

ORIGINAL ARTICLE

A Cross-sectional Survey to Study the Awareness and the Impact of the COVID-19 Pandemic in the Field Practice Area of the Rural Health Centre of a Teaching Hospital

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ABSTRACT

Introduction: COVID-19 is a global pandemic which has affected the whole world. The first confirmed case of coronavirus in India was reported on January 30, 2020, and has now rapidly spread all over the country. India has taken preventive measures such as the national lockdown, mass-scale screening, health education through mass media, and social platforms. The study aims to estimate the awareness levels in the area (village) regarding COVID-19 and to assess the strategies adopted by the area to combat the challenges posed by COVID-19. **Methods:** A cross-sectional survey was conducted in the outreach villages of the Rural Health Center, Nere, Panvel, of Dr. D.Y. Patil Medical College, Navi Mumbai, Maharashtra. **Results:** A total of 350 individuals were interviewed during the study. More than 75% of the population was aware that there is a pandemic. All the people surveyed were aware of the fact that the virus was spread by coughing, sneezing, and fomites. The whole surveyed population was aware that wearing of a mask and handwashing were ways to prevent transmission of the disease and more than 80% of the population was aware that sanitizer use and social distancing were also helpful in preventing spread. Special strategies like home quarantine of the suspected COVID 19 cases and sanitization of the villages were adopted by the village administration to control the spread of the disease. **Conclusions:** Overall, the majority of the surveyed population had good knowledge about the pandemic and the measures to prevent it.

Key words: Awareness, COVID-19, impact, pandemic, rural area

INTRODUCTION

COVID-19 is a global pandemic which has affected the whole world. The disease is caused by a new strain of coronavirus called the Novel Coronavirus. It was first officially reported in the Wuhan Province of China on December 31, 2019, and had rapidly spread all around the world.^[1] By February 11, 2020, the World Health Organization (WHO) officially named the disease resulting from infection with SARS-CoV-2 as Coronavirus Disease 2019 (COVID-19).^[2] The WHO on March 11, 2020, declared COVID-19 as a Pandemic.^[3] The first confirmed case of coronavirus in India was reported on January 30, 2020, and has now rapidly spread all over the country.^[4] India has taken preventive measures like the national lockdown from March 24, 2020, to June 8, 2020, stopping all international and domestic flights and other

means of transport, mass-scale screening, health education through mass media, social platforms, etc.

COVID-19 represents a spectrum of clinical manifestations that typically include fever, dry cough, and fatigue, often with pulmonary involvement. SARS-CoV-2 is highly contagious and most individuals within the population at large are susceptible to infection.^[5] A series of measures have been suggested to reduce COVID-19 infection, including knowledge training for prevention and control, isolation, disinfection, classified protections at different degrees in infection areas,

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and protection of confirmed cases.^[6] Preventive measures for COVID-19 include maintaining social distancing, washing hands frequently, avoiding touching the mouth, nose, and face.^[7] The media have been reporting continuously across borders to keep all informed about the pandemic situation. All these things are creating a lot of concern for people leading to heightened levels of anxiety. Pandemics can lead to heightened levels of stress; Anxiety is a common response to any stressful situation.^[8]

This survey has been undertaken to determine the level of awareness regarding the COVID-19 and the preventive measures and strategies adopted by villages to combat the challenges of COVID-19 in the adopted field practice area of the Rural Health Center of the Department of Community Medicine, Dr. D Y Patil Medical College, Nerul, Navi Mumbai, Maharashtra.

MATERIALS AND METHODS

A cross-sectional survey of the representative sample of the adopted field practice area of the Rural Health Center, Shantivan, Nere, was conducted from June 15, 2020, till June 23, 2020. The Rural Health Center, situated at Nere, Panvel, is at a distance of 22 km from the Medical College and is situated at Raigad district. The population of Nere is approximately 135,000, out of which the department has an adopted field practice population of 16700. The adopted area consists of Shantivan center and surrounding villages of Wakdi, Wadi, Bhanghar, and Hindustan Nagar. The survey was conducted in the adopted field practice area which has around 3400 households. A representative convenience sample of 10% was taken for the survey. The houses in the area are numbered. The first house was selected by lottery system and then every 10th house was considered for the survey. If the house was found locked, the next house was considered. The head of the family was the informant and he/she was informed about the survey and verbal consent was obtained. As it was a KAP study with no intervention, ethical committee waiver was taken for the study. A pre-designed, pre-validated, and pre-tested questionnaire was administered and the data obtained were analyzed using Software SPSS Version 20. At the end of the study, a total sample size of 350 was obtained which was analyzed.

RESULTS

Out of the total population which was surveyed, a total of 350, 138 were male and 212 were female. Most of the people surveyed were in the age group of 31–50 years. Majority of the population, that is, 49.14%, were Hindus, while 24% were Muslims. All the females in the study population were housewives. Among the males, 40.57% were farmers, while 35.5% were in private jobs. More than 59% of the population belonged to the nuclear family. About 48.8% of the population

was educated up to primary level and 32% of the population was educated up to the secondary level. About 59.4% of the surveyed population belonged to nuclear family.

More than 75% of the population was aware that there is a pandemic. All the survey population knew the name of the virus which had caused the COVID-19 pandemic and 88.57% of the survey population were aware of the fact that the disease was first reported from China. All the people surveyed were aware of the fact that the virus was spread by coughing, sneezing, and fomites. The whole surveyed population was aware that wearing of a mask and handwashing were ways to prevent transmission of the disease and more than 80% of the population was aware that sanitizer use and social distancing were also helpful in preventing spread. About 71.14% of the population received information regarding the pandemic and its prevention from TV and radio, while around 14% of the population received information from health care professionals and social media. Most of the survey population said that people in the older age group and those with co-morbidities were more susceptible to the infection.

No one in the survey population suffered from the infection during the time of the study. However, more than 35% of the population thought that there was at least a 50% or more chance of them developing the infection. Most of the population surveyed was going out for household work [Table 1].

About 68% of the population spend from 1 h up to 2 h watching TV or are on social media for news regarding the pandemic. About 62.57% of the surveyed population used a cloth mask while the rest used a surgical mask. About 78.28% of the population said that everyone should wear a mask. Even though 71.71% of the population was observing social distancing only 26% and 29.71% were covering their mouth while coughing/sneezing or sanitizing frequently touched objects, respectively. Almost 60% of the population was buying groceries only on a weekly basis.

About 62% of the population said that there was moderate economic impact due to the pandemic. More than half the population surveyed said that the lockdown has helped in limiting the spread but 69.71% said that the lockdown had a negative impact on their mental health and 76% were worried about losing their income/jobs. Majority of the survey

Table 1: The strategies adopted by the village administration to limit the spread of COVID-19

Special strategies adopted by the village administration (multiple options)	Male (%)	Female (%)
Home quarantine of suspected case	112 (81.15)	176 (83.01)
Sealed border of village	102 (73.91)	189 (89.15)
Sanitization with spraying	79 (57.24)	101 (47.64)

Table 2: The knowledge regarding preventive measures against COVID-19 with their education status of respondents

Parameters	Education					Total	Chi-square	P
	Illiterate	Primary	Secondary	Higher secondary	Graduate and above			
Social distancing								
Yes	19	155	91	30	14	309	9.39	0.052
No	0	16	21	3	1	41		
Sanitizer								
Yes	15	138	95	33	15	296	11.185	0.025
No	4	33	17	0	0	54		

population were having some psychological symptoms such as lack of sleep, hopelessness, lack of energy, and anxiety due to the corona pandemic. People sought various ways to reduce their stress during this period such as TV, hobbies, spending time with the family, yoga, and meditation.

DISCUSSION

This was a community-based cross-sectional study done in a rural area in Maharashtra. The interview was conducted using a structured questionnaire.

Majority of the survey population knew about the pandemic. All the surveyed population knew the name of the virus and was aware of the fact that the virus is spread by coughing, sneezing, and fomites. The whole surveyed population was aware that wearing of a mask and handwashing was ways to prevent transmission of the disease and more than 80% of the population was aware that sanitizer use and social distancing was also helpful in preventing spread. This shows the impact of the health education imparted to the population through mass media, health professionals, etc. The awareness level about the pandemic, its mode of spread, and preventive measures was not different across the gender. However, an online survey done in China showed that the knowledge scores significantly differed across genders, age groups, categories of marital status, education levels, and place of residence.^[9]

Table 2 shows that there is no statistically significant association between the knowledge of the respondents about social distancing as a measure to prevent the spread of COVID 19 with their education status. A statistically significant association is observed with the knowledge of use of hand sanitizer as a preventive measure against COVID-19 and the education status of respondents (p=0.025).

Most of the survey population said that people in the older age group and those with co-morbidities were more susceptible to the infection. Similar results were obtained in a study done in Karnataka.^[10] About 68% of the population spend from 1 h up to 2 h watching TV or are on social media for news regarding the pandemic. This co-relates with the fact that 71.14% of the population has received information from TV/

Social media. Majority of the survey population were having some psychological symptoms due to the corona pandemic. The massive educational efforts for the masses have helped in increasing the awareness of the pandemic but it may have also contributed to the large-scale psychological symptoms seen in the population. At the time of the survey, no one in the survey population suffered from the infection. This is probably because the population is in the rural areas with minimum exposure from outside.

CONCLUSIONS

Overall the majority of the surveyed population had good knowledge about the pandemic and the measures to prevent it. The awareness level about the pandemic, its mode of spread, and preventive measures was not different across the gender. The knowledge about use of hand sanitizer to prevent the spread of COVID-19 was different with regard to their education status.

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