

# CONCERNS AMONG PARENTS OF DENTAL PROFESSION STUDENTS DURING COVID-19 PANDEMIC

Thippeswamy. H. M, Ria Raj, Maurya Manjunath, Nanditha Kumar. M\*

JSS Dental College & Hospital, JSS Academy of Higher Education & Research, Mysuru, Karnataka, India.

Correspondence: nanditha10@gmail.com

## ABSTRACT

### AIM

This study was undertaken to assess the concerns of the parents of dental profession students during the COVID-19 pandemic.

### MATERIALS AND METHODS

In this survey a structured questionnaire was sent to all the participants through Google Forms. The questionnaire was designed into five sections. The complete questionnaire consisted of 19 questions. In the first section, participants needed to answer demographic information (five Questions). The second part of the questionnaire (four questions) assessed anxiety of parents and the third part was related to their professional career (three questions), the fourth part asked about effective disinfection practices (four questions) in the college premises and hostel, while the fifth part questioned about learning mode (three questions) during COVID-19 pandemic.

### RESULTS

The total response rate in this present survey was 78.02%. 52.2% of parents stated that they are really anxious and have disturbed mental health. Significant percentages (more than 80%) of the parents were worried about their son/daughter's career advancement and dental profession but, 87.7% of the parents were not ready to change their son/daughter's profession. 53.2% of the parents believed that their wards were unable to learn efficiently without attending college and 44.9% of the parents were not satisfied in online assessment during COVID-19 pandemic.

### CONCLUSION

Within the limitations of this present study, it was concluded that majority of the parents expressed fear and anxiety about their children's profession. Regarding the mode of learning, half of the parents expressed concern that their wards were unable to learn efficiently without attending college and clinics and also, they were unsatisfied with online assessment.

### KEYWORDS

COVID-19 pandemic, concerns, dental students, parents, anxiety

## INTRODUCTION

The COVID-19 pandemic has disrupted people in many aspects of life also including education. To inhibit the spread of this pandemic, distance learning from conventional face to face learning has been implemented. During this implementation of online learning, obstacles were encountered which included positive benefits like accelerating technology integration, information, and communication in learning behaviour. [1,2]

The pandemic was declared by the World Health Organization (WHO) on Mar 11, 2020, following which, overnight, curfews and lockdowns had been implemented worldwide. It was identified that this highly infective virus is transmitted through direct and indirect modes. The dental profession demands the patients violate the recommended one-meter safe distance and dental procedures generating aerosols. It was no surprise that all non-essential dental procedures were suspended as a part of the interim guidance [3]. However, if this theory was true, then surely dentists and other members of the team would be at risk because of close contact and high volume of patients seen. To treat the patients in dentistry, surgical and aerosol procedures using rotary cutting and scaling instruments are involved. During these procedures chances of creating infective aerosol of water, saliva, blood and debris are increased. SARS-CoV-2 transmission during dental procedures may happen through inhalation of these aerosols or by direct contact with mucous membranes, oral fluids, contaminated instruments and equipment surfaces [4,5]. If adequate precautions are not taken properly, dental health personnel and trainees will have high risk of contracting any infection through cross contamination/infection. [6,7,8]

Worldwide, health personnel are encountering constant stress during COVID-19 pandemic in their daily work related to risk of infection, frustration, exhaustion and social isolation. Due to the possible high risk of contagion when performing routine dental procedures and close relationship between risk of infection and psychological stress and anxiety, it is essential that this aspect should also be recognized while training in dental health services. [9,10,11,12] Dental health personnel who perceive their likelihood of infection as high, may experience this pandemic as more personally life-threatening and experience greater traumatic stress when compared to

other professions who have less chances of acquiring infection. [13]

The global COVID-19 pandemic is a stressor that originated outside of the family system has given the novelty and uncertainty concerning this disease; also, likely to be perceived significant for many parents and children. In fact, emerging research has shown that parents' perceived impact of COVID-19 is associated with increased parenting stress and, in turn, increased risk of harsh parenting. Even for families who have not been directly exposed to the virus, they are likely to experience indirect effects of the COVID-19 pandemic. The most prevalent stressor among parents included changes to their mood and general stress levels. Likewise, a majority of parents reported experiencing symptoms of anxiety and depression as well as poor sleep. These results are consistent with prior research examining the effects of public health crises on the health and well-being of individuals [14]. Hence, this present study was undertaken to assess the concerns from parents of dental professional students during COVID-19 pandemic.

## MATERIALS AND METHODS

### STUDY DESIGN AND SETTING

This descriptive study was designed to elicit the information from parents of dental students who are presently studying an undergraduate dental professional degree. The study was conducted in Mysuru, India from May 2021 to July 2021 after the second lockdown due to COVID-19 pandemic.

In this survey a structured closed ended questionnaire was sent to all the participants using Google Forms [15]. The required information about a student's parents was elicited from the institution administrative office.

Before beginning the study, ethical clearance was obtained from the Institutional Review Board [JSSDCH IEC Research Protocol No: 11/2021]. Those parents who responded by completing the questionnaire were included in the study. Follow up was done by sending three reminders and final data was collected in the month of July 2021.

### QUESTIONNAIRE

The questionnaire was designed into five sections. The complete questionnaire consisted of 19 questions. In the first section, participants needed to answer demographic

information (5 Questions) like name, year of the son / daughter studying, place, education, occupation. The second part of the questionnaire (4 questions) assessed anxiety of parents and the third part was related to their professional career (3 questions), fourth part enquired about effective disinfection (4 questions) in the college premises and hostel while the fifth part questioned about learning mode (3 questions) during COVID-19 pandemic. The students admitted for studies in the dental college were from all over the country. In India there are a total of 28 states and 8 union territories are present and, in each state, the local language is different. However, in the present study questionnaire English language has been used. The parents who could not comprehend English language were asked to take help from their children, relatives or neighbours.

The questionnaire was face and content validated by experts who were not involved in the study. Before administering the final questionnaire, it was pretested on ten participants of student parents, whose responses were not included for analysis. After fulfilling validity and reliability criteria the questionnaire was finally considered for the main study.

## STATISTICAL ANALYSIS

The statistical analysis was carried out using SPSS (version 23) for Windows. Descriptive statistics was carried out by frequency distribution. Chi-Square Test was used to compare the differences from parents of students who belonged to different years. The level of significance was kept at  $p < 0.05$ .

## RESULTS

A total of 301 parents of first year to internship students, responded to the questionnaire. The total response rate in this survey was 78.02 percent. The internal consistency was checked using Cronbach's alpha which was found to be 0.77 and Kappa Value 0.84 maximum response was obtained from the intern's parents. In the survey the majority (86%) of the parents filled in the questionnaire themselves.

More than 99% of the parents were concerned regarding health of their son/daughter during this COVID-19 pandemic. 52.2% of the parents stated that they are really anxious and have disturbed mental health. Both the above-mentioned questions were found to be statistically

significant while assessing anxiety of the parents. Majority of the parents (95.7%) were concerned that their children might contract the COVID-19 infection while treating patients or through close contact with friends and classmates.

Significant percentages (more than 80%) of the parents were worried about their son/daughters' career advancement and dental profession however but 87.7% of the parents were not ready to change their son/daughters' profession. The remaining 14(4.7%) of the parents wanted to change the profession and 23(7.6%) were uncertain to continue dentistry.

Nearly 90% of the parents were aware that the Institute had taken adequate measures for disinfection and prevention for COVID-19. Though strict disinfection protocol was followed by the institute, 86.7% of the parents were concerned about contact tracing, testing and quarantine/ isolation procedures, if any student was COVID-19 positive.

Regarding the mode of learning majority of the parents were happy with online mode of teaching but were not satisfied with the assessment of students through online mode. Fifty percent of the parents expressed that their wards were unable to learn efficiently without attending college and clinics.

## DISCUSSION

This present study investigated the dental student's parental worries/concerns during COVID-19 pandemic. The responses obtained from the parents showed substantial concerns about their children studying and treating patients during this sensitive pandemic situation. After emergence of COVID-19 in early 2020, dental student's parents were anxious about disinfection methods in the college and hostel premises, career enhancement, and the mode of learning for the dental profession and skills. When compared to all other professions, the dental profession has the highest risk in contracting infection while treating patients.[16]

During the COVID-19 pandemic situation treating dental diseases were highly challenging and required thorough knowledge of COVID-19 transmission. As per our literature search there were no studies related to anxiety of parents of the dental professional students during COVID-19 pandemic. However, a previous literature investigated on,

how healthcare professionals can provide guidance and support to parents of adolescents.

Santabarbara J et al, in a systematic review and meta-analysis, reported that dental students' anxiety ranges from 14.22% to 75.92% [17]. In this present study more than half of the dental student's parents were very anxious and had disturbed mental health during the first and second wave. Increased stress and anxiety of the parents was due to, since the initial stages of the pandemic to date, none have accurate knowledge about the virus transmission, signs and symptoms, modes of treatment and precautions related to corona virus. Also, another reason may be due to dental diseases diagnosis and treatment procedures required close contact of the patients through saliva, aerosols etc.

A significant percentage of the parents worried about their children profession in dentistry and majority of the parents still did not want to change their wards profession. In this present study majority of the parents felt practicing dentistry is unsafe. The parents also thought that this virus will remain for a prolonged period and dental procedures would be difficult to carry out in the future which would affect their wards to practice dentistry. During this pandemic period, psychological pressure on them increased, and situations such as anxiety, fear, and high stress levels have adversely affected their mental health. At the same time, daily distressing news through social media, news, and increasing number of cases and deaths both in countries and the world, difficult working conditions, difficulties in provision of personal protective equipment, combined with the concerns of dentists in ensuring well-being of themselves and their family caused increased fear, anxiety, and high-stress levels [18]

Nearly 40% of the parents were not satisfied with online mode of teaching and more than 50% of the parents felt that their children were unable to learn practical skills without attending college and doing preclinical work. The Sarialioglu Gungor A, Sesen Uslu Y, Donmez N [18] study set out 59.1% of the dental students expressed distance learning is not effective as traditional face-to-face education during COVID-19 pandemic. Most of the parents believed that dental profession is the art and science and learning practical skills through preclinical work and direct interaction with patients is the best approach to enlighten their children career.

This present study carried out had certain limitations. Firstly, due to COVID-19 pandemic face to face interview was not

feasible so the data collected through social media thinking that participants would understand the questionnaire completely. Secondly, data obtained was self-reported, convenience sampling method was used, and the cross-sectional study design and an open-ended questionnaire could be used due to multiple varied opinions from parents was anticipated. Finally, data was collected from one college so external validity is questionable.

## CONCLUSION

Within the limitations of this present study, it was concluded that majority of the parents expressed fear and anxiety about their children profession. Though the institution followed stringent protocols and maintained good disinfection procedures, parents were still concerned with contact tracing and quarantine procedures. Regarding mode of learning, half of the parents expressed that their wards were unable to learn efficiently without attending college and clinics and also unsatisfied with online assessment.

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## APPENDIX

TABLE 1: DENTAL PROFESSIONAL STUDENTS PARENTS ANXIETY DURING COVID -19 PANDEMIC

Response	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	Internship	TOTAL	p-value
<b>Q1- Are you aware that your son/daughter is treating patients during COVID-19 pandemic and they can get infected?</b>							
Yes	50(92.6)	57(90.5)	89(98.9)	22(100)	70(97.2)	288(95.7)	0.243
No	01(1.9)	2(3.2)	1(1.1)	0(0)	0(0)	4(1.3)	
Don't know	03(5.6)	4(6.3)	0(0)	0(0)	2(2.8)	9(3.0)	
<b>Q2-Are you concerned about the health of your son/daughter during this pandemic?</b>							
Yes	54(100)	63(100)	90(100)	21(95.5)	71(98.6)	299(9.3)	0.044
No	0(0)	0(0)	0(0)	1(4.5)	0(0)	1(0.3)	
Don't know	0(0)	0(0)	0(0)	0(0)	1(1.4)	1(0.3)	
<b>Q3- Are you aware that the students and staff have been educated about the symptoms of COVID-19?</b>							
Yes	50(92.6)	61(96.8)	86(95.6)	22(100)	66(91.7)	285(94.7)	0.489
No	0(0)	0(0)	2(2.2)	0(0)	1(1.4)	3(1.0)	
Don't know	4(7.4)	2(3.2)	2(2.2)	0(0)	5(6.9)	13(4.3)	
<b>Q4-During this pandemic, are the concerns about your son's /daughter's causing you anxiety and disturbing your mental health?</b>							
Yes	20(37.0)	30(47.6)	55(61.1)	10(45.5)	42(58.3)	157(52.2)	0.039
No	33(61.1)	28(44.4)	29(32.2)	9(40.9)	25(34.7)	124(41.2)	
Don't know	1(1.9)	5(7.9)	6(6.7)	3(13.6)	5(6.9)	20(6.6)	

Chi square test was used. P<0.05 was used for statistical significance

TABLE 2: DENTAL PROFESSIONAL STUDENTS PARENTS CONCERN ABOUT PROFESSIONAL CAREER DURING COVID -19 PANDEMIC

Response	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	Internship	TOTAL	p-value
<b>Q1- Are you concerned that if this pandemic continues it will affect your son's/daughter's profession and career advancement?</b>							
Yes	37(68.5)	58(92.1)	79(87.8)	19(86.4)	62(86.1)	255(84.7)	0.007
No	14(25.9)	3(4.8)	7(7.8)	1(4.5)	5(6.9)	30(10.0)	
Don't know	3(5.6)	2(3.2)	4(4.4)	2(9.1)	5(6.9)	16(5.3)	
<b>Q2- Are you worried about son's/daughter's dentistry profession because of this COVID-19 pandemic?</b>							
Yes	35(64.8)	55(87.3)	77(85.6)	16(72.7)	58(80.6)	241(80.1)	0.055
No	17(31.5)	6(9.5)	11(12.2)	6(27.3)	11(15.3)	51(16.9)	
Don't know	2(3.7)	2(3.2)	2(2.2)	0(0)	3(4.2)	9(3.0)	
<b>Q3- After COVID-19 pandemic do you want your sons/daughters to change their profession?</b>							
Yes	1(1.9)	0(0)	9(10.0)	0(0)	4(5.6)	14(4.7)	0.122
No	51(94.4)	57(90.5)	74(82.2)	20(90.9)	62(86.1)	264(87.7)	
Don't know	2(3.7)	6(9.5)	7(7.8)	2(9.1)	6(8.3)	23(7.6)	

Chi square test was used. P<0.05 was used for statistical significance



**TABLE 3: DENTAL PROFESSIONAL STUDENTS PARENTS CONCERN TOWARDS DISINFECTION IN COLLEGE AND HOSTEL DURING COVID -19 PANDEMIC**

Response	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	Internship	TOTAL	p-value
<b>Q1- Are you concerned about the mental status of your ward as they may encounter COVID-19 positive patients?</b>							
Yes	40(74.1)	46(73.0)	80(88.9)	18(81.8)	61(84.7)	245(81.4)	0.067
No	10(18.5)	13(20.6)	10(11.1)	3(13.6)	5(6.9)	41(13.6)	
Don't know	4(7.4)	4(6.3)	0(0)	1(4.5)	6(8.3)	15(5.0)	
<b>Q2- Are you concerned if hand washing stations/hand sanitizers are available in college?</b>							
Yes	44(81.5)	52(82.5)	79(87.8)	18(81.8)	54(75.0)	247(82.1)	0.033
No	10(18.5)	10(15.9)	11(12.2)	2(9.1)	17(23.6)	50(16.6)	
Don't know	0(0)	1(1.6)	0(0)	2(9.1)	1(1.4)	4(1.3)	
<b>Q3- If your son's /daughter's or any other students on campus contacts COVID-19 are you concerned that the guidelines for contact tracing, testing and quarantine /isolation will be followed by the institute?</b>							
Yes	46(85.2)	52(82.5)	82(91.1)	21(95.5)	60(83.3)	261(86.7)	0.262
No	5(9.3)	4(6.3)	7(7.8)	1(4.5)	6(8.3)	23(7.6)	
Don't know	3(5.6)	7(11.1)	1(1.1)	0(0)	6(8.3)	17(5.6)	
<b>Q4- Are you aware about the regular disinfection procedures and personal protective kits availability in the hospital?</b>							
Yes	42(77.8)	42(66.7)	77(85.6)	18(81.8)	64(88.9)	243(80.7)	0.043
No	5(9.3)	14(22.2)	8(8.9)	3(13.6)	4(5.6)	34(11.3)	
Don't know	7(13.0)	7(11.1)	5(5.6)	1(4.5)	4(5.6)	24(8.0)	

Chi square test was used. P<0.05 was used for statistical significance

**TABLE 4: DENTAL PROFESSIONAL STUDENTS PARENTS CONCERN TOWARDS LEARNING MODE DURING COVID -19 PANDEMIC**

Response	1 <sup>st</sup> year	2 <sup>nd</sup> year	3 <sup>rd</sup> year	4 <sup>th</sup> year	Internship	TOTAL	p-value
<b>Q1- Are you happy with the online teaching mode during COVID-19 times?</b>							
Yes	36(66.7)	32(50.8)	46(51.1)	13(63.6)	44(61.1)	172(57.1)	0.109
No	12(22.2)	29(46.0)	37(41.1)	5(22.7)	21(29.2)	104(34.6)	
Don't know	6(11.1)	2(3.2)	7(7.8)	3(13.6)	7(9.7)	25(8.3)	
<b>Q2- Do you believe that your sons /daughters are able to learn efficiently without attending college during COVID-19 pandemic?</b>							
Yes	14(25.9)	14(22.2)	35(38.9)	5(22.7)	24(33.3)	92(30.6)	0.125
No	29(53.7)	40(63.5)	46(51.1)	10(45.5)	35(48.6)	160(53.2)	
Don't know	11(20.4)	9(14.3)	9(10.0)	7(31.8)	13(18.1)	49(16.3)	
<b>Q3- Is online mode of assessing the students satisfactory?</b>							
Yes	23(42.6)	19(30.2)	38(42.2)	9(40.9)	20(27.8)	109(36.2)	0.336
No	18(33.3)	32(50.8)	39(43.3)	8(36.4)	38(52.8)	135(44.9)	
Don't know	13(24.1)	12(19.0)	13(14.4)	5(22.7)	14(19.4)	57(18.9)	

Chi square test was used. P<0.05 was used for statistical significance