Original Research Article

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20213787

Study of knowledge attitude and practice towards COVID-19 among patients attending a tertiary care hospital in Durg district of Chhattisgarh

Mohd Junaid¹, Swapnil Shinkar^{2*}, Amol Patil¹

Received: 15 August 2021 **Accepted:** 15 September 2021

*Correspondence: Dr. Swapnil Shinkar,

E-mail: shinkars2008@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Poor knowledge, attitude, and practice (KAP) patterns among patients might reflect the danger of possible high transmission of COVID-19 and the need for awareness campaigns. The need of the hour is to gauge the knowledge, awareness and practices of the people to help prevent the further outbreak of COVID-19.

Methods: Questionnaire based cross sectional study was done for a period of 7 days to access the knowledge attitude and practice towards COVID-19 among patients attending a tertiary care hospital in Durg, Chhattisgarh.

Results: A total of 288 people participated in the study, majority of respondents were males 53% mean age was 39 ± 15.9 years. Overall, 80.4% of the participants had good knowledge, 68.6% of the participants had a positive attitude, 83.8% of the participants were following good practices. Gender and income influenced knowledge scores, being significantly higher in males and higher income individuals (p value <0.05) while attitude and practices scores had no significant association with gender and income group (p value >0.05).

Conclusions: Though the population demonstrated decent knowledge, appropriate practice, and positive attitude towards COVID-19 at the time of outbreak there is still need of on-going health education and awareness campaigns and need of policies and intervention that are more person centred.

Keywords: Attitude, COVID-19, Knowledge, Practice

INTRODUCTION

COVID-19 started from Wuhan China in December 2019 and since then has become a global pandemic which led to loss of millions of life worldwide. The disease is transmitted by respiratory droplets having an incubation period of 2-14 days, patients may develop fever, cough, dyspnoea, fatigue and sore throat or are commonly asymptomatic. The disease may be fatal and more vulnerable are those who are above 65 years with comorbidities. The World Health Organization (WHO) has declared COVID-19 as a public health emergency of international concern on January 30, 2020, and called all countries of the world for collaborative efforts to prevent

the rapid spread of COVID-19.² There is no definitive treatment available and curtailing the pandemic mainly depends on preventing the spread of infection. Therefore, prevention measures as mass vaccination, social distancing, face masks and public awareness campaigns are key players in controlling the pandemic.

Though the entire healthcare system is focused on prevention and containment of COVID-19 infection, timely diagnosis and treatment of other diseases are equally important. Patients seeking healthcare during this lockdown period have a higher risk of exposure, thus awareness of ways to mitigate infection likelihood is important. Poor knowledge, attitude, and practice (KAP)

¹Department of Community Medicine, Shri Shankaracharya Institute of Medical Sciences, Bhilai, Chhattisgarh, India ²Department of Community Medicine, Pandit Jawaharlal Nehru Memorial Medical College, Raipur, Chhattisgarh, India

patterns among these patients might reflect the danger of possible high transmission and the need for awareness campaigns.³

The need of the hour is to gauge the knowledge, awareness and practices of the people to help prevent the further outbreak of COVID-19. The main goal of the present study was to measure the level of knowledge, attitude, and practice concerning COVID-19 and to detect associated socio-demographic variables.

METHODS

It was a cross sectional study that took place for a period of 7 days (24 June 2021 to 30 June 2021). Study was conducted in OPD of a tertiary care hospital in Durg district of Chhattisgarh.

Study population

All patients attending the medicine OPD of the tertiary care hospital during the study period.

Inclusion criteria

All patients from the Medicine OPD who are willing to participate in the study.

Exclusion criteria

Patients not giving consent were excluded.

Sampling method

The sampling method used for the study was purposive sampling.

Statistical analysis

Statistical analysis was done using Epi Info software.

After taking proper consent a brief idea of the study was given to all the participating subjects. All the information for assessing the knowledge, attitude and practice was collected through a questionnaire. The questionnaire consisted of four main parts: 1) demographic data 2) knowledge about COVID-19; 3) attitudes towards COVID-19; and 4) practices relevant to COVID-19.

The final four-section questionnaire included: sociodemographic data: that collected participants' age, gender, residence (urban/rural), educational level, whether they or a family member/friend had been diagnosed (by a medical doctor) with COVID-19. Knowledge about COVID-19: consisted of questions about COVID-19 mode of transmission, vulnerable groups for infection, symptoms, treatment, prevention measures and mortality rate. The answer to each question was yes/no/I don't know choices, except for the question about the mortality rate. Attitudes towards COVID-19:

consisted of questions assessing optimism about the current situation; responsible public health attitudes; stigma against symptomatic individuals, healthcare professionals and Chinese people; and whether the participant believes in conspiracy theories about the disease. The possible answers to each question were agree/uncertain/ disagree. In addition, participants were asked to rate their fear of infection and the negative impact of the pandemic on their mental health on a scale from 1 to 10. Practices regarding COVID-19: included questions describing different practices regarding coughing and sneezing, hand washing, wearing masks and contact with people. The available answers to each question were yes/sometimes/no.⁴

RESULTS

Table 1 shows demographic data of the study subjects in which majority of respondents were males 53% mean age was 39±15.9 years and majority were self-employed 47.2% belonging mostly to Hindu religion 91.7%. 19.8% had history of COVID-19 infection and 41.7% were fully immunized for COVID-19.

Table 1: Demographic characteristics and COVID-19 confirmed infection rates among survey respondents.

Socio-demographic cha	Count (%) (n=288)	
Gender	Male	153 (53.1)
	Female	135 (46.9)
	Mean±SD	39±15.9
	18-30	122 (42.4)
Age (years)	31-50	99 (34.4)
	Greater than 50	67 (23.2)
	Government	39 (13.5)
Job	Private	78 (27.1)
100	Self employed	136 (47.2)
	Unemployed	135 (46.8)
Marital status	Married	178 (61.8)
Maritai status	Single/divorce	110 (38.2)
	Hindu	264 (91.7)
Religion	Muslim	9 (03.1)
Kengion	Christian	3 (01.0)
	Other	12 (04.2)
Have you had a	Yes	57 (19.8)
confirmed infection with COVID-19?	No	231 (80.2)
Do you know a friend	Yes	228 (79.2)
or a family member who had a confirmed COVID-19 infection?	No	60 (20.8)
Have you taken vaccine?	No	75 (26)
	Partial (single dose)	93 (32.3)
	Complete (two doses)	120 (41.7)

Table 2: Answer to knowledge questions about COVID-19 among survey respondents.

	Yes	No	I don't know
COVID-19 is a serious disease.	279 (96.9)	3 (1)	6 (2.1)
Regarding the mode of transmission of the virus			
Eating wild animals	132 (45.8)	99 (34.9)	57 (19.8)
Droplet transmission	264 (91.7)	3 (1)	21 (7.3)
Contact with infected person and then putting your hand on your face, mouth and nose.	282 (97.4)	6 (2.1)	0 (0)
The most vulnerable group of infection is			
Children (0-18 years)	135 (46.9)	66 (22.9)	87 (30.2)
Adults (18-50 years)	117 (40.6)	96 (33.3)	75 (26.1)
Elderly (more than 50 years)	261 (90.6)	6 (2.1)	21 (7.3)
Adults with chronic disease	273 (94.8)	3 (1)	12 (4.2)
The clinical symptoms of COVID-19 include			
Fever	285 (99)	3 (1)	0 (0)
Fatigue	252 (87.5)	6 (2.1)	30 (10.4)
Dry cough	264 (91.7)	12 (4.2)	12 (4.2)
Myalgia	216 (75)	3 (1)	69 (24)
Stuffy nose	243 (84.4)	12 (4.2)	33 (11.5)
Runny nose	237 (82.3)	33 (11.5)	18 (6.3)
Sneezing	210 (72.9)	60 (20.8)	18 (6.3)
Shortness of breath	285 (99)	3 (1)	0 (0)
Diarrhoea	198 (68.8)	42 (14.6)	48 (16.7)
Asymptomatic	264 (91.7)	3 (1)	3 (7.3)
Regarding treatment of COVID-19			
There is effective cure for it	150 (52.1)	96 (33.3)	42 (14.6)
The treatment is symptomatic only	192 (66.7)	48 (16.7)	48 (16.7)
Antibiotics are an effective treatment.	180 (62.5)	66 (22.9)	42 (14.6)
There are various drugs under trail.	270 (93.8)	18 (6.3)	0 (0)
Regarding prevention of COVID-19, which of the following is effective?			
Wearing medical masks	282 (97.9)	3 (1)	3 (1)
Avoiding crowded places	282 (97.9)	3 (1)	3 (1)
Isolation of infected individuals	288 (100)	0 (0)	0 (0)
Healthy diet and avoiding high-fat-containing diet	255 (88.5)	6 (2.1)	27 (9.4)

Table 3: Answers to attitude questions about COVID-19 among survey respondents.

	Positive attitude	Uncertain	Negative attitude
Do you believe that COVID-19 is global conspiracy?	123 (42.7)	51 (17.7)	114 (39.6)
Do you believe that COVID-19 pandemic will finally end?	162 (56.3)	48 (27.1)	48 (16.7)
Do you believe that India will able to control COVID-19 situation soon?	159 (55.2)	72 (25)	57 (19.8)
Since the outbreak, I seek more medical information about COVID-19 to keep updates.	249 (86.5)	36 (12.5)	3 (1)
Since the outbreak, I follow the recommendations to deal with the pandemic.	276 (95.8)	9 (3.1)	3 (1)
Since the outbreak, I am afraid of contacting anyone with ordinary influenza symptoms.	225 (78.1)	48 (16.7)	15 (5.2)
Since the outbreak, I am afraid of contacting any doctors except for the utmost necessity.	183 (63.5)	33 (11.5)	72 (25)

In Table 2 the correct responses to knowledge questions were given a score of 1, while incorrect/I don't know answers were given a score of 0 (hence knowledge

maximum score was 26). The mean knowledge score was 20.82±4.85. After estimating knowledge score for each individual, score of more than 18 was considered as good knowledge. Most of the respondents had good knowledge

about the mode of transmission (droplet transmission 91.7%), vulnerable group (adults with chronic disease 94.8%), symptoms (fever 99%), treatment and prevention of COVID-19.

Table 3 highlights the attitude of respondents towards COVID-19. Some positive attitude was seen as almost 86.5% respondents were seeking more information about the disease but on other hand they were more afraid of contacting people with ordinary influenza symptoms 78.1% and contacting doctors only when utmost necessary 63.5%. In terms of attitudes, the proper attitude was given a score of +1, the improper attitude was given a score of 0 (hence a maximum positive attitudes score of 7). A score of more than 4 was considered as good positive attitude.

Table 4 in terms of practice majority of respondents are following good COVID-19 behaviour as most of them cover their nose while sneezing or coughing 96.9%, wash their hands using soap and water 97.9% and cover their faces in crowded places 100%. Correct practice was given a score of 1, (sometimes) was given a score of 0.5 and incorrect practice was given a score of 0 (hence a maximum practices score of 13). The participants' responses to scale questions (from 1 to 10) were classified as low (1-3), moderate (4-7) or high (8-10).

Table 5 t-test shows that gender and income influenced knowledge scores, being significantly higher in males and higher income individuals (p value <0.05) while attitude and practices scores have no significant association with gender and income group (p value >0.05).

Table 4: Answers to practice questions about COVID-19 among survey respondents.

	Proper practice	Sometimes	Wrong practice
When coughing or sneezing, do you			
Cover your mouth and nose with tissue?	279 (96.9)	9 (3.1)	0 (0)
Throw away the used tissue into the bin?	73 (94.8)	195 (3.1)	10 (3.5)
Turn your face away from the surrounding people?	282 (97.9)	3 (1)	3 (1)
As for your hand, you wash them			
Before touching your eyes and nose.	55 (19)	177 (61.4)	55 (19)
After covering the nose while sneezing.	264 (91.7)	24 (8.3)	0 (0)
After coming from outside	199 (69)	86 (29.8)	3 (1)
Using soap and water.	282 (97.9)	0 (0)	6 (2.1)
Using concentrated alcohol.	219 (76)	30 (10.4)	39 (13.5)
Regarding wearing face mask, you			
Wear a face mask in crowded places.	288 (100)	0 (0)	0 (0)
Wear a face mask outside in general (not crowded)	214 (74.3)	68 (23.6)	6 (3.1)
Regarding the prevention measure from infection, you			
Avoid contact with an infected person	285 (99)	3 (1)	0 (0)
Avoid touching and shaking hands.	255 (88.5)	27 (9.4)	6 (2.1)
Avoid going to crowded places.	252 (84.5)	36 (12.5)	00 (0)

Table 5: Association of knowledge attitude and practice with gender and income.

Knowledge score (S_k)				
	Mean score	Standard deviation	P value	
Male	19.57	5.75	0.0123	
Female	21.59	3.36		
Lower income	19.70	5.01	0.0017	
Higher income	22.09	3.15	0.0017	
Lower income: less than 2	2.5 lakh, higher income: grea	ater than 2.5 lakh.		
Attitude score (S_A)				
Male	3.8727	2.37	0.517	
Female	3.4634	2.29		
Lower income	3.8727	2.23	0.404	
Higher income	3.463415	2.46		
Practices score (S_p)				
Male	11.56	0.66	0.954	
Female	11.27	0.96		
Lower income	11.46	0.62	0.298	
Higher income	11.36	1.04		

DISCUSSION

The current cross sectional study was done to access the KAP towards COVID-19. Our results show that overall 80.4% participants had good knowledge which was lower than a study conducted by Zhong et al among the Chinese population (90%), but results are comparable to study conducted by Kutikuppala et al in Indian population (81%) and higher than a study conducted by Clements et al among USA residents (80%).⁵⁻⁷ Though people had good knowledge still there were some gaps in knowledge which may hamper our activities of preventing the spread of disease, for example 52% believe that there is an effective cure while 62.5% believe that antibiotics can be used for treatment, this knowledge gives falls sense of security and increases the risk of spread.

Our analysis also showed that 97.9% people had the knowledge of effectiveness of wearing surgical mask and avoiding crowded places. Major public health authorities around the world unanimously recommend wearing face masks outdoors in general, not just in crowded places.⁸ However, the compliance rates to these recommendations vary between and within countries.

In our study we found that 68.6% respondents had positive attitude towards COVID-19 with 55.2% believing that India will control the situation and 86.5% seeking more information to keep them updated with the current knowledge of COVID-19. We also found that 83.8% respondents were following good practices with regard to COVID-19. 96.9% were covering their nose and mouth while sneezing and coughing and 97.9% respondents were washing their hands with soap and water. The attitude and practice score of our study was lower than attitude score (90%) and practice score (89%) of study done by Erfani et al in Iran.9

We found that gender and income influenced knowledge scores, being significantly higher in males and higher income individuals (p value <0.05) while attitude and practices scores had no significant association with gender and income group (p value >0.05). This finding is opposite to finding of previous studies by Masoud et al, Al-Hanawi et al and Azlan et al in which they found females had better KAP scores towards COVID-19 than males. 4,10,11

This may be because cultural and social environment in India is a bit different from other countries. Males working outside are more exposed to awareness campaign and women in rural areas generally tend to stay home and do their work, so they do not get the same exposure to awareness campaigns as males do.

CONCLUSION

Though the population demonstrated decent knowledge, appropriate practice, and positive attitude towards COVID-19 at the time of outbreak there is still need of

on-going health education and awareness campaigns and need of policies and intervention that are more person centred. There are still gaps in public understanding and practice which should be the focus of these future campaigns. Hopefully, by increasing knowledge via public health policy-makers, and the cooperation of the authorities and the general population, optimistic control and elimination of the disease can be anticipated.

Funding: No funding sources Conflict of interest: None declared Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

- 1. CDC. Symptoms of coronavirus disease 2019 (COVID-19), 2020. Available at: https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html. Accessed 10 August 2020.
- 2. Novel-Corona Virus Events as They Happen. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/events-as-they-happen. Accessed 10 August 2020.
- Christy JS, Kaur K, Gurnani B, Hess OM, Narendran K, Venugopal A, et al. Knowledge, attitude and practise toward COVID-19 among patients presenting to five tertiary eye care hospitals in South India-A multicentre questionnaire-based survey. Indian J Ophthalmol. 2020;68(11):2385-90.
- Masoud AT, Zaazouee MS, Elsayed SM, Ragab KM, Kamal EM, Alnasser YT, et al. KAP-COVIDGLOBAL: a multinational survey of the levels and determinants of public knowledge, attitudes and practices towards COVID-19. BMJ Open. 2021;11(2):e043971.
- 5. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, et al. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. Int J Biol Sci 2020;16:1745-52.
- Kutikuppala LV, Kiran AN, Suvvari TK. Knowledge, attitude, and practices toward the COVID-19 pandemic among the Indian general population: a cross-sectional survey. Indian J Respir Care. 2021;10:88-92.
- Clements JM. Knowledge and behaviors toward COVID-19 among US residents during the early days of the pandemic: cross-sectional online questionnaire. JMIR Public Health Surveill. 2020;6(2):e19161.
- 8. WHO. Coronavirus disease (COVID-19) advice for the public: when and how to use masks, 2020. Available: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/when-and-how-to-use-masks. Accessed 10 August 2020.
- 9. Erfani A, Shahriarirad R, Ranjbar K, Mirahmadizadeh A, Moghadami M. Knowledge,

- attitude and practice toward the novel coronavirus (COVID-19) outbreak: a population-based survey in Iran. Bull World Health Organ. 2020;30(10.2471).
- Al- Hanawi MK, Angawi K, Alshareef N, et al. Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: a cross-sectional study. Front Public Health. 2020;8:217.
- 11. Azlan AA, Hamzah MR, Sern TJ, Ayub SH, Mohamad E. Public knowledge, attitudes and

practices towards COVID-19: a cross-sectional study in Malaysia. Plos One. 2020;15(5):e0233668.

Cite this article as: Junaid M, Shinkar S, Patil A. Study of knowledge attitude and practice towards COVID-19 among patients attending a tertiary care hospital in Durg district of Chhattisgarh. Int J Community Med Public Health 2021;8:4880-5.