

Knowledge, attitude, practices regarding COVID-19 among dental students of MIDSR Dental College of Latur city: A Cross-Sectional survey

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Abstract:

BACKGROUND:

Knowledge and awareness of mode of disease transmission, basic hygiene principles and measures in public health crisis are vitally important for developing effective control measures. The World Health Organization declared COVID-19 as a pandemic on the 11th of March 2020. Since then, many efforts are being carried out to contain the virus.

OBJECTIVE: The aim of the current cross-sectional study is to Knowledge, attitude, practices regarding COVID-19 among dental students of MIDSR Dental College of Latur city

METHODS: In this cross-sectional, self administrated questionnaire study, conducted among the dental students regarding the KAP of the students about COVID-19 was asked, and participants' demographic characteristics and source of information regarding COVID-19 were recorded and analyzed.

RESULTS: The present study revealed a good knowledge, practice and a high attitude among the study population towards COVID-19.

CONCLUSION: Our findings demonstrated good knowledge, positive attitudes, and practice regarding COVID-19 among dental students during the outbreak.

Keywords: - COVID-19, fatigue, World Health Organization, mode of transmission.

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INTRODUCTION:

COVID-19 is an emerging respiratory disease caused by a novel coronavirus and was first detected in

December 2019 in Wuhan, China.¹ The disease is highly infectious, and its primary clinical symptoms include fever, dry cough, fatigue, myalgia, and dyspnea.¹ The infection rapidly spreading throughout many countries, so the World Health

Organization (WHO) declared that the COVID-19 infection was a Public Health Concern.¹

At present, there is no specific antiviral treatment and preventive vaccine available for COVID-19. Therefore, the guidelines are recommended to reduce infection and respond to the epidemic's challenges. As CDC recommends, coronavirus spreads mainly from person-to-person by close contact (within about 6 feet) with infected people via respiratory (coughs or sneezes) or transmitted by touching a surface or object that the Virus on it.² The COVID-19 infection is more prominent in older people with underlying diseases. The clinical symptoms of COVID-19 include fever, cough, malaise, and acute respiratory distress syndrome in a few patients, and in serious conditions to death of the patients.

Healthcare professionals (HCPs) of all levels and kinds are primarily involved in catering to patients of this highly transmittable pathogen. COVID-19 has posed a serious occupational health risk to the HCP owing to their frequent exposure to infected individuals³. Protection of HCPs and prevention of intra-hospital transmission of infection are essential aspects of epidemic response. This requires that students have updated knowledge regarding the source, information, symptoms, and preventive measures. Literature suggests that a lack of knowledge and misunderstandings among HCPs leads to delayed diagnosis, disease spread, and poor infection control practice.³

Although educational campaigns have awareness regarding COVID-19, it remains unclear to what extent this knowledge can be put into practice and how it reduces COVID-19 infection spread. Knowledge, attitude, and practice survey provide a suitable format for evaluating existing programs and identifying effective strategies for behavior change in society.²

Therefore, the present study was conducted to identify the current status of knowledge, attitude, and practices regarding COVID-19 among MIDSAR Dental College Latur, dental students.

Aims or objectives

This study was conducted to assess the Knowledge, Attitude, and Practice regarding COVID 19 among MIDSAR dental college students in Latur city.

Material and Methods

This cross-sectional study would be conducted among 422 dental students at MIDSAR Dental College. The study was conducted by sending a self-administered questionnaire to the students, and their responses were recorded. The Ethics Committee of MIDSAR Dental College and Hospital, Latur, approved our study protocol and informed consent was taken before conducting the survey.

Participants had to confirm their willingness to participate voluntarily. After confirmation, participants were directed to complete the self-report questionnaire.

Inclusion criteria

Students who are willing to participate

Exclusion Criteria

Students who are not willing to participate

Data collection

The study will be carried out using a standardized Performa. The questionnaire consisted of two parts: demographics and KAP. Socio-demographic data such as age, sex, college, year of study, and complaints about health-related problems. In KAP, the Knowledge part includes data on the most important symptoms of COVID-19. The practice part contains measures that the participant follows to prevent the infection, and the Attitude part contains questions reflecting his/her attitude toward preventive measures. These questions were answered on a true, false and "I don't know" option.

The questionnaire was initially structured in English; after that, the content was validated by microbiology and public health experts. To check the validity of questionnaires, it was piloted among 30 students by online sending the performa.

The knowledge section comprises 12 items, and each question was answered as true, false, and I don't know. The attitude section includes 10 items, and the response of each item was responded as true, false, and I don't know. The practice section had 9 items, and each item was also similarly responded as true, false, and I don't know.

Sample size calculation and Statistical analysis:

The sample size (n) was calculated by using OpenEpi, Version using Kish formula 15 for sample size estimation at a 95% significance level and a 5% error margin; the representative sample size is 384. Considering the non-response rate, 10% of the sample size was added. $384 \times 10\% = 38.4$. So, the total sample size becomes $384 + 38.4 = 422$.

The data obtained will be tabulated, and analysis will be done using SPSS Package. The percentage of correct knowledge answers and various attitudes and practices would be assessed.

Results

A cross-sectional study was conducted during the month of March 2020, after the lockdown to implement social distancing to avoid the spread of a pandemic. A total of 422 students have participated in the study, Survey was started on 1 March 2020, and response acceptance was closed (15-April 2020) when the required sample size was achieved. The participants' variables are shown in Table 1.

Table 1. Distribution of study participants according to gender and year of studying

VARIABLE	NUMBER	PERCENTAGE
Gender		
Female	292	69%
Male	130	31%
Year of studying		
First year	89	21%
Second year	87	20%
Third year	96	24%
Final year	86	20%
Interns	64	15%

In the present study, 69% of the participants were females, followed by 31% were males. 24% of the students who responded to the questionnaire were studying in the third year, 21% were the first year, 20% were second year as well as final year followed by 15% were interns as mentioned in Table 1.

Table 2. Distribution of study participants according to their knowledge (those who answered correctly by choosing "true")

Sr.No	Total respondents (n = 422)	Number %
1	The main clinical symptoms of COVID-19 are fever, fatigue, dry cough, and myalgia.	358(85%)
2	The common cold, stuffy nose, running nose, and sneezing are less common in persons infected with the COVID-19	267(63%)
3	There is no cure for COVID-2019, but only symptomatic and supportive treatment can help most of the patients recover from the infection.	412(97%)
4	Not all persons with COVID-2019 will develop severe cases. Only those who are elderly, have chronic illnesses, and are obese are more likely to be severely affected	318(75%)
5	Eating or contacting animals would result in getting the infection by the COVID-19 Virus.	297(70%)
6	Persons with COVID-2019 cannot transmit the Virus to others person when a fever is not present	289(68%)
7	The COVID-19 Virus spreads rapidly through respiratory droplets of infected individuals.	389(92%)
8	People should wear medical masks to prevent the infection by the COVID-19 Virus.	287(68%)
9	It is not mandatory for children and young adults to take measures to prevent the infection by the COVID-19 Virus	112(28%)
10	To prevent the infection by COVID-19, most of the students have stopped going	412(97%)

	to crowded places such as malls, PVR and avoid taking public transportations.	
11	Isolating and providing treatment of people who are infected with the COVID-19 Virus are effective ways to reduce the spread mode of the Virus.	392(93%)
12	People who came contact with someone infected with the COVID-19 Virus should be immediately isolated in a proper place to prevent other people to infect. The observation period is 14 days.	386(91%)

Most of the students in this study had knowledge about Covid-10; 97% of the students responded that to prevent infection by COVID-19 should avoid going to crowded places such as train stations and avoid taking public transportations. 97% of students think that as there is of now no effective treatment for COVID-2019, but providing early symptomatic and supportive treatment can help most patients recover from the infection.

92% of the students had the knowledge that the COVID-19 Virus spreads via respiratory droplets of infected individuals; 85% of students believe that the main clinical symptoms of COVID-19 are fever, fatigue, dry cough, and myalgia. The majority of the present study students had knowledge about the mode of transmission, early symptoms, and believe they can prevent themselves infected if they avoid going to crowded places, as mentioned in Table 2.

Table 3. Distribution of study participants according to their attitude (those who answered correctly by choosing "true")

Sr.No	Total respondents (n = 422)	Number %
1	Hand washing is necessary for the prevention of infection.	383(90%)
2	The face mask can prevent viral transmission.	354(84%)
3	Antibiotics will not prevent	318(75%)

	infection.	
4	The Virus is not a stigma, and I should not hide my infection.	389(92%)
5	Early detection of COVID-19 can improve treatment and outcome.	413(97%)
6	COVID-19 is a curable disease	343(81%)
7	Whether COVID-19 disease results in death in all cases?	189(44%)
8	Authorities should restrict travel to and from COVID-19 disease areas to prevent contamination	397(94%)
9	Authorities should quarantine COVID-19 patients in special hospitals.	289(64%)
10	If the number of COVID-19 cases increases, authorities should be ready to lockdown and quarantine the city	386(91%)

Regarding the attitude of the students about COVID-19, 97% of the students believe that early detection of COVID-19 could improve treatment and outcome, followed by 94% think that the higher Authorities should restrict travel to prevent disease transmission from COVID-19 contamination, 92% had the attitude that the Virus is not a stigma, and they should not hide about infection. 91% of students, if the number of COVID-19 cases increases, authorities should be ready to lock down and quarantine the city. And 90% of the student's frequent hand washing is necessary for the prevention of infection. In the present study most of the students had a positive attitude of frequent hand washing can prevent the infection, anyone should not hide about their infected and also the higher should take precautions to prevent the spreading of infections by restricting the people to travel and also to lock down and quarantine the city as mentioned Table 3.

Table 4. Distribution of study participants according to their practice (those who answered correctly by choosing “true”)

Sr. No	Total respondents (n = 422)	Number %
1	To prevent contracting and spreading COVID-19, I avoid going out of my home	418(99%)
2	To prevent contracting and spreading COVID-19, I avoid unnecessary vacations.	386(91%)
3	To prevent contracting and spreading COVID-19, I avoid consuming outdoor food.	315(74%)
4	To prevent contracting and spreading COVID-19, I avoid handshaking, hugging.	399(94%)
5	To prevent contracting and spreading COVID-19, I avoid public transportations (taxi, bus, subway, plane, train)	386(91%)
6	To prevent contracting and spreading COVID-19, I avoid going to work.	319(75%)
7	To prevent contracting and spreading COVID-19, I frequently wash my hands.	378(89%)
8	To prevent contracting and spreading COVID-19, I pay more attention to my personal hygiene than usual.	316(74%)
9	To prevent contracting and spreading COVID-19, I use disinfectant and solutions.	289(68%)

Majority of the students, 99% in the present study to prevent contracting and spreading COVID-19 avoid going out of their home, 94% of students to prevent contracting and spreading COVID-19 avoid handshaking, hugging, 91% of students to protect themselves from contracting and spreading COVID-

19 they were avoiding public transportation like taxi, bus, subway, plane, train. So in the present study, most of the students were aware of how they can get infected what they should do to protect themselves and their families, as mentioned in Table 4.

DISCUSSION

The Knowledge, Attitude, and Practices for a infectious disease can be influenced by various factors, namely, the severity of the illness, the mode of its spread, and the mortality rate. After announcement of COVID-19 as a pandemic by the WHO, the knowledge, attitude, and practices toward COVID-19 have been growing day by day.

There has been no evidence-based specific treatment for COVID-19, and management of COVID-19 has been largely supportive. The current approach to COVID-19 is to control the source of infection, use infection preventive measures to lower the risk of transmission, and to provide early diagnosis, isolation, and supportive care for affected patients. This fact was reflected in the response of participants. In this cross-sectional study, we provided an insight into the knowledge, preventive measures, and attitude of the students towards COVID-19.

The study resulted that the overall knowledge about the symptoms and unavailability of vaccine or specific antiviral treatments against COVID-19 was good, where 85% participants have knowledge about the symptoms, and above 97% participants were aware about the unavailability of vaccine and treatment. This could be due to various factors such as the seriousness of the disease as published by various association and health sectors after being declared as a pandemic by the WHO.

The attitude of the participants regarding practices reflects the right way to prevent the infection by various means namely hand washing, avoiding hand shaking and taking precautions during coughing and sneezing. More than 97% of the students agree that early detection of COVID-19 can improve treatment and outcome. 94% of participants to control the pandemic the higher authorities should restrict travel to and from COVID-19 disease areas to prevent contamination

Based on the knowledge attitude and practices scores of the participants, an overall correct rate of 90% and

85%, demonstrated that the majority of participants are knowledgeable about COVID-19. Our results were similar to a previous study regarding the KAP towards COVID-19 in China which also showed an overall correct rate of 90% knowledge among the Chinese population.¹

CONCLUSION

As a conclusion the present study revealed a good knowledge, practice and a high attitude among the study population towards COVID-19. Such response reflects the effect of its announcement as pandemic declared by the WHO and efforts made by the local health authorities to sensitize a wide spectrum of the public about the COVID-19. The findings of this study might prove as the baseline for planning awareness campaigns between students and publics and helpful in directing the efforts and plans of the health authorities of the country for better containment of COVID-19 and its further spread. The study might be fruitful in conducting further research of its kind.

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