



## Psychological Impact of COVID-19 on Dental Interns; A Reality Check

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### ABSTRACT

**Background:** The COVID-19 pandemic and the associated lockdown had universities to limit operation and restrict contact through recommended social distancing. It had an enormous impact at both societal and educational level. This study focuses on the psychological impact of the pandemic on dental interns

**Methods:** An online structured anonymous survey composed of 20 questions was sent to interns of various dental colleges in India. The questionnaire consisted of questions pertaining to demographic data, questions assessing the perceived impact of COVID-19 outbreak questions regarding their stress levels, fears and questions for assessing the psychological reactions, feelings and emotions experienced by students whilst thinking at COVID-19 outbreak were measured by the Generalized Anxiety Disorder 7-Item Scale

**Results:** The perceived fears like Uncertainty about the future is seen among 60% of the participants followed by fear of contacting virus in 26% of the participants. It also shows most of the interns have fear, anxiety and sadness while thinking about covid. GAD scale 7 assessment showed mild to moderate depression in interns during the covid lockdown.

**Conclusion:** The study shows that interns were psychologically affected by covid 19 lockdown. which were significantly associated with fear and anxiety. It is imperative that adequate support is needed for dental interns in the midst of this pandemic and beyond.

**Keywords:** COVID-19, Dental Interns. Pandemic

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## **1 Introduction**

The Coronavirus Disease 2019 (COVID-19) has its origin in Wuhan, Hubei Province, China. This viral disease has spread exponentially, resulting in an outbreak affecting humans all over the world. World Health Organization declared it as a worldwide pandemic globally.<sup>1,2</sup> The government of India had ordered a nationwide lockdown from 26 March 2020 limiting movement of the entire 1.3 billion population including closure of all educational institutions as a preventive measure against the COVID-19 pandemic in India.<sup>2</sup> The unlocking process was started on June 1<sup>st</sup> in a phased manner in the country with restrictions by disaster management authority

COVID-19 has caused unprecedented disruption to the medical and dental education process and to healthcare systems. The highly contagious nature of the virus has made it difficult to continue lectures and clinical experience also thus influencing the dental education process]. These challenges have resulted in limited patient care due to the focus on COVID-19 patients, which restricts the availability of chairside learning opportunities for dental interns.<sup>3,4</sup> The internship is compulsory in India for dental graduates at the end of their undergraduate course with postings in all clinical departments, postings in rural health clinics of dental colleges and public health dental programmes. Due to the covid restrictions, Clinical interns training through clinical rotations has been suspended in many institutions.<sup>2</sup>

Virtual learning procedures still remains as a challenge to dental educators as well as students. Even though virtual learning decrease the risk of spreading infections it has got several drawbacks regarding the practical application of theoretically learned concepts and the training in real patient experiences.<sup>5</sup> Since the lockdown has been eased in phases, dental clinics and dental institutions has been functioning with many dentists and dental interns working with reinforced protective measures. The covid situation s may have considerably affected the psychology, clinical training and their expectations of interns. Therefore, a questionnaire study was planned to assess the psychological perceptions of dental interns during this period

## **2 Materials and methods**

This study was conducted by a group of interns from a dental college in Kerala. Data were collected by means of an online structured anonymous survey composed of 20 questions. The survey was created using the online Google Forms application, and the link to the online survey was sent through Email to various dental colleges in India. Data were collected in the time period from 15 November to 30 November 2020.

The questionnaire was based on a previous study to assess the perceptions of medical students and interns during covid . The questionnaire consisted of questions pertaining to demographic data, information related to the course of study, questions assessing the perceived impact of COVID-19 outbreak on the quality of their course of study and of their professional training. Also questions regarding their stress levels, fears etc also has been included. Questions for assessing the psychological reactions, feelings and emotions experienced by students whilst thinking at COVID-19 outbreak were

measured by the Generalized Anxiety Disorder 7-Item Scale (GAD-7).<sup>6</sup> GAD-7 is a seven-item anxiety scale developed by Spitzer *et al.* with a score of 0 to 3 for each item. The GAD scale ranges from 0 to 21, in which a total score of 0 to 4 suggests no anxiety symptoms, a score of 5 to 9 reflects suggests mild anxiety, a score of 10 to 14 suggests moderate anxiety and those with a total score of  $\geq 15$  are considered to have severe anxiety. The GAD scale had a good factorial validity and reliability. The data obtained were analysed using the Microsoft excel 2019 programme. Descriptive statistics were applied to calculate frequencies and percentages.

### 3 Results

Total of 233 filled responses were received, of this 201 participants were females and 32 males. of the total participants The demographic details are given in table 1.

Table 1 : Demographic details of the participants

No of responses : 233
<b>Gender</b>
Males: 32
Females : 201

The figure 1 shows the perceived fears of interns during the COVID-19 lockdown period. Uncertainty about the future is the most perceived fear among 60% of the participants followed by fear of contacting covid by 26% of the participants . 12% of the participants said they fear of loosing close relatives

Figure 1: Perceived fears of Interns

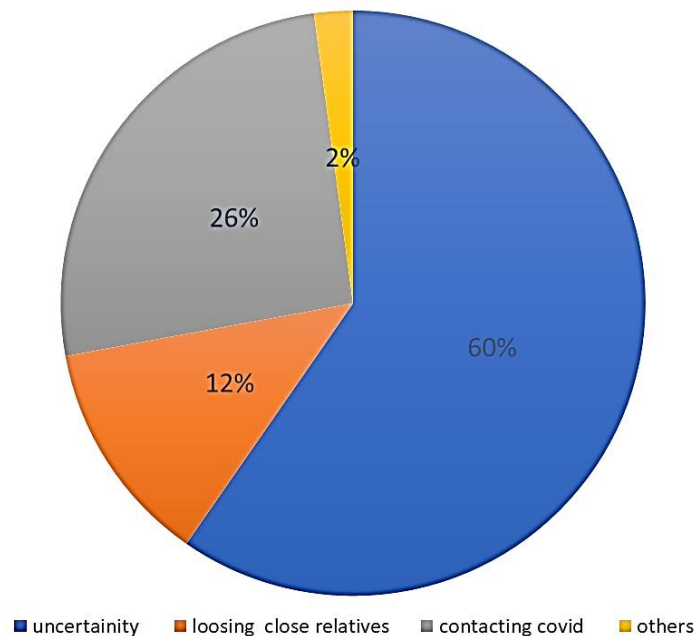


Figure 1. Perceived fears of Interns

Table 2 shows the response of fear of interns during the covid period. Most of the interns fear about loosing on clinical experience and their job prospects. They also have fear of a negative impact on their study career due to the covid pandemic

Table 2: Fear of interns due to the covid situation

	Yes	No	May be
Do u think you are loosing on clinical experience	151	60	22
Delay in intership programme affects your job prospects	94	74	63
COVID-19 emergency having a negative impact on your study career?	76	67	90

Table 3 shows the emotions of the interns when thinking about covid-19 . Most of the respondents shows that they feel moderately about fear, anxiety and sadness while thinking about covid-19.

Table 3 : Emotions of the interns when thinking about covid

	I do not feel it	I feel it lightly	I feel it moderately	I feel it intensely	I feel it very Intensely
Fear	14	34	87	67	31
Anxiety	22	32	101	52	26
Concern	12	18	35	82	86
Sadness	21	11	141	41	19

Figure 2 shows the fear of the interns about contacting covid. Most of them are having moderate fear of contacting the disease, whereas 20% of them fear a lot of getting covid infection.

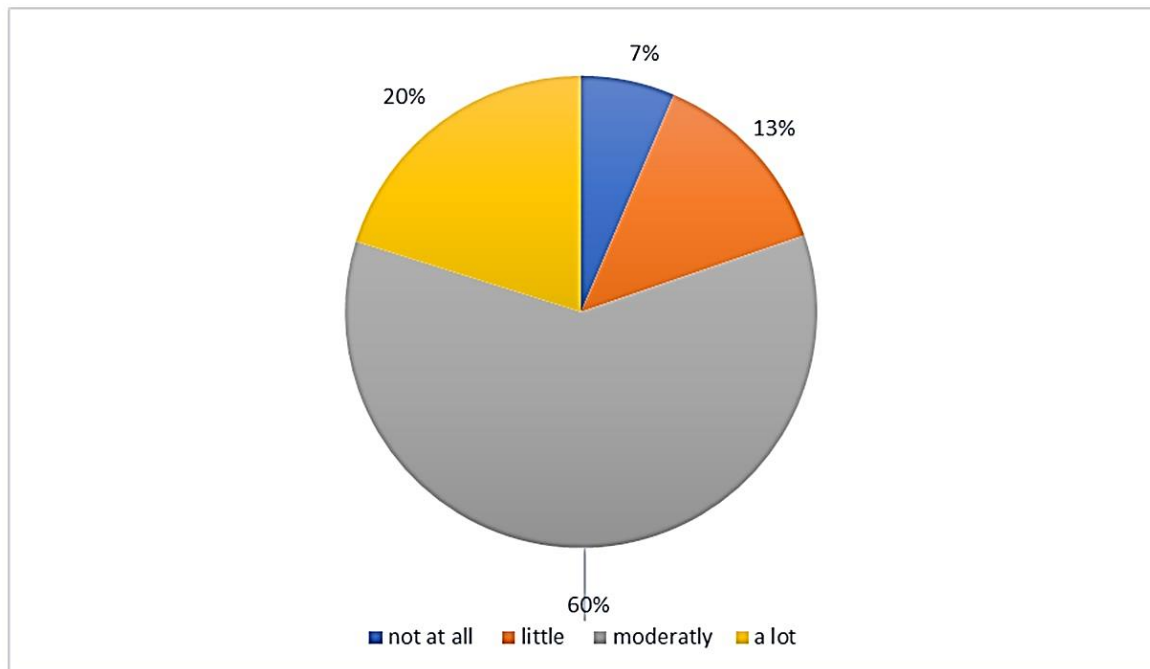


Figure 2: Fear of contacting Covid 19

Figure 3 shows the results General anxiety assessment of the participants by using GAD scale 7. Most of the participants showed mild to moderate depression during the covid 19 lockdown.

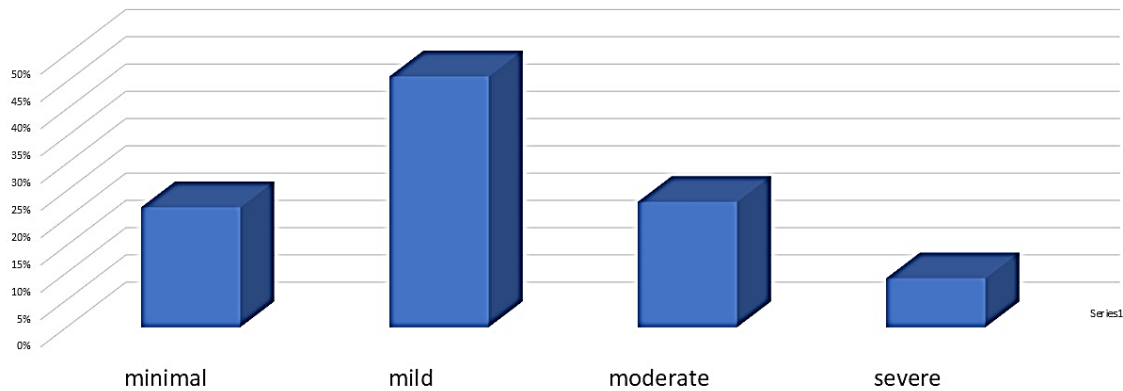


Figure 3: GAD Scale of Interns during covid 10 lockdown

#### 4 Discussion

The uncertainty of the future, which is already competitive is a real concern in the students. This has led to psychological impacts that cannot be ignored especially during the covid lockdown.<sup>7</sup> Importantly, the negative impact of COVID-19 on the career was judged as moderate to extreme by the majority of the responders. This is probably due to the fact that in India, during the lockdown, most of the dental schools, were not allowed to follow and carry out the clinical activity. Hence, interns might have realised that they might not be able to complete the hours of clinical training required to complete their course of study in the near future. Most importantly, they did not know when clinical training activities would resume too normal. the Covid-19 crisis also created a severe challenge of the global reversion for the graduates to accomplish their future academic and working goals.<sup>8,9</sup> Although university closures were intended to keep students safe, for many, these notions came out with different sets of mental health issues.

Previous outbreaks of similar infections such as the severe acute respiratory syndrome (SARS) showed that exposed healthcare workers experienced fear of getting infected whilst treating an infected patient and of infecting family members.<sup>10</sup> The present study showed that interns are having fear about Covid 19. As indicated by recent studies, the COVID-19 pandemic has caused fear and anxiety not only amongst healthcare workers but also amongst the general population. Since it has been widely established that the primary route of transmission of COVID-19 is through droplets and aerosol the majority of interns considered as necessary during procedures generating aerosol. The protection systems such PPE: FFP2 or FFP3 respiratory masks, protective glasses/face shield, disposable gown

and cap protect the dentists from contracting the virus, but they are also likely to help reducing stress levels.<sup>2,11,12</sup>

Measuring anxiety by the means of self-report questionnaires is useful and has been already performed amongst dental practitioners and patients.<sup>13</sup> This study has revealed that the COVID-19 pandemic has impacted on anxiety levels among interns with almost majority of them reporting mild to moderate/severe anxiety levels. The academic delays could have long-term impacts on the psychology of students as they are more likely to be graduated later than they have expected.<sup>14</sup> In this regard, faculties, as well as university authorities, should stay connected with the students and motivate them to move forward together during this difficult time. Cao<sup>15</sup> et al in an earlier study reported that 21.3% of the students were experiencing mild anxiety, 2.7% were reporting moderate anxiety, and only 0.9% were suffering from severe anxiety. The effect of COVID-19 on the global community overall has been considerably significant, causing fear, anxiety and worry, particularly due to uncertainty of the prognosis of the disease, changes in societies lifestyles, lockdown restrictions and educational disruptions. The impact of COVID-19 on university students is particularly burdensome due to the perceived effect of the virus on their studies; and with medical students specifically, it could be due to the interdisciplinary nature of their training and the potential proximity of being exposed to the virus during their clinical postings.<sup>16,17</sup>

For students in a state of depression or anxiety, most of them were mild or moderate, and a few of them were severe. Covid situation has brought panic and pressure to general people, and fears and stresses might be contagious among family members.<sup>18</sup> According to our GAD-7 results, minimal anxiety is seen for 22%, mild anxiety for 46%, moderate anxiety for 23% and for severe anxiety for 9% of the participants. During the prolonged time of isolation, some families lost their source of income because of the epidemic. Economic downturns are associated with an increase in mental health problems for children and adolescents, which might be affected by the ways that economic downturns affect adult unemployment, adult mental health and child maltreatment. Interns themselves might feel depressed and anxious about struggling to maintain stability in their life. Furthermore, during quarantine, depressive and anxious symptoms are more likely to occur and worsen in the absence of interpersonal communication. During adolescence, young people grow in independence and begin to prioritize connections with peers over parents. Changes in life style and fear of the disease and uncertainty of the future may have affected the interns. Normal and healthy social activities are significant to stable emotions and good psychological status.<sup>18,19</sup>

The strengths and limitations of the current study are determined by several issues. The study was conducted after the initial lockdown was over and the life is getting back too normal. The seriousness of the fear and anxiety during the lockdown period might have changed according to the times and must have reflected in the results about the fear and anxiety the e-questionnaire allows to assess the prevalence of anxiety and depression among university students while maintaining the WHO recommended “social distance” during the COVID-19 pandemic, which otherwise would be

impossible. On the contrary, given the limited resources available and the time-sensitivity of the COVID-19 outbreak, the snowball sampling strategy was chosen instead of random samples. In this cross-sectional study, the identified factors are regarded as associated factors, which could be either be the causes or the results of depression or anxiety. Furthermore, due to ethical requirements on anonymity and confidentiality, the contact details of the respondents were not collected. However, the use of validated screening e-questionnaire was considered as a cost-effective approach to explore the situation in general, therefore, used in this study. Since the study could not access subjects with medically examined depression and anxiety symptoms, the provision of the results may not fully reflect the severity of depressive and anxiety symptoms among students

## 5 Conclusion

This study shows that dental interns were emotionally affected by the turnarounds due to the Covid 19 pandemic. As the lockdown has eased and the colleges have opened for interns, persistence and responding positively to the continuous change in this time will prove fruitful for the interns. While a lot of support and judicious policies are expected from the authorities to facilitate and guide them through the important phase of their life.

## 6 Declarations

### 6.1 Acknowledgements

We thank all interns of various dental colleges who took part in this study

### 6.2 Competing Interests

No conflict of interest exists in this publication.

### 6.3 Ethical Approval

Kannur Dental College ethical committee approval no- KDC/1120/2

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