

## ORIGINAL RESEARCH

**Cognizance and awareness of covid-19 virus amongst the non-teaching staff at health care center- A cross sectional study**<sup>1</sup>Dr. Kajal Dave, <sup>2</sup>Dr. Shivani Sachdeva, <sup>3</sup>Dr. Harish Saluja<sup>1</sup>Associate Professor, Department of Periodontology, College of Dental Sciences and Research Centre, Ahmedabad, Gujarat, India<sup>2</sup>Professor, Department of Periodontology, Rural Dental College, Pravara Institute of Medical Sciences, India<sup>3</sup>Professor, Department of Oral and Maxillofacial surgery, Rural Dental College, Pravara Institute of Medical Sciences, India**Correspondence:**

Dr. Kajal Dave

Associate Professor, Department of Periodontology, College of Dental Sciences and Research Centre, Ahmedabad, Gujarat, India

**Abstract**

**Background:** COVID-19 (Coronavirus disease 2019) was declared a “pandemic” by the World Health Organization (WHO) in early March 2020. All over the world extraordinary measures are being adopted to fight the spread of the ongoing outbreak. Under such conditions, people’s knowledge to preventive measures is greatly affected by their awareness of the disease.

**Aim:** Aim of the present study was to assess the awareness and knowledge about Covid-19 among non-teaching staff in hospitals.

**Material and method:** The community-based, cross-sectional survey was conducted using a self-developed structured questionnaire and individuals were personally interviewed. A total of 82 individuals were interviewed who included the sterilization workers, cleaners and ward staff. The non-teaching staff included was working in the dental, medical and physiotherapy institute.

**Result:** The result interpretation showed that **95.1%** of participants included in the study knew about Covid-19. Awareness was pragmatic among **89%** about the precautions to be taken. While, **63.4%** agreed on getting formal training from the workplace. Respondents agreed to change the methods and adopt newer techniques to deal with the Covid-19 pandemic.

**Discussion:** Since its initial outbreak in China in December 2019, the COVID-19 disease has had a cascading effect worldwide. Even though these subjects are not actively involved in patient management, there are high chances of non-clinical staff having patient contact at some point in the healthcare setting and therefore at risk of contracting and spreading the infection.

**Keywords:** Covid19, Covid19 awareness, Hospital staff, WHO, Healthcare workers.

**Introduction**

**COVID-19 (coronavirus disease 2019)** is a viral infectious disease caused by **SARS-CoV-2** and is currently a World Health Organisation (WHO) declared pandemic<sup>8</sup>. As of August 2020, 20 million people had been infected globally with over 750,000 deaths<sup>1</sup>. **COVID-19** is an infectious disease caused by **severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)**, a strain of coronavirus. The first cases were seen in Wuhan, China, in December

2019 before spreading globally, with more than 20 million cases now confirmed. The current outbreak was officially recognised as a pandemic by the World Health Organisation (WHO) on 11 March 2020<sup>8</sup>.

As the ongoing pandemic goes on, the medical institutions and hospitals have a tremendous workload to cater upon. With new protocols and added precautionary measures, it in itself is a task to carry out routine OPD's and IPD's. Coming on to the healthcare workers which constitute The Doctors, Nurses, Brothers, Support staff, Receptionists, Ward staff, cleaning staff. All have to adapt towards newer protocols, with the intent of providing quality care to the patients they take care off. Doctors, Nurses on one hand have a greater and updated knowledge regarding the norms to follow. On the other hand, comes the non-treating staff of sterilization workers, cleaners who being exposed have very less knowledge to tackle their daily jobs.

The major purpose of this study is to evaluate the awareness and knowledge among the non-treating staff working in the hospitals regarding **COVID-19**. With the treating staff who are mostly well learned with the updated practices that need to be followed, the non-treating personnel aren't well versed with the newer handling protocols. The exposure before and after treating a patient can be a source for the contact spread, be it the sanitization, handling of soiled instruments, or mere cleaning of the operatory.

### Materials and methods

This survey was conducted in a tertiary-care hospital and teaching institute among the class 3 and class 4 workers in Loni, Ahmednagar district of Maharashtra, India. The survey was conducted in a questionnaire format and a total of 96 individuals were approached out of which 82 individuals agreed on being interviewed, who included the sterilization workers, cleaners and ward staff. The staff included was working in the Dental, Medical and Physiotherapy institutes. The period of survey was September 2020 to November 2020.

The questionnaire included 11 questions based on knowledge and infection control practices related to COVID-19 disease in the healthcare setting were adapted from the current interim guidance and information for healthcare workers published by the CDC, updated on March 7, 2020. The questionnaire also included questions related to hand hygiene techniques based on the "five moments of hand hygiene" described by the WHO, which were used to test participants knowledge in optimal hygiene practices<sup>9</sup>.

An informed consent was taken from each subject before getting included in the study. Questions were asked verbally in their regional language, owing to which the people could comprehend the subject more. The Institutional Ethics Committee (IEC) reviewed and approved the study-related documents, after which the study was commenced.

### Results

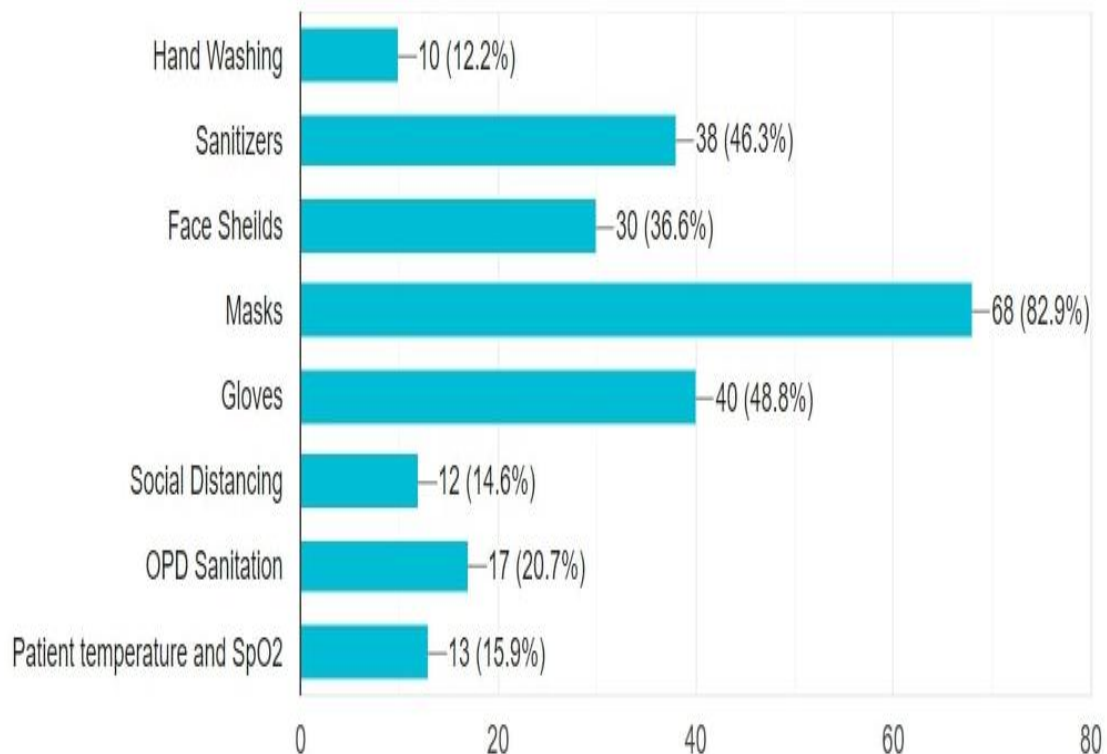
A total of 96 individuals were approached for the survey and 82 responses were obtained with no participant having a Medical Degree. **95.1%** of participants included in the study knew about Covid-19 and the common signs and symptoms associated with it. The major source of their knowledge was from the discussions with the medical counterparts. Among the interviewed, **89%** had some knowledge about the precautions to be taken on a personal level to protect from the virus. **63.4%** agreed on getting formal training from the workplace for protecting themselves from the virus, which is certainly low due to the reason that some refrained from joining work due to fear of contacting the virus themselves. The medical institutes and hospitals all together fell short of work force due to unavailability of awareness in the less educated class on precautions of tackling Covid-19.

After having knowledge about the virus and the necessary precautions to be taken, **89%** agreed on following all the precautions as mentioned for protection. About

**93.9%** respondents used masks while being outdoor at their workplace or while commuting to and fro from home. This was a high number as fines were issued for not wearing masks by the local authorities and institutes. In contrast to this, only **76.8%** respondents agreed on wearing masks while being at home even while working in hospitals. **87.8%** took precautions at home by changing their clothes and washing it immediately while taking a bath themselves maintaining social distance from the people back at home. **89%** accepted that maintaining hand hygiene by washing with soap and water and use of sanitizers is sufficient in controlling the spread of virus on a personal level. While **91.5%** believed that additionally to avoid touching of unnecessary surfaces and objects like door handles and elevator buttons could tremendously stop the spread of virus among the masses.

When an open question was asked about extra precautions taken from their side in handling patients and used instruments of the patients especially after the outbreak of Covid-19, common responses were collected in which most of the respondents mentioned use of 'masks' (**82.9%**), Gloves (**48.8%**), sanitizers (**46.3%**), Face shields (**36.6%**), OPD sanitization (**20.7%**), Patient temperature and SpO<sub>2</sub>(**15.9%**), Social Distancing (**15.9%**), Hand washing (**12.2%**) (TABLE1).

**Table 1: Response To Open Question**



Respondents agreed on change in the way they used to work before the Covid-19 pandemic, and were very much keen on continuing the present protocols followed hereafter. Asking about the duration of hand washing, most respondents answered washing hands for 0 - 1 minute (**41.5%**) and 1 - 2 minutes (**42.7%**), while very few said 2 - 3 minutes (**15.9%**)(TABLE2)

**Table 2- Response to framed questions**

	YES		NO
Do you know about COVID-19, and the signs and symptoms associated with it?	78		4
Do you know how can we protect ourselves from COVID 19?	73		9
Have you received any formal training in order to protect yourself from contacting COVID-19?	52		30
Are you taking all the necessary precautions to avoid COVID-19?	73		9
Do you use masks regularly while being at work, or during your commute?	77		5
Do you have separate masks for work and home?	63		19
Do you change your clothes and take a bath after reaching home from work?	72		10
Do you regularly follow hand hygiene using soap wash or use of alcohol-based sanitizers?	73		9
Do you avoid touching unnecessary surfaces, as a precaution from the surface spread of virus?	75		7
What extra precaution do you take while handling patients and used instruments after the treatment gets over, especially after COVID-19 outbreak?			
What is the duration of hand washing followed by you?	0-1 Min	1-2 min	2-3 min

## Discussion

Since its initial outbreak in China in December 2019, the COVID-19 disease has had a cascading effect worldwide. Even though these subjects are not actively involved in patient management, there are high chances of non-clinical staff having patient contact at some point in the healthcare setting and therefore at risk of contracting and spreading the infection. As this study was conducted during the national lockdown period in India, healthcare workers were quite aware of most of the information related to COVID-19 as part of being prepared to respond to the ongoing pandemic. Sufficient amount of information was passed on to the public through the Ministry of Health and Family Welfare (MoHFW) and World Health Organisation (WHO).

Correct hand hygiene practices and adequate precautionary measures play a crucial role in preventing the spread of the virus. The WHO “Five Moments of hand hygiene” defines key moments when healthcare providers must carry out hand hygiene. The information regarding the virus and its spread was mostly gained through news and their fellow medical counterparts. Similar studies conducted showed that respective health ministries of the region played an important role in educating people about the new virus and its precautions.

Important in this study is that the workers already had awareness (95.1%) and basic precautionary measures (89%) to be taken. This could be because the MoHFW constantly updated new findings and obligates healthcare providers to be aware of COVID-19 updates.

Awareness of the use of personal protective equipment (PPE) was moderate among most subjects interviewed. Participants still were reluctant on the use of PPE's for the daily working period, citing no direct patient contact. A sizeable population involved in the study showed fears from working in hospitals in the initial period, as to not transmit it to their family members.

As far as preparedness to fight against Covid-19 is concerned, our study showed that all the participants were aware of avoiding mass gathering, the use of facemasks and hand sanitizers, and maintaining proper hand hygiene. Individuals were most in favour of using masks and hand sanitizers as it formed the primary line of defence from the virus. It was observed that the educational background plays a significant role in understanding the situation quickly. This survey showed that and people with higher education have a better understanding of the disease than their counterparts. Even though all the groups showed almost identical knowledge about the primary information of the disease, in some areas, such as disease complications, high-risk populations, personal protection measures, and treatment availability, a clear distinction exists.

### Conclusion

As far as the non-treating staffs are considered, they form the backbone of the healthcare system without which the healthcare structure would collapse. Forming the strongest pillar of providing healthcare to the people, they form an unimaginable link in the chain without which optimum healthcare delivery is unthinkable.

The study found out that though the non-treating staffs in a hospital, though less educated are aware and efficient enough to make changes in their work style. This study highlighted that non-treating staff had sufficient awareness, positive attitudes, optimal prevention, and positive perceptions during the Covid-19 outbreak. Also, the precautions taken by them on personal level to stop the spread and continue giving efforts to take care of other non-covid patients was tremendous. Healthcare workers practice is directly correlated with their attitude. Hence, despite better knowledge, there is a need for a more positive attitude at the place of practice.

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