Awareness, Attitudes, Vulnerability Perception and Actions Related to COVID-19 Disease Among Relatives and Neighbours of COVID 19 Patients: A Cross-sectional Survey

Shirpurwar JD¹, Ingle SJ², Mote SB¹, Ingle JR³

¹Physician, Department of Medicine, Smt Kashibai Navale Medical College, Narhe, Pune 411041, India; ²Associate Professor, Department of OBGY, Smt Kashibai Navale Medical College, Narhe, Pune 411041, India; ³Professor, Department of Medicine, Smt Kashibai Navale Medical College, Narhe, Pune 411041, India.

ABSTRACT

Introduction: India is having an evolving outbreak of coronavirus disease 2019 (COVID-19) which is requiring social distancing, recurrent lockdowns, and other measures to contain it. Governments, Non-Government Organizations, Electronic Media, etc have been trying to make social awareness about the disease.

Objective of this study is to determine awareness, attitudes, vulnerability perception, and actions related to COVID-19 disease amongst relatives and neighbours of COVID 19 Patients.

Methods: We surveyed relatives and neighbours of patients that are admitted to COVID hospital via direct verbal communication / telephonic communication with the questionnaire to assess their awareness, attitudes, vulnerability perception, and actions related to COVID-19 disease. We interviewed a total of 532 participants (3.70% illiterate and 32.33% from rural areas) aged 17 years to 81 years.

Results: 17.29% of participants were convinced that they were about to get coronavirus infection "very likely" as they accompanied the patient while half (46.62%) of participants thought it is "somewhat likely". About one-third (36.09%) of participants were sure that they will "Not likely" catch the infection.

Conclusion: Most participants had critical knowledge of Coronavirus disease in 2019. Many of them were concerned about the disease and were positively motivated for preventive measures.

Key Words: 2019, Actions, Attitudes, Awareness, Corona, Coronavirus, Covid 19, India, Pandemic, Vulnerability Perception

INTRODUCTION

The evolving pandemic of coronavirus disease 2019 (COVID-19) is requiring social distancing and other measures to protect public health in India. The government has taken various steps to create awareness related to COVID 19 disease among Indian citizens to fight this pandemic effectively. Especially amongst those who are more vulnerable to complications of infection because of age and comorbid conditions. However, miscommunication regarding the imminent threat of COVID-19 may lead to public confusion and inaction or panic condition. Hence, we are evaluating Awareness, Attitudes, vulnerability perception and Actions Related to COVID-19 disease Among Relatives and Neighbours of COVID-19 Patients admitted to our hospital. The coronavirus

disease 2019 (COVID-19) disease has overcome geographical barriers achieving a remarkable proliferation. Because of that, different countries started public health protocols to control the spread of the virus, much of them related to social distancing, hand wash, and social distancing by doing lockdown of the cities.

This critical condition has raised a variety of reactions among the population, causing anguish, and massive fear.¹ It should be noted that studies during pandemics that occurred before have shown that the concern is mainly present in the unaffected population.² COVID-19 disease has evolved into a pandemic, requiring the population around the world to attend to rapidly changing messages about public health and take immediate actions to minimize their risk for infection

Corresponding Author:

Dr. Jayprakash D. Shirpurwar, Physician, Department of Medicine, Resident hostel 1, Room 22, Smt Kashibai Navale Medical College, Narhe, Pune 411041, India; Phone: +91 8788 518296; Email: jps21@gmail.com

ISSN: 2231-2196 (Print)

ISSN: 0975-5241 (Online)

Received: 03.11.2020

Revised: 06.01.2021

Accepted: 12.03.2021

Published: 30.03.2021

and the spread of the virus. In this global crisis, around the globe incidents of miscommunication regarding the imminent threat of COVID-19 have noted, leading to public confusion and inaction.³

Elderly people and those with underlying health conditions are not only at greatest risk for severe infection and death due to COVID-19 but also they have reduced ability to access and understand health information, make well-informed decisions, and take optimal health-promoting actions—a skill set commonly called “health literacy”.⁴ The perception of the risk of being infected by the Coronavirus in the general population would be mediated by the type of information that the individual holds. Disinformation or lack of information would be an additional barrier, increasing the probability of infection.⁵ An interesting fact to consider is that people make judgments based on their perception of risk, but not on the real risk.⁶ Another study conducted simultaneously at Amity University, Jamia Millia Islamia University, AIIMS at New Delhi to assess the Quality of life, depression, anxiety, stress levels in the Indian population due to COVID-19 and They found a significant difference in the Quality of life & Depression, Anxiety and Stress Scale (DASS-21) between the male and female participants and different age groups.⁷

In this background, we aimed to assess the awareness, attitudes, vulnerability perception, and actions related to COVID-19 disease among relatives of patients admitted to our hospital. Also we have assessed the awareness, attitudes, vulnerability perception, and actions related to COVID-19 disease among neighbours of patients admitted to our hospital after discharge.

MATERIALS AND METHODS

This survey is a cross-sectional direct verbal/telephonic survey of relatives and neighbours of patients that are admitted to the Dedicated Corona Care facility (COVID Ward / COVID ICU) of Smt Kashibai Navale General Hospital, Pune.

Prior Ethical committee approval was obtained.

Inclusion criteria: Relative or neighbours of the patient admitted to COVID 19 building (confirmed or suspected of COVID 19) of the hospital.

Exclusion criteria: Unwilling potential participant and presence of a severe and uncorrectable cognitive, visual, or hearing impairment that would preclude a participant's ability to complete interviews

Sampling Technique: Sequential sampling as the new patient gets admitted to our hospital

Procedure: Trained research interviewers will contact participants with a short set of questionnaires about COVID-19

directly or by telephone. Participant responses and consent will be recorded by interviewers. On average, surveys will take less than 5 minutes. We divided questionnaires into 3 sections; the first two for the patient's relatives or neighbours accompanying the patient, and the third section for the patient.

Besides, we asked two questions to coronavirus patients admitted to our hospital, to know better how they are feeling about the treatment given by friends and relatives. That questionnaire is labelled as section 3 in this study. Study was conducted for 4 months from 11 May 2020 to 10 August 2020.

RESULTS AND DISCUSSION

We interviewed a total of 532 participants and aged 17 years to 81 years. 156 (29.30%) participants were female and 376 (70.7%) were male. 20 participants (3.70%) were illiterate, while 96 participants (18.04%) were educated below the 10th standard. 32.33% of participants were from rural areas while the remaining were from urban areas. Detailed analysis of the responses of the participants to SECTION 1 and SECTION 2 of the questionnaires are given in Table 1 and Table 2 respectively.

We interviewed 133 coronavirus patients with two questions for the section 3 questionnaire as given in Figures 1 and 2.

Table 1: Analysis of the responses of the participants to SECTION 1 of the questionnaire

Section 01 Question 01		
Do you fear that you or your other family members might get Corona disease from the corona patient who has been admitted (as you were in contact with the patient before he or she got admitted?)	Frequency (n)	Percentage
A. Very likely	92	17.29%
B. Somewhat likely	248	46.62%
C. Not that likely	192	36.09%
D. Not at all likely	0	0.00%
Section 01 Question 02		
For the patient who is currently admitted, do you feel that the patient should be further quarantined even after discharge at some other place?	Frequency(n)	Percentage
Y.Yes	200	37.59%
N.No	332	62.41%

Table 1: (Continued)

Section 01 Question 03		
Are you are afraid that you can get Corona disease from the family members of the patient?	Frequency(n)	Percentage
A. Very likely	52	9.77%
B. Somewhat likely	296	55.64%
C. Not that likely	184	34.59%
D. Not at all likely	0	0.00%
Section 01 Question 04		
What precautions or lifestyle changes will you follow henceforth? during interaction with other persons (Multiple Options can be chosen)	Frequency(n)	Percentage
A. Wearing face mask most of the time	160	30.08%
B. Hand washing frequently	28	5.26%
C. Social distancing	344	64.66%
D. Any other not mentioned above	0	0.00%
Section 01 Question 05		
For the family members and neighbors of the Corona patient: COVID-19 awareness and concern	Frequency(n)	Percentage
How worried are you about getting coronavirus?		
A. Very worried	24	4.51%
B. Somewhat worried	264	49.62%
C. Little worried	244	45.86%
D. Not worried at all	0	0.00%
Section 01 Question 06		
Do you think that you will get sick from coronavirus at some point in time?	Frequency(n)	Percentage
A. I definitely will	20	3.76%
B. I probably will	296	55.64%
C. Its possible	216	40.60%
D. Not at all	0	0.00%
Section 01 Question 07		
How likely do you think it is that you or someone you know may get sick from coronavirus this year?	Frequency(n)	Percentage
A. Very likely	72	13.53%
B. Somewhat likely	288	54.14%
C. Not that likely	172	32.33%
D. Not at all likely	0	0.00%

Table 2: Analysis of the responses of the participants to SECTION 2 of the questionnaire

Section 02 Question 01,02,03		
Mean response(SD) to “on a scale of 1 to 10, how serious of a public health threat do you think the coronavirus is or might become? (1- being no threat at all,10-being a very serious public health threat)	09.96 + 0.24	
Mean response (SD) to “what percentage of people who get the coronavirus do you think will die as a result?”	0.031 + 0.01	
Mean response (SD) to ”what percentage of people who get the coronavirus do you think will have only mild symptoms?”	0.76 + 0.08	
Section 02 Question 04		
Correctly identified 3 probable symptoms of the coronavirus (dry cough, fever, difficulty in breathing)	Frequency(n)	Percentage
Y. Yes	508	95.49%
N. No	24	4.51%
Section 02 Question 05		
Correctly identified 3 prevention methods (social distancing, hand washing, and wearing a face mask) of the coronavirus	Frequency(n)	Percentage
Y. Yes	520	97.74%
N. No	12	2.26%
Section 02 Question 06		
How much has the coronavirus changed your daily routine?	Frequency(n)	Percentage
A. A lot	464	87.22%
B. Some	64	12.03%
C. A little	4	0.75%
D. Not at all	0	0.00%
Section 02 Question 07		
Are you changing any plans that you have made because of the coronavirus?	Frequency(n)	Percentage
Y. Yes	188	35.34%
N. No	344	64.66%
D. don't know	0	0.00%

Figure 1: CORONAVIRUS Patient's response to the first question of section 3.

Figure 2: CORONAVIRUS Patient's response to the second question of section 3.

17.29% of participants were convinced that they were about to get coronavirus infection “very likely” as they accompanied the patient while half (46.62%) of participants thought it is “somewhat likely”. About one-third (36.09%) of participants were sure that they will “Not likely” catch the infection. 37.59% of participants felt that patients should be quarantined further even after discharge while the rest of them disagreed. 9.77% of participants believed that it is “very likely” to get corona disease from family members of the patient while 34.59% believed that the risk of getting coronavirus disease from a patient's family members is “not that likely”.

4.5% of participants were “very worried” about the risk of getting coronavirus infection while 45.8% were “little worried” about the infection. 3.76% of them believed that they “definitely will” get sick from coronavirus at some point in time. Almost all participants thought that coronavirus pandemic will become a serious public health threat. 95.49% of participants had correctly identified all three most common symptoms of coronavirus disease i.e dry Cough, fever, and difficulty in breathing. 97.74% of participants correctly

identified social distancing, hand washing, and wearing a face mask as three prevention methods for this ongoing pandemic.

The daily routine of 87% of participants was drastically affected by the Coronavirus disease pandemic and 35.34% of them had to change their preplanned event due to this pandemic. Despite this deadly infectious disease growing very rapidly in our country most of the patients (71%) have experienced caring attitudes towards them by their family members and friends while 22% of them experienced that their family members/friends/neighbours having somewhat fearful attitudes towards them.

56% of the Coronavirus patients were confident that the behaviour or attitude of their friends or neighbours will not change towards themselves after getting cured or discharged from the hospital, but 16% feared that it might change. A cross-sectional study with a questionnaire of relatives/neighbours of COVID 19 patients during the COVID-19 outbreak lead to some interesting facts. Most participants including those from rural areas, the elderly category, and uneducated groups had critical knowledge about COVID-19 disease and pandemic. They are well aware of the public threat posed by coronavirus disease and its preventive methods and are motivated to fight this pandemic.

CONCLUSION

Many of the participants were concerned about catching the disease but despite concern, their attitude towards their patients was positive and caring. Hence it is harmless to say that the awareness campaign strategy of various governments and nongovernment sectors (TV/electronic media/Newspapers/Radio) has been successful. With this positive attitude and hope, we will control this global pandemic.

Conflict of Interest: None.

IEC letter no. SKNMC/ ETHIC/APP/2020/640

ACKNOWLEDGEMENT

Authors acknowledge the immense help received from the scholars whose articles are cited and included in references to this manuscript. The authors are also grateful to authors/editors/publishers of all those articles, journals, and books from where the literature for this article has been reviewed and discussed.

Specific author's contribution:

JDS: Design the hypothesis of study.

SJI: Analyzed and reviewed the data and prepared the draft manuscript.

SBM: Conducted the survey and collected the information.

JRI: Reviewed the final manuscript and performed editing.

REFERENCES

1. Roy D, Tripathy S, Kar SK, Sharma N, Verma SK, Kaushal V. Study of knowledge, attitude, anxiety & perceived mental healthcare need in Indian population during COVID-19 pandemic. *Asian J Psychiatr* 2020;51:102083.
2. Ilesanmi O, Alele FO. Knowledge, Attitude and Perception of Ebola Virus Disease among Secondary School Students in Ondo State, Nigeria. *PLoS Curr* 2016;:ecurrents.outbreaks.c04b88cd-5cd03cccb99e125657eecd76.
3. Ioannidis JPA. Coronavirus disease 2019: the harms of exaggerated information and non-evidence-based measures. *Eur J Clin Invest* 2020;e13223.
4. Wolf MS, Gazmararian JA, Baker DW. Health Literacy and Functional Health Status Among Older Adults. *Arch Intern Med* 2005;165(17):1946.
5. Janjua NZ, Razaq M, Chandir S, Rozi S, Mahmood B. Poor knowledge – predictor of nonadherence to universal precautions for blood borne pathogens at first level care facilities in Pakistan. *BMC Infect Dis* 2007 Dec 24;7(1):81.
6. Smith RD. Responding to global infectious disease outbreaks: Lessons from SARS on the role of risk perception, communication and management. *Soc Sci Med* 2006;63(12):3113–3123.
7. Ali K, Mufti U, Sharma G, Mufti A. A Cross-Sectional Study to Assess the Quality of life, Depression, Anxiety and Stress Levels after 45 Days COVID-19 Lockdown. *Int J Curr Res Rev* 2020;12(22):108–114.