Original Article

Anxiety, Practice Modification, and Economic Impact Among Dentists During the Coronavirus Disease 2019 Outbreak in Madhya Pradesh: A Cross-Sectional Survey

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Abstract

Background: Virus has ability to motive severe breathing tract contamination and pneumonia among infected individuals, and can be effortlessly transmitted through hand touch, saliva, nasal droplets, and infected surfaces. **Methods:** This report is based on a questionnaire that was conducted among dentists in Madhya Pradesh, India. The survey included questions that evaluate the anxiety, practice modification, and economic impact of delta mutant of coronavirus disease 2019 (COVID-19) among dentists during the outbreak. **Results:** The dental practitioners have affected by delta mutant of COVID-19 virus. Most of the dentist had problems such as financial, psychological, and regarding practice methods. **Conclusions:** Young people offer training classes and seminars to increase their knowledge of the effects, to control the spread of infection. This would improve and enhance their skills, and make them willing to consider the item as part of their daily practice.

Keywords: Anxiety among dentist, Coronavirus disease, Dental practice.

INTRODUCTION

The emergence of the novel coronavirus disorder coronavirus disease 2019 (COVID-19) in Wuhan, China, all components of existence had been motivated international,[1,2] affecting thousands and thousands of human beings global and inflicting hundreds of thousands of deaths.[3] Many countries have close down their coaching institutes, industries, game sports, social gatherings, public events, and airports. Drastic measures which include person self-quarantine and social distancing regulations have been brought in an attempt to manipulate the infection.[4] The condition in India has been no better than in lots of different international locations, which is characterized through a single-stranded RNA structure.[5] This virus has ability to motive severe breathing tract contamination and pneumonia among infected individuals, and can be effortlessly transmitted through hand touch, saliva, nasal droplets, and infected surfaces.[2,6] Fitness care people and dentists mainly are categorized as at high danger of catching this contamination.[7] This will be because their near contact with patients in the course of recurring dental techniques will increase the opportunity of infection transmission.[8,9] Droplets and aerosols which can be generated at some point of dental techniques by way of together with excessive pace hand pieces, air-water syringes, and ultrasonic scaling should produce a contaminated pathogenic surroundings within the dental operating discipline in the course of treatment of an infected individual.[6,9,10] Consequently, the chance of infection transmission inside the dental crew cannot be controlled through the standard shielding measures of day-by-day dental practice.[8] This categorization as excessive danger experts may want to boom fear inside the dental network.[11,12]

Concerning the fast spread of the contamination, dental offices need to be saved closed at some point of the outbreak. These tips emphasized using the appropriate precautions such as sporting non-public defensive system personal protective equipment (PPE) at some point of dental processes.[13,14] Further, the use of antibacterial mouth washes, rubber dam, and high-quantity section in the course of remedy tactics with frequent cleansing and disinfecting of surfaces of chairs, door handles,

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and floors changed into distinctly encouraged.[8,15] Providing at ease surroundings is of paramount significance for dentists and dental staff to conduct dental paintings in a secure running surroundings. The high infection price of COVID-19 and absence of PPE would possibly have an effect on the anxiety of the dentist. The levels tensions of dentists have shown a poor effect on choice making, great of work, and burnout.[16-18]

Therefore, the purpose of this take a look at was to apply a particularly designed online-based questionnaire to assess the effect of the COVID-19 outbreak on Madhya Pradesh, India, dentists in phrases in their anxiety, consciousness and exercise modification, and the monetary implications for his or her dental exercise.

METHODS

A cross-sectional survey was conducted using an online questionnaire that was electronically sent to dentist in Madhya Pradesh. Administration of the questionnaire started on April 2, 2021, for a period of 4 weeks, which was extended for another week after a reminder was sent, and end on May 8, 2021.

The final sample size was equal to 800 dentists. Accordingly, the questionnaire link was sent through emails to dentist and total 1443 dentist respond.

Questionnaire design

Google Forms was used to create the link for the questionnaire that was distributed to the targeted population electronically through mail to ensure uniform and validated distribution across all groups of dentists, including general practitioners, specialists, and consultants, throughout the state. Then, data were entered on spreadsheet and double checked by two authors which was followed pre-launch analysis was performed to check the internal consistency of all.

Statistical analysis

Descriptive statistics were used to summarize and analyze the data. The Chi-square test was used to find any significant association between the parameters, and $P < 0.05$ was considered as statistically significant. The calculation was performed using Statistical Package for the Social Sciences version 22.0 software.

RESULTS

Table 1 shows anxiety among dentist afraid of providing treatment for any patient – there was a significant difference in between the of age ($P < 0.002$), gender ($P < 0.01$), and experience ($P < 0.00$).

Table 1: Anxiety among dentist due to second mutant of COVID-19

Questions	Are you afraid of providing treatment for any patient			Do you have an anxiety of being infected with COVID-19 by a patient or coworker?			If a patient is coughing or suspected to be infected with COVID-19, are you afraid to provide treatment for him/her?			Are you afraid that you could carry the infection from your practice back to your family		
	No	Some-times	Yes	May be	No	Yes	May be	No	Yes	May be	No	Yes
Age												
20–30	6	90	306	24	12	366	72	6	324	246	120	36
30–40	18	135	702	41	12	802	114	36	705	413	288	154
More than 40	0	24	171	6	6	183	24	11	160	100	71	24
	P=0.002 Chi-square=16.7			*P*=0.13 Chi-square=6.94			*P*=0.012 Chi-square=12.78			*P*=0.00 Chi-square=26.8		
Gender												
Male	6	118	419	24	0	519	90	6	447	325	159	59
Female	18	131	760	47	30	832	120	47	742	434	320	155
	P=0.01 Chi-square=13.1			*P*=0.00 Chi-square=18.9			*P*=0.00 Chi-square=18.08			*P*=0.00 Chi-square=21.97		
Education												
BDS	12	131	639	36	18	728	114	24	644	409	266	107
MDS	12	118	540	35	12	623	96	29	545	350	213	107
	P=0.8 Chi-square=0.355			*P*=0.69 Chi-square=0.74			*P*=0.44 Chi-square=1.62			*P*=0.4 Chi-square=1.8		
Experience												
5–10 years	12	70	426	23	12	473	30	12	466	238	199	71
<5	12	132	462	42	12	552	138	18	450	324	198	84
More than 5	0	47	291	6	6	326	42	23	273	197	82	59
	P=0.00 Chi-square=23.82			*P*=0.01 Chi-square=13.05			*P*=0.00 Chi-square=79.8			*P*=0.00 Chi-square=21.28		
Job setting												
Government	0	12	90	0	0	102	0	6	96	48	30	24
Private	24	237	1089	71	30	1249	210	47	1093	711	449	190
	P=0.14 Chi-square=4.33			*P*=0.01 Chi-square=8.2			*P*=0.00 Chi-square=19.3			*P*=0.03 Chi-square=6.7		

COVID-19: Coronavirus disease-2019

Mostly dentists having anxiety of being infected with COVID-19 by a patient or coworker. Mostly dentists accept that, if a patient is coughing or suspected to be infected with COVID-19, they afraid to provide treatment for him/her. Dentist has afraid that they carry the infection from your practice back to your family.

Table 2 shows economic impact among dentist. Most of the dentist accept that their dental practice income been reduce more than 50%.

Mostly dentists accept that they had canceled patient, recently as a part of COVID-19. Mostly dentists accept that they had reduced treatment price, recently. Mostly dentists accept that dental materials have expired during COVID 19.

Table 3 shows practice modification among dentist changed the non-clinical protocol for staff – mostly dentist has changed the non-clinical protocol for staff. When asked to the dentist that they had changed waste disposal protocols, mostly accept that they had changed. Mostly dentists accept frequent rapid test of dentist and dental coworkers. Mostly dentists accept that they had changed measure to keep the dental clinic open.

DISCUSSION

The present cross-sectional look at pronounced an excessive level of hysteria dentists in Madhya Pradesh because of the COVID-19 delta mutant outbreak and high cognizance about stopping its transmission and keeping off contamination similarly, they and their practices were economically affected because of this pandemic situation. These findings are comprehensible due to the fact dentists fall inside the highest chance class, considering their exercise is associated with era of droplets and aerosols which is taken into consideration as a prime route of virus transmission.[19,20] The high stages of tension recorded among these dentists may be taken into consideration as herbal human emotions for the duration of the pandemic situation, in particular in mild of the growing infection and mortality fees. This could in all likelihood be due to variations in to be had fitness assets among international locations,[21,22] and the exaggerated pressure on the fitness care system because of the short spread of the virus, preferred emotions of stress children than different circle of relatives members, the tension of shifting infection to family individuals, especially their kids, could growth emotions of strain among woman in evaluation to male dentists. In the same manner, dentists who were operating inside the public quarter, in clinics or hospitals, said higher tension levels than others. This will be attributed to the massive variety of dental sufferers traveling the general public facilities in line with day in contrast to personal clinics.[23,24] Nearly, all of the responding dentists have been

Table 2: Economic impact among dentist due to second mutant of COVID-19

Questions	How much has the practice's income been reduced due to the COVID 19-second mutant?			For non-urgent cases have you canceled recently as a part of COVID-19 precaution protocol?		Because of the COVID-19 pandemic, how much have the prices for your dental services been reduced, if at all			What percentage of your stored dental materials have expired during the COVID-19 pandemic?		
	<25%	25–50%	50–75%	No	Yes	<25%	25–50%	50–75%	<25%	25–50%	50–75%
Age											
20–30	54	18	330	0	402	0	36	366	120	36	246
30–40	120	23	712	6	849	29	77	749	221	142	492
More than 40	30	12	153	0	195	0	11	184	71	11	113
	P=0.13 Chi-square=7.068			*P*=0.12, Chi-square=4.2		*P*=0.00 Chi-square=23.4			*P*=0.00 Chi-square=29.02		
Gender											
Male	78	24	441	0	543	6	29	508	167	29	347
Female	126	29	754	6	903	23	95	791	245	160	504
	P=0.451 Chi-square=1.59			*P*=0.05 Chi-square=3.59		*P*=0.00 Chi-square=15.47			*P*=0.00 Chi-square=45.14		
Education											
BDS	108	41	633	6	776	29	82	671	221	95	466
MDS	96	12	562	0	670	0	42	628	191	94	385
	P=0.002 Chi-square=12.22			*P*=0.02 Chi-square=5.16		*P*=0.00 Chi-square=34.89			*P*=0.53 Chi-square=1.26		
Experience											
5–10 years	60	6	442	0	508	11	42	455	132	101	275
<5	120	12	474	0	606	12	54	540	198	48	360
More than 5	24	35	279	6	332	6	28	304	82	40	216
	P=0.00 Chi-square=85			*P*=0.00 Chi-square=19.85		*P*=0.98 Chi-square=0.34			*P*=0.00 Chi-square=41.25		
Job setting											
Government	30	0	72	0	102	0	0	102	36	12	54
Private	174	53	1123	6	1344	29	124	1197	376	177	797
	P=0.00 Chi-square=24.2			*P*=0.6 Chi-square=0.45		*P*=0.002 Chi-square=12.9			*P*=0.27 Chi-square=2.5		

COVID-19: Coronavirus disease-2019

Table 3: Practice modifications among dentist due to second mutant of COVID-19

Questions	Changed the non-clinical protocol for staff			Waste disposal protocols		Frequent rapid test of dentist and dental coworkers			Measure to keep the dental clinic open		
	No	Partially	Yes	No	Yes	May be	No	Yes	May be	No	Yes
Age											
20–30	12	30	360	18	384	54	12	336	54	30	318
30–40	24	29	802	47	808	105	12	738	122	60	673
More than 40	0	12	183	12	183	24	5	166	18	12	165
	P=0.003 Chi-square=16.19			*P*=0.641 Chi-square=0.89		*P*=0.36 Chi-square=4.33			*P*=0.39 Chi-square=4.05		
Gender											
Male	12	24	507	24	519	65	17	461	82	36	425
Female	24	47	838	53	856	118	12	779	112	66	731
	P=0.7 Chi-square=0.69			*P*=0.24 Chi-square=1.34		*P*=0.05 Chi-square=5.88			*P*=0.3 Chi-square=2.35		
Education											
BDS	18	47	717	35	747	94	11	677	93	54	635
MDS	18	24	628	42	628	89	18	563	101	48	521
	P=0.09 Chi-square=4.72			*P*=0.15 Chi-square=2.31		*P*=0.15 Chi-square=3.69			*P*=0.19 Chi-square=3.3		
Experience											
5–10 years	12	24	472	18	490	7	1	78	53	42	413
<5	24	36	546	30	576	17	2	82	96	36	474
More than 5	0	11	327	29	309	42	6	460	45	24	269
	P=0.001 Chi-square=18.05			*P*=0.005 Chi-square=10.51		*P*=0.00 Chi-square=23.8			*P*=0.07 Chi-square=8.51		
Job setting						39	11	288			
Government	0	18	84	0	102	12	0	90	12	12	78
Private	36	53	1261	77	1273	171	29	1150	182	90	1078
	P=0.00 Chi-square=40.48			*P*=0.01 Chi-square=6.14		*P*=0.3 Chi-square=2.35			*P*=0.14 Chi-square=3.8		

COVID-19: Coronavirus disease-2019

privy to the character of the COVID-19 illness and its mode of transmission. These data are considered to be crucial in phrases of applying contamination control measures at the same time as carrying out dental treatment. Within the same way, over 80% of the dentists spoke back that they had been up to date about the modern day who hints for pass contamination manage measures inside dental practice.[14]

This become pondered through over 70% of the respondents asking their patients if they had been in touch with an infected COVID-19 character, and above 60% recording sufferers' body temperature.[23] The nature of this disease, with its prolonged incubation period (as long as 14 days). Its spectrum that ranged from asymptomatic to death. This confirms findings from research approximately COVID-19 (eleven), or previous outbreaks of similar infectious respiratory illnesses such as SARS, which verified excessive and sustained psychological trauma, mainly a few of the frontline health-care employees.[24,25]

Every other interesting locating within the present look at changed into that the recorded anxiety stage changed into higher among more youthful than older dentists and girls than adult males. This goes toward the reports that among infected individuals, there are higher threat agencies, together with older and male adults, who're more likely to broaden extreme breathing symptoms and die than more youthful people and women.[26] This became also meditated inside the finding through this look at of a statistically tremendous better stage of awareness about the virus and its mode of transmission among dentists elderly above 35 years in evaluation to those aged below 35 years.[27,28] Considering the fact that women, as mothers, generally tend to have nearer touch with them throughout the routine examination to become aware of doubtlessly infectious the oral hollow space.[29,30] The latter has virucidal pastime toward severe acute respiratory syndrome coronavirus and Middle East respiratory syndrome coronavirus and is suggested to be used at 0.5% concentration as a mouthwash for patients earlier than starting up medical process.[31]

The respiratory viruses can be effectively prevented through right hand washing and cleansing with alcohol primarily based sanitizers.[8,32] Moreover, most people of the look at respondents agreed with the habitual use of N-95 respirators in place of surgical mask in dental practice all through the COVID-19 outbreak.[33]

Almost all of the respondents within the contemporary study said that they'd altered their appointment schedules to manipulate spread of the virus.[34]

CONCLUSIONS

The creation of the new coronavirus has increased concerns among health professionals, especially dentists, that microbes

should be avoided rather than using the usual microbes carried in the blood. Item effectively limiting the spread of sprays when using a series of instruments, reducing the risk of ingestion a thin instrument provides excellent isolation industries, and increases patient acceptance of dental care.[28]

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