

Psychological Status of Students and Interns of a Dental College During COVID-19 Pandemic

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ABSTRACT

Introduction: A new respiratory virus was found in Wuhan, Hubei Province of China in the month of December 2019. As it was a new kind of virus, the World Health Organisation named it as corona virus disease (COVID)-19 virus. Since then, it has affected various aspects of dental field including clinical and academic activities. Psychological status of student is also disturbed during this pandemic.

Objective: The main objective of this study was to find out the impact of COVID-19 pandemic had on students and interns of Kantipur Dental College and Hospital.

Materials and Method: This descriptive cross-sectional study was conducted from August to September 2020. An online questionnaire consisting of 10 questions to assess the psychological status of dental students and interns was prepared on Google Forms and online link was sent via email and Facebook messenger. The data were analysed in Statistical Package for Social Sciences (SPSS) version 20 software.

Result: In this study, out of 286 participants, 112 (40.29%) were moderately anxious, 15 (5.39%) were severely anxious and 57 (20.50%) were less anxious. Similarly, 261 (92.89%) participants thought mental health awareness during pandemic is very important whereas 17 (6.05%) thought there are other issues rather than mental health.

Conclusion: In this study, most of the participants thought mental health awareness was very important during pandemic. So, this study helps to provide a theoretical basis for psychological interventions to college students and also provides a basis for the formation of national and governmental policies.

Keywords: corona virus disease-19; dental student; psychological status.

INTRODUCTION

A new respiratory virus was found in Wuhan, Hubei Province of China in the month of December 2019, World Health Organisation (WHO) named it as corona virus disease (COVID)-19 virus.¹ WHO declared COVID-19 as health pandemic on 11th March 2020.² As per the 18th September 2020 data given by Ministry of Health, Nepal, total number of people infected with COVID-19 virus was 61, 593 and the number of people who died from COVID-19 was 390.

Glycoprotein containing acetyl esterase and haemagglutination (HE) properties addition makes COVID-19 differ from other corona viruses.³ Mental health needs to be taken into serious consideration

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by the governing bodies and authorities as different studies during this pandemic have brought forward the ill effects on mental health of different age group individuals.² Study done by Li et al. predicted that higher the occupational/academics disturbance by COVID-19 higher will be the disturbance in sleep.² Hence alteration in mental health due to disturbances in academic activities should be monitored post pandemic.²

The main objective of this study was to find out different impacts COVID-19 pandemic has on students and interns of Kantipur Dental College and Hospital (KDCH) who have been locked up at homes and restrained from the academic activities.

MATERIALS AND METHOD

This is a descriptive cross-sectional study, carried out among 286 bachelor of dental surgery (BDS) students and interns of KDCH, Kathmandu, Nepal during August 2020 to September 2020. While preparing questionnaires for this survey, guidelines related to COVID-19 were reviewed and went through similar literature and the international guidelines.^{1,2,4,5} Online survey is an efficient medium to assess how the people perceive the ongoing public health threat and help them understand the severity of the threat.⁵ This advantage led us to choose the online survey for this study. Convenience sampling method was utilised and the sample size of 267 was calculated using Slovin's (1960) formula:

$$n = \frac{N}{1 + Ne^2}$$

Where n = required sample size; N = population size = 350; e = margin of error = 0.03 (at confidence level 99%); and 1 = constant value. Hence, n = 266.16. Sample was made 286 to prevent sample loss or incomplete filling of questionnaire.

Online structured survey consisting of 10 questions prepared in free access google database was either e-mailed to students or sent through Facebook messenger service. The answered filled form was emailed to the principle investigator through the Google database. Total 10 questions were prepared after going through multiple published papers, the questions were sent to 20 random samples who

were related to the dental profession using the Facebook messenger. Ethical clearance was taken from the Institutional Review Committee (Ref. 18/2020). Utmost confidentiality was maintained and no names, documents are disclosed anywhere other than among the researchers. Participants were allowed to answer more than one option in each question. Bachelor in Dental Surgery (BDS) students who did not wish to reply us back were not included. Dental students from BDS first year to final year studying at KDCH and dental interns who were working prior to pandemic and who were present in Nepal during the pandemic were only included. No discrimination based on gender, year, and location was done in the study.

The data from the proforma were entered in Microsoft Excel and statistical analyses were performed using IBM statistical package for social sciences (SPSS) Statistics for Windows, version 20 (IBM Corp., Armonk, N.Y., USA). The data were analysed using descriptive statistics and presented as frequency and percentages.

RESULT

A total of 286 students and BDS interns of KDCH participated in the study and responded to the questionnaire whose responses were included for the analysis. The genderwise distribution showed majority were females (Figure 1).

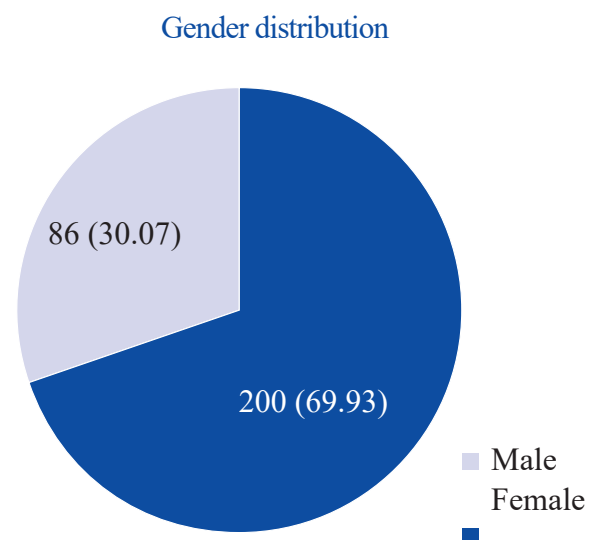


Figure 1: The gender wise distribution of participants, n (%).

Table 1: Response of participants to various questions, n (%).

Questions	Response 1	Response 2	Response 3	Response 4	Response 5
Who do you live with? 282 responses	Parents/ guardians 254 (90.07%)	Siblings 22 (7.80%)	Friends 10 (3.55%)	Alone 16 (5.67%)	-
What is your major concern in this pandemic? 280 responses	Personal health 137 (48.93%)	Family's health 237 (84.64%)	Global health 1 (0.36%)	Academic loss 3 (1.07%)	Financial turbulence 99 (35.36%)
How much do you think will the pandemic affect your academics? 278 responses	Health is the first concern for now 144 (51.79%)	It shall not affect a lot, we'll get back 88 (31.65%)	It shall have a long-term effect 75 (26.98%)	Cannot tell, but will affect in a bad way 1 (0.36%)	Study loss 1 (0.36%)
How often do you fear about the pandemic? 281 responses	All the time 44 (15.66%)	Quite often 147 (52.31%)	I have stopped thinking about it 90 (32.03%)	No fear at all 1 (0.36%)	Sometimes 1 (0.36%)
How often do you check the internet and online portal to find about COVID-19 effect? 281 responses	All the time 71 (25.27%)	Once-twice a day 163 (58.01%)	Hear it from others 37 (13.17%)	Check for medication progress only 15 (5.34%)	-
On the scale of 0-10 how anxious do you get about the pandemic? 278 responses	Less anxious scale 0-4 57 (20.50%)	Moderately anxious scale 5 112 (40.29%)	More anxious scale 6 47 (16.91%)	Highly anxious scale 7 -9 47 (16.91%)	Severely anxious scale > 9 15 (5.39%)
How important do you think is mental health awareness during such pandemic? 281 responses	Very important 261 (92.89%)	There are other issues rather than mental health 17 (6.05%)	No idea 7 (2.49%)	-	-
How worried are you about going back to your normal routine in class and practicals? 279 responses	Very worried 115 (41.22%)	Not much 46 (16.49%)	Things will definitely not be the same 136 (48.75%)	-	-
Are web classes helpful in reducing your concern about the missed academics? 279 responses	Yes, a lot 38 (13.62%)	Not really 120 (43.01%)	Helps us to keep up with the learning process 127 (45.52%)	Something is better than nothing 1 (0.36%)	It is totally of no use, we don't understand anything 1 (0.36%)
Do you practice any sort of mental relaxation process like yoga, meditation? 277 responses	Yes, on daily basis 79 (28.52%)	Not really 111 (40.07%)	Only when I get anxious 83 (29.97%)	Sometimes 3 (1.08%)	Do other exercises 1 (0.36%)

In this study, out of 286 participants, 112 (40.29%) were moderately anxious, 15 (5.39%) were severely anxious and 57 (20.50%) were less anxious (Table 1). Similarly, 261 (92.89%) participant thought mental health awareness during pandemic is very important whereas 17 (6.05%) thought there are other issues rather than mental health. Responses to various questions is presented in Table 1.

DISCUSSION

Corona virus belongs to the family of virus that are enveloped, single stranded positive RNA which are classified in Nidovirales order.⁶ The enzymatic activity of the virus is due to the Haemagglutinin-esterase (HE), which is also responsible for adhesion and dissolution of specific sialic acid receptors of

the host cells.⁷ Angiotensin Converting Enzyme-2 receptors (ACE-2) which are present at the epithelial cells of the respiratory and gastrointestinal tract are the primary target of this virus, they enter the cell through this receptors, but more research is going on regarding the invasion of the virus to other tissues also.⁸⁻⁹

Steven Taylor a prominent professor in the department of psychology, University of British Columbia states that corona virus pandemic may lead psychological scar among people all over the world and may manifest as post-traumatic stress disorder.¹⁰ Dental students like many other people find themselves isolated and away from friends, even they are trying to live a normal life amidst the pandemic, they miss the group activities they enjoy with the friends. Twenty-seven percentages of the participants in our study feared that the pandemic will have long term effect on their academics.

Current survey specifically focussed on particular group of students who are of specific age group, not many studies have been done among the dental students worldwide to find about the mental health conditions during the pandemic. Ugo et al. did an epidemiological and psychological aspect study among the dental practitioners in Northern Italy district, on the study more than 80% of the participants feared that the situation will not be normal post pandemic also,¹¹ likewise in this study 136 (48.75%) of the participants felt that the things will never be the same.

Dental clinics operate in a close system and aerosols generating procedures are common during dental treatment that make dental clinics vulnerable for spreading corona virus among the dental staff and patients.¹² Dental students are posted in various dental department during their practical session, they have to be prepared for working in this environment as COVID-19 does not seem to end soon. Out of the total participants 115 (41.22%) were worried about going back to the routine class and practicals.

Taha et al. in 2009 after conducting survey during the H1N1 influenza pandemic indicated the importance of precise methods to reduce anxiety,¹³ similar methods are required in COVID-19 pandemic as 147 (52.31%) of this study participants responded

that they quite often fear about pandemic while 44 (15.66%) responded that they fear about pandemic all the time.

A cross-sectional study done by Bhagavathula et al. among the health workers to find about the knowledge and perception about COVID-19 found 30% of the respondents rely on government news portal and online media to find about the COVID-19 spread.¹⁴ However, 163 (58.01%) of the respondents in current study checked the online portal once or twice a day to find about the COVID-19 spread.

Out of total participant, 47 (16.91%) respondents when asked to rate how anxious they were rating from 0-10 scales replied on scale 7-9 that was categorised as highly anxious. The main reason for this may be due to wrong and frightening information that is being circulated in internet and social media as 71 (25.27%) of respondents in present study said they check on the internet and news portal all the time. This finding correlates with many health care workers, infection controls centers and scientists warning regarding the fear that is being caused by spreading wrong information and messages about COVID-19.¹⁵⁻¹⁷

Misleading information regarding the COVID-19 being spread in internet especially in social media is alarming.^{18,19} Nepal government thus has established the official media centre from where the reliable news and data regarding the COVID-19 has been circulated.²⁰ We should ask our dental students to follow the government official web page to collect the information rather than random search in internet.

Wang et al. correlated the age and the information received regarding the COVID-19.²¹ They did not find any significant correlation between information acquiring from internet and developing the confidence, similarly though many of the participants in current study were using internet to acquire information 112 (40.29%) were still moderately anxious regarding the pandemic.

Silveira et al. in their study suggested that even after six months post lock down and isolation, the community and vulnerable people should be provided mental health support and follow-up, they fear that the pandemic will lead to health

problems like anxiety, stress, depressive symptoms, insomnia, anger among others.²² A total of 261 (92.89%) of the participants in this study replied that mental health awareness is very important. Understanding the importance of yoga meditation on mental health, 79 (28.52%) of the participants were doing it regularly. This finding gives us some insight regarding the importance of mental health support our students need post lock down.

Study conducted by Guo et al. in 2020 found out a smaller number of dental patients visiting the dental clinic since the beginning of pandemic, in their study the dental patients were 38% lesser, they also concluded the change in pattern of dental disorder and found out the change in behaviour of dental patients.²³ A total of 75 (26.98%) of our participants described that this pandemic will have long term effect on their academics, the dental students today are the dental surgeons of future so the change in behaviour of the practitioner's post pandemic should be the area of future research.

CONCLUSION

Methods of guiding students to effectively and appropriately regulate their emotions during public health emergencies and avoid losses caused by crisis events have become an urgent problem for colleges and universities. Therefore, analysing and investigating the mental health status of college students during the epidemic is important. It serves the purpose to evaluate the mental situation of college students during the epidemic; to provide a theoretical basis for psychological interventions to college students; and also provide a basis for the formation of national and governmental policies. This study of our is an attempt in that direction.

Conflict of Interest: None.



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