*International Journal of Research and Review*
*Vol.7; Issue: 12; December 2020*
*Website: www.ijrrjournal.com*
*Original Research Article* *E-ISSN: 2349-9788; P-ISSN: 2454-2237*

# Knowledge Status of the Participants Regarding Current COVID-19 Pandemic: A Cross Sectional Study

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## ABSTRACT

**Background:** Good knowledge, attitudes and practices among the public are essential for successful control and outbreak prevention of pandemics. Effective COVID-19 pandemic management requires adequate understanding of factors that influence behavioural changes. This study aims to assess knowledge and practices towards COVID-19 of patients visiting dental OPD among the Nagpur population.
**Aims and Objective:** The study aims to evaluate knowledge of patients visiting dental OPD regarding COVID-19 pandemic.
**Material and Methods:** A structured, pre-validated questionnaire consisting of 13 questions was given randomly to 200 patients visiting the dental OPD of Nagpur, Maharashtra to assess their knowledge and awareness towards COVID -19. The obtained data was analyzed using statistical software.
**Results:** Result of present study state that overall knowledge of people is 31.82%.
**Conclusion:** This study raises some important concerns about the adequacy of knowledge of the patients visiting the dental OPD about COVID-19 during the outbreak. There is a clear need for training programs, to improve the understanding of the risks and prevention strategies among critical care clinicians. This should, in turn, improve the confidence of clinicians to provide the right care to their patients and protect them as well.

***Keywords:*** COVID -19, Pandemic, Dental OPD, Patients attitude

## INTRODUCTION

COVID -19 was first found in China which is genetically related to theSARS-CoV-1 virus which caused thousands of deaths in 2002.The current COVID-19 pandemic has caused so many reported cases around the world.[1]The methods of transmission of COVID 19 viruses are that it is transmitted from person-to-person similar to seasonal influenza and may cause the same symptoms. There is no vaccine and no specific treatment for this virus so far and because it is a new virus, nobody has prior immunity which in theory means that the entire human population is potentially susceptible to COVID-19 infection.[2]

The time elapsed between exposure to a pathogenic organism and symptoms and signs that first appear for COVID-19 is estimated between 2-14 days. At this stage, we know that the virus can be transmitted when people who are infected shows flu like symptoms which differ in clinical presentation from a mild upper respiratory illness to rapidly progressive pneumonia and multi-organ failure [3]. The symptoms are fever, cough, difficulty in breathing, muscle pain and tiredness. More serious cases develop severe pneumonia, acute respiratory distress syndrome, sepsis and septic shock that can lead to death.[4]

People who are at greater risk of developing severe symptoms are: elderly people and those with underlying health disorders such as hypertension, diabetes, cardiovascular diseases, chronic respiratory diseases and cancer. Disease in children appears to be relatively rare and mild.[5]

There is no particular treatment for COVID -19 disease, so doctors provides the symptomatic relief to symptoms (e.g. fever, difficulty in breathing) of patients. Supportive care (e.g. fluid intake, oxygen therapy, etc.) can be highly helpful for patients with symptoms [6]. Current testing depends on the stage of the outbreak in the country or area where you live. Others Countries could be at different phase of the pandemic and the address to testing may differ according to country policy. This is adapted to the situation at local and national level [7].

The aim of this study is to evaluate the level of awareness and knowledge of the people about COVID 19 pandemic and the methods that to be followed in order to counteract with this virus.

It is important to assess the knowledge and behaviour of the public towards important and prevalent infectious diseases. Such information provides baseline data for the prevention and control of these diseases through estimation of the impact of previous prevention efforts made by the government and thus guiding the need for further interventions. Thus, the purpose of the study was to assess the knowledge of dental patients regarding COVID-19 pandemic.

## MATERIALS AND METHODS

A predesigned COVID 19 pandemic questionnaire was distributed among 200 participants randomly visiting the dental OPD.A prior consent was obtained from the participants and their confidentiality was maintained. There were total of 13 questions. The completed questionnaires were collected and obtained data was tabulated. These questions were answered as on a true /false basis with an additional "not sure" option. Questions on practices were used to assess the individuals' compliance, knowledge and behaviour during the quarantine period.

## RESULTS

To measure knowledge about COVID-19, 13 items were adapted from previous research. This questioner (Table 1) includes patients knowledge about clinical symptoms (items 1–4), transmission path (items 5–8) and prevention and control (items 9–13) of COVID-19. Participants were given "true," "false," or "not sure" response options to these items.

**Patient's Attitude towards the Current COVID-19 PANDEMIC**

**Patient's Name:** **Date:**
**Patient's Age:** **Occupation:**
**Address:** **Number of members in family:**

**Table 1: Quessioner**

| Sr No | Question | True | False | I am not sure |
|---|---|---|---|---|
| 1 | The main clinical symptoms of COVID-19 are fever,fatigue,dry cough and body aches. | | | |
| 2 | Unlike the common cold,stuffynose,runny nose and sneezing are less common in persons infected with the COVID-19 virus. | | | |
| 3 | There currently is no effective cure for COVID-19, but early symptomatic and supportive treatment can help most patients recover from the infection. | | | |
| 4 | Not all persons with COVID-19 will develop to severe cases. Only those who are elderly and have chronic illnesses are more likely to be severe cases. | | | |
| 5 | Eating or touching wild animals would result in the infection by the COVID-19 virus. | | | |
| 6 | Persons with COVID-19 cannot infect the virus to others if they do not have a fever. | | | |
| 7 | The COVID-19 virus spreads via respiratory droplets of infected individuals. | | | |
| 8 | The COVID-19 virus is airborne. | | | |
| 9 | Ordinary residents can wear face masks to prevent the infection by the COVID-19 virus. | | | |
| 10 | It is not necessary for children and young adults to take measures to prevent the infection by the COVID-19 virus. | | | |

| | | | | |
|---|---|---|---|---|
| 11 | To prevent the infection by COVID-19, individuals should avoid going to crowded places and avoid taking public transportations. | | | |
| 12 | Isolation and treatment of people who are infected with the COVID-19 virus are effective ways to reduce the spread of the virus. | | | |
| 13 | People who have contact with someone infected with the COVID-19 virus should be immediately isolated in a proper place. In general, the isolation period is 14 days. | | | |

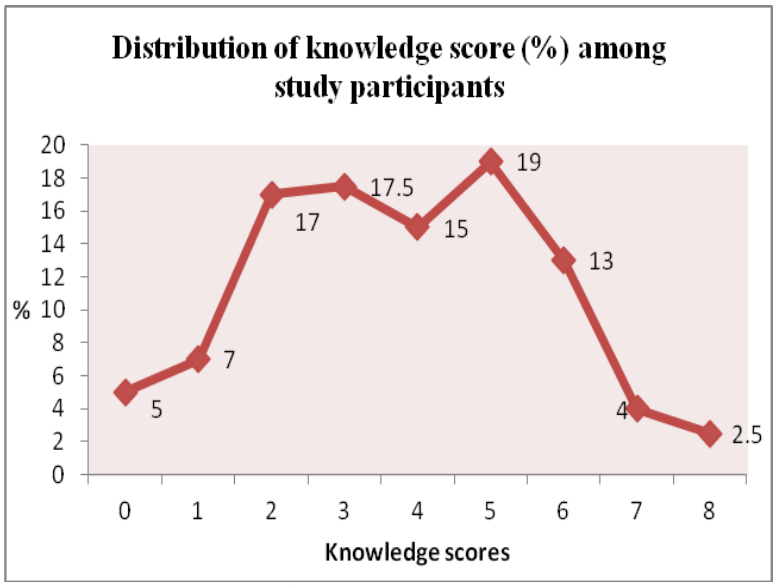
A total number of 200 participants completed the survey questionnaire. Among the final sample, 103 (51.5%) were male and 97(48.5%) were female. The data was subjected to statistical analysis using SPSS software version 24 IBM and was analyzed. ANOVA and t-test were applied to formulate the result.

In this 103 male and 97 female participated in the study, Where male responded significantly than older than female. (Table 2).

**Table 2 Sex distribution of the participants and their mean ages**

| Sex | Number | % | Mean (± SD) Age in years |
|---|---|---|---|
| Male | 103 | 51.5 | 40.5 (± 12.5)* |
| Female | 97 | 48.5 | 36.2 (± 11.7) |
| Total | 200 | 100,0 | 38.4 (± 12.3) |

Knowledge score in 5% people is 2,while 17.5% of people shows knowledge score of 3 while 6 was the highest knowledge seen in 19% of study population. And least knowledge score was seen in 2.5 %of study population. (Graph 1)




**Graph 1 Distribution of knowledge score%among study population.**

More study participants are seen between age group between 30-50 years. (Table 3)

Comparing the knowledge score among sex, male has shown more knowledge score.(Table 5 )

Comparing the knowledge score by age, age between 30-50 years has more knowledge than age above 50 years (Table 6)

This study shows that the Basic knowledge of COVID-19 is fair among the patients visiting dental OPD. The overall proportion with correct knowledge was 31.82%.

Knowledge score is explained in (Table 4)

Comparing the knowledge score among sex, male has shown more knowledge score (Table 5).

Comparing the knowledge score by age, age of the participants between 30-50 years had more knowledge than age above 50 years (Table 6).

**Table 3 Age distribution of the study subjects**

| Age group (years) | Number | % |
|---|---|---|
| Up to 30 | 51 | 25.5 |
| 30- 50 | 109 | 54.5 |
| Above 50 | 40 | 20.0 |
| Total | 104 | 100.0 |

**Table 4 Knowledge status of the participants regarding current COVID 19 pandemic**

| Sr No | Question | True | False | I am not sure |
|---|---|---|---|---|
| 1 | The main clinical symptoms of COVID-19 are fever,fatigue,dry cough and body aches. | 28 (14.0) | 152 (76.0) | 20 (10.0) |
| 2 | Unlike the common cold,stuffynose,runny nose and sneezing are less common in persons infected with the COVID-19 virus. | 76 (38.0) | 108 (54.0) | 16 (8.0) |
| 3 | There currently is no effective cure for COVID-19, but early symptomatic and supportive treatment can help most patients recover from the infection. | 40 (20.0) | 145 (72.5) | 15 (7.5) |
| 4 | Not all persons with COVID-19 will develop to severe cases. Only those who are elderly and have chronic illnesses are more likely to be severe cases. | 86 (43.0) | 87 (43.5) | 27 (13.5) |
| 5 | Eating or touching wild animals would result in the infection by the COVID-19 virus. | 114 (57.0) | 50 (25.0) | 36 (18.0) |
| 6 | Persons with COVID-19 cannot infect the virus to others if they do not have a fever. | 75 (37.5) | 107 (53.5) | 18 (9.0) |
| 7 | The COVID-19 virus spreads via respiratory droplets of infected individuals. | 49 (24.5) | 132 (66.0) | 19 (9.5) |
| 8 | The COVID-19 virus is airborne. | 73 (36.5) | 107 (53.5) | 20 (10.0) |
| 9 | Ordinary residents can wear face masks to prevent the infection by the COVID-19 virus. | 40 (20.0) | 135 (67.5) | 25 (12.5) |
| 10 | It is not necessary for children and young adults to take measures to prevent the infection by the COVID-19 virus. | 107 (53.5) | 73 (36.5) | 20 (10.0) |
| 11 | To prevent the infection by COVID-19, individuals should avoid going to crowded places and avoid taking public transportations. | 25 (12.5) | 162 (81.0) | 13 (6.5) |
| 12 | Isolation and treatment of people who are infected with the COVID-19 virus are effective ways to reduce the spread of the virus. | 15 (7.5) | 175 (87.5) | 10 (5.0) |
| 13 | People who have contact with someone infected with the COVID-19 virus should be immediately isolated in a proper place. In general, the isolation period is 14 days. | 21 (10.5) | 172 (86.0) | 7 (3.5) |

*(Numbers in parentheses represent percentages from n=200)Overall proportion with correct knowledge = 31.82% (95% CI 25.60% - 38.95%*
*(Note: Participants with not sure responses were excluded)*

**Table 5 Comparison of knowledge scores by sex of the participants**

| Sex | Number | Mean (± SD) Knowledge score |
|---|---|---|
| Male | 103 | 3.65 (± 1.96) |
| Female | 97 | 3.85 (± 1.89) |
| Significance (t-test) | *t =0.7144, df= 198, P=0.4759, NS* | |

**P =0.0124, indicating males respondents were significantly older than females*

**Table 6 Comparison of knowledge scores by age-group of the participants**

| Age-group (years) | Number | Mean (± SD) Knowledge score |
|---|---|---|
| Up to 30 | 51 | 3.96 (± 2.03) |
| 30- 50 | 109 | 3.81 (± 1.84) |
| Above 50 | 40 | 3.30 (± 1.99) |
| Significance *(ANOVA)* | *F = 1.45, df= (2. 197), P=0.2366, NS* | |

## DISCUSSION

COVID-19 is a relatively new virus that has devastating effects within the short time since it was first detected in December 2019. To date, there has been limited published data on population knowledge, attitudes and practices towards COVID-19. The novelty of this disease, along with its uncertainties, makes it critical for health authorities to plan appropriate strategies to prepare and manage the public. It is therefore very important that the knowledge and practices of the population has to be studied to guide these efforts.

The average knowledge score of patients in regards to COVID-19 was fair at 31.2%. Even though, correct esteem knowledge of COVID-19 widely ranged. This indicates that the some people have high levels of knowledge on the disease, others did not have.

Different studies conducted in other Asian countries have estimated high levels of COVID-19

Knowledge among the general population[8] and healthcare workers[9]. Differences in measurement and scoring and grading systems do not make it possible for accurate comparisons of knowledge levels across these studies.

In a study conducted in the adult population by Roy *et al*[10] in Lucknow, Uttar Pradesh, India, it was found that only 18.2% regarded fever as a symptom of COVID-19, which is known to be a major symptom. In the present study, questions from 1-4 represents the clinical features of COVID - 19 among these, for question 2(41.2%) and question 4(49.71%) participants had highest knowledge of it as per the statistics. This

indicates that patients are well aware about the symptoms of COVID -19 and not all patients develops the severe infection until and unless the patient is severely ill or elderly. In a study conducted in the adult population by Roy *et al*.[10] in Lucknow, Uttar Pradesh, India, it was found that 29.5 % answered that the virus spreads through multiple modes such as touching, kissing, sneezing and food. In the present study, maximum participants knew about the transmission of COVID-19 i.e. 66% through respiratory droplets, while 53.5% people thinks that virus is airborne from which we can conclude that our study participants were aware of the facts and not biased with any myths. Half of the population that is 53.5% thinks that virus can be transmitted to other person even if patient is asymptomatic.

While 87.5% believed that isolation and proper treatment of people who are infected with the COVID-19 virus are effective ways to reduce the spread of the virus. 86% of people think that isolation period should be 14 days. In our the present study, most of the people reported taking precautions such as avoiding going to crowded places and taking care of proper hand hygiene. Enquiring about the wearing of face masks we got a mixed response. Almost half of the participants indicated that they did not wear a face mask when leaving the home. Only 20% of population said that wearing mask will be able to prevent the spread of disease.

## CONCLUSION

The COVID-19 pandemic has affected the world in various ways. The deficiency of information, the need for accurate information and the rapidity of its dissemination are important as this pandemic requires the cooperation of entire populations. The rapid survey that we conducted had a good response and it showed that the general public were quite well informed about the coronavirus. They are also aware of the measures needed to be taken to reduce the spread of the disease.

In summary, the present study was able to provide a comprehensive examination of the knowledge and practices of population towards COVID-19. The findings suggest that people have an acceptable level of knowledge on COVID-19 and are generally positive in their outlook on overcoming the pandemic. Even though, consistent memorandum from the government and/ or health authorities are way to aid public knowledge and understanding ofCOVID-19. Additionally, some categories of the population may benefit from specific health education programs to raise COVID-19 knowledge and improve practices.

## ACKNOWLEDGMENT

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references to this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals, and books from which the literature for this article has been reviewed and discussed.

**Conflict of Interest:** Nil
**Source of Funding:** Nil

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How to cite this article: Gaikwad R, Bagde L, Sathawane R et.al. Knowledge status of the participants regarding current COVID-19 pandemic: a cross sectional study. International Journal of Research and Review. 2020; 7(12): 560-565.

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