

# Awareness amongst Non-teaching Professionals Regarding COVID-19 in a Rural Teaching Hospital: A Cross-sectional Study

ERVILLA DASS<sup>1</sup>, MAULIN D MEHTA<sup>2</sup>

## ABSTRACT

**Introduction:** The Coronavirus Disease 2019 (COVID-19) pandemic has enforced a huge burden on the primary health care systems around the world to deal with this global health challenge. The recent global threat of this pandemic is rapidly progressing and has placed a high priority on investigation of medicaments. The rapid rise in COVID-19 occurred during the first week of March 2020, wherein, cases of COVID-19 reached over 100 countries with more than 100,000 cases reported.

**Aim:** To assess the knowledge and perception regarding COVID-19 amongst non-teaching professionals of a rural teaching hospital.

**Materials and Methods:** This was a cross-sectional study and was conducted over a period of two months from start of May, 2020 to end of June, 2020. Total number of participants enrolled were 70. Each questionnaire had a total of 27 questions in their vernacular language, through which their knowledge (9 questions) and perception (18 questions) regarding COVID-19 were assessed. Moreover, one question related to five steps of the 20 second

handwash technique was also included with pictorial graphics. Questionnaires filled by the participants were collected for statistical analysis and the results were expressed as percentage.

**Results:** A total of 70 participants were included in the present study. Regarding questions related to knowledge of coronavirus, 91.43% of participants had heard about the recent coronavirus. However, 68.57% were not aware about coronavirus spread from person-to-person through small drops from the nose or mouth, that can be dispersed widely through an infected person when they cough or breathe. Nearly 44.29% participants knew that coronavirus can cause difficulty in breathing. Concerning questions related to prevention and safety, all the participants were aware of wearing face masks.

**Conclusion:** Though majority of the participants are aware about coronavirus, they had lack of in-depth knowledge as seen in their perception of knowledge through detailed questions. Hence, there is a need for increased awareness regarding the symptoms, implementation of precautionary measures and guidelines laid down by the authorities from time to time.

**Keywords:** Coronavirus, Hand wash, Non-professionals, Rural area

## INTRODUCTION

The recent global threat and anxiety surrounding the pandemic of SARS COVID-19 is rapidly progressing and intensifying, as it is highly contagious. COVID-19, a respiratory disease, is an infectious disease caused by a newly discovered coronavirus [1,2]. So far, there are no specific approved vaccines or treatments for COVID-19. There are many ongoing clinical trials evaluating potential treatments [3-5]. As per World Health Organisation (WHO) (March, 2020), a number of medicines have been suggested as potential new therapies, majority of which are now being or will soon be studied in clinical trials [4,5].

This study is an attempt to create awareness in Indian rural population, for which no adequate data are available till date in this geographical area. The awareness generation regarding how to prevent the infection will help, to some extent, to prevent the spread of COVID-19 and in reducing the potential risk of exposure to others [6,7].

The present study was undertaken as there is a poor understanding of COVID-19 among working non-teaching professionals/cleaning personnels. This may result in the rapid spread of infection and also in delayed treatment. It is in this regard that this structured questionnaire-based study was conducted amongst non-professionals working in a teaching rural hospital to assess their knowledge, perception and practices regarding COVID-19.

## MATERIALS AND METHODS

The present questionnaire-based study was a cross-sectional study which was conducted in a teaching rural hospital and college, Sumandeep Vidyapeeth, in Waghodia taluka of Vadodara, Gujarat, India. The study was conducted after receiving permission from Sumandeep Vidyapeeth Institutional Ethics Committee (SVIEC) (SVIEC/ON/Medi/RP/20038) and was carried out over a period of two months from start of May, 2020 to end of June, 2020. There were, in total, 83 non-teaching professionals including the cleaning personnels, clerks, attendants and peons of the institution. Out of this, 13 participants dropped out prior to the study. Hence 70 participants were enrolled in the present research.

**Inclusion criteria:** Any non-teaching working professional such as clerks, attendants, cleaning personnels, supervisor from the institution who were willing to participate and those who have filled up the questionnaire completely were included.

**Exclusion criteria:** Those who were not willing to participate in the study and those who gave incompletely filled questionnaires were excluded from the study.

All participants in the study were informed regarding the details of the study in their own language. Written informed consent was obtained from all the participants enrolled in the study. The questionnaire included 27 questions in total (knowledge-9, perception-9, and practice-9) were distributed; and also, one question to assess awareness regarding the 20 seconds hand wash technique [6,7].

The questionnaires were simple to understand, and required the participants to answer either Yes or No to assess their knowledge, perception and practices during COVID-19 pandemic.

## STATISTICAL ANALYSIS

The data from the questionnaires were entered in computerised Microsoft Excel worksheet, were subjected to statistical analysis and the results were expressed as percentages. The statistical calculations were performed using computer-based statistical software Statistical Package for the Social Sciences (SPSS) version 21.0.

## RESULTS

A total of 70 participants (n=70) answered the questions, out of which 15 were males and 55 were females, all belonging to the district of Vadodara. The age group was between 25 to 70 years as depicted in [Table/Fig-1].

Age group (years)	No. of participants (n=70)
20 to 35	42
36 to 50	25
>50	03
Total no. of participants	70

[Table/Fig-1]: Age distribution among participants.

Nearly 91.43% participants had heard about coronavirus and about 82.86% knew that it is a contagious disease. When asked regarding transmission of the coronavirus, 68.57% were not aware about its spread from person-to-person through small droplets from the nose or mouth that can be spread through an infected person when they cough or breathe [Table/Fig-2].

All the participants (100%) agreed to help the community prevent the spread of coronavirus disease; all of them knew about masks and wore masks for their safety and prevention of coronavirus and its spread [Table/Fig-3].

SET-I	Questions	n=70 Yes (%)	n=70 No (%)
1.	Have you heard of a viral disease, named coronavirus (COVID-19)?	64 (91.43)	06 (8.57)
2.	Did you know that this coronavirus- viral disease is contagious?	58 (82.86)	12 (17.14)
3.	Do you know what precautions you should take to prevent this coronavirus-viral disease?	27 (38.57)	43 (61.43)
4.	Did you know that coronavirus is spread from person to person through small droplets from the nose or mouth that can be spread to an infected person when they cough or breathe?	22 (31.43)	48 (68.57)
5.	Did you know that these droplets can stay on objects and surfaces around an infected person?	16 (22.86)	54 (77.14)
6.	Did you know that to protect yourself from coronavirus you should avoid touching your eyes, nose and mouth with unwashed hands?	36 (51.43)	34 (48.57)
7.	Did you know that you should not take any medicine without consulting a doctor?	31 (44.29)	39 (55.71)
8.	Did you know that this disease can cause difficulty in breathing?	31 (44.29)	39 (55.71)
9.	Are you aware of the common symptoms of this coronavirus- viral disease are fever, cough, fatigue, shortness of breath and dry cough.	14 (20)	56 (80)

[Table/Fig-2]: Responses for questions on knowledge regarding COVID-19 [2,6,7].

SET-II	Questions	n=70 Yes (%)	n=70 No (%)
1.	Can you help the community prevent the spread of coronavirus disease?	70 (100)	0 (0)
2.	Do you know how to prevent the spread of coronavirus disease?	32 (45.71)	38 (54.29)
3.	Do you know about masks?	70 (100)	0 (0)
4.	Do you wear a mask?	70 (100)	0 (0)
5.	Did you know that you should take a shower every day and wash your hair regularly to maintain cleanliness?	49 (70)	21 (30)
6.	Did you know that to protect yourself from coronavirus you should clean your home, clean the surfaces using soap and water, then use disinfectant.	12 (17.14)	58 (82.86)
7.	Did you know that it is important to stay at least 1 meter (3 feet) away from others?	70 (100)	0 (0)
8.	Did you know that hand washing can keep you healthy and prevent the spread of respiratory infections from one person to another?	41 (58.57)	29 (41.43)
9.	Did you know that it is important to wash your hands regularly with soap and water for 20 seconds or disinfect with a sanitiser or hand rub?	23 (32.86)	47 (67.14)

[Table/Fig-3]: Practices of the participants related to coronavirus-prevention and safety [2,6,7].

Responses to the question on the five important steps involved in the 20 seconds hand wash technique [2,6,7] reflected the practices of the participants. The questionnaire included these five steps which were given to participants in their vernacular language, as mentioned below in sequential order:

- 1) Wet your hands with clean, running water (hot or cold), turn off the tap and apply soap.
- 2) Make soap foam. Clean your hands by rubbing your hands together with soap foam. Rub your hands with soapy foam between your fingers and under your nails and on the back of your hands.
- 3) Scrub your hands for at least 20 seconds.
- 4) Rinse your hands thoroughly under clean, running water.
- 5) Blow-dry or dry hands using a clean handkerchief/towel.

At the end of narrating the steps, all the participants were asked if the above information on handwashing technique was informative or not. All the participants responded positively for the question (n=70, Yes=70).

As depicted in [Table/Fig-4], most of the participants (90%) were aware that they should avoid leaving their home, unless absolutely necessary. Whereas, only 17.14% were aware that doors, handles, tables, things that people touch frequently, mobiles and glasses should be cleaned frequently. Other responses reflecting their perception are depicted in [Table/Fig-4].

## DISCUSSION

COVID-19 is an infectious disease that is caused by a newly discovered coronavirus [1]. The various ways to prevent and suppress the infection is to have proper knowledge regarding the COVID-19 virus and its spread, and also by creating awareness about COVID-19. Various COVID-19 guidelines have been published which are being updated from time to time and modified from country to country which suggest ways to protect oneself

SET-III	Questions related to perception towards COVID-19 disease [2]:	n=70 Yes (%)	n=70 No (%)
1.	Did you know that if you ingest or swallow a hand sanitizer, it can produce alcohol poisoning, which can lead to death?	39 (55.71)	31 (44.29)
2.	Did you know that you should not spit in public places to prevent the spread of coronavirus?	33 (47.14)	37 (52.86)
3.	Did you know that you should avoid leaving your home unless absolutely necessary?	63 (90)	07 (10)
4.	Did you know that you should avoid travel during peak hours and avoid crowds?	52 (74.29)	18 (25.71)
5.	Did you know that doors, handles, tables, things that people touch frequently, mobiles and glasses should be cleaned frequently?	12 (17.14)	58 (82.86)
6.	Did you know that you should follow the rules given by your concerned authorities to prevent the spread of coronavirus?	70 (100)	0 (0)
7.	Did you know that there is no cure for coronavirus yet?	06 (8.57)	64 (91.43)
8.	Do you currently have a fever or cough or difficulty in breathing?	0 (0)	70 (100)
9.	Will you help the country by implementing hand hygiene techniques, wearing masks and staying away from crowds to fight coronavirus?	70 (100)	0 (0)

**[Table/Fig-4]:** Responses to questions assessing the perception of the participants towards COVID-19.

and others from coronavirus infection. The most important of these is washing your hands or using an alcohol-based hand rub frequently and not touching your face [4-7]. These also include nation-wide social distancing of the entire population plus other interventions such as, home self-isolation, and closure of schools and business institutions. These policies may be required for long periods to avoid rebound viral transmission [5,6,8-12]. So far, no clinically available antiviral drugs have been developed for SARS-CoV, SARS-CoV-2 or MERS-CoV [6,7,13]. Healthcare authorities have initiated awareness and preparedness activities beyond borders. Poor knowledge of the disease among people may result in delayed treatment and rapid spread of infection; it is therefore necessary to update the cleaning personnels/non-teaching professionals about COVID-19, and its prevention and consequences.

It is important to know that the patients infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Elderly people and those with underlying medical conditions are more probable to develop serious illness. When participants were asked regarding the spread of coronavirus, 31.43% responded positively, while others were unaware of the mode of transmission. As we now know that the COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, it is important that awareness should be created amongst people to practice respiratory etiquette (for example, by coughing into a flexed elbow) [1,2,4,5,8-11]. COVID-19 guidelines suggest methods to prevent infection by washing hands, using an alcohol-based hand rub frequently and by not touching face [4-7]. The questionnaire also described the steps of 20 second handwash technique along with pictorial graphics so as to make it easy for grasping and implementation [6,7].

### Limitation(s)

Though the sample size was limited, the present observational study created awareness amongst non-teaching staff such as clerks/peons/attendants/sweepers regarding COVID-19. In future it would be instrumental to prevent the spread of COVID-19 and reduce the potential risk of exposure to others. Also, the present study will create a baseline data for comparison with similar type of studies in future [13-16]. Moreover, the findings from this present study will help healthcare providers and policy-makers to propose targeted interventions to conduct awareness programs.

Another limitation of the present study is that it was conducted at only one rural area of Piparia and nearby villages of Vadodara District, for non-professionals. Future studies can be conducted involving other rural areas of Vadodara or nearby places.

### CONCLUSION(S)

It can be concluded from present study that majority of the personnels are aware that coronavirus disease does exist, but they have poor in-depth knowledge as seen from their perception of knowledge through detailed questions. Hence, they need to be made aware of its symptoms, and should be educated on preventive measures and updated guidelines. From the current trend of the disease spread and threat of COVID-19, conducting regular awareness generation programmes will help in minimising the spread of the disease.

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#### PARTICULARS OF CONTRIBUTORS:

1. Associate Professor, Department of Pharmacology, Smt. B.K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth an Institution Deemed to be University, Piparia, Vadodara, Gujarat, India.
2. Associate Professor, Department of Pharmacology, Smt. B.K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth an Institution Deemed to be University, Piparia, Vadodara, Gujarat, India.

#### NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Ervilla Dass,  
Associate Professor, Department of Pharmacology, Smt. B.K. Shah Medical Institute and Research Centre, Sumandeep Vidyapeeth an institution Deemed to be University, Piparia, Ta. Waghodia, Vadodara-391760, Gujarat, India.  
E-mail: ervilladass@gmail.com

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