Regeneration, Reconstruction & Restoration **Original Article**

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COVID-19 Pandemic, Good Knowledge, Proper Attitude, and High Anxiety in Students and Dental Assistants of Shahid Beheshti University of Medical Sciences

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Background and objectives: The purpose of this study was to investigate the knowledge of attitude and anxiety in students and dental assistants of Shahid Beheshti University about the COVID-19 pandemic.

Materials and Methods: A descriptive cross-sectional study was conducted using an online questionnaire for 200 students and specialized assistants of the school of dentistry. Data was collected with questions such as demographics, people's opinions about their knowledge, attitudes, and levels of anxiety about the Coronavirus pandemic.

Results: The level of knowledge and attitude of individuals was acceptable. There was no statistically significant difference between the knowledge level of attitude and anxiety of male and female participants as well as students and specialized assistants. A general acceptance of preventive measures was reported.

Conclusion: The level of knowledge and attitude of the participants were acceptable, and their level of anxiety was high, which may affect their attitude.

Keywords: COVID-19, Dentistry, Knowledge, Attitude, Anxiety.

1. Introduction

Coronavirus disease (COVID-19) with an unknown etiology appeared in Wuhan, China, in December 2019, with symptoms such as fever, cough, sneezing, body aches, and respiratory problems (1,2). World Health Organization declared it a pandemic due to the high prevalence of this disease on March 12, 2020 (3,4). This pandemic is known as the seventh member of coronavirus family that is infectious to humans, and its progression could be either mild or severe (1,2).

The virus was classified as Acute Respiratory Syndrome in 2002 and Acute Respiratory Syndrome in the Middle East in 2012 (3). This contagious virus was first transmitted from animals to humans and then spread among humans (4,2).

The most common ways, that the virus is transmitted by, are coughing, sneezing, and speaking (2,4). Therefore, dentists and dental students are considered high risk for this disease, and the daily dental procedures that emit aerosols pose a danger to patients, dentists the staff, and finally, will face education and anxiety (1,2,4).

It has been reported that the fear of staying home and being away from school may negatively affect students' mental health (1). The psychological and emotional impact is also evident during the COVID-19 pandemic. It is the emergence and spread of this disease that causes great concern for people and leads to increased levels of anxiety (2).

The COVID-19 crisis has also affected education in such a way that educational classes have been postponed, and most colleges and universities have been challenged by virtual learning. Also, there is currently no specific treatment for this disease, and the emergence and spread of it have made the population generally susceptible to this disease. Preventing and controlling the spread of this infection is very challenging. With infected and even

suspicious people, regular washing and hygiene of hands, use of masks, cleaning, and disinfection of surfaces are important ways to control and prevent the spread of the virus (1-3,5).
The aim of this study was to investigate the knowledge of students and dental assistants of Shahid Beheshti University over COVID-19 and their attitudes and anxiety about the pandemic.

2. Materials and methods

Our implementation method was using a questionnaire. The participation was through online tools. This questionnaire has four sections. The first part was demographic questions about the gender and whether the participants were students or dental personnel. In the second part, there are multiple choice questions over knowledge to assess people's level of knowledge about the coronavirus. Questions were as follows:

1. What is the etiology of COVID-19?
2. What is the most common route of transmission?
3. How much time is the incubation period?
4. How does COVID-19 manifest in humans?
5. What is the most common sign of COVID-19?
6. Is there any proper vaccination against COVID-19?
7. What is the most effective prevention tool?
8. Which age group is most susceptible to COVID-19?

In the third part, 2-choice questions about people's attitudes over the coronavirus epidemic were posed. Questions were as follows:

1. Do you wash your hands for at least 20 seconds with soap and water?
2. Do you keep a minimum of 3-4 feet distance from others?
3. Do you cover your nose when coughing or sneezing?
4. Do you have self-control over touching your eyes/ ears/ mouth?
5. Do you ventilate your environment?
6. Do you wash the clothes at 60-90 degrees Celsius?
7. Do you prevent touching patients with background diseases?
8. Do you avoid sharing personal stuff?
9. Do you consume a proper amount of fruits and care about your sleeping pattern?

Finally, in the last part, we have questions related to the level of anxiety. Questions in the first part of the questionnaire were adopted from literature (2). Anxiety section of the PHQ-4 questionnaire includes four multiple-choice questions with none, mild, moderate, and severe choices:

1. During the past two weeks, how many times did you feel anxiety?
2. During the past two weeks, how many times were you not able to control the anxiety?
3. During the past two weeks, how many times did you feel depressed?
4. During the past two weeks, how many times have you shown enthusiasm for stuff?

Then, we compared the results of the data. First of all, the questionnaire is distributed among 30 students, male and female assistants in Shahid Beheshti Dental School via the Rubika application of social media to check its reliability, and then the questionnaire is distributed to all (200) students and dental assistants of Shahid Beheshti University in a counting technique. The first question of the questionnaire to observe ethical principles will be whether they are willing to participate in the questionnaire or not. If they are not volunteers, the questionnaire will end, and only the volunteers will continue to answer the questions.
Knowledge questions were assessed with a score of 1 for correct answers and a score of 0 for incorrect answers. People, who answer seven or more questions correctly have an acceptable level of knowledge, and a score lower than seven is unacceptable. And the third part of the 2-choice questions is about people's attitudes about the coronavirus pandemic.

2.1. Ethical approval

The first question of the questionnaire is whether they are volunteers to participate in the questionnaire. If they are not volunteers, the questionnaire ends (IR.SBMU.DRC.REC.1400.029).

2.2. Statical analysis

Descriptive statistical methods such as charts and statistical indicators are used to describe the results.
The internal consistency of the instruments used to measure attitude knowledge and anxiety is assessed by Cronbach's alpha index, and the reliability of the test is assessed by the interclass correlation coefficient index. The average privilege of the questionnaires will be provided along with the relevant confidence intervals. Questionnaire scores will be compared between men and women as well as between residents and students using the independent t-test and Kolmogorov-Smirnov test. Analyzes are performed using SPSS 20 software (IBM Inc.)(Delaware, USA).

3. Results

The method of study was approved as internally consistent and reliable through Cronbach's alpha index and interclass correlation coefficient index. A total of 200 students and professional assistants responded to the questionnaires. 120 (60%) were women and 80 (40%) were men. About 55% of participants were students, and 45% were professional assistants. 86 individuals thought COVID-19 had a greater impact on psychological life, 62 individuals on social life, and 52 on economics. 184 people thought they had enough information

about COVID-19. 98 people were following the daily rate of death due to COVID-19 in the country.

According to participants, their family members were at risk for COVID-19. 196 participants had no underlying disease. 189 people were concerned about being infected by COVID-19, And all of the participants were worried that one of their family members would get COVID-19.

The average answer to attitude questions in women was 5.63 ± 0.97, in men, 5.59 ± 0.88, and p-value was 0.736. This means there was no statistically significant difference between male and female participants. The question of washing hands with soap and water for at least 20 seconds had the most positive attitude among the attitude questions. The question of avoidance with patients with underlying disease had the least positive attitude. The second least positive attitude was about consuming fruits and caring about sleep patterns.

Also, the average response to attitude questions was 5.59 ± 0.97 in students and 5.64 ± 0.9 in specialized assistants, and with a p-value of 0.689, no statistically significant difference was observed between these two groups.

The average response to anxiety questions was 6.27 ± 1.71 for women and 6.31 ± 1.98 for men. With a p-value of 0.862, there is no statistically significant difference between these two groups. Also, the average response to anxiety questions was 6.15 ± 1.73 in students and 6.44 ± 1.92 in specialized assistants, with a p-value of 0.262; there is no statistically significant difference between the two groups (Figure 1).

About 54.5% of participants reported moderate anxiety, 33 % had mild anxiety, 11.5 % had severe anxiety, and 1% were normal (Figure 2).

4. Discussion

The level of awareness and knowledge of each individual is first and foremost important to prevent a pandemic in the world (1). In this article, our aim was to examine the knowledge of the attitude of students and specialized assistants of the College of Dentistry against the coronavirus pandemic and also to evaluate the effect of this epidemic on the level of anxiety of students and specialized assistants. In our study, the average correct answer of the participants to 8 questions related to knowledge was 7.83 in women and 7.89 in men.

Based on our data, the level of knowledge of our participants about COVID-19 was acceptable. There was no statistically significant difference in the level of knowledge of male and female participants, students, and specialized assistants. With that said, in the study conducted by Burkey et al., the level of knowledge of clinical students was higher than that of clinical lambs (1).

In our study, participants' attitudes about COVID-19 were measured by nine questions. The average response rate of men and women participants was 5.63 and 5.59, respectively, indicating that the level of attitude of male and female participants was not statistically significant. In fact, it showed

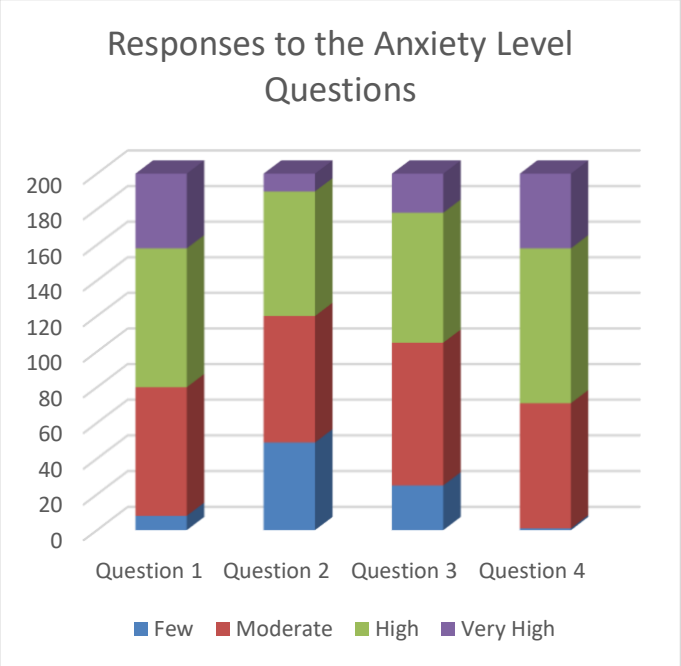

Figure 1. The response to the anxiety question. During the past two weeks, how many times did you feel anxiety? Q2: During the past two weeks, how many times were you not able to control the anxiety? Q3: During the past two weeks, how many times did you feel depressed? Q4: During the past two weeks, how many times did you show enthusiasm for stuff?

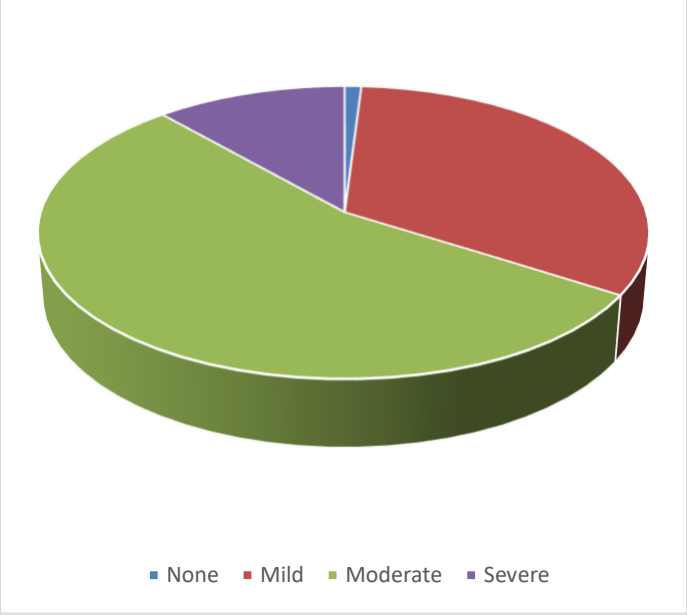

Figure 2. The level of anxiety among participants.

that the attitude of the participants was relatively positive and acceptable.
In a study conducted on nurses in Iran, the data showed that knowledge and attitudes about the COVID-19 pandemic were at high levels (1). Among medical students, there was not much difference in the level of knowledge and attitude of intern students about COVID-19 (1).
Usually, outbreaks appear to be exacerbated during pregnancy and in children. Anxiety and fear of an outbreak can make it difficult for people to fight the disease. Identifying and addressing anxiety-related factors is crucial for reducing anxiety level and combating an epidemic. An important component of preventing the negative effects of an epidemic on individuals, modifiable factors should be identified that can alleviate anxiety. In our study, the level of anxiety was tested. The level of anxiety was high in both men and women. And there was no statistically significant difference between the anxiety levels of men and women.
Overall, it is predictable that medical staff are at greater risk during the epidemic and are more concerned about the risk of infection and transmission to family members. It may negatively affect people's attitudes toward the pandemic.

5. Limitations

Our study population is limited, and this assessment is only for students and dental assistants of Shahid Beheshti University.

6. Conclusion

The level of knowledge and attitude of the participants about the COVID-19 pandemic was acceptable. There was no statistically significant difference between male and female participants as well as students and professional assistants. Participants' anxiety levels were high and may have a negative effect on people's attitudes.

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None.

Authors' contribution

Farzad Aghdashi: Conceptualization, Methodology, Software.
Golnaz Nahvi: Data curation, Writing- Original draft.
Amir Mazidi Sharafabadi: Visualization, Writing- Original draft

Conflicts of interest

None.

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