during the first wave of the pandemic in the United States revealed that the changes implemented (virtual learning, limitations related to hands-on practice and clinical experience) had a negative impact on the clinical training [1]. This article attempts to understand the consequence of the COVID-19 pandemic on

postgraduate training, highlighting its impact on HO and PG students. The goal of this study was to see if the COVID-19 pandemic had an impact on clinical practice of dental trainees as well as their post-graduate career plans.

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 professional skills and career plans 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 of 380 participants were selected for the study from 4 teaching dental hospitals of Peshawar. Table-1 shows their demographic information.

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%)

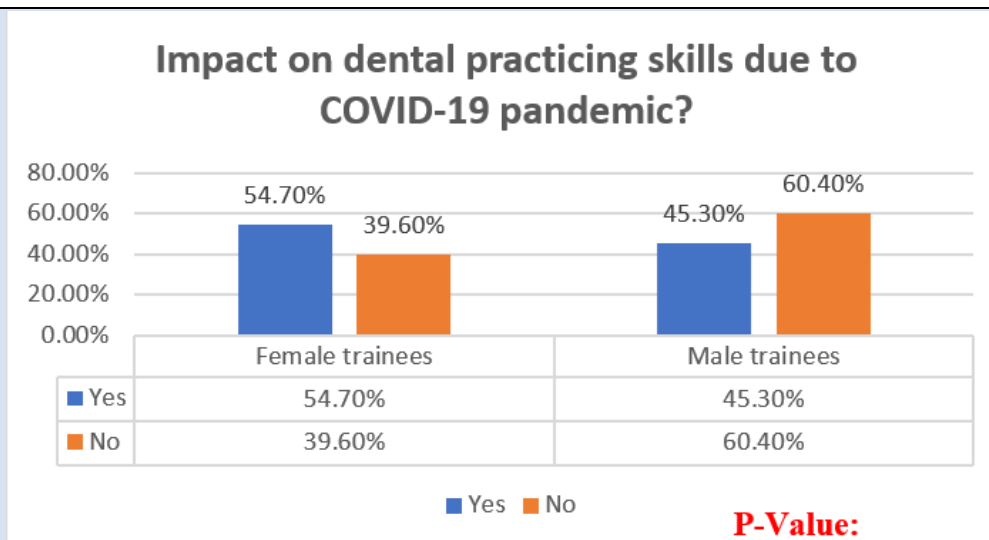


Figure 1: Association between gender and perception of Dental Trainees regarding impact of COVID-19 on dental practicing skills

Table 2: Questions regarding career plans

Variables	Were you searching for employment options/ business plans other than dentistry?		P-Value
	Yes	No	
House officers	106 (54.6%)	67 (36%)	0.000
Postgraduate trainees	88 (45.4%)	119 (64%)	

Table 3: Questions regarding financial issues and professional skills and career plans.

S.No	Questions	Answers	
		Yes	No
1)	Do you think it affect your dental practice?	81.6%	18.4%
2)	Have you observed a decrease in number of patients since the outbreak of COVID-19 pandemic?	96.8%	3.2%
3)	Were your dental practicing skills effected due to COVID-19 pandemic?	72.1%	27.9%
4)	Were you performing any dental procedures during the peak of pandemic?		
	a) No I was not performing any procedures	a) 73.2%	
	b) I was only performing emergency procedures	b) 22.4%	
	c) I was performing regular procedures	c) 4.5%	
5)	Did you encounter any financial problem during the peak of pandemic?	60%	40%
6)	Have you ever been compelled to seek financial assistance from family or friends due to COVID-19?	47.6%	52.4%
7)	Did you have to rely on another source of income besides dentistry due to COVID-19?	45.5%	54.5%
8)	Due to COVID-19 pandemic, did you ever choose or thought of choosing another career?	42.1%	57.9%
9)	If yes! The reason for it was?		
	a) financial issue	a) 59.5%	
	b) Inadequate professional skills	b) 39.2%	
	c) Uncertainty in career opportunity	c) 1.3%	

Discussion

Females' dental practicing skills more affected

According to our study (n=380), 54.7% of the females reported being more anxious than their male counterparts about COVID-19 compromising their dental practicing skills. Female dentists reported that

clinical abilities, such as technical skills, were more stressful for them, according to a survey conducted on dental students in Saudi Arabia [1]. A study conducted on dental students at the University of Malta also reported that Females were much more concerned than males about losing manual dexterity [1]. Other studies also found that female dentistry students had higher self-reported stress, which could be due to females' willingness to display vulnerability in self-reported surveys [2,3].

Searching for employment options/ business plans other than dentistry

During the peak of COVID-19 pandemic, perceived job uncertainty was observed to be a major factor in dental trainees searching for other employment options. During the lockdown, all dentists were required to close their clinics, and hospitals were required to close their out-patient departments or limit their activity to urgent procedures due to concerns about the coronavirus, while patients also cancelled previously scheduled appointments, putting additional strain on their financial resources. Not only did the dentists' financial capabilities suffer as a result of their perceived employment insecurity, but their mental health suffered as well. The interruption of regular dental practice resulted in decreased patient contact and limited use of clinical competencies. Less possibilities for trainees to observe and treat new situations impacted their training time, resulting in mental health problems. In the context of the current study, the COVID-19 pandemic may exacerbate the effects of poor mental health to which dental trainees are predisposed due to the strictness and intensity of training most likely as a result of additional uncertainties about academic and clinical training, as well as future employment and income prospects.

According to a study of dental and dental hygiene students at a single U.S. dentistry school, the COVID-19 outbreak has caused almost 12% of those polled to reconsider their future career plans [1].

Financial issue leading cause for other employment options

This can be explained by the fact that operating in private dental clinics was prohibited by the government during the national lockdown, and the sole source of revenue was the government's monthly stipend. In an attempt to restrict the spread of the infection, quarantines and lockdowns were imposed around the world. The lockdowns alternated between complete shutdowns of all sectors and partial

shutdowns of selected sectors such as schools, universities, and other institutions. This has had a significant economic influence on practically every industry, including dentistry. This is understandable in the event of a pandemic. According to the conclusions of a study conducted in Iraq, the COVID-19 outbreak caused a 50 percent economic loss to the dentistry community [1].

According to a study conducted in Germany, the COVID-19 pandemic caused financial stress for dental practices due to reduced work hours and limited dental procedures. A large percentage of the participants experienced financial difficulties as a result of the reduced work hours and limited dental procedures [1].

Impact on dental practicing skills

According to our study 72.1% reported that the COVID-19 pandemic affected their dental practicing skills while 96.8% observed a decrease in number of patients since the outbreak of the coronavirus.

These findings can be explained by the fact that the number of outpatients were significantly lowered during the peak of the pandemic, resulting in less interaction between dental trainees and patients, compromising their communication and psychomotor skills. Only emergency cases were allowed to be treated because the outpatient department was closed. All non-emergency procedures were rescheduled or cancelled. The decrease in the number of patients had a significant impact on the training duration of dental trainees, as they had less opportunity to use and polish their newly acquired skills on patients.

Performing Procedures

According to our study 73.2% of the participants were not performing any dental procedures while 22.4% were performing only emergency procedures during the peak of pandemic. The dentists are considered to be the high-risk professionals in contracting the virus due to the proximity at which they work with the patients and the nature of the disease. The fear of contagion and of infecting family members and friends could be the primary justification of this as COVID-19 has caused enormous death toll. The unavailability of viral screening technology in hospitals, lack of PPE (personal protective equipment) and other safety equipment, fear of social isolation- especially from family and mental exhaustion, all contributed to deferring or only treating emergency operations. Another research on Iraqi dentists found

that the majority of respondents reported fewer working days, rescheduling appointments to see only emergency cases, a lack of governmental support, and a decrease in their total income [1].

Conclusion

Human nature drives us to desire to know, to look for explanations, and even to peer into a crystal ball to see what the future holds. That desire is heightened during uncertain times. Although COVID-19 has caused uncertainty on a worldwide scale, its effects are still unknown. In light of the fact that we are still learning the full extent of the pandemic's effects on careers, the questions we presented in our introduction remain rhetorical. As the pandemic spreads, the data on rising unemployment rates and relative gains and losses change. From the perspective of the HO and PG, the survey revealed the pandemic's severe negative effects on the training programmes. We found that poor mental health was prevalent among dentistry students who had been assessed, which may have been made worse by the COVID-19 pandemic. Dropout intentions were linked to poor mental health brought on by training interruption, financial strain, post-graduation delay, and extension.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the ethical committee of Gandhara University. Consent was taken from all the participants before data collection.

Consent for publication

All authors have given consent for this article to be published in European society of Medicine.

Availability of data and materials

The datasets generated and analyzed during the current study are readily available from the corresponding author upon justifiable request.

Competing interests

The authors have no conflicts of interest regarding the research, authorship, or publication of this article that might influence the objectivity and integrity of the research.

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