

## **Knowledge and Attitude Towards Protective Measures During Covid-19 Pandemic Among Dental Students**

Type of Manuscript: Original research

Running Title: Protective measures during covid-19 pandemic

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### **ABSTRACT:**

**BACKGROUND:** In 2019, a new strain of virus was first reported in Wuhan city, China after the detection of clusters of cases of pneumonia. The rapid spread of covid-19 is difficult to control and compelled governments worldwide to take measures in an attempt to slow down the pandemic.

**AIM:** A study was done to analyse the knowledge and attitude about the protective measures during covid-19 pandemic among dental students.

**MATERIALS AND METHODS:** The survey was conducted among 96 dental students. A self-administrated questionnaire of 20 closed-ended questions was prepared and distributed among dental students through online survey forms 'Google Forms'. The questionnaire consists of questions related to demographic details, covid 19 symptoms and protective practices during the pandemic. Descriptive statistics and chi square test were used in data analysis.

**RESULTS:** Out of ninety-six participants, 45% were male and 55% were female. Among these 96 study participants, 34%, 30%, 14%, 10% and 12% belonged to the first year, second year, third year, fourth year and internship respectively. About 79% avoided social contact, 48% were affected by the post on social media about covid virus, 67% avoided ordering food online, 69% had difficulties in sleeping by worrying about covid, 62% avoided large meetings and gatherings during COVID-19. Males were more aware about the preventive measures of pandemic (p value - 0.028).

**CONCLUSION:** In this study we observed that more than half of the dental students are aware of covid-19 pandemic protective measures and followed the protocols during covid-19 pandemic. Nearly half of the respondents were anxious during Covid pandemic.

**Key words:** pandemic, viral infection, COVID 19, innovative analysis, protective measures

## 1. INTRODUCTION:

Covid-19 pandemic is a viral outbreak in China. More than 40 cases were first reported on pneumonia. WHO along with China started working about the new virus on 11th january in chinese, the first death reported was a 61-year-old man <sup>1</sup>. Corona virus can cause human disease ranging from cold to severe acute respiratory syndrome and Middle East Respiratory Syndrome. It is commonly transmitted from person to person <sup>2</sup>. The average incubation period for covid is 4 to 14 days. The rapid spread of covid-19 is difficult to control and compelled governments worldwide to take measures in an attempt to slow down the pandemic <sup>3</sup>. As of 20th may 2020, a total case of 481 million were globally confirmed with 319,000 deaths. Currently there is no proven treatment or vaccine against covid-19. this highly dangerous disease needs an awareness among the public <sup>4</sup>. Many students have been affected due to the covid-19 outbreak. In this process dentists may provide the virus transmission from covid-19 patients and patients under surveillance <sup>5</sup>. It appears possible to have asymptomatic infections among patients who are under surveillance. A large number of doctors and staff got the infection while working with the infected patients <sup>6</sup>. In dental procedures aerosols which contain microorganism from infected individuals are at high risk which cause cross infection between dentists and patients. Covid-19 now of interest to dentists because of the risk of infection in their practices <sup>7</sup>. Dental practitioners can inhale aerosols from infected patients or direct contact through mucous membranes. Dentists are at high risk for corona due to the direct contact with patients and usage of the instruments such as scalars that can spread droplets and aerosols <sup>8,9</sup>. Studies that show the direct contact with patients and the usage of instruments for procedures can favour the transmission of disease. Dental students who are in training should be more aware of this critical infection covid-19 <sup>10</sup>.

Previous research done on this topic was Covid-19 awareness among dental professionals in Indonesia. Very few studies were done to predict students' minds and to convey awareness <sup>11</sup>. Infection control is an important aspect in clinical practice as there is a huge increase in the prevalence of infectious diseases. Several factors such as knowledge and educational background, availability and access of required materials, costs play role in infection control practices. Universal protective measures such as masks, gloves, spectacles have been reported to be important in preventing the infection in dental practice <sup>12</sup>. Our team has extensive knowledge and research experience that has translate into high quality publications <sup>13-32</sup>. A study was done to analyse the knowledge and attitude about the protective measures during covid-19 pandemic among dental students.

## 2. MATERIALS AND METHODS:

A descriptive cross-sectional study was done to analyse the knowledge and attitude about the protective measures during covid-19 pandemic among dental students in Chennai. Ethical approval was obtained from the institutional review board to conduct an online survey. The survey was conducted among 96 dental students. A self-administrated questionnaire of 20 closed-ended and open questions was prepared and distributed among dental students through Google Forms. The questionnaire consists of questions related to demographic details, covid 19 symptoms and practices during the pandemic. Students from a private dental college who were willing to participate were included in the study. Convenient sampling was used. The responses were collected and tabulated in the excel sheets and analysed.

Data entered in SPSS and results were represented in a bar graph. Chi square test was used to analyse and compare the

knowledge among dental students. The independent variables are age, gender and education. The dependent variables are knowledge, attitude and practise responses.

### 3. RESULTS:

The survey was conducted among 96 study participants. Out of 96 participants, 45% were male and 55% were female. Among these 96 study participants, 34%, 30%, 14%, 10% and 12% belonged to the first year, second year, third year, fourth year and internship.

Questionnaire responses:

About 79% avoided social contact and 21% did not avoid social contact during COVID-19 pandemic (Figure 1). Among the study participants, 48% were affected by the post on social media about covid virus and 52% are not affected by the post on social media about covid virus during COVID-19 (Figure 2). 52% hesitated to buy any stock all essential from shop and 48% did not hesitate to buy and stock all essential from shop during COVID-19 (Figure 3). 60% felt paranoid about contacting the novel coronavirus infection and 40% did not feel paranoid about contacting the coronavirus infection during COVID-19 (Figure 4). 67% avoided ordering food online and 33% did not avoid ordering food online during COVID-19 (Figure 5). 62% talked to their friends about the corona and 38% did not talk to their friends about the corona during COVID-19. 69% had difficulties in sleeping by worrying about covid and 31% did not have difficulties in sleeping by worrying about covid.

62% avoided large meetings and gatherings and 38% did not avoid large meetings and gatherings during COVID-19. 67% avoided partying and 33% did not avoid partying during COVID-19.

Among the respondents, 57% were affected by the talks about coronavirus on the news channel and 43% were not affected by the talks about coronavirus on the news channel during COVID-19. 53% got afraid of anyone in their social reports of being sick and 47% did not get afraid of anyone in their social reports of being sick during COVID-19. 49% feel not to use sanitizer/gloves and 51% feel to use sanitizer/gloves during COVID-19. 52% feel why to wash hands frequently and 48% feel to wash hands frequently during COVID-19. 58% feel worried about them regarding novel coronavirus and 42% did not feel worried about them regarding novel coronavirus. 53% wear masks even if they are not exposed to corona and 47% do not wear masks. 53% felt that it would be better to talk to someone about their worries regarding COVID-19 and 47% did not feel better if they talked to someone about their worries regarding COVID-19. 54% said it is necessary to get a mental health if anyone panics about covid pandemic and 48% said it is not necessary to get a mental health if anyone panics about covid pandemic. 59% felt it would be beneficial if mental health professionals help people in dealing with the current Covid-19. 48% suggests people for obtaining mental health help to them who are highly affected by the Covid-19 pandemic and 52% did not suggests people for obtaining mental health help to them who are highly affected by the Covid-19 pandemic. 46% feel that their life is spoiled and 54% did not feel that their life was spoiled during COVID-19 pandemic. Social contact during covid pandemic were avoided mostly by males when compared to females suggesting males were more aware about the preventive measures of pandemic. (Figure 6) Social contact during covid pandemic were avoided mostly by final years when compared to other years of study suggesting final year students were more aware about the preventive measures of pandemic. (Figure 7)

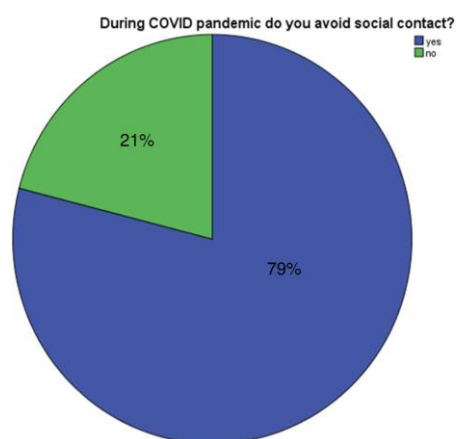


Figure 1 depicts that 79% avoided social contact and 21% did not avoid social contact.

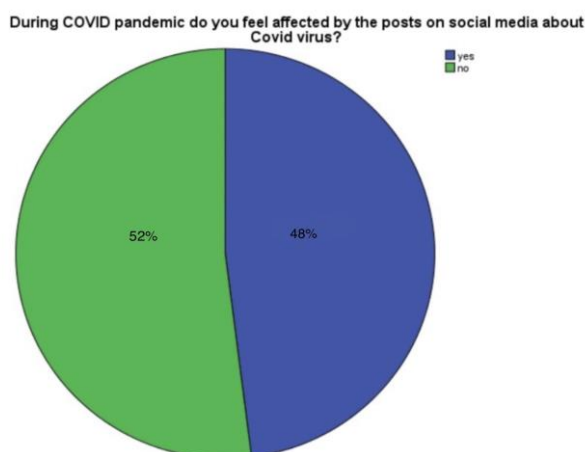


Figure 2 depicting 48% were affected by the posts on social media about covid virus and 52% were not affected by the posts on social media about covid virus.

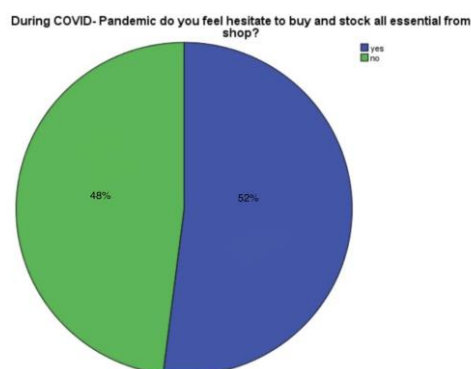


Figure 3 depicts the participant's response to the question during COVID pandemic: do you feel hesitant to buy and stock all essentials from the shop?52% feel hesitant to buy and stock all essentials from the shop and 48% do not hesitate to buy and stock all essentials from the shop.

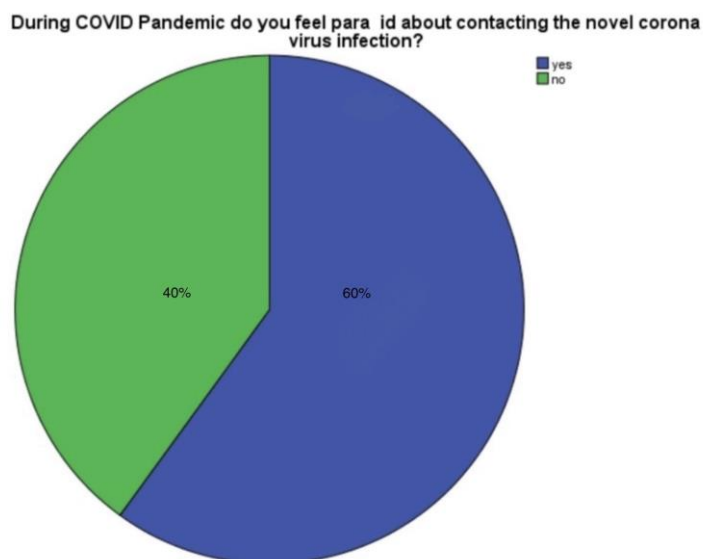


Figure 4 depicts the participant's responses for the question "During covid pandemic do you feel paranoid about contacting the novel coronavirus infection? 60% feel paranoid about contacting the novel coronavirus infection and 40% are not paranoid about contacting the novel coronavirus infection.

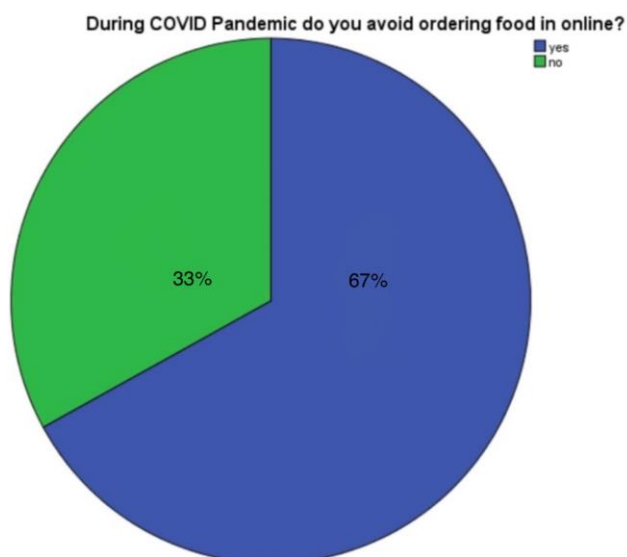


Figure 5 depicting the participant's response for the question During covid pandemic do you avoid ordering food online? 67% avoided ordering food online and 33% do not avoid ordering food online.

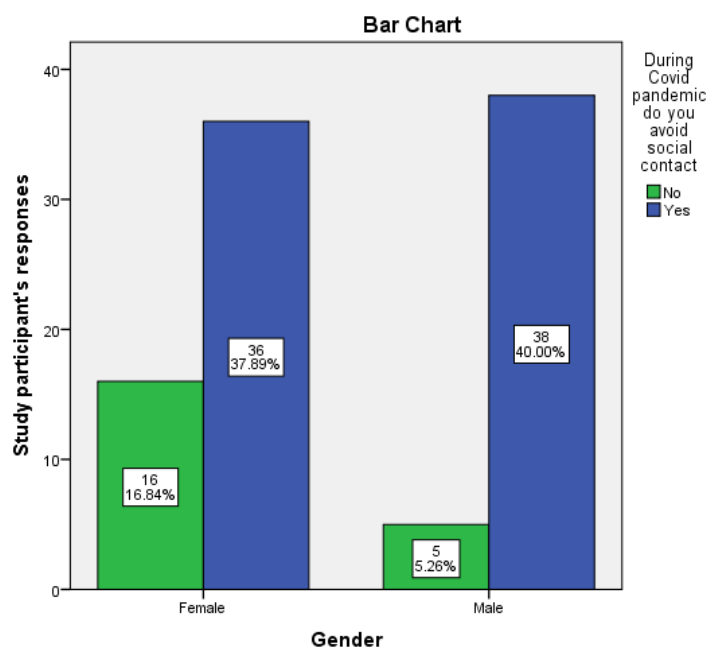


Figure 6: Bar chart showing the association of gender and their avoidance of social contact during Covid pandemic. X axis represents gender of the study participants and the y axis represents responses of the study participants. More number of male participants avoided social contact during covid pandemic when compared to females suggesting males were more aware about the preventive measures of pandemic. This difference was found to be statistically significant. (Chi square value - 5.008; p value - 0.028).

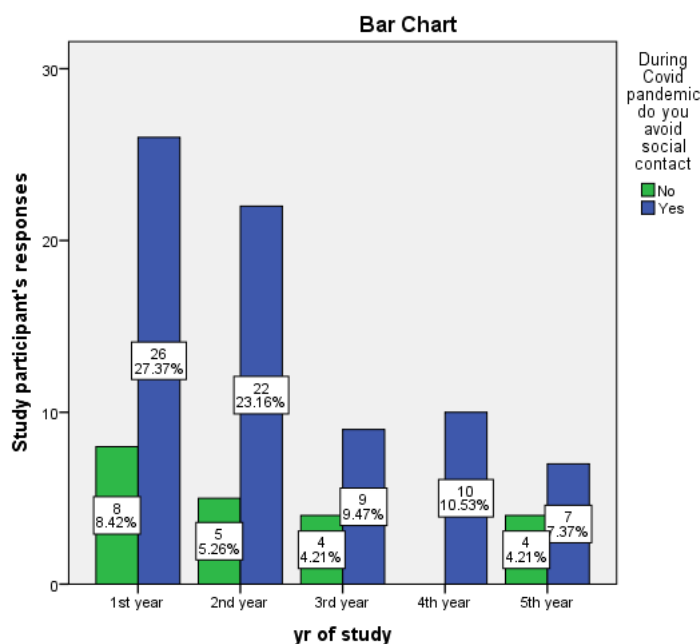


Figure 7: Bar chart showing the association of year of study and their avoidance of social contact during Covid pandemic. All the final year students avoided social contact during covid pandemic when compared to students of other years of study suggesting final year students were more aware about the preventive measures of pandemic. However, this difference was found to be statistically insignificant. (Chi square value - 4.945; p value - 0.293)

#### 4. DISCUSSION:

The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette<sup>33</sup>. Frequent hand washing or using alcohol-based hand rub would prevent the spread of infection.<sup>34</sup> Special treatment may not be required for those who experience less severe respiratory problems whereas people having medical problems and older individuals may require special treatment.<sup>35</sup> Social distancing was recommended by many of the governments to prevent the disease spread. In the present study, 79% of the students avoid social contact whereas in previous study 98.8% of the students believe that social distancing is the essential thing to stop the spread of covid-19. In the present study 48% of the students felt that it would be better to talk to someone about their worries regarding COVID-19 whereas in the previous study 77.2% felt better to talk to someone about covid pandemic.

Virus spread through food is not proved and the virus that causes COVID-19 can be killed at temperature. In the present study 67% of the students avoided ordering food online whereas in the previous study 80% of the students worried about their eating habits because of ordering food online which may be transfer covid. In China, youths' food ordering patterns may also be influenced by the COVID-19 lockdown. People started to eat out only after the lockdown period, which has differed slightly across provinces with the restrictions<sup>34, 35, 36</sup>. The impact of the pandemic of COVID-19 has a certain influence on various walks of life around the world. Because of the pandemic of this novel coronavirus in terms of COVID-19, the social life global wide has been changed a lot. To keep the social distance between human beings to prevent being infected is the most important strategy for all the countries. Many dental schools have been locked down to minimize the spread out of this coronavirus infection. Close contact between human beings is required for all those learning processes in traditional dental education. In the present study 46% of the students feel that their life is spoiled whereas in the previous study 90% of the student's academic performance were affected during covid pandemic.

The global coronavirus pandemic has changed much about our lives in the last few months, and that includes our sleeping patterns. Isolation, loss of work, economic and health worries, and disruption. These in turn can play havoc with your quality of sleep. You may toss and turn at night, unable to sleep no matter how tired you feel, or wake up in the middle of the night and struggle to get back to sleep. In our present study 69% of the students had difficulties in sleeping by worrying about covid whereas in previous study more than 80% had many sleeping disorders regarding the worries about covid-19<sup>36</sup>.

Social media platforms provide significant information; among them, with approximately 40 million users in 2019, Facebook is the main social means utilized by users all over the world. In our present study, 48% were affected by the posts on social media regarding covid-19 whereas in the previous study 90% of the student's gathered information and gained knowledge about covid through social media.

High profile international sporting events such as the Olympics or World Cups as well as international religious events such as the Hajj count as mass gatherings. However, lower profile conferences and events can also meet WHO's definition of a mass gathering<sup>37</sup>. In our present study, 62% avoided meetings and gatherings whereas in the previous study 95.8% of the students' avoided meetings and gatherings.

In the present study, 51% of the students use sanitizer/gloves whereas in the previous study 99% of the students use sanitizer/gloves. Several studies have found that people with COVID-19 who are asymptomatic and those who are not yet showing symptoms (pre-symptomatic) can still spread the virus to other people. In the present study, 53% of the students wear masks even if they are not exposed to corona whereas in the previous study, 80.1% of the students wear masks even if they are not exposed to corona.

#### 5. CONCLUSION:

In this study we observed that nearly half of the dental students are aware of covid-19 pandemic protective measures and followed the protocols during covid-19 pandemic. Nearly half of the respondents were anxious during Covid pandemic.

## 6. AUTHORS CONTRIBUTION:

Darshika Raja: Literature search, data collection, analysis, manuscript drafting.

Dr.L. Leelavathi: Data verification, data analysis, manuscript drafting.

## 7. CONFLICT OF INTEREST

Authors declares that there was no conflict of interest in the present study

## 8. SOURCE OF FUNDING

The present project is supported by Saveetha Institute of Medical and Technical Sciences, SaveethaDental College and Hospitals, Saveetha University

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