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ORIGINAL ARTICLE

Fear and Practice Modifications of Dentists During the Omicron ERA of Covid-19

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ABSTRACT

Background/Aim: After the rapid spread of the COVID 19 when it first started in December 2019, the omicron wave of the infection started to rise again in November 2021. During this time Centers for Disease Control and Prevention came up with a comprehensive plan in place which allowed dentists to treat patients safely. Due to the fear of contraction of the virus and its easy transmissibility, it begs to reason that dental practitioners should modify the clinical practice to ensure optimal cross infection control.

Methods: Our sample size consisted of 290 respondents from all over Pakistan, all of whom were dental practitioners using a standardized questionnaire. The data were analyzed using SPSS V.23. Frequencies were calculated & the Mann-Whitney u-test of significance was applied to the responses.

Results: It was seen that out of the 290 respondents, 79% of the total respondents were anxious about treating patients with suspicious signs and symptoms of COVID-19 and 81% of the respondents were afraid of carrying the infection back to their families. On the other hand, only 49% of the respondents said that they use N95 respirators while treating patients, 28% of the respondents said that they were using rubber dams for aerosol-generating procedures and 49% said that they would perform 4 to 6 handed dentistry.

Conclusion: There was a lack of adherence to the CDC proposed guidelines by the majority of the respondents despite having fear regarding the transmissibility of the disease.

Keywords: Omicron wave, dental practice modifications, fear of COVID-19

INTRODUCTION

In December 2019, a series of complicated pneumonia-like cases were reported in Wuhan, China[1]. The viral strain that was isolated from these cases was found out to be one from the coronaviridae family, a novel strain that had never created these kinds of complications in human beings previously. A single strand RNA virus then proceeded to spread to the other people in the country at an alarming rate and given the cast population of China and global travelling[2]. In February 2020, this condition, dubbed COVID-19 by WHO, was officially declared a pandemic as it trickled into other countries and started spreading like wildfire[1,3]. While the mortality rate was initially low, around 2%; as of January 2021 more than 92 million cases have been reported, with almost 2.5 million deaths worldwide. (Worldometer.com, dated 2/27/2021).

Like most respiratory infections, COVID-19 or SARS-COV-2 transmits rapidly through sneezing, coughing and touch with contaminated objects[3,4]. The disease presents as an acute respiratory infection with symptoms ranging from fever, dry cough and headache to myalgia, nausea, diarrhoea and loss of smell and taste[2,5]. To control its rapid spread the entire world was asked to be socially distant, have a rigorous handwashing routine and wear masks[6]. The disease showed a particularly morbid effect on individuals suffering from other systemic conditions such as diabetes and heart disease [7,8], causing a myriad of complications such as pneumonia and typhoid like symptoms[2,3,6] initially, and now the complications have become progressively more damaging like cardiac arrests[9], acute kidney failure and death[5,10,11] like most respiratory infections SARS-COV-2 also occurs in waves of acceleration and deceleration periods, the world has entered its wave of Covid-19 variant Omicron which started in November 2021; increased UV rays mutating the virus[12,13].

Dentists and Dental hygiene personnel are at an increased risk of COVID-19 transmission due to the proximity of the patient and DHCP [6,10,14]. Furthermore, it was observed that SARS-COV-2 is readily bound to the human angiotensin-converting enzyme 2 receptors[3], which are present in the saliva, given the nature of dental procedures and the aerosol generated during these procedures it stands to reason that inhalation of these suspended air droplets can prove to be hazardous to the staff [1,7,15]. With the virus able to remain stable for several hours suspended in air and for days on plastic and steel surfaces, the chance of cross-infection becomes paramount for dentists and DHCP[15,16]. Furthermore, a new strain of the Omicron virus is more transmissible due to the concentrated amount of the viral load in the saliva, which presents a bigger risk to dentists and other DHCPs[17].

When the Covid-19 virus first started spreading, a widespread lockdown occurred in all countries[3], along with Pakistan which meant a lot of dental clinics shut down as well. Due to the unknown nature of the virus, the fear of infection and lack of consistent regulations[1] every new policy was on a trial and error basis, hence dentists were resorting to teledentistry [15], triaging patients and treating only the emergency[14,18] and managing non-emergent cases with counselling and pharmacological means[10]. Increased fear amongst patients also meant that fewer people were reporting to the clinics with dental problems[1]. All of this took a toll on the dentists' fiscal conditions, which were already trying during the pandemic[18,19]. Furthermore, the dentists who were incorporating the regulations proposed by the CDC, which were last updated in December 2021 also had to bear the expenses of the expensive regular testing and specialized PPE like N95 respirators and disposable gowns that has become necessary to protect the DHCP from the transmission of the virus[18].

However, the different waves have prepared dentists, dental hospitals and dental clinics a little, now have the idea of what to expect and what to watch out for. Patient triaging has become routine and patients suspected of being infected are being asked to quarantine for a fortnight before coming in for the treatment after which standard protective procedures are being followed to treat these patients[6,20]. Still, due to the pandemic, there is rampant anxiety about getting infected and fear regarding the disease[5]. Fear has played an important role in promoting dentists to modify their dental practices, with fear being more prevalent in females[2,21]. Men reportedly had a predilection to getting infected and experiencing severe complications[3]. Moreover, a higher level of education also ensured that people would modify their practices as opposed to people with less education[21]. The understanding promoted people to take safety measures they probably would not take if the severity of the disease was not taken seriously. Older individuals are more susceptible to the morbidities of the infection hence were more fearful of the spread of COVID-19[2,8]. The rising

fear in the medical and dental professionals was also present, which is attributed to a greater comprehension of the disease[22].

The purpose of this study is to evaluate the practice modification of dentists during the Omicron wave of COVID 19 while treating patients and see if their fear of the disease plays a role in these practices. An evaluation of these practices would have a twofold benefit. It will create awareness amongst dentists, promote adherence to the regulations proposed by CDC/WHO and where there is a gap, these discrepancies can be assessed and corrected.

MATERIAL AND METHODS

This cross-sectional survey-based, the multivariate study was conducted from November 2021 to February 2022 in the Department of Prosthodontics of Avicenna Dental College. Permission to conduct the study was granted by the research committee of the institution. All respondents were informed about the nature of the research and consent was taken. The questionnaire was used with permission from the original authors of the research "**Fear and Practice Modifications among Dentists to Combat Novel Coronavirus Disease (COVID-19) Outbreak"** with some modifications to the questions which was deemed relevant to the Omicron wave of COVID-19.

The data was collected via an online survey created on "Google forms" along with an identical printed survey form. A convenience sample size of 290 respondents was collected. The survey questions were created following the CDC and WHO guidelines. The inclusion criteria consisted of all dental practitioners who have graduated from dental school regardless of age, gender, level of qualification and area of practice. The forms were sent out all over Pakistan via WhatsApp, Facebook, Twitter and Instagram. The physical copies of the form were handed over to the respondents of Avicenna dental college in person and collected once they were filled.

Results were analyzed using SPSS (V.23 IBM Corp USA 2016). Data were evaluated by calculating frequencies and the Mann-Whitney u-test of significance was applied to the results of the responses with the gender and qualification of the respondents. There was no conflict of interest amongst the authors of the study.

RESULTS

There were a total of 290 respondents from all over Pakistan. Out of all of the respondents; 41% (n=120) were males and 59% (n=170) were females. The majority of the respondents 60% (n=176) were in the 21 – 30 age group with only 2% (n=7) of the respondents in the 51 and above age group. 57% (n=166) were dentists who had undergraduate qualifications or were currently enrolled in post-graduate training programs and 43% (n=124) respondents had completed their Post-Graduation as can be seen in Table 1.

Table 1: Demographic details

Demographics	Categories	Number of respondents (Percentage)
Gender	Male	120 (41%)
	Female	170(59%)
Age	21 – 30	176 (61%)
	31 – 40	93 (32%)
	41 – 50	16 (5%)
	51 - over	7 (2%)
Institution	Government	76 (26%)
	Private	214 (73%)
Qualifications	Graduate	166 (57%)
	Post Graduate	124 (43%)
Designation	General Dentist	172 (59%)
	Specialist	77 (26%)
	Consultant	41 (14%)

Fear assessment of respondents was made by asking questions related to concerns associated with treating patients and fiscal burdens that they may face during the nationwide lockdown during COVID 19 pandemic. Respondents were also asked about the practice modifications that they enacted in their clinics post COVID-19 spread to reduce transmission of the disease. The results of fear and practice modifications are given in table 2.

Table 2: Fear & practice modification of dentists during the Omicron wave of COVID-19

Fear-Based Questions	Yes (%)	No (%)	Maybe (%)
I am Afraid of Getting Infected with COVID-19 from a Patient and Co-Worker.	160 (55%)	37 (12%)	93 (32%)
I feel anxious when I hear that COVID-19 cases are on the rise again?	195 (67%)	20 (6%)	75 (26%)
I am Anxious When Providing Treatment to a Patient who is Coughing or Suspected of being Infected with COVID-19	231 (79%)	13 (5%)	46 (15%)
I Feel Nervous when Talking to Patients in Close Vicinity?	125 (43%)	80(27%)	85(29%)
I would close my dental practice if the number of COVID cases rise again	149 (51%)	84(28%)	57(19%)
I Fear that I Could Carry the Infection from my Dental Practice back to my Family?	236 (81%)	16(5%)	38(13%)
I am Afraid of Getting Quarantined if I Get Infected	157 (54%)	86(29%)	47(16%)
I am anxious for the financial loss I might face if I go into quarantine	166 (57%)	74(25%)	50(17%)
I am Anxious about the Cost of Treatment if I Get Infected?	137 (47%)	118(40%)	35(12%)
Practice Modifications of Dentists			
I am Aware of the Mode of Transmission of COVID-19?	279 (96%)	4 (1%)	7 (2.4%)
I am still following the updated guidelines recommended by CDC and/or WHO in my dental practice	201 (69%)	19 (6.5%)	70 (24%)
I am still asking every Patient's Travel History before Performing Dental Treatment?	187 (64%)	61 (21%)	42 (14%)
I continue Taking every Patient's Body Temperature before Performing Dental Treatment?	179 (61%)	64 (22%)	47 (16%)
I am still Deferring the Dental Treatment of Patients Showing Suspicious Symptoms?	199 (68%)	39 (13%)	52 (17%)
I use surgical masks as I still believe that they are sufficient to cross infection control against COVID-19	210 (72%)	48 (16%)	32 (11%)
I am wearing N-95 Mask routinely and at all times due to the rise in COVID-19 cases	98 (33%)	117 (40%)	75 (25%)
I am wearing an N-95 Mask while Treating a Patient in my Dental Practice, regularly	143 (49%)	87 (30%)	60 (21%)
I wear a standard cloth mask or face mask when not doing patients	193 (66%)	72 (24%)	25 (8.6%)
I still use disposable gowns over my clothing for every patient	170 (58%)	62 (21%)	58 (20%)
I have been discarding the disposable gown in a designated bin after every patient	156 (53%)	93 (32%)	41 (14%)
I use Protective Eyewear without gaps in my clinical practice (does not include eyeglasses and contact lenses)	142 (48%)	114 (39%)	34 (11%)
I am Routinely Following Universal Precautions of Infection Control for Every Patient?	216 (74%)	21 (7%)	53 (18%)
I Use Rubber Dam Isolation for Every Patient	83 (28%)	167 (57%)	40 (13%)
I Use High-Volume Suction in my Practice for Every Patient?	164 (56%)	81 (27%)	45 (15%)
I am practising 4 to 6 handed dentistry when doing aerosol-generating procedures	144 (49%)	86 (29%)	60 (20%)

I Am Asking Every Patient to Rinse His/Her Mouth with Anti-Bacterial Mouthwash before Treatment?	129 (44%)	113 (38%)	48 (16%)
I Have Been Washing Hands with Soap and Water/Use Sanitizer Before and After Treatment of Every Patient?	265 (91%)	7 (2.4%)	18 (6%)
I am Aware of which Authority to Contact if I Come Across a Patient with a Suspected COVID-19 Infection?	213 (73%)	66 (22%)	11 (3%)
I am still following the same protocols today for COVID-19 as I was 6 months ago.	178 (61%)	53 (18%)	59 (20%)

Respondents were divided into four separate age groups. Comparisons were made between these different age groups and the fears respondents are facing regarding COVID-19 and the practice modifications they have enacted in their dental practices. These age oriented results can be seen in table 3.

Table 3: Fear & practice modification of dentists during COVID-19 per age

Fear-Based Questions	21-30 Yes (%)	31-40 Yes (%)	41-50 Yes (%)	51 and over Yes (%)
I am Afraid of Getting Infected with COVID-19 from a Patient and Co-Worker.	102 (57%)	47 50%	9 56%	2 29%
I feel anxious when I hear that COVID-19 cases are on the rise again?	119 (67%)	61 66%	11 69%	4 57%
I am Anxious When Providing Treatment to a Patient who is Coughing or Suspected of being Infected with COVID-19	133 75%	79 85%	15 94%	4 57%
I Feel Nervous when Talking to Patients in Close Vicinity?	70 40%	45 48%	6 37%	4 57%
I would close my dental practice if the number of COVID cases rise again	78 (44%)	57 61%	12 75%	2 29%
I Fear that I Could Carry the Infection from my Dental Practice back to my Family?	150 85%	71 76%	11 69%	4 57%
I am Afraid of Getting Quarantined if I Get Infected	89 50%	54 58%	10 63%	4 57%
I am anxious for the financial loss I might face if I go into quarantine	98 56%	55 59%	9 56%	4 57%
I am Anxious about the Cost of Treatment if I Get Infected?	83 47%	48 512%	4 25%	2 29%
Practice Modifications of Dentists				
I am still following the updated guidelines recommended by CDC and/or WHO in my 75 practice	117 65%	67 72%	15 88%	2 28%
I am still asking every Patient's Travel History before Performing Dental Treatment?	114 64%	63 67%	8 47%	2 28%
I continue Taking every Patient's Body Temperature before Performing Dental Treatment?	108 61%	54 58%	13 76%	4 57%
I am still Deferring the Dental Treatment of Patients Showing Suspicious Symptoms?	108 61%	76 81%	11 64%	4 57%
I am wearing N-95 Mask routinely and at all times due to the rise in COVID-19 cases	58 32%	34 36%	4 23%	2 28%
I am wearing an N-95 Mask while Treating a Patient in my Dental Practice, regularly	86 49%	46 49%	9 52%	2 28%
I use Protective Eyewear without gaps in my clinical practice (does not include eyeglasses and contact lenses)	76 43%	56 60%	6 35%	4 57%
I Am Asking Every Patient to Rinse His/Her Mouth with Anti-Bacterial Mouthwash before Treatment?	79 (44%)	46 (49%)	8 (50%)	2 (28%)
I Have Been Washing Hands with Soap and Water/Use Sanitizer Before and After Treatment of Every Patient?	73 (41%)	46 (49%)	9 (56%)	2 (28%)
I still use disposable gowns over my personal clothing for every patient	100 (56%)	59 (63%)	11 (68%)	0 (0%)
I Use Rubber Dam Isolation for Every Patient	57 32%	19 18%	5 29%	2 28%
I Use High-Volume Suction in my Practice for Every Patient?	98 55%	53 57%	9 52%	4 57%
I am practising 4 to 6 handed dentistry when performing aerosol-generating procedures	78 44%	55 59%	7 41%	4 57%

Respondents' fears and subsequent practice modifications regarding COVID-19 were compared to their genders and qualifications to see if there is a discrepancy between the concerns between men and women and if differences can be observed when the dentists are graduates and post-graduate clinicians. The result of that is given in table 4.

Table 4: Fear and practice modification of dentists during COVID-19 following age & qualification

Fear-Based Questions	Male Yes (%)	Female Yes (%)	Graduate Yes (%)	Post-Graduate Yes (%)
I am Afraid of Getting Infected with COVID-19 from a Patient and Co-Worker.	62 (52%)	98 (58%)	98 (59%)	62 (50%)
I feel anxious when I hear that COVID-19 cases are on the rise again?	75 (63%)	120 (70%)	118 (71%)	77 (62%)
I am Anxious When Providing Treatment to a Patient who is Coughing or Suspected of being Infected with COVID-19	101 (84%)	130 (76%)	128 (77%)	103 (83%)
I Feel Nervous when Talking to Patients in Close Vicinity?	54 (45%)	72 (42%)	64 (38%)	61 (49%)
I would close my dental practice if the number of COVID cases rise again	54 (45%)	95 (56%)	67 (40%)	82 (66%)
I Fear that I Could Carry the Infection from my Dental Practice back to my Family?	97 (80%)	139 (82%)	139 (84%)	97 (78%)

I am Afraid of Getting Quarantined if I Get Infected	68 (57%)	90 (53%)	83 (50%)	74 (60%)
I am anxious for the financial loss I might face if I go into quarantine	80 (67%)	87 (51%)	99 (60%)	67 (54%)
I am Anxious about the Cost of Treatment if I Get Infected?	62 (52%)	75 (44%)	81 (49%)	56 (45%)
Practice Modifications of Dentists				
I am still following the updated guidelines recommended by CDC and/or WHO in my 75 practice	74 (61%)	127 (74%)	118 (71%)	83 (66%)
I am still asking every Patient's Travel History before Performing Dental Treatment?	56 (46%)	131 (77%)	112 (68%)	75 (60%)
I continue Taking every Patient's Body Temperature before Performing Dental Treatment?	70 (58%)	109 (64%)	106 (64%)	73 (58%)
I am still Deferring the Dental Treatment of Patients Showing Suspicious Symptoms?	88 (73%)	111 (65%)	104 (63%)	95 (76%)
I am wearing N-95 Mask routinely and at all times due to the rise in COVID-19 cases	42 (35%)	57 (33%)	53 (32%)	45 (36%)
I am wearing an N-95 Mask while Treating a Patient in my Dental Practice, regularly	51 (42%)	93 (54%)	73 (44%)	70 (56%)
I use Protective Eyewear without gaps in my clinical practice (does not include eyeglasses and contact lenses)	60 (50%)	82 (48%)	73 (44%)	69 (56%)
I Use Rubber Dam Isolation for Every Patient	28 (23%)	55 (32%)	57 (34%)	26 (20%)
I Am Asking Every Patient to Rinse His/Her Mouth with Anti-Bacterial Mouthwash before Treatment?	50 (41%)	79 (46%)	71 (42%)	58 (46%)
I Have Been Washing Hands with Soap and Water/Use Sanitizer Before and After Treatment of Every Patient?	102 (85%)	163 (95%)	147 (88%)	118 (95%)
I still use disposable gowns over my clothing for every patient	61 (51%)	109 (64%)	92 (55%)	78 (62%)
I Use High-Volume Suction in my Practice for Every Patient?	71 (59%)	93 (54%)	101 (61%)	63 (50%)
I am practicing 4 to 6 handed dentistry when performing aerosol generating procedures	61 (50%)	84 (49%)	80 (48%)	64 (51%)

Mann-Whitney's u test was applied to the responses of the individuals based on gender and qualifications. These values were then compared and certain aspects stood out more than others as highlighted in table 5.

Table 5: P-values of fear and practice modification responses based on gender and qualification

Sr #	Question	P-Value	
		Gender	Qualification
Fear-Based Questions			
1	I would close my dental practice if the number of COVID cases rise again	0.015 (Male)	-
2	I am anxious for the financial loss I might face if I go into quarantine	-	0.00 (Postgraduate)
Practice Modification			
3	I am still following the updated guidelines recommended by CDC and/or WHO in my 75 practice	0.013 (Female)	-
4	I am still asking every Patient's Travel History before Performing Dental Treatment	0.00 (Female)	-
5	I am still Deferring the Dental Treatment of Patients Showing Suspicious Symptoms?	-	(0.022) (Post Graduate)
6	I am wearing an N-95 Mask while Treating a Patient in my Dental Practice, regularly	0.026 (Female)	-
7	I still use disposable gowns over my clothing for every patient	0.012 (Female)	-
8	I Have Been Washing Hands with Soap and Water/Use Sanitizer Before and After Treatment of Every Patient?	0.001 (Female)	0.047 (Post Graduates)
9	I Use Rubber Dam Isolation for Every Patient	-	0.007 (Graduates)
10	I Use High-Volume Suction in my Practice for Every Patient?	-	0.039 (Post Graduates)

DISCUSSION

COVID-19 has taken the world by a storm and in this situation, prevention is indeed better than the cure and the repercussions that come with getting infected which are still not fully clear or known. Fear of the disease and practice modifications to prevent the disease go hand in hand, and the purpose of this study was to see the general trends that are prevalent amongst the dental community of Pakistan. The questionnaire used in this study was initially used in the study by Ahmed et al and then reused by Aly et al, some questions were added and modified to incorporate the relevant conditions of the omicron wave of COVID-19 and the recommendations proposed by the CDC[14,23].

In our study with a sample size of 290 respondents, 79% of the dentists said that they were afraid of treating patients who showed visible symptoms of COVID-19, which is corroborated the study done by Ahmed et al (14,23) where the majority was also concerned about treating patients who are coughing or suspected of being infected with COVID-19. Another thing that was concerning was the fact that respondents were worried, 81%, about carrying a possible infection to their family members from their clinics which was again a common fear in the research done by this was also a concern raised by medical and dental doctors all over Pakistan in the study by[14,23,24].

With the emergence of COVID-19 and its high level of transmissibility, the Center for Disease Control and Prevention (CDC) and the World health organization, (WHO) came out with very detailed guidelines that were made to ensure that health professionals could perform their duties without the risk of getting infected (Source: CDC Guidance for Dental Settings Resource) updated last on December 4, 2020. 69% of the respondents in the sample said that they were aware of the updated CDC guidelines, yet only 49% of the respondents said that they were using N-95 while doing patients, which shows that the dentists were not being careful, which was also a trend seen in the study by where 90% of the respondents admitted to not using an N95 mask while doing patients, however, N95 respirators are considered standard for dental treatments[14]. The reason for N95 respirator use is that the dental treatment creates aerosol which is diffused in the air and given the high presence of SARS-COV-2 strain in the saliva, it can increase possible infectivity of the disease[3,7,14,16]. So lack of N95 respirator use during dental practice is not a safe habit. Only 33% of the respondents said that they would use N95 respirators on a routine basis whereas 84% of the respondents in Ahmed et al admitted to using N-95 routinely outside of the practice[14]. 70% of the respondents said they were not using rubber dam isolation routinely while performing dental procedures, this was a trend seen

in the studies Ahmed et al. and Aly et al[14,23]. . The use of rubber dam isolation was deemed vital in controlling aerosol generation in the surroundings in the dental clinic as recommended by the CDC's recent updated guidelines[14]. 51% of our sample size did not practice 4-6 handed dentistry in their daily practice and only 44% of the sample size used antibacterial mouthwashes before treatment, both of these guidelines control the transmission of SARS-COV-2 by reducing the transmissible load in the saliva and effective removal of saliva from collecting[14]. (Table 2)

Individuals of a higher age group are more prone to have adverse effects of COVID-19 with a 14.8% fatality rate[2]. Given this situation, it would stand to reason that an older sample of the study would be more cautious and vigilant regarding upholding the guidelines in their practices. However, only 60% of the major sample size above the age of 40 said that they were anxious if the cases rise again which is still on the lower end of the spectrum. This was in direct contrast with the studies where the older population had a higher fear of COVID-19[22]. In this study, 67% of the respondents between the ages of 21 to 40 said that they would be anxious if cases rise again. It was seen in the study done that younger adults had a fear of death but also behaved more recklessly as opposed to older adults who have had a long time to contemplate the idea of dying but hold on to being alive more and are more careful[25]. The study showed this recurrent trend where both old and young adults were not very concerned about COVID 19 and its possible infection except for the concern regarding carrying the infection to their families, which was high across the board, which was also the case in different studies[23,24]. The majority of our respondents all across the board were not enacting proper practice modifications in their dental practice like using N95 facemasks while doing patients, using protective eyewear, using rubber dam isolation, using high volume saliva ejectors and performing 4-6 handed dentistry, which demonstrated a lack of understanding or information of the disease and the recently updated guidelines proposed by the CDC. (Table 3).

Gender also played a vital role in the trends that were seen in the present study. In south Asian countries, men are more predisposed to be educated which would stand to reason that men are generally more understanding of the disease and hence less fearful of the actual disease[21,22]. Only 45% of the male respondents agreed to close their dental practices in case of a rise in COVID-19 patients which can be attributed to our society's preconceived notion that men are the primary breadwinner of the family and thus can be attributed to the lack of concern about the finances in female respondents. Due to the lockdowns in COVID-19, the fiscal concerns of the respondents, especially male respondents were on the higher level, our study demonstrated significant concerns of the male respondents (p-value:0.015) regarding the financial losses they might face if they were required to close their practices again[2,19]. Women were slightly more anxious and fearful of the disease and the implications of the disease which can be attributed to a more protective instinct for their families and the aversion to germs[2,21,22]. Women were noted to be ever so slightly more cautious while triaging patients in the study and taking protective measures against the spread of the disease like asking patient's travel history (p-value:0.00), taking patient's body temperature before the treatment, wearing n95 masks while performing dental procedures (p-value:0.026) and washing hands with soap and water and 77% of them said that they were following CDC's updated guidelines with a significant value of (0.013). a higher percentage of women were also said that they would wash hands before and after patients (p-value:0.001) and wear disposable gowns over their clothes than males (p-value:0.012). All of this can be explained by women's increased fear of the disease and getting infected[2,21].

Education allows dental professionals to understand the intricacies of COVID-19 and take necessary steps to control its spread[21,22]. In this study, a significant majority of postgraduate dentists were more open to closing their practices in the case that COVID cases rise again, which shows that greater education equates to a greater understanding of the spread of the disease (p-value 0.00). Along with that significant amount of post-graduate doctors were inclined to defer patients showing suspicious signs of COVID-19, washing hands before and after seeing patients. (Table 5)

Graduate dentists were more prone to use newer techniques like high volume ejectors and rubber dam isolation, although even these scores were not up to the mark, especially the rubber dam isolation practice where only 34% of the graduates admitted to placing rubber dams p-value (0.007). This was also seen in studies done by Ahmed et al and Aly et al, but it's a problematic result considering these studies were done during the first wave of COVID-19 infections and with the dental clinics open, all dental health care providers are expected to be following the protocols submitted by CDC as it not only provides a semblance of safety to the dentists but also their families[14,23].

That said the steps taken by the dental professionals to modify their dental practices during the current omicron wave of COVID-19 were on the lower side, with the majority not following the instructions set forth by the CDC, which shows a general disregard of the disease despite it being an enigma of a massive level and some degree of fear was reported by the respondents. This trend was also seen in similar studies done by Ahmed et al and Aly et al[14,23].

In conclusion, the present study showed a general lack of adherence to the guidelines proposed by the CDC. In the areas where they were being followed, it was seen that men were more concerned about fiscal losses they might face due to COVID 19 and hence their fear of the disease was explained. Women were more concerned about disease transmission and hence followed protocols that prevented the spread of the disease. Individuals with post-graduate education and higher were more cautious and practised dentistry closer to the recommended instructions.

However, there was a large discrepancy between the respondents who claimed to be following the CDC proposed guidelines and the results of their actual practice modifications, which suggests that either the guidelines are known but aren't being followed or the respondents were not aware of these guidelines in the first place. It is the need of the hour to ensure that these guidelines are made a common practice in our dental clinics and setups to create a safe environment where the patient, the clinician and both of their families are protected from possible COVID-19 infection.

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