



A CROSS SECTIONAL STUDY OF AWARENESS OF NURSES FROM CENTRAL INDIA ABOUT COVID-19

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ABSTRACT

Introduction: Nurses are in close contact with infected people and so constitute a main part of the infection transmission chain. Thence, their awareness of COVID-19 can help prevent the transmission chain. Keeping this in mind the present study was conducted to assess awareness of nurses about COVID-19. **Materials and Methods:** A questionnaire based cross sectional study was carried out in a tertiary care centre in Central India. Study participants constituted the nurses employed in the institute. Data was analysed using SPSS. Chi square test was applied as test of significance. **Results:** Total 744 (79.83%) nurses were aware about transmission of COVID -19 and 924 (99.14%) about its symptoms. But only 540(57.94%) nurses were aware that incubation period of COVID-19 is 2 to 14 days. **Conclusions:** Most of the nurses in present study were well aware about various aspects of COVID-19.

KEYWORDS : Nurses, Awareness, COVID-19, India

INTRODUCTION:

The severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) and resultant corona virus disease 2019 (COVID-19) have evolved into a pandemic, forcing people around the world to accept rapidly changing norms about public health and take immediate actions to minimize their risk of infection and the spread of the virus. 1 Considering the global threat, the World Health Organization (WHO) declared COVID-19 a public health emergency of international concern (PHEIC) in January 2020 and finally a pandemic on 11th March 2020.1,2 The entire world is almost in a state of paralysis due to the severe outbreak of COVID-19. More than 200 countries and territories reported confirmed corona-positive cases.3 Although early studies reported a link between a single local fish and wild animal market and most cases of infection, indicating possible animal-to-human transmission, later studies have increasingly demonstrated human-to-human transmission of SARS-CoV-2 through droplets or direct contact.4-6 The spread of the disease on a wider scale has been associated with a delay in diagnosis and poor infection control procedures.7 At times even health care workers may not be tested in keeping with the revised testing strategies for COVID-19.8 Nurses, being in close contact with infected people, constitute a main part of the infection transmission chain. 9 Hence their awareness of COVID-19 can go a long way in breaking the transmission chain. Keeping this in mind, the present study was conducted to assess awareness of nurses about COVID-19.

Material and Methods:

Present cross sectional study was carried out in a tertiary care centre in Central India. Study participants were the nurses employed in this institute. Approval was obtained from the Institutional Ethics committee (IEC) and permission was taken from the dean and the medical superintendent. Universal sampling method was applied. Study duration was two months. It was a questionnaire based study. The subjects were explained about nature and purpose of the study and an informed consent was obtained from them for their participation in the study. A pre tested, pre designed questionnaire which included close ended questions related to awareness about symptoms, transmission, incubation

period, management and prevention of COVID-19 was circulated among the nurses. The data was entered in Microsoft excel and statistical analysis was done with the aid of SPSS version 20.0. Pearson chi square test was applied to compare the association and p value <0.05 was considered as statistically significant.

Results and Discussion:

In the present study total number of nurses was 932 of which 119 (12.77%) were male and remaining 813 (87.23%) were female nurses. Thus majority of the study participants were females. Ten questions on different aspects of COVID-19 were used to assess awareness of the study participants. In the present study total 744 (79.83%) nurses were aware that transmission of COVID -19 is by droplets and by touch with surfaces contaminated with virus. The awareness about symptoms of COVID-19 such as fever, tiredness, difficulty in breathing, shortness of breath, chest pain, diarrhea, body ache, malaise etc was present in 924 (99.14%) i.e. almost all nurses. But only 540(57.94%) nurses were aware that incubation period of COVID-19 is 2 to 14 days. Vaccine against SARS-CoV-2 is not available was known to 459 (49.25%) study subjects. Most nurses (90.45%) were aware that merely wearing masks is not sufficient to protect against COVID-19. Only 184 (19.74%) nurses were aware that duration of hand washing should be 40 seconds. Awareness about percentage of alcohol in the hand sanitizer as 70% was present in 694(74.46%)nurses. Awareness about higher risk of infection in patients with underlying chronic diseases and in health care workers was noted in 896(96.14%) and 923(99.03%) respectively. Similarly majority i.e. 882(94.64%) were aware that social distancing can help in preventing COVID 19.

Gender-wise correct response is displayed in Table 1.

Table 1. Correct responses of the nursing staff as per gender

Sr. No	Awareness parameter	Gender		p value
		Male	Female	
		N=119	N=813	

1	Transmission of COVID 19	103 (86.55)	641 (78.84)	0.05
2	Symptoms of COVID 19	116 (97.48)	808 (99.38)	0.035
3	Incubation period of COVID 19	57 (47.90)	483 (59.41)	0.018
4	Availability of COVID 19 vaccine	70 (58.82)	389 (47.85)	0.025
5	Do you think only wearing of masks is sufficient to prevent against Covid 19	109 (91.60)	734 (90.28)	0.649
6	Duration of hand washing for protection against COVID-19	17 (14.29)	167 (20.54)	0.109
7	Percentage of alcohol in the sanitiser for hand sanitization	86 (72.27)	608 (74.78)	0.557
8	Higher risk of infection in patients with underlying chronic diseases	116 (97.48)	780 (95.94)	0.416
9	Health care workers are at a higher risk of contracting COVID 19	119 (100)	804 (98.89)	0.249
10	Social distancing can help in preventing COVID 19	115 (96.64)	767 (94.34)	0.299

Figures in parenthesis indicate percentage
As obvious from table 1, there was a significant difference between male and female nurses with regards to awareness about symptoms, incubation period and availability of vaccine.

The detailed age-wise awareness is shown in table 2

Table 2 Age-wise comparison of correct responses

Sr. No.	Awareness parameter	Age		
		< 35 years * N= 492	>35 Years* N= 440	p value
1	Transmission of COVID 19	403 (81.91)	341 (77.50)	0.094
2	Symptoms of COVID 19	487 (98.98)	437 (99.32)	0.581
3	Incubation period of COVID 19	282 (57.32)	258 (58.64)	0.684
4	Availability of COVID 19 vaccine	240 (48.78)	219 (49.77)	0.762
5	Do you think only wearing of masks is sufficient to prevent against Covid 19	464 (94.31)	379 (86.14)	0.001

6	Duration of hand washing for protection against COVID-19	99 (20.12)	85 (19.32)	0.758
7	Percentage of alcohol in the sanitiser for hand sanitization	350 (71.14)	344 (78.18)	0.014
8	Higher risk of infection in patients with underlying chronic diseases	473 (96.14)	423 (96.14)	0.999
9	Health care workers are at a higher risk of contracting COVID 19	487 (98.98)	436 (99.09)	0.867
10	Social distancing can help in preventing COVID 19	468 (95.12)	414 (94.09)	0.486

*Figures in parenthesis indicate percentage

The p values indicate that there was a statistically significant difference in the age groups in consideration to awareness about only wearing of mask is not sufficient for protection and also about percentage of alcohol in hand sanitizers.

Most of the nurses in the present study were aware about epidemiology and prevention of COVID-19 . This finding is coherent with that of other studies.(9.10) However the awareness about an important aspect in prevention of COVID-19 viz duration of hand washing was hardly present in a quarter of the study participants. This needs to be corrected by providing the nurses with appropriate information and training.

Based on the study findings it can be stated that nurses can be of a great help in the present scenario because of their awareness about this recent disease. They can also be helpful in creating awareness among the patients whom they are much in contact with and also in the other support staff.

CONCLUSIONS:

It can be concluded that nurses have kept themselves well informed about the current pandemic situation and are aware about the various aspects of COVID-19.

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