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RESEARCH ARTICLE

COMMUNITY AWARENESS OF COVID – 19 FOR THE HERD OF HARYANA: A WEB BASED SURVEY

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ABSTRACT

Background: COVID – 19 (Corona virus disease – 19) is an infectious respiratory disease caused by SARS-CoV-2. It was originated from Wuhan city, China and thereafter spread across the world. The present study was conducted to assess the community perception, awareness and perceived risk about COVID – 19 among population residing in Haryana. **Material and Method:** This cross-sectional online survey was conducted among population residing in Haryana. This was a questionnaire based study comprised of 14 close ended questions. Respondent demographic characteristics, awareness, information sources, knowledge and perceptions related to COVID-19 were recorded. Data were tabulated in MS excel and descriptive statistics were performed using Statistical Package for Social Sciences (SPSS) version 21. **Results:** Almost all participants heard about COVID – 19 (95.2%). Risk perception level towards COVID-19 was high. The majority of participants were aware of COVID-19 symptoms, able to correctly report modes of transmission and aware of measures for preventive measures. **Conclusion:** The present study concluded that the majority of the participants heard about COVID – 19. The study recommends that the government should use mass media like social media, internet, television, radio etc. on a large scale for spreading awareness regarding COVID – 19.

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INTRODUCTION

COVID – 19 is a respiratory disease caused by SARS-CoV-2. At the end of 2019, the emergence of novel corona virus in Wuhan (China) has led to a large global outbreak.⁽¹⁾ After that, it has rapidly spread across the world. So far, it has affected about 1436198 patient and caused a great public health concern.⁽²⁾ When infected, human show symptoms such as dry cough, sore throat, fever, difficulty in breathing, bilateral lung infiltrates etc. Some have developed fatal complications like acute respiratory distress syndrome (ARDS), impaired renal functions and renal failure etc.⁽³⁾ Firstly, the infection was reported in those who had some activities related to Wuhan wet market. After that, it starts appearing in those who did not visit the market. It has been reported that 31.3% of patients travelled to Wuhan and 72.3% of patients came in contact with people from Wuhan.⁽⁴⁾ Taken together, all these evidence indicates human to human transmission of COVID – 19. This infection is transmitted through inhalation of infected droplets while sneezing, cough, direct contact with the infected patient or contact with fomites etc. with an incubation period of 2-14 days.^(5,6) Some high-risk people like children, elderly people and people with weakened immune systems due to some systemic disease like cancer, diabetes mellitus or heart disease

are more prone to develop COVID – 19 complications.⁽⁷⁾ Eventually, it was declared as pandemic on 11 March 2020 by World Health Organization. Till now, there is no specific drug or vaccine is endorsed for prevention and it has become the global threat. Early diagnosis and identification of risk factors are the backbone of management of COVID – 19.^(8,9) Preventive measures are of utmost importance for prevention. To break the transmission chain of COVID – 19 virus, it is necessary to adopt preventive measures like simple hygiene and sanitation measures and thus halt the major pandemic disease.⁽¹⁰⁾ There is no exception that each and every one somehow should have appropriate knowledge and awareness regarding COVID – 19 to prevent the spread. Truly, WHO has started many online programmes to raise awareness, perceive risk and preventive strategies against COVID – 19.

The government of India is already dispersing information through various means.^(11,12) It is very important to increase the level of awareness, knowledge to effectively prevent the disease. To facilitate the management of COVID-19, there is an urgent need to figure out the public's awareness of COVID-19 at this demanding moment. Keeping all these in view, the present study was conducted to assess the community perception, awareness and perceived risk about COVID – 19 among population residing in Haryana.

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MATERIALS AND METHODS

A web based open survey was conducted in accordance with CHERRIES guidelines (Checklist for Reporting Results of Internet E-Surveys).⁽¹³⁾ It was conducted among population residing across Haryana. A close ended 14 items questionnaire was designed using a template provided by the Google Forms to cover the domains of demographic characteristics, awareness, information sources, knowledge and perceptions related to COVID-19.

Questionnaire was sent via Whatsapp application as a web link along with the text stating the title and purpose of the study using snowball sampling i.e. link was sent to friends or added contact person on the phone and then was forwarded to the next friend circle across India. It was purely voluntary survey where participants were asked to respond to the questionnaire if they were willing to participate. No incentives were offered. The final sample consisted of 250 study participants. Statistical analysis was undertaken using IBM SPSS version 21. Frequency distribution was used for descriptive analysis.

RESULTS

The present study comprised of 250 subjects residing in Haryana, India. The study reported that 172 were male respondents while the remaining were females. Majority of the study subjects were educated up to higher secondary while only 4% were illiterate (Table 1). The study reported that majority of the participants (95.2%) had heard about new corona virus disease. Out of 250 participants, 93.2% participants could mention the COVID – 19 is a viral disease. Regarding source of information of COVID – 19, about half of the participants (49.6%) reported television/radio while only 12.8% reported health unit/health worker. When subjects were asked about risk of COVID – 19, 86.8% considered it to be very dangerous.

Regarding the knowledge on its mode of transmission, droplet infection and direct contact with infected persons were identified by highest proportion. Regarding symptoms related to this infection, cough/sneezing and fever were the most frequent answers. When asked about the knowledge they would like to know, large proportion wanted to know the protective measures of the disease (Table 2)

Table 1. Demographic characteristics

Socio-demographic characteristics	N(%)
Sex	
• Male	172(68.8%)
• Female	78 (31.2%)
Age	
• 18-25	112
• 25-35	98
• 36-45	30
• >45	10
Education	
• Illiterate	10 (4%)
• Matric	60 (24%)
• Higher Secondary	96 (38.4%)
• Graduate	35 (14%)
• Post graduate	49 (19.6%)

Table 2. Awareness about COVID - 19

Characteristics	N(%)
Have you ever heard about new corona virus disease (COVID – 19)	
• Yes	238 (95.2%)
• No	12 (4.8%)
What do you know about COVID – 19?	
• I don't know anything	5 (2%)
• It's a virus that can cause a disease	233 (93.2%)
• It's a government's programme	4 (1.6%)
• It's a TV/radio campaign	81 (3.2%)
Source of information	124 (49.6%)
• Television / Radio	72 (28.8%)
• Social media / WhatsApp	32 (12.8%)
• Health unit/Health care worker	22 (8.8%)
• Family members / Friends	22 (8.8%)
Which channel/who do you trust the most related to coronavirus?	
• Television / Radio	98(39.2%)
• Social media / WhatsApp	75(30%)
• Health unit/Health care worker	55(22%)
• Family members / Friends	22(8.8%)
How dangerous do you think the new corona virus risk is?	217 (86.8%)
• Very dangerous	18 (7.2%)
• More or less dangerous	15 (6%)
• Is not dangerous	
Who do you think is at highest risk to get the corona virus?	185 (74%)
• Children under 5 years old	112 (44.8%)
• Adults	232 (92.8%)
• Elderly persons	168 (67.2%)
• Pregnant women	229 (91.6%)
• Health workers	215 (86%)
Modes of transmission*	217 (86.8%)
• Droplets from infected people	145 (58%)
• Direct contact with infected people	125 (50%)
• Touching contaminated objects or surfaces	198(79.2%)
• Eating contaminated food	215 (86%)
Main symptoms*	
• Coughing / sneezing	168 (67.2%)
• Fever	95 (38%)
• Shortness of breath and breathing difficulties	20 (8%)
• Muscle pain / Headache	
• Don't know	
Do you know how to prevent it?*	224 (89.6%)
• Wash your hands regularly using alcohol or soap and water	203 (81.2%)
• Cover your mouth and nose when coughing or sneezing	212 (84.8%)
• Avoid close contact with anyone who has a fever and cough	85 (34%)
• Avoid contact with animals	19 (7.6%)
• Don't know	
Do you consider important to take actions to prevent the spread of coronavirus in your community?	241 (96.4%)
• Yes	9 (3.6%)
• No	0 (0%)
• Don't know	
What to do if you or someone from your family has symptoms of this disease?	20 (8%)
• I will look for a more experienced relative to advise me on what to do	185 (74%)
• I will go to the hospital / health unit	5 (2%)
• I will look for the traditional healer	40 (16%)
• I would stay in quarantine	
What more would you like to know about the disease?*	235 (94%)
• How to protect yourself from the disease?	124 (49.6%)
• Symptoms of the new corona virus disease	159 (6%)
• How it is transmitted	

* - Multiple answers

DISCUSSION

COVID-19 is considered to be fatal relative of SARS and MERS. It is highly contagious and caused by corona virus.⁽¹⁴⁾

In the past few months, COVID – 19 has spread very fast worldwide and considered as a pandemic. Simple preventive measures can be a very crucial in spreading and controlling of disease.⁽¹⁵⁾ To set preferences in information campaigns on COVID-19 by public health authorities and the media, the data of this study could be useful. This survey provides an insight on the level of risk perception and awareness against COVID – 19. The present survey included a total of 250 samples from Haryana in which males were dominant. Only 22.2% participants believed that information from health care unit is reliable and trustworthy. Regarding transmission, majority of the participants have knowledge that COVID – 19 is transmitted through droplets or direct contact with infected person. Only 8% of the participants don't know regarding symptoms of diseases while the fever, cough and shortness of breath were reported by majority of the participants. All most all of the participants had knowledge regarding preventive measures and agreed that it is very crucial to take actions for prevention of the disease. Majority of the participants wanted to gain more knowledge regarding the prevention and protection from the disease.

Knowledge of the people had great impact in preventing the spread of infection. The current measures to defeat COVID-19 is to control the source of infection, use infection control measures like hygiene maintenance; and quarantine facility and supportive care for patients.⁽¹⁶⁾ This was reflected by most of the study participants. The risk perception was very important to intensify the pandemic control. While, a minor proportion (6%) believed that COVID – 19 is not dangerous to public health, majority of them believed it to be very serious problem. This was in consistent with the study conducted by Kwok *et al* in Hong Kong.⁽¹⁷⁾ Regarding the perceived risk to infection, some of the participants, perceived that adults had less chance of become infected with the disease. This finding was in agreement with the study conducted by Mya *et al* among Myanmar population.⁽¹⁸⁾ Preventive measures such as hand hygiene, cough/sneeze etiquettes and distancing from infected persons were reported by most of the participants which is in line with the study conducted by Mya *et al* and Kwok *et al*.^(17,18) To break the chain of transmission of infection and prevention, adequate knowledge should be present among population regarding the disease. One good outcome from this study was that the majority of the participants had heard about COVID – 19 and had knowledge regarding the infection and prevention. Though the knowledge regarding COVID – 19 is good among population yet there is need for formulation of improved public awareness programmes via mass media. This study has some limitations. First and foremost, the present online survey was conducted online. Hence, responses of those who are without internet such as elder population, rural population were belittled. They are more likely to have poor knowledge, inadequate and inappropriate preventive measures against COVID-19. The relatively low response rate is other limitation which resulted in a smaller than expected sample size.

Conclusion

To conclude, the mass media being a primary source of information for the common public should be engaged advantageously for boosting public awareness. This will also aid in formulating programs, which will eliminate the commonly held misconceptions about COVID – 19. By simple preventive measures such as hygiene and sanitation for cough

and respiratory problems, we can break the continuity of COVID – 19 infection in the community. The present study recommends that healthcare functionaries should enhance their information, education, and communication activities so that knowledge regarding spread, signs and symptoms, aetiology, mode of transmission and preventive measures should be conveyed. The government should use mass media like social media, internet, television, radio etc. on a large scale for spreading awareness regarding COVID – 19. Thereby, proper knowledge and awareness will help in taking effective steps to prevent the spread of infection.

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