Original Article

Knowledge, Attitude and Practices towards COVID-19 among Adults in a Rural area of Sonepat: A Cross-Sectional Study

Pankaj Yadav[1], Sanjay Kamar Jha[2], Babita Rani[3], Anita Punia[4], Tanvi Goel[5]

[1,5]Postgraduate, [2]Professor and Head, [3,4]Professor, Department of Community medicine, BPS Government Medical College for Women, Khanpur Kalan, Sonepat.

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Abstract

Background: The COVID-19 pandemic posed a major global health challenge. India has taken unprecedented and stringent preventive and precautionary measures against COVID-19 to control its spread. Public adherence to preventive measures is influenced by their knowledge and attitude towards COVID-19. This study was aimed to access the knowledge, attitude, and practices (KAP) towards COVID-19 among Indian adults

Methods: This cross-sectional study was performed on 576 participants from August 2021 to July 2022 in three villages under CHC Juan, Sonepat, Haryana using multistage random sampling. A pretested semi structured proforma comprising questions regarding knowledge attitudes and practices with respect to COVID-19 was used. Data were analysed using R statistical software.

Results: Participants were male (61.8%) & married (89.6%) & the mean (SD) age was 43.11 (15.66) years. Participants had overall good knowledge of COVID-19 as 82.6% knew that the disease was contagious. The most common symptoms of this disease reported by participants were cough, fever, body ache, difficulty in breathing in sequence. Almost 90% had positive attitude about receiving vaccine against COVID-19. Most participants washed their hands (92.4%) and used a facemask (92%), avoided crowded places (88.9%) to safeguard self from COVID-19 infection.

Conclusion: The knowledge on COVID-19 preventive measures was good and majority held positive attitude and practices.

Keywords: Knowledge, Attitude, Practices, COVID-19, Pandemic

Introduction

The new Coronavirus disease 2019 (COVID-19) pandemic has emerged as the most important public health challenge of the 21st century and has caused enormous health and economic losses globally.[1] First human case of Severe Acute Respiratory Syndrome Coronavirus-2 was reported in Wuhan, China in December 2019. Covid-19 is a highly contagious disease transmitted mainly through respiratory droplets and its major clinical manifestations include fever, dry cough, runny or stuffy nose, sneezing, sore throat, shortness of

Corresponding Author: Pankaj Yadav, Postgraduate, Department of Community Medicine, BPS Government Medical College for Women, Khanpur Kalan, Sonepat.

Mobile: 8930895893

E-mail: dr.pankaj26@gmail.com

breath, headache, body aches, fatigue, chills, and loss of taste and smell.[2] High surge in the number of cases worldwide led the WHO to declare it as "a public health emergency of international concern" on January 30th; 2020.[3]

As of October 06th, 2022, there were 611.4 million confirmed cases in the world and 44 million confirmed cases in India, and the death tolls has reached 6.5 million and 5,28,449 respectively.[4,5]

Although different actions taken in fighting the outbreak, the success or failure of these efforts is largely dependent on public behaviour. Specifically, public adherence to preventive measures is of key importance to avert the spread of the disease. According to the knowledge, attitude, and practices (KAP) theory, the state of society, behaviours, understanding, and habits significantly impact willingness to consider behavioural improvement and adherence to preventive strategies. Individuals' knowledge, attitude, and practices (KAP) towards preventive and precautionary measures for COVID-19 is essential to control the spread of the disease.[6,7] Several KAP studies about COVID-19 have been conducted worldwide and in India but most of the studies were done among healthcare workers. There is a dearth of data regarding KAP towards COVID-19 in rural Sonepat. So, this study was conducted to assess the KAP regarding COVID-19 among adults in a rural area of district Sonepat, Haryana.

Material and Methods

This community based cross-sectional study was conducted from August 2021 to July 2022 among adults of three villages under CHC Juan, Sonepat, Haryana which is field practice area of the Department of Community Medicine, Bhagat Phool Singh Government Medical College, Khanpur Kalan, Sonepat. Assuming the prevalence of knowledge, attitude and practices as 50%, the sample size was calculated for proportions considering 95% confidence interval, margin of error 0.05 with design effect 1.5. The calculated sample size was 576. Multistage random sampling method was opted for recruitment of participants. Participants aged 18 years and above who were residents (6 months or more) of the study area and willing to participate were included in the study.

The study objectives were explained to the participants. Data were collected after taking written informed consent from the participants. The ethical clearance was obtained from the Institutional Ethics Committee. For data collection, a pretested semi structured proforma was used to interview the participants. It included questions related to awareness, attitude and practices towards COVID-19. R statistical software was used to perform all statistical analyses. The results were described in terms of frequency and proportion.

Results

Table 1: Socio-demographic characteristics of the study participants (n=576)

Age (Years)	Frequency (n)	Proportion (%)
18-29	143	24.8
30-39	112	19.4
40-49	125	21.7
50-59	76	13.2
60 and above	120	20.8
Gender		
Female	220	38.2
Male	356	61.8
Marital status		
Married	516	89.6
Unmarried	60	10.4
Occupation		
None	341	59.2
Labourer	111	19.3
Business	9	1.6
Profession	7	1.2
Cultivation	72	12.5
Service	36	6.3
Educational Status		
Illiterate	137	23.8
Can Read and Write	40	6.9
Primary	77	13.4
Middle	80	13.9
High School	109	18.9
Secondary School	85	14.8
Graduate and above	48	8.3
Socioeconomic Status		
Social Class I	32	5.6
Social Class II	144	25.0
Social Class III	200	34.7
Social Class IV	172	29.9
Social Class V	28	4.9

- Table 1 shows the sociodemographic characteristics of the study participants. Out of total 576 participants majority were males (61.8%) and married (89.6%). The mean (SD) age of participants was 43.11 (15.66 years). Around one-fourth (24.8%) were in age group 18-29 years followed by 21.7% in age group 40-49 years. More than half (59.2%) of the participants were un-employed, and almost one fifth (19.3%) were laborer. Almost one fourth (23.8%) of study participants were Illiterate whereas approximately one fifth (18.9%) had completed their high school. Majority (34.7%) belonged to Social Class III followed by Social Class IV 172 (29.9%) as per Modified B G Prasad Scale 2020.

Table 2: Distribution of study participants according to their knowledge about COVID-19 (n=576)

Characteristics	Yes	No	Don't know
	n (%)	n (%)	n (%)
COVID-19 viral disease	237 (41.1)	7 (1.2)	332 (57.6)
COVID-19 Contagious	476 (82.6)	25(4.3)	75(13.0)
COVID-19 Spread through Sneezing	480 (83.3)	23 (4.0)	73 (12.7)
COVID-19 Spread through Coughing	482 (83.7)	22 (3.8)	72 (12.5)
COVID-19 Spread through Touching	372 (64.6)	109 (18.9)	95 (16.5)
COVID-19 Spread through Food	361 (62.7)	97 (16.8)	118 (20.5)
Get COVID-19 from covid-19 vaccine	22 (3.8)	400 (69.4)	154 (26.7)
Have COVID-19 without knowing it	146 (25.3)	178 (30.9)	252 (43.8)
Symptoms of COVID-19			
Fever	520 (90.3)	12 (2.1)	44 (7.6)
Cough	529 (91.8)	14 (2.4)	33 (5.7)
Difficulty Breathing	469 (81.4)	36 (6.3)	71 (12.3)
Sore Throat	431 (74.8)	40 (6.3)	105 (12.3)
Runny nose	245 (42.5)	81 (14.)1	249 (43.2)
Tiredness	464 (80.6)	31 (5.4)	81 (14.1)
Body ache	473 (82.1)	26 (4.5)	77 (13.4)
COVID-19 can lead serious complications	534 (92.7)	13 (2.3)	29 (5.0)
COVID-19 can be prevented with the vaccine	477 (82.8)	9 (1.6)	90 (15.6)
Antibiotic can cure COVID-19	66 (11.5)	184 (31.9)	326 (56.6)

Table 2 shows knowledge of study participants regarding COVID-19 disease. Among study participants, more than half (57.6%) were unaware about viral aetiology of disease but majority (82.6%) knew that disease was contagious. Maximum participants knew about its spread through sneezing (83.3%), coughing (83.7%), touching (64.6%) and through food (62.6%). Approximately seventy percent (69.4%) knew about the fact that COVID-19 vaccine did not cause Corona virus disease and 43.8% were unaware of having COVID-19 without knowing it. Most commonly reported symptom was Cough (91.8%), followed by fever (90.3%), Body ache (82.1%) and Difficulty Breathing (81.4%). More than ninety percent (92.7%) agreed that COVID-19 could lead serious complications. Majority (82.8%) of study participants believed COVID-19 as vaccine preventable disease. In response to the question antibiotic can cure COVID-19, more than half (56.6%) showed unawareness.

Table 3: Distribution of study participants according to their attitude about COVID-19 (n=576)

Characteristics	Agree	Don't Agree	Don't know
	n (%)	n (%)	n (%)
Pandemic led Millions of Deaths	570 (99)	0 (0)	6 (1.0)
Vaccine best way to prevent COVID-19	470 (81.6)	7 (1.2)	99 (17.2)
Vaccine must be received by everyone	518 (89.9)	16 (2.8)	42 (7.3)
Vaccine will stop COVID-19 Pandemic	438 (76.0)	8 (1.4)	130 (22.6)
Get Vaccine if Doctor recommends it	571 (99.1)	5 (0.9)	0 (0)
Get Vaccine if Government recommends it	567 (98.4)	6 (1.0)	3 (0.5)
More Complications elderly/Young	523 (90.8)	38 (6.6)	15 (2.6)

Table 3 shows attitude of study participants about COVID-19 disease. Utmost all (99%) study participants agreed the fact that COVID-19 pandemic had led millions of deaths. Majority of participants considered vaccine as best way to prevent COVID-19 (81.6%), vaccine must be received by everyone (89.9%) and it would stop the Pandemic (76%). Almost all participants had positive attitude towards vaccine acceptance if recommended by doctor (99.1%), and government (98.4%). More than ninety percent believed that COVID-19 cause more complications in elderly/young.

Table 4: Distribution of study participants according to Practices (Behavioural Responses) to COVID-19 Pandemic (n= 576)

Characteristics	Yes	No
	n (%)	n (%)
Hand washing with soap and water	532 (92.4)	44 (7.6)
Alcoholic hand gel use	373 (64.8)	203 (35.2)
Cover Face with Cloth/ Mask	530 (92.0)	46 (8.0)
Covering mouth while coughing/sneezing	543 (94.3)	33 (5.7)
Increased frequency to clean/disinfect things might touch	263 (45.7)	313 (54.3)
Kept away from crowded places	512 (88.9)	64 (11.1)
Reduced Public Transport use	511 (88.7)	65 (11.3)
Cancelled/postponed social events	505 (87.7)	71 (12.3)
Reduced going shops	510 (88.5)	66 (11.5)
Avoid public spitting	547 (95.0)	29 (5.0)

Table 4 shows Practices of study participants to COVID-19 Pandemic. Participants had good hand washing practices with soap and water (92.4%), however lesser use of alcoholic hand gel (64.8%) was observed. Participants had good cough etiquette practices like Cover Face with cloth/Mask (92%), covering mouth while coughing/sneezing (94.3%), avoid public spitting (95%). Good social distancing practices like kept away from crowded places (88.9%), Reduced public transport use (88.7%), cancelled/ postponed social events (87.7%), reduced going shops (88.5%) were practiced by study participants.

Discussion

India is the second most populated country in the world; thus, a large number of citizens are at greater risk of transmission and mortality by COVID-19 in India, particularly among the children and elderly. Worldwide efforts to stop the spread of the virus have been made. These efforts are based on the general public's understanding of the disease, which is mainly regulated by their knowledge and attitude.

In the current study, there were a greater number of males (61.8%) than females (38.2%) majority (24.8%) of participants were within the age group of 18-29 years, reflecting the young generation's - who actively express their views and concerns about socially relevant issues - presence on social media platforms. Such young people's decision strongly reflects the community's perception, judgment, and attitude. In the current study, literacy rate was reported to be 76.2% which is in line with the average literacy rate of rural areas of Sonipat (76.93%).[8]

The etiological agent, signs and symptoms, disease transmission mode, prevention mechanisms,

and risk groups were all assessed in this study. Only 41.1% of participants in the current study were aware of the causative agent, however 82.6% of participants knew that COVID-19 was contagious suggesting that study participants understood disease transmission better, which may have kept them away from becoming infected. The findings of our study were higher than the studies by Serwaa D et al. (67.4%) and Mohamed NA et al. (55.9%).[9,10]

Participants in the current study were well-versed with the modes of COVID-19 transmission. The majority (83.7%) of participants reported respiratory droplets as the mode of spread. This is consistent with studies conducted in Pakistan (87%) and India (80%).[11,12]

Other modes of transmission reported by our study participants were touching 64.6% and food 62.7%. In a study conducted by Molla KA et al, 81.4% of participants reported disease transmission by touching contaminated material.[13]

A significant number of participants were aware of signs and symptoms of the disease. The majority of participants (90.3%) reported fever, followed by cough (91.8%), difficulty breathing (81.4%), tiredness (80.6%), and sore throat (74.8%), while only 42.5% were aware that runny nose was a symptom of COVID-19. This could be because of information obtained via newspapers, radio, television, flyers, and posters distributed by the local municipality government department.[14] This is in approximation with the findings of the studies conducted in India, Ethiopia, Ghana, and Iraq.[10,13,15,16]

Almost all participants agreed that COVID-19 can cause death (99%), and poses greater risks (90.8%) to elderly and children. The current findings of disease seriousness are consistent with the results of an online survey on the attitude and willingness of Chinese adults to receive Covid-19 vaccination (98.7%) and a study on COVID-19-related KAPs conducted among Indians (>90%).[12,17]

The vast majority of respondents (76%) were optimistic about the vaccine's ability to aid in the fight against the Covid-19 pandemic, which is consistent with the findings of Khune S et al (73.83%).[16] Positive attitudes and high confidence in COVID-19 control could be interpreted by the Indian government's unprecedented response in taking stringent control and precautionary measures such as the lockdown and suspension of all domestic and international flights, as well as the closure of all offices and educational institutions to protect citizens from COVID-19.

Being equipped with good knowledge and attitude toward pandemic or epidemic diseases does not guarantee that people will not contract the disease; practices play a critical role. Wearing masks (92%), maintaining social distancing (88.9%), washing hands (92.4%), and following respiratory etiquette when sneezing and coughing (94.3%) were all common precautions in this study. This indicated a high level of willingness among participants to make behavioural changes to protect against COVID-19. The findings of our study are remarkably similar to the findings of the study by Serwaa D et al, Ahmed N et al, Al-Qerem W et al, Khune S et al study.[10,11,15,16]

Conclusion

This study had found overall good knowledge, positive attitude and good preventive practices about COVID-19 among rural adults of Sonepat. Efforts targeting poor and illiterate sections of the society in rural areas should be intensified to improve KAP about COVID-19 and other upcoming pandemic diseases in future.

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Declarations

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