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RESEARCH ARTICLE

ASSESSMENT OF FEAR OF COVID-19 AMONG PATIENTS VISITING SATELLITE CENTRES OF DENTAL COLLEGE IN PANCHKULA, HARYANA

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ABSTRACT

Background: One of the emergent global challenges is managing the novel Corona virus 2019, as it has an extremely high infectious rate and relatively high mortality. Apart from reducing the transmission rate, considering an individual's fear is an important aspect of their psychological well-being and may also influence the manner in which an individual may adhere to preventive measures and thereby determine the clinical outcome of COVID-19. **Aim:** To assess the fear of COVID-19 among patients visiting satellite centers of dental college in Panchkula, Haryana. **Methods:** A cross-sectional study was conducted using a self-administered questionnaire among 200 patients visiting satellite centers of dental colleges in Panchkula, Haryana from January 2021 to March 2021. To assess fear among patients using the fear of Covid-19 Scale, which was also translated into Hindi. **Results:** There was a highly statistically significant difference ($p < 0.001$) found between a fear score of COVID-19 during (March 2020-May 2020) and after lockdown (June 2020). **Conclusion:** It was concluded from the present study that in a resource-challenged country like India, Precautionary and preventive health advisories are crucial to controlling the transmission of COVID-19.

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INTRODUCTION

Coronavirus disease (COVID19) is an infectious disease caused by the SARSCoV2 virus. Most people infected with the virus develop mild to moderate respiratory illness and recover without the need for special treatment. However, some people become seriously ill and may require professional help. Elderly people and people with underlying illnesses such as cardiovascular disease, diabetes, chronic respiratory illness, and cancer are more likely to develop serious illnesses. Anyone infected with COVID-19 can get seriously ill or can die at any age. The best way to prevent and delay infection is to get vaccinated and boosted along with educating oneself and others about how to both avoid getting infected and help prevent spreading the virus to others. They include wearing a properly-fitting mask, washing your hands frequently, or using alcohol-based products, keeping a safe distance of at least 1 meter from others, getting a vaccine when it's your turn, and following local guidance (Coronavirus disease, 2021). A pandemic changes the complete environment of a population, making psychological problems with stigmatization, fear, and discrimination, fuelled by an absence of correct and comprehensive information. Fear is often described as an adaptive response to the environment—a defence mechanism designed to boost the possibility of survival. Once the fear is excessive, the results could also be harmful at both the individual level (e.g., mental health issues, like phobic disorder and social anxiety), and the societal level (e.g., panic looking or xenophobia)

(Pakpour, 2020). On the other hand, too little fear, like ignoring the government measures that were imposed to slow the spread of COVID-19 virus may also lead to harm to individuals and society. Societal safety measures, such as obligatory lockdowns, have their uses in preventing the spread of infections, however, once such safety measures are prolonged or overly strict, they'll have negative consequences, as well as disruption of the economy and unemployment (Kwan Hoong, 2020; Bao-Liang Zhong, 2020). Fear has always been closely linked to dentistry but it could be intensified by the objective risks imposed by the COVID-19 pandemic which has affected the attitudes and behaviour of people pertaining to visits to dental offices. In this scenario, the dental practice was identified as a working place with a most potential high risk of cross-infection, as face-to-face communication and consistent exposure to body fluids, such as blood and saliva, are frequent and common in dentistry (Dolar Doshi, 2021). In response to the present contingency and its emotional repercussions, medical researchers around the world have devised ways to measure the impact using scales that specialize in stress response and fear. A scale was developed to evaluate fear of the COVID-19 pandemic and its effects on the psychological mental state of the Iranian general population (Daniel Kwasi Ahorsu, 2022). The psychological aspects of COVID-19 fear among dental patients during and after the lockdown also need to be considered and researched. There is a pressing need to understand the knowledge of COVID-19 at this critical moment and the prevalence of fear among dental patients by using a standardized scale.

Therefore, this study was undertaken with the aim to assess the fear of the COVID-19 pandemic among dental patients visiting satellite centers of Swami Devi Dyal Dental College and Hospital Panchkula, Haryana.

MATERIALS AND METHODS

A Cross-sectional, questionnaire-based survey was conducted among 18 years and above adult population attending satellite centers, CHC Shahzadpur, PHC Pathreri, and ITBP Bhanu of Swami Devi Dyal Hospital and Dental College, Panchkula, Haryana. The ethical clearance was obtained from the Ethical Committee of Swami Devi Dyal Hospital and Dental College, Barwala, Panchkula prior to the onset of the study. Necessary permission was obtained from the concerned satellite center authorities. Verbal voluntary informed consent was obtained from all the study subjects after duly explaining the purpose and methodology of the study. Prior to the main study, a pilot study was carried out on 15 subjects to assess the feasibility of the study and to develop an alternate strategy on the basis of constraints that can be adopted in the main study. The Cronbach alpha value for the FCV- 19S was 0.89, indicating very good internal reliability. Inclusion criteria for the study were the patients who were 18 years old or above, medically capable of responding to the questionnaire, hence were able to provide verbal informed consent and Patients attending OPD between 10.0 am- 2 pm. Patients not willing to participate in the survey were excluded from the study. Due to the alarming situation caused by the Covid-19 Pandemic, there was a very less patient inflow in the satellite centers (CHC Shahzadpur, PHC Pathreri and ITBP Bhanu) as a result of which we had to incorporate all the available patients, fulfilling the inclusion criteria, so as to collect the data (convenience sampling). A total of 200 patients were included in the study out of which 67 patients were selected from CHC Shahzadpur, 66 from PHC Pathreri, and 67 from ITBP Bhanu, making a total of 200 patients in study. The study was carried out during the months of January 2021 to March 2021. Data were collected by using the Close - ended questionnaire and was administered once after the lockdown in which the patients were asked to retrospectively evaluate their fear during the lockdown (March 2020- May 2020). All the standard procedures and protocols were followed to ensure infection control during the study. Hands were sanitized regularly. Gowns were cleaned and autoclaved every day after collecting data. Due to the COVID-19 pandemic, each patient's temperature and Blood Oxygen level was recorded by Lab technicians using a Non-Contact Infrared Digital Thermometer and Pulse oximetry respectively. In order to take precautions during the COVID-19 pandemic, the examiner asked questions to the patients and subsequently filled out the questionnaire. In this study, along with the original FCV-19S⁶, a Hindi⁷ translated Fear of COVID-19 scale was also used. The first part included general information regarding the participant's demographic profile and socioeconomic status (modified Kuppuswamy scale 2020)⁸. The second part of the questionnaire included the Fear of COVID-19 Scale (Neha Sayeed, 2000).

The fear scale of COVID-19 (Daniel Kwasi Ahorsu, 2022)

QUESTIONS
I am most afraid of Corona virus-19.
It makes me uncomfortable to think about coronavirus-19.
My hands become clammy when I think about coronavirus-19.
I am afraid of losing my life because of coronavirus-19.
When watching news and stories about coronavirus-19 on social media, I become nervous or anxious.
I cannot sleep because I am worrying about getting coronavirus-19.
My heart races or palpitates when I think about getting coronavirus-19.

Scoring: The participants indicated their level of agreement with the statements using a five-point Likert-type scale. Answers included "strongly disagree," "disagree," "neutral" "agree" and "strongly agree". The minimum score possible for each question was 1, and the maximum was 5. A total score was calculated by adding up each item's score (ranging from 7 to 35).

The response was recorded during and after the post-lockdown period of the COVID-19 pandemic among the study participants.

STATISTICAL ANALYSIS

The data collected was entered in the Microsoft word Excel Sheet 2007 version and processed using the SPSS v21.0 software package (SPSS Inc. Chicago, IL, U.S.A. The observed data were coded, tabulated, and analyzed as frequency and percentages for categorical variables (gender, age group, and socioeconomic status) and Mean + Standard Deviation for continuous variables (fear during lockdown score and fear after lockdown score). A comparison of gender with fear was done using an independent t-test and a comparison of age group and SES (socioeconomic status), and gender with fear was done using a one-way ANOVA test. A p-value of less than 0.05 is considered to be statistically significant.

RESULTS

A Questionnaire study was conducted to assess the fear level among patients attending satellite centers of Swami Devi Dayal Dental College and Hospital. Among a total of two hundred study participants, 130(65%) were males and 70(35%) were females. In terms of age 70(35%) were from the age group 18-29 years, 47(23.5%) were from the age group 30-49 years and 83(41.5%) were from the age group of >50 years age. A total of 81(40.5%) study participants were from upper-lower status, 52(26.0%) were from lower-middle status, 47(23.5%) were from upper-middle status, 16(8.0%) were from lower status and only 4(2.0%) study participant was from upper status (Table 3). A total fear score of COVID-19 during lockdown range was found to be from 7 to 35 (20.75± 5.145) and after lockdown, a fear score of COVID-19 ranged from 7 to 29 (16.41 + 5.0 13) (Table 1). A total of 132(66%) study participants had medium fear, 42(21%) had high fear and 26(13%) had low fear during the lockdown. 110(55%) had medium fear, 82(41%) study participants had low fear and 8(4%) had high fear after lockdown (Table 2). There was no statistically significant difference (p=0.325) found between males (20.59 ± 5.216) and females (21.06 ±5.012) with fear of COVID-19 during the lockdown. However, after lockdown, there was a statistically significant difference found (p=0.011) between males (16.0± 5.002) and females (17.19 ±4.955) with fear of COVID-19. There was no statistically significant difference found between both during lockdown (p=0.094) and after lockdown (p=0.487) between the 18-29 years age group (*During lockdown Fear total score*, DFTS=21.43± 4.843, After lockdown fear total score, AFTS= 16.51±4.869), 30-49 years age group (DFTS= 20.28 ±5.241, AFTS= 16.79 ±5.081) and 50 years and above age group (DFTS= 20.45 ± 5.303, AFTS= 16.12±5.102) respectively (Table 3). There was statistically significant difference found between socioeconomic status when compared with fear of COVID-19 both during (p=0.033) and after lockdown (p=0.042) For upper status: DFTS=23.64±5.316, AFTS= 18.36±5.91, upper-middle: DFTS= 21.28±5.278, AFTS= 16.86±5.002, lower-middle: DFTS= 21.17±4.613, AFTS= 16.91±4.685, for upper- lower DFTS= 20.33±5.189, AFTS= 16.08±5.063 and for lower status: DFTS=19.23±5.677, AFTS= 14.63±5.290 (Table 3). There was a highly statistically significant difference (p<0.001) found between the fear score of COVID-19 during lockdown (20.75±5.145) and after lockdown (16.41±5.013) (Table:1).

DISCUSSION

On 24 March 2020 the Govt. of India imposed a complete lockdown as a result of which the growth rate of COVID-19 cases witnessed a steady fall from April 3 when the lockdown was able to put a brake on the speed of growth. The number of COVID-19 deaths too had fallen significantly due to the lockdown, marking a notable difference between pre-lockdown (Before March 2020) and post-lockdown situations (June 2020) (Ministry of Health And Family Welfare, 2020).

Table 1: Total scores regarding covid-19 fear among study participants.

VARIABLES	n	MINIMUM	MAXIMUM	MEAN±SD	p-value
DFTS- During Lockdown Fear Total Score	200	7	35	20.75 ± 5.145	<0.001*
AFTS- After Lockdown Fear Total Scores	200	7	29	16.41± 5.013	

p≤0.05: significant

Table 2. Distribution of Study Participants On The Basis Of Total Fear Scores During And After Lockdown

TOTAL FEAR SCORES	DURING LOCKDOWN frequency (%)	AFTER LOCKDOWN frequency (%)
Low Fear (7-15)	26 (13)	82 (41)
Medium Fear (16-24)	132 (66)	110 (55)
High Fear (25-35)	42 (21)	8 (4)
Total	200	200

Table 3. Comparison of fear of covid-19 during and after lockdown according to variables

VARIABLES	DFTS- During Fear Lockdown Total Score	AFTS- After Fear Lockdown Total Scores
GENDER (n)		
Male (130)	20.59 ±5.216	16.00 ±5.002
Female (70)	21.06 ±5.012	17.19± 4.955
p value [†]	0.325	0.011*
AGE (n)		
18-29 yrs. (70)	21.43 ±4.843	16.51 ±4.869
30-49 yrs. (47)	20.28± 5.241	16.79 ±5.081
50 yrs. & above (83)	20.45 ±5.303	16.12± 5.102
p value [†]	0.094	0.487
SOCIOECONOMIC STATUS (n)		
Upper (4)	23.64 ±5.316	18.36± 5.91
Upper Middle (47)	21.28 ±5.278	16.86 ±5.002
Lower Middle (52)	21.17± 4.613	16.91±4.685
Upper Lower (81)	20.33 ±5.189	16.08 ±5.063
Lower (16)	19.23 ±5.677	14.63 ±5.290
p value [†]	0.033*	0.042*

Independent t test[†], ANOVA test[†], p≤0.05: SIGNIFICANT

Our study highlights the initial psychological responses in the form of fear towards the life-threatening pandemic of COVID-19 during lockdown. This period signifies the decline of the novelty effect of lockdown and rising of real-time difficulties which may be due to confined mobility. All this might demonstrate as panic and fear towards this disease. Among the total study participants, a total fear score of COVID-19 during the lockdown ranged from 7 to 35 (20.75 ± 5.145). Similar results were seen in the studies conducted by Dolar Doshi et al. (2021) Kanika K Ahuja. After lockdown, a total fear score of COVID-19 was found to be from 7 to 29 (16.41 ± 5.013). The probable reason for this finding could be the distress in the pandemic that can be attributed to limited social interactions, tensions among families in lockdown together as well as the fear of illness. No earlier studies were conducted using a fear scale of COVID-19 after lockdown. Among them 66% had medium fear (16-24), 21% had high fear (25-35), and 13% had low fear (7-15) during the lockdown. After lockdown 55% of study participants had medium fear (16-24), 41% had low fear (25-35) and 4% had high fear (1-15).

The reason may be the importance of social contact, as social isolation can have a negative psychological effect during the lockdown in the COVID-19 pandemic, thus resulting in high fear. There was no statistically significant difference (p=0.325) found between males (20.59 ± 5.216) and females (21.06 ± 5.012) with fear of COVID-19 during the lockdown. However, the results were, in contrast, to study conducted by Dolar Doshi et al where there was a statistically significant difference (p=0.007) found between males and females with fear of COVID-19 during the lockdown. In our study, after lockdown, there was a statistically significant difference found (p=0.011) between males (16.00 ± 5.002) and females (17.19 ± 4.955) with fear of COVID-19. The possible reason could be the greater psychological vulnerability in women and that could increase the perception of risk against the disease, promoting preventive behaviours. Among the study participant, there was no statistically significant difference (p=0.094) found between 18-29 years old age

group (21.43 ± 4.843), 30-49 years age group (20.28 ± 5.241), and 50 years and above age group (20.45 ± 5.303) during the lockdown. However, the results were, in contrast, to a study conducted by Carla Formighieri Giordani et al. In our study, after lockdown, there was no statistical difference (p=0.487) found between the age group of 18-29 years (16.51 ± 4.869), 30-49 years age group (16.79 ± 5.081), and 50 years and above age group (16.12 ± 5.102). The possible reason may be that people of all age groups can be infected by the COVID-19 virus. There was a statistically significant difference found when the socioeconomic status of study participants was compared with the fear of COVID-19 during lockdown (p=0.033) between upper status (23.64 ± 5.316), upper-middle (21.28 ± 5.278), lower-middle (21.17 ± 4.613), upper-lower (20.33 ± 5.189) and lower status (19.23 ± 5.677). After lockdown there was a statistically significant difference (p=0.042) found when the socioeconomic status of study participants was compared with the fear of COVID-19 between upper status (18.36 ± 5.591), upper-middle (16.86 ± 5.002), lower-middle (16.91 ± 4.685), upper-lower (16.08 ± 5.063) and lower status (14.63 ± 5.290). A highly statistically significant difference (p<0.001) was found between a fear score of COVID-19 during lockdown (20.75 ± 5.145) and after lockdown (16.41 ± 5.013). The reason may be attributed as upper-status people being more worried about their health, as they can afford the resources that protect and improve health and have more disposable income.

LIMITATIONS

- A convenience sample was used that does not adequately represent the general population of Haryana. Therefore, it is necessary to have a more representative and diverse sample to compare and generalize the results.
- A self-report measure was used to assess the fear of COVID-19. This technique can be influenced by social desirability, and memory, so it is recommended to use other information-gathering techniques such as in-depth interviews.

- The study had a cross-sectional design which prevents providing information about causality among the variables for fear of COVID-19. Future studies should have a longitudinal design to evaluate the causal relationships between the variables mentioned above.
- The stability of the FCV-19S scores over time was not examined. Test-retest reliability measures should be incorporated in the future.
- The absence of the factor invariance assessment by gender was due to the unequal number of males and females in the present study in which most of them were males. It is suggested that for factor invariance analysis it is necessary that the number of participants in each group is similar.

CONCLUSION

Both during and after lockdown the majority of the population had medium fear scores with significantly higher scores found in women and among different socioeconomic classes after lockdown. The psychological determinant of health has always been underplayed, but in situations such as COVID-19, it emerges as a significant factor; hence, we aimed to understand the effect of fear among dental patients. Identifying the fears and opinions of the frightened patients during this challenging time would make it easier for the dentists in order to increase a sense of security among the patients so as to include some new protocols in their everyday practice, such as implementing preventive measures in front of the patients, ensuring an empty waiting room, and providing telephone consultations. One of the basic objectives of treating dental anxiety is to diminish or remove the cause of fear among patients so that they could be motivated for long-term repeat visits (Ahmed *et al.*, 2020)¹². The pandemic as an exogenic factor cannot be removed, and therefore it is important to know the profile of the frightened dental patient during the pandemic, as well as what increases fear and what increases a sense of security. This study portrays an urgent need to conduct a nationwide epidemiological study to determine the level of fear as well as other associated issues concerning mental health in relation to COVID-19. The findings of this study may help to identify the groups most at risk and formulate tailor-made intervention strategies to ensure their optimal health in this time of global crisis.

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