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Awareness, Attitude & Knowledge of COVID-19 amongst North Indian Population: Mirror of an Outburst Scenario

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Abstract

Context: In the current era, the evolving pathogen, CoVs was originated anonymously in a patient suffering from pneumonia in Wuhan in December 2019 has drawn implausible care around the world. **Aim:** Its aim was to assess the knowledge, attitudes and degree of awareness among the North India population of different ages towards COVID-19 through a well-formatted questionnaire. **Methods and Materials:** A cross-sectional study of 384 participants enlisted from various places was conducted through an effective and dependable questionnaire including socio demographic and COVID-19 knowledge data in the population of Northern India. **Statistical Analysis Used:** ONE-WAY ANOVA test was used to illustrate statistical differences and result came as significant at ($p<0.05$). **Result:** Maximum participants were males (52%) of age 40-59 years (39%); secondary passed (12%) and people working in a private sector (12%). **Conclusion:** Due to collaboration of all the sources as social media, television, newspaper and health related advertisement public was having good knowledge about COVID-19.

Keywords: COVID-19, pneumonia, Wuhan

1. Introduction

Currently, the out burst scenario of coronavirus came into picture on Dec 8, 2019, where ample number of cases were reported in Wuhan, Hubei province, China in which patient was suffering from pneumonia of unknown aetiology[1-3]. On investigation it was evaluated that mostly patients worked at or lived around the local Huanan seafood wholesale market, where live animals were also on sale.

On Jan 7, Chinese Center for Disease Control and Prevention (CDC) recognized a novel coronavirus by the collection of sample from throat of a patient, and was laterter medas 2019-nCoV by WHO[4].

It is a human transmission disease which principally arises when any infected person sneezes, the production of respiratory droplets can be firmly enter through the mouth or nasal mucosa and lungs of people with inhaled air causing respiratory complications[5-7]. COVID-19 is a life-threatening disease which can be transmitted from asymptomatic patients as well[8].

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The present study was deliberated to assess the knowledge, attitudes and degree of awareness among the North India population of different ages towards COVID-19 through a well-formatted questionnaire.

2. Materials and Methods

2.1 Study Design and Study Population

The present study was a cross-sectional study conducted amongst 384 participants enlisted from various places through a well formatted questionnaire, consisting of 10 questions for the evaluation of knowledge, attitudes, and awareness amongst them.

2.2 Estimation of the Sample

It was done by using $n = P(1-P)Z^2/E^2$, assuming unknown prevalence of 50%, Z = 1.96, E = 0.05, confidence level = 95% (margin of error = 5%), and 80% power of the study.

The calculated sample size of this study is 384 participants.

2.3 Inclusion and Exclusion Criteria

Consecutive samples of North Indian participants, all male and female were included in the current study with the age ranges between 20 years to >60 years and Medical students and health care providers were excluded.

2.4 Data Collection and Analysis

For data collection, a well formatted questionnaire including multiple-choice questions written in English, was given and collected personally from the participants after they had been completed independently. All questionnaires were attached with an acknowledgment letter pertaining the purpose of the study and they were informed that their participation is optional, with the right of withdrawal at any stage of the study.

The questionnaire included:

Socio demographic data (age, gender, educational level, and occupation)

Questions related to the disease knowledge (mode of infection, clinical picture, methods of control, and sources of information).

Questions relating to assess the knowledge, attitudes & awareness and regarding COVID-19

2.5 Statistical Analysis

Data entry and analysis was conducted using Statistical Package for Social Sciences version 22.0. The ONE-WAY ANOVA test was used to illustrate statistical differences was performed among various groups. The *f* - ratio value is 8.29605. The p-value is 0.000151. The result is significant at ($p<0.05$).

3. Results

3.1 Sociodemographic Characteristics

There was a total of 384 participants (males = 52% and females = 48%), maximum of which belongs to the age between 40-59 years (35%). The respond which we got was from educated field who have completed their university (27%) and belongs to the private sector (29%) (Table 1).

Table 1. Sociodemographic details of study

Sociodemographic Details	Frequency	%
Age (in Years)		
20-39	122	32%
40-59	136	35%
>60	126	33%
Gender		
Males	198	52%
Females	186	48%
Education level		
Uneducated	89	23%
Secondary	93	24%
University	102	27%
Higher	100	26%
Occupation		
Unemployed	80	21%
Government	98	26%
Private	113	29%
Retired	93	24%

3.2 Knowledge Related to COVID-19

The global knowledge related to COVID-19 was reported in (Table 2). The majority of the population knew that COVID-19 is a viral disease (28%) which may be through contact i.e., from person to person (26%). Most of them were well aware of its spread, that it spreads through

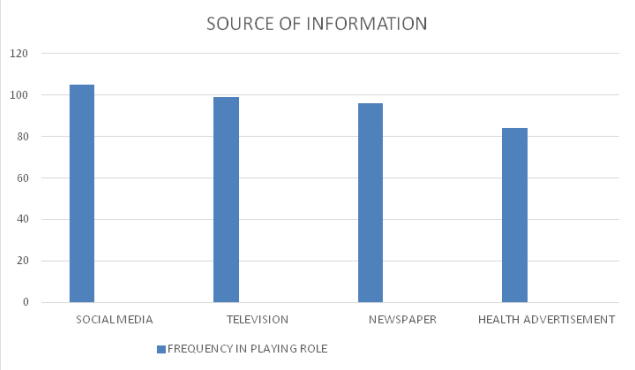
Table 2. Knowledge about the disease caused by COVID-19

SRNO	Questionnaire	Correct	%
1.	Cause of the disease		
	Virus	109	28%
	Immunodeficiency	92	24%
	Inherited disease	85	22%
	Disease is infectious, can be spread from person to person.	98	26%
2.	Mode of transmission		
	Droplets after sneezing/ coughing	111	29%
	Shaking hands with infected person	106	28%
	Touching contaminated surface	97	25%
	Blood	70	18%
3.	Is it safe to eat meat & poultry during coronavirus outspread?		
	Unsafe	117	30%
	Safe if washed, cooked at high temperature	146	38%
	Prepared under good hygiene	121	32%
4.	Signs & Symptoms		
	Fever	114	30%
	Shortness of breath	99	26%
	Cough	90	23%
	Nausea, vomiting	81	21%
5.	Incubation period		
	Immediate	91	24%
	1-3 days	67	17%
	5-6 days	109	28%
	1-14 days	117	31%
6.	Prevention		
	Washing hands with soap	100	26%
	Wearing face masks	94	24%
	Staying at home	97	25%
	Avoid touching eyes, nose, mouth	93	24%
7.	Most common cause of spread of infection		
	Overcrowding	138	36%
	Undiagnosed	116	30%
	Poor infection control	136	35%
8.	Management		
	Supportive treatment at home	90	23%
	Hospitalization	96	25%
	Intensive care	112	29%
	No drug treatment	86	22%
9.	Concern		
	Government should isolate infected patients.	109	28%
	Stay at home.	99	26%
	Government should restrict travel from and to the areas of the disease to avoid spread of disease.	103	27%
	Schools should be closed.	73	19%
10.	Source of information		
	Social media.	105	27%
	Television.	99	26%
	Newspaper.	96	25%
	Health advertisement	84	22%

droplets after sneezing/coughing (29%). There is a myth whether it is safe to eat meat and poultry, but around (38%) people said, it can be eaten if it is washed properly and cooked at high temperature. Participants were well aware of the symptoms as fever (30%). Around (31%) of the participants said that the incubation period is about 1-14 days. For its prevention around (26%) of them showed their response that it can be prevented by washing hands with soap however (24%) of them said that wearing face masks and avoid touching eyes, nose, mouth can also be useful and another precaution could be by staying at home (25%). Most of the common cause of spread of infection could be over crowding at one place (36%). This out burst can be managed by giving intensive care (29%) and Government has shown its concern by isolating infected people (28%). Their source of information was social media (27%) (Graph 1).

Table 3. Evaluation of awareness of the disease according to their responses

SocioDemographic details	Transmission	Signs & Symptoms	Prevention	Management	Std dev.
Age (in years)					
20-39	45 (12%)	43 (11%)	31 (8%)	30 (8%)	13.5781
40-59	52 (14%)	51 (13%)	33 (9%)	31 (8%)	
>60	18 (5%)	19 (5%)	21 (6%)	10 (3%)	
Gender					
Males	63 (16%)	51 (13%)	39 (10%)	46 (12%)	8.2635
Females	55 (14%)	47 (12%)	38 (10%)	45 (12%)	
Education level					
Uneducated	9 (2%)	8 (2%)	10 (3%)	5 (1%)	12.6227
Secondary	47 (12%)	34 (9%)	33 (9%)	29 (8%)	
University	41 (11%)	36 (9%)	30 (8%)	27 (7%)	
Higher	23 (6%)	19 (5%)	16 (4%)	17 (4%)	
Occupation					
Unemployed	10 (3%)	7 (2%)	8 (2%)	7 (2%)	12.6386
Government	41 (11%)	36 (9%)	30 (8%)	27 (7%)	
Private	47 (12%)	34 (9%)	33 (9%)	29 (8%)	
Retired	24 (6%)	18 (5%)	15 (4%)	18 (5%)	



Graph 1. Depicting source of information regarding COVID-19.

Assessment of the knowledge, attitudes & awareness and regarding COVID-19: This was reported in (Table 3).

Knowledge about mode of transmission was most commonly found amongst males (63%) of age group 40-59 years (52%); and amongst secondary passed respondents (47%) working in a private sector (47%).

Knowledge about signs and symptoms was most commonly found amongst males (51%) of age group 40-59 years (51%); and amongst university graduated (36%) and people doing government jobs (36%).

Knowledge about signs and symptoms, was most commonly found amongst males (39%) of age group 40-59 years (33%); and amongst secondary passed (33%) and people doing private jobs (33%).

Knowledge about signs and symptoms, was most commonly found amongst males (46%) of age group 40-59 years (31%); and amongst secondary passed (29%) and people doing private jobs (29%).

4. Discussion

Presently, the scenario of whole world is becoming worst day by day henceforth the information and education should be considered and public should be well aware of it. It has a tremendous impact and has also increased people's contemplation towards it. The present study demonstrated about the occurrence, transmission, signs & symptoms, preventive measures of COVID-19 infection.

Till so far, many studies have scrutinized various levels of knowledge and practices about other infectious disease epidemics, such as severe acute respiratory syndrome, avian influenza, and the influenza strain H1N1[9]. But a literature search has not found any public reports on knowledge regarding coronavirus among the population in Northern India until now. Therefore, this survey could bring out the mirror image of the knowledge, attitude and awareness of the population and would be beneficial in the future.

In the present study mostly, people were knowing about the mode of transmission that it is through droplets after sneezing/coughing (29%), and fever (30%) is the most common and first symptom. People were well aware of the fact that by taking care of precautionary measures this infectious disease can be control to a certain extent like washing hands with soap (26%), wearing face masks (24%), staying at home (25%) and by avoiding touching of eyes, nose, mouth frequently (24%). Apart from this public should maintain social distancing, should avoid overcrowding (36%) and by chance a person gets affected proper intensive care should be given (29%) and Government is taking care to keep such patients in quarantine i.e., under isolation (28%).

In our study, majority of participants were well aware of an enduring coronavirus situation in the country, they were getting updated through various means such as social media (27%), television (26%), newspaper (25%), health advertisement (22%).

5. Conclusion

On evaluating the present study, we concluded that the level of knowledge, attitude and awareness was good amongst the study group regarding COVID-19. The facts composed in this survey could be used as baseline data to observe public insight and performance in the future epidemic of COVID-19 and media resources are best to do it.

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