

Awareness about Prevention of COVID-19 among Students Studying in Selected Nursing Colleges of Pune

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Abstract

Background: WHO has recommended personal hygiene respiratory hygiene, using face masks, washing hands with warm water and soap, use of alcohol based hand sanitizers, avoid touching mouth, eyes & nose, cleanliness, social distancing and careful handling of purchased products as an effective preventive measure for COVID-19 disease. The growing pandemic of COVID-19 disease requires social distancing and personal hygiene measures to protect public health. But this message was not clear and well understood among people specifically among young generation. The aim of this study was to determine the Awareness about prevention of COVID-19 among students studying in selected nursing colleges of Pune.

Adults in the 20-49 years age group more likely to spread COVID 19: Adults are reportedly the only group still spreading the contagious virus. This was concluded after a study carried out by a team of researchers from Imperial College London using cell phone data from more than 10 million individuals of the USA. The findings revealed that adults between 20 to 49 years have been the only ones significantly responsible for the rising COVID cases. Out of 100, about 65 cases of infections were originated from those belonging to this age group. As per another study published in JAMA Network, over half of COVID-19 cases are likely caused by people without symptoms. It revealed that about 59 per cent of all transmission is caused by pre symptomatic and asymptomatic individuals.¹

Method: A cross sectional study was performed during the third week of March among selected nursing college students. Sample size was 186. 10 structured online questionnaire MCQ type was used to obtain data. The demographic parameters were tabulated; Frequency Distribution and percentage were calculated for correct answers of MCQs. Associations were also checked for selected demographic variables of samples i.e. Gender with the help chi square test.

Results: Total 186 samples selected for the study; 109 were females and 77 were males. All were graduate nursing students. Maximum score for each respondent was 10. Item analysis was done for each of the 10 structured questions. Mean score for the respondents was 8.31. Chi Square test used to find association between selected demographic variables of samples i.e. Gender and level of awareness.

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Conclusion: The Awareness about prevention of COVID-19 among participants was good. Mean score for the respondents was 8.31. Deficiencies in knowledge were noted in certain areas. Chi Square test suggested that there is no association between selected demographic variables of samples i.e. Gender and level of awareness about prevention of COVID-19.

Keywords: COVID-19, Respiratory hygiene, Face masks, washing hands, Alcohol-based hand sanitizers.

INTRODUCTION

COVID-19 is a novel respiratory virus emerged from Wuhan City, Hubei, China, reported to be transmitted by animal-to-human and human-to-human interaction.^{2,3}

The viral outbreak is a pandemic resulting in human deaths in enormous numbers.⁴ The development of the epidemic follows an exponential growth in cases.⁵

In the last week of December 2019, the first case of pneumonia caused by a novel corona virus in Wuhan city, China, was diagnosed. Person to person transmission of novel coronavirus was confirmed by china on 21 January 2020 with more than 200 diagnosed cases and 4 deaths.¹² On 30th January 2020, WHO declared the Chinese outbreak of COVID-19 to be a Public Health Emergency of International Concern posing a high risk to countries with the poor health care system.¹³ On 11 March 2020 WHO declared COVID-19 outbreak as a pandemic with more than 11800 cases and 4291 death in 114 countries.¹⁴ The main source of transmission of the corona virus is are the infected patients. It is mainly transmitted by respiratory droplets, contact, or high concentration aerosol exposure in a closed environment.¹⁵ Among 72,314 confirmed SARS-CoV-2 patients in china, 81% had mild symptoms, nearly 14% develop severe symptoms like dyspnoea and hypoxia, 5% became critically ill and 1 to 3% required intubation.¹⁶ It is mainly the patients with mild symptoms that contribute to the spread of disease as they are not picked by the current screening technique.¹⁷ The current outbreak is not going to end very soon and there is a high possibility of the second wave which happened in 1918 Spanish flu.¹⁸ Since it is a new disease, little is known regarding its natural history, pathophysiology, and treatment. This kind of viral pandemic creates a sustained demand for healthcare infrastructure, support staff, and healthcare personnel that is often limited in a developing country.¹⁹ Such demand requires us to use our resources carefully for a better outcome. All the countries of the world that have been affected by the pandemic has already started mobilizing their healthcare resource for combating the disease.

COVID-19 causes a variety of symptoms in people who are infected, and not all people infected with COVID-19 will have the same symptoms. Fever, dry cough, shortness of breath, fatigue or body aches are some of the most common symptoms appearing 2-14 days after the exposure,⁶ however, some people have experienced headache, abdominal

pain, diarrhoea and sore throat as well, although some patients may not develop symptoms until later.⁷

Asymptomatic cases were also found which can be a major issue of concern with respect to being extension into transmission chain of virus.⁸

The present paper is determining the Awareness about prevention of COVID-19 among students studying in selected nursing colleges of Pune. An online questionnaire is conducted keeping in view the essential parameters about the important aspects of disease spread, including causative agent, role of personal hygiene & social distancing in the prevention of disease, pandemic nature of disease.

April 14th 2021 Maharashtra: Pune district reports 7,888 new cases 10,578 recoveries and 94 deaths, in the last 24 hours. Total cases: 6,76,014. The tough new measures announced by the Maharashtra government for the next 15 days to break the Covid-19 transmission chain came into force on Wednesday night with Hon'ble Chief Minister Shri. Uddhav Thackeray directing officials to ensure their strict implementation. The 'lockdown-like' restrictions, which exclude essential services, became operational at 8pm and will remain in force till 7 am on May 1 2021.⁹

APR 16, 2021. Pune's demand for Remdesivir injections not met over last several days: Pune additional collector Vijay Singh Deshmukh said against a demand of 45,000 doses, a consignment of only 600 injections was received. Pune is among several cities facing a shortage of Remdesivir injections. Amid the sudden surge in COVID-19 cases across the country, several states have witnessed shortage of the anti-viral drug Remdesivir and medical oxygen."The daily demand for Remdesivir in Pune district is about 18,000 injections per day. We have demanded 45,000 doses but we received the first consignment of 600 injections, later (on the next day) we received 300 injections stock, and yesterday we received about 1,200 injections," he said. Meanwhile, Centre is taking various steps to ensure easy access of Remdesivir to patients and hospitals and for that matter it has prohibited exports of Remdesivir injection and Remdesivir active pharmaceutical ingredients till the COVID situation in the country improves. Several states have been witnessing shortage of Remdesivir, as in Pune, relatives of COVID-19 patients staged a sit-in protest outside Collector's office demanding the supply of Remdesivir injections.¹⁰

People ages 20 to 49 are most responsible for the

2020 COVID-19 resurgences, according to a study published in Science Magazine.¹¹

Assessing the Existing Healthcare Capacity

Following a global trend, we can easily say that healthcare needs created by coronavirus pandemic will go beyond our capacity. India has 1154686 registered doctors in the speciality of modern medicine. At present single Government Allopathic Doctor cater to the need of 10926 persons. Currently, 60% of the total of India's population lives in rural India. To provide healthcare facilities to the people living in rural India, the government has established 25743 Primary Health Centers, 158417 Sub Centers, and 5624 Community Health Centers. Currently, 713986 beds are available in government hospitals in India which amounts to 0.55 beds per 1000 population. Some states like Jharkhand, Assam, Haryana, Bihar, Gujrat, Odisha, Madhya Pradesh, Maharashtra and Manipur which is home to more than 70% of the total Indian population has the population to bed ratio even lower than the national average but some states like Kerala, Sikkim, and Tamil Nadu has the better population to bed ratio.²⁰

OBJECTIVES OF THE STUDY

- To assess Awareness about prevention of COVID-19 among students studying in selected nursing colleges of Pune.
- To find association between study findings and selected demographic variables of samples i.e. Gender.

Ethical Aspects

Study is conducted after tool validated from experts in the field.

Reliability and pilot study was conducted on 20 samples with reliability score was found 0.86 with r parsons correlation coefficient formula and test retest method.

The permission was obtained from the concerned authority.

Informed consent was taken from the participants.

The Information given by the subjects is kept confidential.

Data Generated during the research process, is used extensively for Benefits of the Profession.

Conceptual Framework

The conceptual framework also enlightens the

investigator regarding relevant questions on the phenomenon under study. The framework is influenced by system model.

RESEARCH METHODOLOGY

A cross sectional study was performed during the third week of March among selected nursing college students. Research approach in this study is Quantitative approach.

Research Design: Quantitative Non-Experimental Exploratory study. Sample size was 186. Sampling Technique: Non Probability Convenient sampling. Setting of the study: selected Nursing Colleges in Pune. 2 colleges were selected for Pilot and Final study Separately. 10 structured online questionnaire MCQ type was used to obtain data through Google forms. Content Validity of the tool was done by 9 experts. Reliability was conducted on 20 samples with reliability score was found 0.86 with r parsons correlation coefficient formula and test retest method. For pilot study was done in different setting from main study on same samples of reliability and test (First score of test retest method.) score was taken for same. Questionnaire link was shared with the help of a commonly used social media platform of whatsapp account.

Descriptive Statistics: The demographic parameters were tabulated; Frequency Distribution and percentage were calculated for correct answers of MCQs.

Inferential Statistics: Associations were also checked for selected demographic variables i.e. Gender of samples and study findings with the help chi square test.

RESULTS

Total 186 samples selected for the study; 109 were females and 77 were males.

All were graduate nursing students. Maximum score for each respondent was 10. Item analysis was done for each of the 10 structured questions. Mean score for the respondents was 8.31. Chi Square test used to find association between selected demographic variables of samples i.e. Gender and level of awareness; at (p=0.05).

Table 1: Demographic characteristics of respondents (n =186)

Demographic Characteristic	Frequency	%
Male	77	41.3978495
Female	109	58.6021505
Total	186	100

Demographic characteristics of respondents

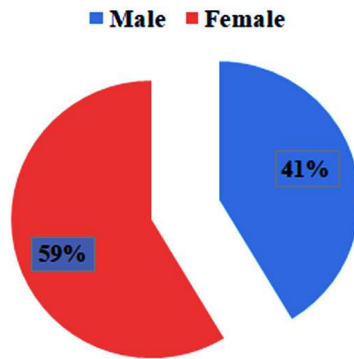


Fig. 1: Demographic characteristics of respondents (n =186)

Item analysis was done for each of the 10 structured questions.

Table 2: Item analysis (n =1860)

Sr. No.	Question	Correct Response		Wrong Response		Total
		Male	Female	Male	Female	
1.	How is COVID-19 passed on?	30	51	47	58	186
2.	What are the common symptoms of COVID-19?	31	45	46	64	186
3.	Can you always tell if someone has COVID-19?	74	107	3	2	186
4.	Can washing your hands protect you from COVID-19?	77	109	0	0	186
5.	Which of the following people is COVID-19 more dangerous for?	77	93	0	16	186
6.	When should fabric face masks be worn?	77	107	0	2	186
7.	Which of the following is an example of physical distancing?	77	109	0	0	186
8.	Following practices are useful to prevention of corona infection Except	77	108	0	1	186
9.	Following action prevent corona virus infection.	77	109	0	0	186
10.	How does Coronavirus transmit?	46	65	31	44	186
Total		643	903	127	187	1860
Grand Total		1546		314		1860

Sample size 186 each sample responded to 10 structured questions so total number of responses were 1860. Total Number of correct responses were 1546 and wrong reposes were 314

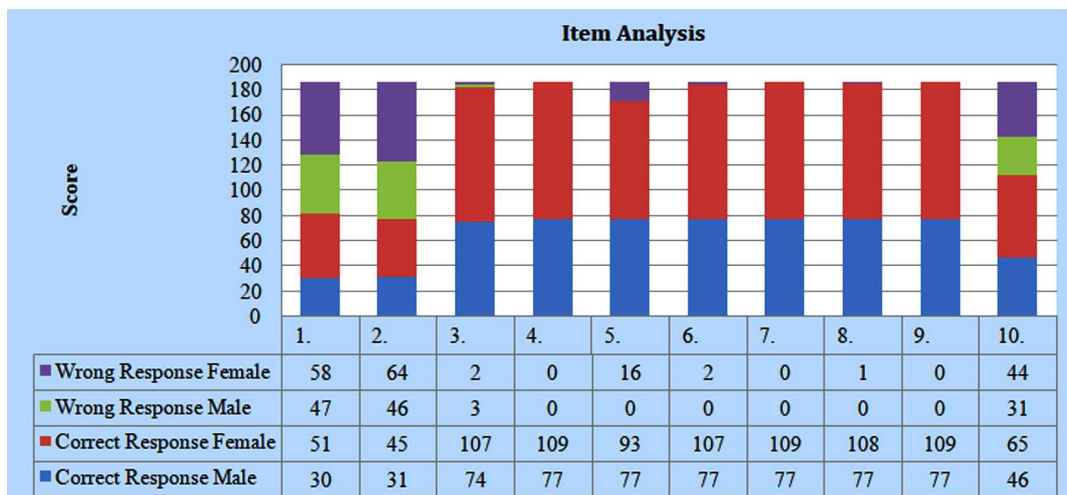


Fig. 2: Item analysis (n =1860)

Comparison between correct and wrong responses

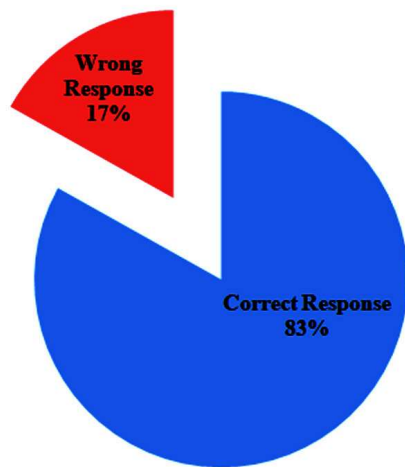


Fig. 3: Comparison between correct and wrong responses (n =1860)

Fig. 3: Mean score for the correct responses for respondents was 8.31.

Chi Square test used to find association between selected demographic variables of samples i.e. Gender and level of awareness; at (p=0.05).

Chi-square value: 0.141

Degrees of freedom: 185

p-value: 0.70728889.

CONCLUSION

The Awareness about prevention of COVID-19 among participants was good. Mean score for the respondents was 8.31. Deficiencies in knowledge were noted in certain areas. Chi Square test suggested that there is no association between selected demographic variables of samples i.e. Gender and level of awareness about prevention of COVID-19.

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