

## Study of anxiety and fear level in dental practitioners from coronavirus and need of clinical practice modification to combat Covid-19

### ABSTRACT

An outbreak of novel corona virus (COVID-19) in China has influenced several aspects of the life of healthcare professionals, especially dentists, who are actually exposed to a higher risk of getting infected due to close interaction with their patients during treatments.

The study was conducted to understand the anxiety and fear level of dental practitioners in getting infected during practice in the current corona virus (COVID-19) situation. In addition, also to evaluate their awareness about various practice modifications needed or required to combat COVID-19 during clinical practice.

A cross-sectional study was conducted by an online survey from 3rd Aug to 8th Sept 2020. For the central region, a well-defined survey was planned at Google doc. A total of 239 participants from 16 different states of India had responded. Post scrutiny, completed questionnaires (n = 210) were included in the study. Statistical analysis was performed using SPSS version 25. Chi-Square and tests were applied

The fear and anxiety levels of dentists are found as; 69% of participants were afraid getting infected from a patient visiting their clinics. 74.8% were scared while providing treatment to patients. 47.1% felt suggest or think not to do practice until the number of COVID-19 patient cases decreases. 54.3% participants felt anxiety and scared while interacting to patients while treatments, 81% have fear to carry the infection from clinic to their home and can get their family infected. 40% were afraid of getting quarantined and 59.5% were concerned about the cost of treatment on the off chance if get Infected. Dental practitioners are in a state of anxiety and fear while treating their patients due to the pandemic impact around the community. A number of dental practitioners have either modified their clinical practice process as per recommended guidelines for emergency treatment only, or closed down clinics for an uncertain period.

**Keywords:** Covid-19, Dental Practitioner, Corona virus, Pandemic

### Introduction:

A novel Covid outbreak (COVID-19) in China has affected each part of life around. In last couple of months, corona has spread worldwide and on March 11, 2020, the World Health Organization (WHO) proclaimed it as a controllable pandemic disease[2,3]. The origin of Covid-19 is accepted to spread from a fish and marine food market in Wuhan, China1. On 11 February, 2020, WHO utilized the term COVID-19 to portray the strain of Covid4 19. Basically, COVID-19 is a ss-RNA, encompassed infection with a size of ~350 kilo base-pair (kbp5) . This virus cause serious respiratory tract infection among people and easily can transmit from individual to individual by means of hands, salivation, nasal beads, and surface contacts[3,6].

The normal hatching time frame scopes of COVID-19 from 4 to 14 days[7]. The impacted individual generally presents with upper respiratory tract infection (RTI) and protests of high-grade fever, a dry hack, and dyspnea8. It is highly recommended to keep any suspected individuals in quarantine

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(isolation) and under observation until further investigation by the real-time polymerase chain reaction (RT-PCR) can take place<sup>9</sup>, unfortunately, there is no antiviral immunization available, yet on 16th March 2020 the main clinical preliminary was started by the National Health Institute (NHI), USA[3]. Thusly, patients need to depend on steady treatment, for example, nutrients A, C and D10 chloroquine phosphate; and general medical care until the body's resistant framework can restrict the disease to spread more robust in the body and transmitted to people who are living together.

Thinking about the imperative part of the body's invulnerable framework, older patients with interminable weakening ailments have a higher danger of getting contaminated contrasted with youthful, young healthy people with a good immune system resistant body framework. In spite of the fact that the mortality related with COVID-19 is low, it has a high spreading potential. Since the COVID-19 outbreak is so quick and destroying, numerous nations have closed down. Medical services experts are presented to a higher danger of getting tainted because of their nearby contact with contaminated patients.

Specifically, dental specialists play out their obligations in close contact with patients as well as while presented to vaporized aerosols and beads sprinkling out of patients' while doing oral treatments. Hence, dental practitioners have a high danger of getting infected from patients and can conceive spreading it to their companions, families, and different patients. Under these conditions, it's obvious for dental doctors to build up a threat, anxiety or fear of being infected by their patients. Fear and nervousness are incredible feelings that might be related with the staggering reports on the COVID-19 pandemic by social, electronic, and print media. Dental specialists got serious uneasiness by the current pandemic circumstance having threat of getting infected while treating their patients being in close interaction due to oral treatment procedures.

Thinking about the current spread of contamination, the Indian Dental Association (IDA) featured key steps for safety to be taken by dental specialists, for example, taking patients' ongoing travel history; surveying signs and indications of RTI; recording patients' body temperature level while arriving at clinics; getting mouth flushed with 1% hydrogen peroxide before beginning of any technique or treatment procedures; utilizing an elastic dam and high volume pull during process; and often cleaning and sanitizing open contact territories including dental chairs, entryway handles, seats and,

washrooms in the clinics and hospitals. In spite of the fact that the IDA has distributed preventive rules, most of dental specialists are yet hesitant and having fear of treating patients (Source IDA-COVID-19 Resources for Dentists). Actually, most dental specialists may not know about the ongoing rules and secured guidelines to be adopted during treatment of their patients. Hence we have initiated a poll based examination to assess dental specialist attitude and approach towards clinical practices in India. Truth is to be told, most dental specialists may not know about the ongoing rules. The current study expected to understand anxiety and fear of getting infected among dental specialists while working at their clinics or hospitals during the current viral pandemic Covid 19.

### **Objective of Study:**

The objective of study is to understand anxiety and fear level of dentists getting infected while working in their clinics, during the treatment or checkups of the patients arriving in current corona virus (COVID-19) outbreak. In addition, also to study their awareness and knowledge about precautions and practice modifications required and needed while treatment procedures to remain safe and secured to combat COVID-19 pandemic efficiently.

### **Methodology:**

The current cross-sectional study was directed by an online survey from 3rd Aug to 8th Sept 2020. For majority from central region of the country, a very much developed survey was planned at google doc.

The survey form was circulated through online social media and an email to dental experts to collect their responses through an online well defined questionnaires. All paramedical staff and dental science undergraduate students were excluded from this study.

The questionnaire survey contained an aggregate of 24 questions for submissions, which were divided into two areas. The principal area zeroed in on the threat among dental specialists about getting infected with COVID-19 viral infection and the subsequent segment was intended to assemble data about their clinical practice alterations adopted or made to overcome and fight reducing COVID-19 spread as per IDA practice rules.

A sum of 210 members from 16 states wherein majority 154 dental practitioners responded are from Madhya Pradesh India over took and submitted the survey, barring 29 unfilled

or incompletely filled structures (Figure 1). The study expected to understand anxiety and fear of getting infected among dental specialists working during the current viral scenario while treating their patients. Likewise, dental specialist information about different practice changes adopted to battle the novel Corona outbreak (COVID-19) has been assessed.

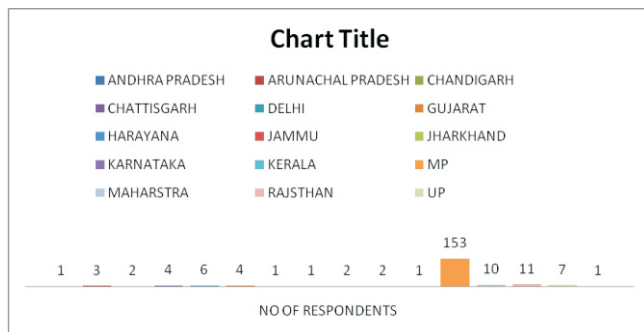
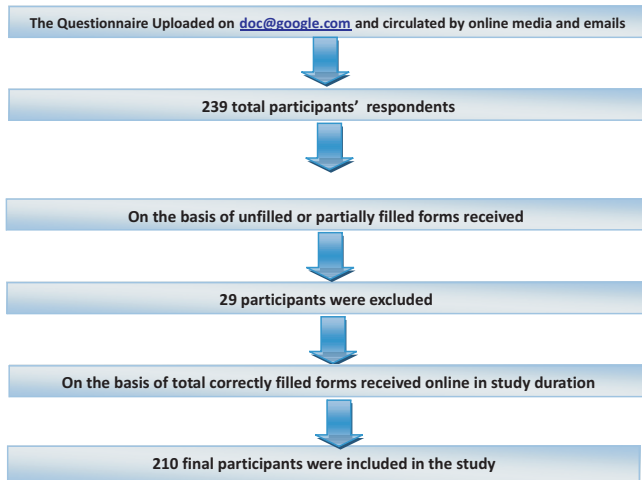


Chart -1 : No of Respondents

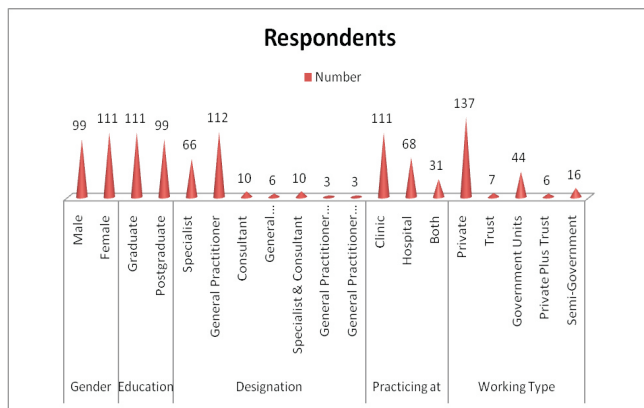


Chart -2 : Demographic Classification of Dental Care Professionals (n=210)

Table-1: Demographic Classification of Dental Care Professionals (n=210)

Demographics	Particulars	Number
Gender	Male	99 (47.1%)
	Female	111 (52.9%)
Education	Graduate	111 (52.9%)
	Postgraduate	99 (47.1%)
Designation	Specialist	66 (31.4%)
	General Practitioner	112 (53.3%)
	Consultant	10 (4.8%)
	General Practitioner, Specialist & Consultant	6 (2.9%)
	Specialist & Consultant	10 (4.8%)
	General Practitioner & Consultant	3 (1.4%)
	General Practitioner & Specialist	3 (1.4%)
Practicing at	Clinic	111 (52.9%)
	Hospital	68 (32.3%)
	Both	31 (14.8%)
Working Type	Private	137 (65.2%)
	Trust	7 (3.3%)
	Government Units	44 (21%)
	Private Plus Trust	6 (2.9%)
	Semi-Government	16 (7.6%)

The above table exhibits the demographic information of Dental care Professionals. The data reveals that out of 210 Professionals, 47.1% were male and 52.9% were female. Regarding education it is found that 52.9% were Graduates and 47.1% were pgs. As Designation is concerned, 31.4 are practicing as Specialist, 53.3% are practicing as General Practitioners, 4.8% are Consultants, 2.9% are practicing as General Practitioner, Specialist & Consultant, 4.8% are both Specialist & Consultant, 1.4% are General Practitioner & Consultant and again 1.4% are practicing as General Practitioner & Specialist. Regarding the workplace, it is found that 52.9% are practicing at their own clinics, 32.3% are working at Hospitals and 14.8% are practicing at both Clinic & Hospitals. In consideration with the working type Institutions, it reveals that 65.2% are from private working type, 3.3% are from Trust, 21% are from Government Units, 2.9% are from Private plus Trust and rest 7.6% are from Semi Government Units.

Table-2: Assessment on Fear or Afraid of Dental Care professionals (n=210)

Statement	Yes	No	Not Sure
Are you afraid or concerned about getting Infected with COVID-19 from a Patient visiting and Co-Worker working at your clinic in this outbreak covid19?	145 (69%)	30 (14.3%)	35 (16.7%)
Are you scared while providing check-up or Treatment to a patient who visited your clinic who is coughing or can be suspected of being Infected with COVID-19?	157 (74.8%)	27 (12.9%)	26 (12.4%)
Do you feel suggest or think not to do Practice and open clinic until the number of COVID-19 patient cases starts reducing in your region or locality?	99 (47.1%)	110 (52.4%)	1 (.5%)

Do you practice at multiple locations and units?	62 (29.5%)	148 (70.5%)	0
Do you feel or get nervous and cautious when talking to patients in close vicinity while procedures and treatments or consultations?	114 (54.3%)	70 (33.3%)	26 (12.5%)
Do you have fear or threat that you could carry the Infection from your clinic or hospital back to your home and can get Family infected?	170 (81%)	16 (7.6%)	24 (11.4%)
Are you afraid of getting quarantined if get Infected	84 (40%)	64 (30.5%)	62 (29.5%)
Are you curious about the cost of treatment on the off chance that you get Infected?	125 (59.5%)	36 (17.1%)	49 (23.3%)

In above table description of the fear and anxiety levels of dental care professionals towards COVID-19 is given; 69% of participants were afraid concerned about getting Infected with Corona Virus spread from a patient visiting or co-worker at their clinic in this outbreak . 74.8% were scared while providing check-up or treatment to patients who visited their clinic who were coughing or can be suspected of being infected with corona virus infection. 47.1% of participants felt suggest or think not to do practice and open clinic until the number of COVID-19 patient cases starts reducing in the region or locality, Among these respondents 29.5% were practicing at multiple locations and units. 54.3% participants felt or get anxiety and scared while talking to patients in close vicinity while procedures and treatments or consultations, 81% professionals have fear or threat that they could carry the infection from clinic or hospital back to their home and can get their family infected. 40% were afraid of getting quarantined if get Infected and 59.5% were curious about the cost of treatment to be incurred on the off chance that you get Infected.

Table -3: Knowledge & Awareness of Suggestive Measures (n=210)

Statement	Yes	No	Not Sure
Are you updated with the WHO guidelines for cross-Infection control in context to COVID-19?	189 (90%)	5 (2.4%)	16 (7.6%)
Are you right now asking each patient's travel history or any event of infection recently before performing treatment?	200 (95.2%)	10 (4.8%)	0 (0%)
Are you checking the patient's body temperature and using oximeter before giving Dental Treatment?	199 (95.8%)	11 (5.2%)	0 (0%)
Do you avoid/ignore the treatment of patients showing suspicious symptoms?	155 (73.8%)	32 (15.2%)	23 (11%)
Do you think the surgical mask is sufficient to prevent Infection of COVID 19?	13 (6.2%)	159 (75.7%)	38 (18.1%)
Do you think N-95 mask ought to be worn in Dental Practice because of the outbreak?	171 (81.4%)	16 (7.6%)	23 (11%)

Have you ever worn an N-95 mask, PPE kit, and other suggestive accessories while treating a patient in your Dental Practice?	185 (88.1%)	21 (10%)	4 (1.9%)
Do you follow prescribed precautions of avoidance of infection from or for every patient in routine?	201 (95.7%)	9 (4.3%)	0 (0%)
Do you use rubber dam Isolation for every patient?	37 (17.6%)	153 (72.9%)	20 (9.5%)
Do you wash hands with soap /use sanitizer before and after the treatment of every patient?	207 (98.5%)	2 (1%)	1 (.5%)
Do you ask the patient to rinse his/her mouth with anti-bacterial mouthwash before treatment and in between procedures?	190 (90.5%)	14 (6.7%)	6 (2.9%)
Are you aware of whom & where to connect or contact if you come across a patient or contact with suspected COVID-19 Infection during your work?	193 (91.9%)	17 (8.1%)	0 (0%)

The above table reflects the description of the knowledge and awareness of dental care professionals about COVID-19 clinical practice procedures; 90% were updated with the WHO guidelines for cross-Infection control in context to COVID-19, 95.2% preferred asking each patient's travel history or any event of infection recently before performing treatment, 73.8% were ignored the treatment of patients showing suspicious symptoms, only 6.2% participants thought that the surgical mask is sufficient to prevent Infection of COVID 19. Accordingly, 81.4% responded that N-95 mask ought to be worn in Dental Practice because of the outbreak, 88.1% participants worn an N-95 mask, PPE kit, and other suggestive accessories while treating a patient in their clinics , 95.7% professionals followed prescribed precautions of avoidance of infection from or for every patient in routine, only 17.6% professionals used rubber dam Isolation for every patient, 98.5% washed hands with soap /use sanitizer before and after the treatment of every patient, 90.5% participants asked the patient to rinse his/her mouth with anti-bacterial mouthwash before treatment and in between procedures and 91.9% were aware of whom & where to connect or contact if they come across a patient or contact with suspected COVID-19 Infection during their clinical practice and treatment of patients.

**Testing of Hypotheses:**

H01: There is no significant association between gender and the level of fear and threat of doctors while treating patients in clinic during this Corona covid 19 Pandemic.

H01a: There is no significant association between gender and afraid or concerned about getting infected with COVID-19 from a patient visiting and co-worker working at clinic in this outbreak covid[19].



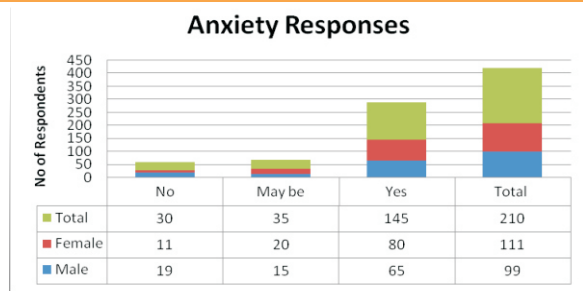


Chart -3: Anxiety Level In Male and Female

Table – 4 :Anxiety \* Gender cross tabulation count

Responses		Gender		Total
		Male	Female	
A1	No	19	11	30
	May be	15	20	35
	Yes	65	80	145
Total		99	111	210

Table -4.1: Chi-Square Tests Afraid & Gender

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.726 <sup>a</sup>	2	0.155
Likelihood Ratio	3.745	2	0.154
Linear-by-Linear Association	2.406	1	0.121
N of Valid Cases	210		

A. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 14.14.

The calculated value of chi-square test (3.726) is lesser than the table value of chi-square (9.210) for 2 degrees of freedom at .155>0.01 level of insignificance. As calculated p-value is higher than 0.01 so the framed hypothesis for this purpose is accepted. Therefore, it could be concluded that there is no significant association between Gender and anxiety or concerned about getting infected with COVID-19 from a Patient visiting and Co-Worker working at clinic in this outbreak covid19. Both male and female perceives equally about getting infected with COVID-19 from a patient visiting and co-Worker working at clinic in this outbreak covid19.

H01b: There is no significant association between gender and anxiety while providing check-up or treatment to a patient who visited clinic who is coughing or can be suspected of being infected with COVID-19.

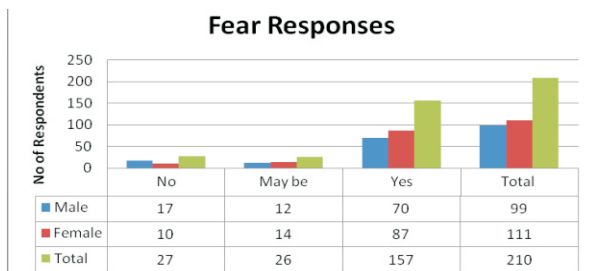


Chart -4: Fear Responses Count

Table -5:Fear \* Gender Cross tabulation Count

Responses		Gender		Total
		Male	Female	
A12	No	17	10	27
	May be	12	14	26
	Yes	70	87	157
Total		99	111	210

Table -5.1 :Chi-Square Tests Fear \* gender

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.134 <sup>a</sup>	2	0.209
Likelihood Ratio	3.148	2	0.207
Linear-by-Linear Association	2.649	1	0.104
N of Valid Cases	210		

0 cells (0.0%) have expected count less than 5.

The minimum expected count is 12.26.

The calculated value of chi-square test (3.134) is lesser than the table value of chi-square (9.210) for 2 degrees of freedom at .209>0.01 level of insignificance. As calculated p-value is higher than 0.01 so the framed hypothesis for this purpose is accepted. Therefore, it could be concluded that there is no significant association between gender and fear while providing check-up or treatment to a patient who visited clinic who is coughing or can be suspected of being infected with COVID-19. Both male and female perceive equal fear while providing check-up or treatment to a patient who visited clinic who is coughing or can be suspected of being infected with COVID-19.H02: There is no significant association between Gender and the awareness of whom & where to connect or contact if they come across a patient or contact with suspected COVID-19 Infection during work.

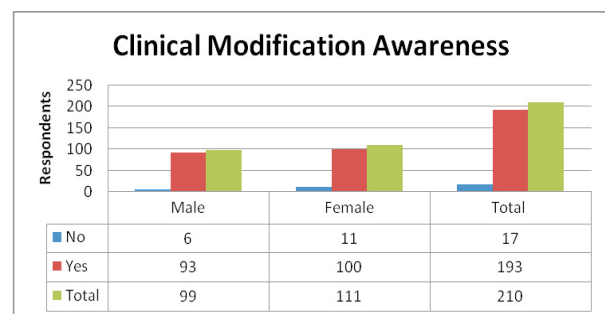


Chart -5: Awareness \* gender Cross tabulation Count

Awareness		Gender		Total
		Male	Female	
A1	No	6	11	17
	Yes	93	100	193
Total		99	111	210

Table -6: Awareness \* gender Cross tabulation Count

Table -6.1: Chi-Square Tests Awareness \* gender

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1.042 <sup>a</sup>	1	0.307		
Continuity Correction <sup>b</sup>	0.589	1	0.443		
Likelihood Ratio	1.06	1	0.303		
Fisher's Exact Test				0.448	0.222
Linear-by-Linear Association	1.037	1	0.308		
N of Valid Cases	210				

0 cells (0.0%) have expected count less than 5.

The minimum expected count is 8.01. Computed only for a 2x2 table

The calculated value of chi-square test (1,042) is lesser than the table value of chi-square (6.635) for 2 degrees of freedom at 307>0.01 level of insignificance. As calculated p-value is higher than 0.01 so the framed hypothesis for this purpose is accepted. Therefore, it could be concluded that there is no significant association between Gender and the awareness of whom & where to connect or contact if they come across a patient or contact with suspected COVID-19 Infection during work. The result indicated that both male and female are equally aware of whom & where to connect or contact if they come across a patient or contact with suspected COVID-19 Infection during work.

### Conclusion:

Despite having sufficient awareness and knowledge about the procedures and clinical practices, Dental practitioners are in a state of anxiety and fear while treating their patients due to the COVID-19 pandemic spread and opening of lockdown despite having increasing number of patients impacted by novel corona virus. Currently, the effects of COVID-19 are worsening day by day in community as a viral spread. Which makes them scared and in anxiety about their becoming prone to get infected from visiting patients and co workers daily in the clinic either at private clinics or in hospitals. Several dental practitioners have modified their services according to recommended guidelines but for only emergency treatment or for the patients whom they are treating are under process, or closed down practices for an uncertain period awaiting for the decline in number of patients which is increasing day by day. It is essential that in the present scenario, priority is to be given to dental procedures modifications and take utmost caution and follow measures given by the WHO and Dental or Medical Council of India. All dental treatments are to be done under strict guidelines and precautions practitioners could take safely while treating a patient visiting the clinic for clinical procedures or treatments till the time the vaccine arrives or there is a drop in count of people getting covid- 19

positive in community spread.. This would be an appropriate step in attempts to curtail the further spread of COVID-19 and dental practitioners to stay safe and secured also keeping their families safe and uns infected with their professional challenges.

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