



Challenges faced by Undergraduate Dental students with regards to emotional and psychological health in COVID-19 pandemic - A Questionnaire Based Study

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ABSTRACT:

Background: Balance of physical health, work-life, emotional health and mental health had been a challenge during COVID-19. The pandemic had spread rapidly across the globe potentially affecting everyone, especially the students.

Aim: To determine the impact of challenges faced by undergraduate students with regards to physical, emotional and mental well being during COVID-19 pandemic.

Objective: 1. To assess the effect of Covid-19 on Physical health, routine work & daily life.

2. To assess the effect of Covid-19 on emotional and mental well being.

Method: - A questionnaire-based survey was conducted by collecting data on demographics, exposure in epidemic severity, engagement in prophylactic measures and balance of work, life with regard to physical health, challenges faced during the pandemic with regard to Emotional well-being and struggles in Mental well-being.

Result: Emotional and mental health of dental UG students had been adversely affected due to the overall impact of COVID-19 pandemic.

KEYWORDS: Covid-19 Pandemic, mental health, emotional health, undergraduate dental students.

I. INTRODUCTION

The Novel Coronavirus disease 2019 (COVID -19), had taken a toll all over the world since its outbreak in Wuhan. Its first case was reported in December 2019. Its spread had victimized not only the ones who had tested positive but also others directly or indirectly. The World Health Organization (WHO) had declared the Novel Coronavirus, COVID-19 as Pandemic. Globally, there were millions of confirmed cases and deaths. The disease had affected people widely and rapidly across the globe.

The first COVID-19 case in India, was reported in Kerala on 30 January 2020.

Within a few months, India had become the 2nd most affected country. Immediate measures were taken by the Indian Government, by implementing all the necessary restrictions. Places most affected were isolated highlighting the containment zones. Various restrictions were made to prevent the fatal outbreak with a 14-day quarantine period for the affected and the suspected. The high infectivity rate, increased fear, anxiety, distress had engaged people in hygiene behaviors, and social distancing had become the new way of living.

The situation had simultaneously affected the students irrespective of their class, grades and professional fields. With the rising concern of COVID-19, the number of students getting affected, emotionally, academically, financially and psychologically had risen. Several studies [1][2] and surveys showed increased stress, fear, anxiety, and social isolation had affected students' academic success, mental health, personal opportunities and future career.

Our current study, concerned the impact of challenges faced by undergraduate students with regards to physical, emotional and mental well being during COVID-19 pandemic. The study proposed mainly two objectives. First, the study sought to assess the effect of Covid -19 on physical health, routine & daily life. Second, It sought to assess the effect of Covid -19 on emotional and mental well being.

II. METHODOLOGY

Study Design This is a cross-sectional survey study approved by the institutional ethics Committee. (Reference no. IEC/04/04 dated 15/06/2021.)

Study Sample

A total number of 400 students participated in the survey. The sample size was determined using G-power software.



Participants and Procedure

This was a questionnaire-based study that was carried out among undergraduate students from the Dental Colleges of nearly all regions (North, South, East, West and Central) studying in different Universities (Government, Private, Autonomous, Deemed). Students of all grades starting from first BDS to Interns participated in the study. Nearly Four hundred students randomly participated in the study. Informed consent was obtained from all the participants to ensure their voluntary participation. Students of different disciplines, and those not willing to participate or who provided incomplete information in the survey questionnaires were excluded from the study. The questionnaire was framed of 40 questions for the purpose of study which was further revised to 35 questions accordingly after the content validation by two experts. The questionnaire was either sent to the participants by social media applications like WhatsApp Or emailed to them directly. The

information on demographics, symptoms and signs related to Covid -19, physical health, routine work & daily life, mental and emotional well-being measures were collected with this survey. Students participated and gave informed consent in the survey by completing and submitting the questionnaire electronically. All the data were self reported. A total 400 students completed the survey.

Measures

Exposure and Epidemic Severity

Engagement in prophylactic measures and balance of work, life with regard to physical health

Challenges faced during the pandemic with regard to Emotional Health

Struggle in Mental Health

Data Analysis

Descriptive analyses examined the distribution of all variables of interest.

Table 1: Descriptive Statistics among Study Group

Variable	Category	N (%)
Age	Minimum	18
	Maximum	29
	Mean \pm SD	21.39
	Median, Range	1.691
Gender	Female	70.5% (282)
	Male	29.5% (118)
Qualification	I	31% (124)
	II	16% (64)
	III	21.2% (85)
	IV	13.8% (55)
	Intern	18% (72)
College Type	Deemed University	1.2% (5)
	Government Sector	52.8% (211)
	Private sector	42.5% (170)
	Autonomous	3.5% (14)
Region in India	Central	49.3% (197)
	East	5.7% (23)
	North	2.5% (10)
	West	39.5% (158)
	South	3% (12)



Table 2 : COVID -19

Question No.	Question	Variable options (N%)		
		Yes	No	Don't know
8	Do you currently suffer from Covid -19 symptoms such as fever, dry cough, breathing problems, sore throat, loss of smell or taste, headache or diarrhea	27 (6.7%)	365 (91.3%)	8 (2%)
9	Have you been tested positive for Sars Cov-2 (Covid-19)?	80 (20%)	312 (78%)	8 (2%)
11	Has someone close to you in your family been infected with COVID-19?	201 (50.2%)	188 (47%)	11 (2.8%)
12	Has a person close to you in your family died in the course of COVID-19 disease?	102 (25.5%)	294 (73.5%)	4 (1%)
13	Has any of the people with whom you had direct contact in the past 2 weeks become infected with COVID-19?	37 (9.3%)	345 (86.2%)	18 (4.5%)

Table 3 : Physical health, Work and Daily life

Physical Health						
Sr. No	Question	Never	Once in a while	About half the time	Most of the time	Always
17	How often do you feel Energetic?	9 (3%)	93 (23.3%)	140 (35%)	130 (31.7%)	28 (7%)
		0	1	2	3	4
22	Over the past 14 days I have had an excessive urge to wash or disinfect my hands again and again so that I do not become ill from germs or contamination.	66 (16.5%)	72 (18%)	125 (31.3%)	68 (17%)	69 (17.2%)
23	Over the past 14 days I have had an excessive urge to wash or disinfect my hands again and again so that I do not pass on germs or contamination to other people.	65 (16.3%)	70 (17.5%)	123 (30.8%)	67 (16.8%)	75 (18.6%)



Work, life Balance					
Sr. No	Question	Very much	Moderately	Very less	No problem
35	Does your health limit you in doing daily activities?	32 (8%)	137 (34.3%)	121 (30.2%)	110 (27.5%)
		Yes	No	Don't know	
34	During the past 4 weeks, have you had any problems with your work or daily life due to your physical health?	108 (27%)	273 (68.2%)	19 (4.8%)	
36	Are you overeating or experiencing poor appetite?	97 (24.2%)	272 (68%)	31 (7.8%)	

Table 4 : Emotional Health

Sr. No.	Questions	Never	Once in a while	About half the time	Most of the time	Always
18	How often do you feel gloomy?	61 (15%)	171 (42.8%)	107 (26.8%)	50 (12.6%)	11 (2.8%)
28	How often do you feel positive about life?	6 (1.5%)	80 (20%)	117 (29.3%)	144 (36%)	53 (13.3%)
		0	1	2	3	4
29	Over the past 14 days I have felt strong desire to consume addictive substances (alcohol, cigarettes, drugs)	312 (78%)	32 (8%)	36 (9%)	7 (1.7%)	13 (3.3%)
		Very often	Somewhat often	Not so often	Not at all	
25	Have you felt low or down for more than 2 weeks in a row?	34 (8.5%)	82 (20.5%)	170 (42.5%)	114 (28.5%)	
		Yes	No	Don't know		



24	During the past 4 weeks, have you had any problems with your work or daily life due to any emotional problems, such as feeling depressed, sad or anxious?	147 (36.8%)	215 (53.8%)	38 (9.4%)
32	Are you feeling bad about not being able to help yourself, your family, or the community in this difficult time?	259 (64.8%)	93 (23.2%)	48 (12%)
33	Are you feeling helpless or frustrated?	125 (31.2%)	192 (48%)	83 (20.8%)

Table 5 : Mental Health

Sr. No	Questions	Excellent	Somewhat good	Average	Somewhat poor	Poor	Not sure
14	Overall how would you rate your mental health	85 (21.1%)	120 (30%)	133 (33.3%)	38 (9.5%)	15 (3.8%)	9 (2.3%)
		Less than 6 months ago	6 months ago	A year ago	More than a year ago	Never	
16	When did you last get your mental health examination done?	14 (3.5%)	15 (3.8%)	19 (4.6%)	33 (8.3%)	319 (79.8%)	
		Never	Once in a while	About half the time	Most of the time	Always	
26	How often do you feel calm and peaceful?	14 (3.5%)	106 (26.5%)	122 (30.5%)	132 (33%)	26 (6.5%)	



27	How often do you experience anger?	28 (7%)	203 (51.7%)	93 (22.3%)	68 (17%)	8 (2%)
		Very Bad	Bad	Normal	Good	Very good
38	How is your Quality of sleep?	9 (2.3%)	37 (9.1%)	195 (48.8%)	104 (26%)	55 (13.8%)
		Very often	Somewhat often	Not so often	Not at all	
21	During the past 2 weeks, how often has your mental health affected your relationships ?	30 (7.4%)	111 (27.8%)	129 (32.3%)	130 (32.5%)	
		Not at all	Several days	More than half days	Nearly every day	
30	Are you worrying too much about the effects of COVID-19 on the nation?	69 (17.3%)	234 (58.5%)	46 (11.5%)	51 (12.7%)	
31	Are you worrying too much about the effects of COVID-19 on the world?	82 (20.5%)	213 (53.3%)	56 (14%)	49 (12.2%)	
		Less than 4 hours	4-6 hours	7-9 hours	9+ hours	
37	How many hours do you sleep per day?	10 (2.5%)	131 (32.7%)	234 (58.5%)	25 (6.3%)	
		Yes	No	Maybe		
33	Are you feeling helpless or frustrated?	125 (31.3%)	192 (48%)	83 (20.7%)		
		Yes	No			
15	Have you seen a therapist in the recent past?	31 (7.7%)	369 (92.3%)			



19	Have you ever been diagnosed by a doctor Or a therapist with one or more mental health disorders?	18 (4.5%)	382 (95.5%)	
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III. RESULTS

Descriptive Findings

As shown in table 1, In the present study there were a total of 400 participants having minimum age 18 years with maximum 29 years participating from different regions of the country, belonging to different dental colleges. It shows the frequencies of students of all grades under the specific headings.

In Table 2, more than 90 % of students at the time of survey were not suffering from COVID related symptoms. However, 20% of the students and at least one close family member of 50.2% of the students had tested positive for COVID in the recent past. Nearly 25% of the students lost a family member due to COVID.

Table 3 shows that, out of the surveyed students, 23.3% never felt energetic and nearly 30% of students had an excessive urge to wash or disinfect their hands repeatedly in order to avoid germs and contamination. 8% student's had health which limited them doing daily activities. Also, within 4 weeks prior to the survey, 27% students had problems in work and daily life due to physical health.

According to Table 4, nearly 3% had felt gloomy and also felt a strong desire to consume addictive substances. 8.5% felt low for more than 2 weeks in a row. Almost 37% students had problems with work or daily life due to any emotional problems, such as feeling depressed, sad or anxious. More than 64 % felt bad about not being able to help themselves or their family or the community. Also 31.3% felt helpless or frustrated.

Table 5, shows that less than 25% of students rate their mental health excellent, 3.5% had never felt calm and peaceful and about 50% experienced anger once in a while. Less than 60% slept 7-9 hours a day and nearly 12% of students did not get quality sleep. Within 2 weeks prior to the survey, 7.4% of students thought that their mental health had affected their relationships. Nearly 13 % worried too much about the effects of Covid-19 on the nation and the world. 7.7% had seen a therapist in the recent past and 4.5% had

been diagnosed with one or more mental health disorders.

IV. DISCUSSION: -

In the present study, it was found that the exposure and severity of the Covid-19 pandemic and engagement in prophylactic measures had led to challenges and had affected the mental and emotional health of the participants. More than 25% students had engaged themselves in prophylactic measures like washing and sanitizing hands frequently. Similar changes in behavioral patterns were observed in recent studies done in New Jersey [3], China [4] and Hong Kong [5]. Some changes were also as a result of mandatory requirements in response to pandemic like social distancing, wearing masks, quarantine. One-fourth of the participants had had problems in work and daily life due to physical health, few had felt gloomy, and had desired to consume addictive substances.

With no other alternative ways to escape from Covid-19, its spread had impacted on daily living, physical health, psyche, money, and the work life balance had been disturbed. Our study showed participants almost feeling depressed, sad or anxious with work and daily life due to emotional problems during this pandemic period. Only a few participants had rated their mental health excellent, and had never felt calm and peaceful. Also 12% had not got quality sleep. Students had felt their mental health being affected and in turn affecting their relationships. This correlated with study done in United States and in Iran; they anticipated increase of anxiety, depression and traumatic reactions during Covid -19 [6][3]. It also correlated with the study done in India which had suggested more than two fifths of people were experiencing anxiety and depression due to the prevailing Covid -19 pandemic [7].

A significant proportion of participants had felt helpless and frustrated. Also worry too much about the effects of Covid-19 on the world and nation. Many had visited therapists in the recent past which may or may not be due to stress during Covid-19. Overall, the survey concluded participants facing mild to moderate difficulties



either mentally, emotionally or physically. The findings suggested prevalence of frustration, boredom, less energetic, stress which supports the increase in the level of anxiety and depression among students. Similar studies were done in a medical College in Chennai, India [8] which showed a significant increase of anxiety and depression in college students. More than 65% medical students were observed with signs of anxiety due to Covid-19 in a study done by Laura C Reigada et al. J Am Coll Health. 2023.[9]. According to Bergmann C, Muth T, Loerbroks A. the mental health medical students were found to be even poorer, when compared to the general population[10]. Contrary to the Study findings, a positive impact was also seen in the environmental changes with improved air quality due to lockdown and spending a good quality time with loved ones, also bringing the world together to fight against the pandemic [7].

Looking at the challenges faced by the students, the decision makers in the public health, health care providers and the other higher health officials should take their attention towards the dangerous aspects of covid-19 distressing the students in balancing the work-life, emotional health and mental health. Also highlighting the need to approach the undergraduate students and support them with new strategies for proper improvement and overall development focusing on the particular grades or years they are pursuing so that the potential impacts of Covid -19 could not stress or depress the students well-being.

V. LIMITATION:

The present study design is a cross-sectional observational study. It did not include any structured diagnostic parameters to evaluate criterion-related to emotional, mental and physical health of students. It was uncertain to generalize the findings of the study all over the country in comparison to the cities which were hit by the pandemic to great extent. We could have also failed to get the exact response of students because of their less attention to the information and missed the survey details. The survey simply relied on a limited set of behaviors and exposure to the pandemic. Also, self-reported levels of emotional and mental well-being are not confirmed by the health professionals' assessment.

VI. CONCLUSIONS: -

COVID-19 pandemic had adversely affected the physical, emotional and mental health of students worldwide, especially students from health professional educational fields.

Administrators and decision makers had needed to be equipped and prepared to handle similar educational crisis in future to safeguard the interests of students.

Conflict of interest: All authors declare no conflict of interest.

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