

# How Good are the Knowledge and Awareness of General Public about Covid-19?

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## Abstract

*This study was conducted to assess the knowledge about the disease and awareness regarding the myths and facts about Coronavirus disease or Covid-19, an infectious disease caused by a newly discovered (novel) coronavirus (SARS, Cov-2) among general public in India. Total of 324 participants had participated in a monkey survey by a convenience sampling technique. Demographic profile and self-developed structured knowledge and awareness questionnaire based on World Health Organisation (WHO) and Ministry of Health & Family Welfare (MOHFW) guidelines were used for data collection. Data was analysed in terms of frequency, percentage, mean and standard deviation. Correlation was computed between the knowledge and awareness of general public about Covid-19. Majority of participants had average or good knowledge (95%) with the mean knowledge score of  $5.62 \pm 1.15$ , while poor to average awareness about Covid-19 (92.6%) with the mean awareness score of  $11.79 \pm 2.02$ . No statistical correlation could be observed between knowledge and awareness ( $p > 0.05$ ). Significant number of participants had poor awareness suggestive of high prevalence of myths among the general public, requiring sharing of factual information with the general public. Myths related to the disease need to be dispelled by providing factual information through media and campaign organised by the government health agencies, health care workers and the media.*

Coronavirus disease (Covid-19) is an infectious disease caused by a newly discovered (novel) coronavirus (SARS, Cov-2). It has affected more than 200 countries and caused huge number of deaths world over. Covid-19 causes mild to moderate respiratory illness in around 80-85 percent of patients. The symptoms of Covid-19 resemble that of common cold and flu. Most of the infected individuals experience fever, cough and shortness of breath. These patients recover within considerable period of time with some supportive treatment. In less than 5-10 percent of cases, Covid-19 can be very serious illness requiring special treatment and hospitalisation in ICU. Severely affected patients with Covid-19 can present with pneumonia, multi-organ failure, severe acute respiratory syndrome and even death. Vulnerable population includes older people, individuals with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, renal disease and cancer and pregnant women. Knowledge and awareness regarding Covid-19 among general public in India may have important impact on the course of the disease. The behaviour of the general public is likely to be influenced by their knowledge and awareness about the disease. Therefore, an online survey was conceptualised.

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## Objectives

The objectives of the study were:

- To assess the knowledge regarding Covid-19 among general public in India.
- To assess the awareness regarding the facts and myths about Covid-19 among general public in India.
- To establish correlation between knowledge and awareness of general public about Covid-19.

## Review of literature

Since the researchers had taken up the study in the month of April 2020, no literature could be found. Novel Coronavirus disease being a new disease, no research on the same was done previously.

**Need of the study:** Amidst the chaotic environment of a new virus intruding into the life of humanity, very less information is available to the general public regarding the precautions, prevention and treatment. It becomes essential to have the knowledge and awareness regarding Covid-19 so that the facts can be disseminated and myths dispelled. Very less literature is available on the same.

We operationally defined knowledge as the fact of knowing about Covid-19 and awareness as consciously or interestingly knowing about the disease without having any myths. In view of the important

role of general public in coping with Covid-19, the researchers felt the need to explore on this aspect and disseminate findings of the present study and share the factual information related to Covid-19 among the general public.

### Materials and Methods

In a cross-sectional monkey survey, conducted on an online platform managed by Google, 324 people responded to a pre-tested and validated structured questionnaire. Inclusion criteria for the participation in the study included the age of the participant more than 18 years, willing to participate, and computer literate. The tool consisting of the demographic profile (7 items), knowledge (7 items, multiple choice questions i.e. MCQ and awareness, 23 items True/False type) questionnaire was circulated from 1 to 15 April 2020. Demographic profile included age, gender, education, occupation, residence and source of information about Covid-19. The self-developed structured knowledge and awareness questionnaire was based on World Health Organisation (WHO) and Ministry of Health & Family Welfare (MOHFW) guidelines. Prior to filling up the questionnaire, the participants were requested to give their consent.

The collected data was converted to an excel sheet and the responses were entered as correct and incorrect responses. A score of '1' was given for correct response and '0' for the incorrect response. The possible knowledge and awareness scores ranged from 0-7 and 0-23 respectively. Knowledge and awareness scores were categorised as good, average and poor: 6-7, 4-5, <4 and >15, 12-14, <12 respectively.

Data was analysed using SPSS 23.0. Descriptive statistics such as mean, standard deviation, frequency and percentage were computed and correlation between knowledge and awareness scores was studied using coefficient of correlation at a set p value of 0.05.

### Results

The demographic profile of the general public along with the mean and standard deviation of the age is mentioned in Table 1.

Majority of participants (70.4%) were in the age group of 18-29 years with the mean age of 27 years, males (73.4%) and graduate and above (78.9%) and residing in urban area (64.1%) (Table 1). More than half of the participants were students (56.2%) and from outside Delhi (66.4%). Majority of participants were dependent on social media (81.3%) and TV (73.5%) for Covid-19 related information.

The mean overall knowledge and awareness scores of the general public about Covid-19 were  $5.62 \pm 1.15$  and  $11.79 \pm 2.02$  respectively. Majority of subjects had average to good knowledge (95%) and

poor to average awareness (92.6%) about Covid-19 Table 2. Item-wise knowledge and awareness regarding Covid-19 among general public was assessed as shown in Table 3 and 4. No correlation could be observed between the knowledge and awareness of participants about Covid-19 ( $r = -0.01$ ,  $p = 0.86$ ).

As shown in Table 3, majority of participants (87%) had correctly written the full form of Covid-19 and knew that it is a viral infection (94.4%). Majority of participants (78.1%) knew that the disease could be transmitted through direct contact, fomite and droplets. Most of the participants (63.6%) identified correctly patient with genetic disease as having least risk from a given group of patients with renal disease, diabetes mellitus, genetic disease and elderly. Majority of participants (86.3%) stated that a person could show symptoms of disease within 14 days of contact with diseased. Most of the participants

Table 1: Demographic profile of general public (N= 324)

Variable	f (%)	
Age (years)*	<b>27 ± 9.01</b>	
	18-28	228 (70.4)
	29-38	67 (20.7)
	39-49	14 (4.3)
	49-59	12 (3.7)
	≥ 60	3 (0.9)
Gender	Male	239 (73.4)
	Female	85 (26.3)
Education	Up to secondary	17 (5.3)
	Senior secondary	51 (15.8)
	Graduation	182 (56.2)
	Post-graduation and above	74 (22.7)
Residence	Rural	116 (35.9)
	Urban	208 (64.1)
State	Delhi and NCR	99 (33.65)
	Outside Delhi	215 (66.35)
Occupation	Student	182 (56.17)
	Unemployed	05 (1.54)
	Government job	103 (31.79)
	Private job	24 (7.4)
	House wife	03 (0.92)
	Business	06 (1.85)
	Army	01 (0.308)
Source of information	Newspaper	165 (50.8)
	TV	238 (73.5)
	Social media	263 (81.3)
	Family and friends	183 (56.4)
	Health care provider	192 (59.2)

\*Mean ± SD

**Table 2: Overall knowledge scores of general public about Covid-19 (N= 324)**

Variable		f (%)	Mean ± SD
Knowledge	Good (6-7)	193 (59.57)	5.62±1.15
	Average (4-5)	114 (35.19)	
	Poor (<4)	17 (5.34)	
Awareness	Good (>15)	25 (7.71)	11.79± 2.02
	Average (12-14)	97 (29.94)	
	Poor (<12)	202 (62.35)	

**Table 3: Item-wise knowledge analysis of general public about Covid-19 (N=324)**

Statement	Knowledge	Knowledge scores f (%)
Full form of Covid -19	Correctly stated (Yes)	282 (87)
	Incorrectly stated (No)	42 (13)
Covid-19	Viral infection	306 (94.5)
	Bacterial infection	18 (5.5)
Mode of transmission of Covid -19	Direct, fomite & droplet	253 (78.1)
	Fomite & droplet	49 (15)
	Direct & fomite	19 (6)
	Direct	3 (0.9)
Not at risk for developing Covid-19	Person with genetic disease	206 (63.6)
	Person with renal disease	42 (12.9)
	Diabetes mellitus	23 (7)
	Elderly	53 (16.5)
A person can show the symptoms of disease following how many days of contact with the infected Covid-19 patient	Within 7 days	27 (8.4)
	Up to 14 days	280 (86.3)
	Up to 21 days	17 (5.3)
	Within 30 days	-
Respiratory etiquettes (multiple response)	Sneezing or coughing without handkerchief	44 (13.6)
	Spitting on the road	21 (6.5)
	Sneezing on the inner aspect of elbow, Sneezing or coughing covering nose and mouth with handkerchief	236 (72.8)
	Sneezing or coughing covering nose and mouth	266 (82.1)

(72.8%) identified the correct respiratory etiquettes which included sneezing or coughing either in a handkerchief or tissue paper or on the inner aspect of elbow.

Table 4 shows that majority of participants were aware that social distancing (89.5%) and frequent hand hygiene using soap and water or sanitiser (95.6%) are the preventive measures to protect an individual from contacting the disease. However significantly few participants (28.7%) expressed that using a face mask would protect a person from getting Covid-19. More myths related to Covid-19 are given in Table 3.

## Discussion

Findings of the present study suggest that majority of participants had average to good knowledge about the disease, its mode of transmission, at risk population, and preventive measures to protect an individual from getting the disease, but poor to average awareness about Covid-19. Use of face mask to protect a person from getting Covid-19 was expressed by relatively few participants. Covid-19 is a new disease and every day new body of knowledge is generating. The probable reason for recommending use of face mask by few participants could be the old guidelines issued by MOHFW in which use of face mask was recommended for suspected and confirmed Covid cases. However, the new guidelines recommend the use of triple layer surgical mask for patients and ordinary cloth mask for the general public.

In the present study, many participants were holding myths about the disease. Therefore, there is a need to clarify myths of general public. They should be informed about the facts related to Covid-19. Newspaper and television can play very important and crucial role in providing the factual information by organising educational sessions of experts from the health ministry and public health agencies. General public should also be cautioned about the myths being circulated in social media. They must check authenticity of the social media site before trusting and forwarding the circulated information. Similar findings were reported by Geldsetzer (2020). In the present study, one of the important sources for Covid information was social media including Whatsapp, which might have led to misinformation.

Findings of the present study could be used to decide the priorities in providing information on Covid-19. In addition, planned behaviour education counselling (BEC) programmes could help to dispel the myths related to Covid-19, which would help the general public to practice the safe measures to protect themselves from contracting the disease. Non-compliance with the recommended government guidelines could prove to be disastrous for the nation. Therefore, mass educational campaign programme would act as guiding framework in improving the knowledge and awareness of general public about the disease Covid-19 and further help them to maintain the health-related behaviours.

In resource-constrained country like India, prevention is the only way to control the disease as we cannot afford to have testing and screening for the entire population. Treatment of Covid-19 is quite expensive. Simple cost-effective measures like social

**Table 4: Awareness related to facts and myths of Covid-19 among general public (N=324)**

Statement	Response f (%)
Covid-19 cannot spread in countries having hot and humid weather	45 (13.9)
Social distancing is maintaining distance of one meter between two persons	290 (89.5)
Cold weather and snow can kill the Covid-19	6 (0.2)
Taking a hot bath prevents Covid-19	83 (25.4)
Covid-19 can be transmitted through mosquito bite	13 (4)
Hand dryers effective in killing new Coronavirus	36 (11)
Ultraviolet lamp disinfection can kill Covid-19	231 (71.3)
Thermal scanner is effective in detecting Covid-19	170 (52.5)
Spraying alcohol or hypochlorite solution all over the body for killing the new Coronavirus is a good practice	113 (34.9)
Vaccine against pneumonia is effective against new Coronavirus	58 (17.9)
Regularly rinsing one's nose with saline can help prevent infection with new Coronavirus	73 (22.5)
Eating garlic can help in preventing the Covid-19 infection	92 (28.3)
Drinking warm water every 15 minutes can prevent us from getting infected with Covid-19	164 (50.6)
Covid-19 infects older people more than children	243 (75.1)
Antibiotics are effective in controlling Covid-19	62 (19.2)
A face mask will protect you from getting Covid-19	93 (28.7)
One should visit the hospital in case of cough or fever	266 (82.2)
Only people with symptoms can spread the Covid-19	195 (60.3)
Pets at home can spread Covid-19	264 (81.6)
Tab chloroquine can prevent Covid-19 infection	105 (32.4)
Hand washing with soap and water or alcohol rub can prevent the spread of Covid-19	310 (95.6)
Spitting in public can prevent Covid-19	289 (89.1)
There is definite treatment for Covid-19	42 (13)

distancing (3 to 6 feet gap between two individuals), use of homemade face mask by healthy individuals, observing cough etiquettes, frequent hand washing and avoiding close contact with people who are sick could help in controlling the spread of infection among the general public. Government health agencies, health care workers and the media can play crucial role in dispelling the myths of the general public about the disease.

Online survey during the outbreak is the most cost effective, rapid and trustworthy method of assessing the knowledge and awareness of general public during fast evolving infectious disease without having any direct contact with the participants and ensuring the safety of the general public. The pos-

sibility of the participants to explore the correct responses through internet might be there which was the extraneous variable and beyond the control of the researchers. However, this act of exploring the correct responses by the participants might have helped them in improving their knowledge and awareness about the disease. Further study can be done to explore the association of knowledge and awareness related to Covid-19 with selected variables to identify the less knowledgeable group. This would help in using the targeted approach in improving the knowledge and awareness among the general public.

### Recommendations

- Similar study can be repeated in community setting where more patients can be assessed to check the knowledge, practices and its association with other variables.
- Similar study can be done on a larger sample size to establish the generalisability.
- General information can be circulated via online platforms for the public awareness of various doubts and clarification.

### Nursing Implications

- Nurses should to take charge to provide need-based care education to the general public.
- Nurses should be able to convince the public to bust the myths related to Covid-19.
- The Nurse administrators should ascertain that all the nurses have undergone training related to Covid-19 and the infection control practices.
- The research related to the Covid-19 should be disseminated to create an awareness among general public and significant others.

### Conclusion

The general public in the India have average to good knowledge but poor to average awareness about Covid-19. Myths related to the disease; need to be dispelled by providing information campaign by the government health agencies, health care workers and the media.

### References

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