

Original Research Article

A cross-sectional study to assess the knowledge, attitude and practice about COVID-19 following the 2nd wave among the residents of Mysuru city

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ABSTRACT

Background: COVID-19 is an infectious disease which emerged at the end of 2019 in China and soon took over the world. Interventional measures such as lockdown and health education were provided to contain the spread of the infection. The present study was conducted to assess the knowledge, attitude and practice of the people of Mysuru and clarify any misconceptions regarding the disease or COVID-19 vaccination following the 2nd wave of the disease.

Methods: A cross-sectional study was conducted from June to July 2021 to assess the knowledge, attitude and practice about the 2nd wave of COVID-19 among the people residing in Mysuru city. The aim was to correct any misconceptions about COVID-19 vaccination, black fungus and basic practices to combat the ongoing COVID-19 pandemic. A sample size of 142 was interviewed with a questionnaire through a door-to-door survey.

Results: Though awareness about black fungus and basic etiquette was present among the people, there was poor knowledge about the benefits and use of COVID-19 vaccination among the people.

Conclusions: Providing health education is essential to provide knowledge to the public. However, clarifying their doubts and queries is also an essential component to ensure better attitude and widespread practice of the containment measures.

Keywords: Black fungus, Coronavirus, COVID-19, Mucormycosis, Pandemic

INTRODUCTION

SARS-CoV-2, also known as COVID-19, is an infectious respiratory disease caused by the novel coronavirus.¹ The COVID-19 pandemic saw its emergence in Wuhan city of China at the end of 2019. It soon took over the world and was declared a global pandemic by WHO on March 11, 2020.²

COVID-19 initially presented with common symptoms such as fever, dry cough and fatigue and serious symptoms such as difficulty in breathing, chest pain and difficulty in talking and moving.³

It was found early on that the virus spreads through human-human contact through body droplets, from the mouth or nose of an affected person which could spread while coughing, sneezing or even talking. The droplets contaminated inanimate objects such as plastic, stainless steel, metals and cardboard.¹ As of now, there is no definitive treatment or vaccine available to combat the pandemic.² Hence, the emphasis has been on preventive measures such as maintaining social distancing, wearing a face mask/ face shield and frequent hand washing when coming from outside.

After the 2nd lockdown, we wanted to assess the level of knowledge, attitude and practice among the people about COVID-19. Thus, this study was undertaken with the aim

to assess and at the same time provide health education and clarifying misconceptions among the people regarding the pandemic and COVID-19 vaccination.¹

METHODS

A cross-sectional study was conducted among 142 participants residing in the urban field practice area of the department of Community Medicine, JSS Medical College, Mysuru. It was a door-to-door survey conducted between June- July 2021. Simple random sampling was used to include the participants. Participants above the age of 18 years and who gave voluntary consent were included in the study. The questions were read out to the participants and data was entered in Google forms. Since the name of the participants was not recorded it assured their privacy.

A self-designed google questionnaire was prepared, which comprised of two parts- one to collect demographic details of the participants and the next to assess their KAP towards COVID-19. The questions were established based on published literature and the author's experience with KAP. After the preparation of the questionnaire, it was sent to certain experts to consult their opinions regarding the validity of the questionnaire. This was followed by a small pilot study to test its simplicity and difficulty. However, the results of the pilot study were not included in the actual samples used for the study.

Questionnaire and scoring

The first part of the questionnaire covered the demographic information of the participants and the second part contained questions for the KAP assessment. Demographic variables included age, gender, place of residence, educational qualification, occupational status, and with COVID-19 related history like whether the participant had become COVID-19 positive at any time, if yes, what were the presenting symptoms, associated with any of the comorbidities, history of any contact with COVID patients and whether their house is properly ventilated or not. The self-designed questionnaire comprised 10 questions regarding knowledge, 6 questions regarding attitude, and 4 questions regarding practice. Knowledge questions mainly dealt with the participants' knowledge regarding clinical symptoms, transmission routes, prevention, and control of COVID-19. These questions were responded to on a true/false basis with an additional "I don't know" option. The true answer was assigned 1 point and false/I don't know answers were assigned 0 points. Higher scores represented a better knowledge of COVID-19. Similar options were assigned for the questions related to attitude while only two options namely 'Yes' and 'No' were assigned for the questions related to practice towards COVID-19. Cronbach's alpha coefficient of the knowledge statements was 0.8.

Statistical analysis

Data collected were saved in MS Excel 2019. Statistical analyses were performed using SPSS, version 26 (Statistical package for social science) Windows, version 26.0 (IBM Corp. Released 2019. IBM SPSS Statistics for Armonk, NY, USA). Quantitative data were expressed as mean $\pm$ SD and categorical data were expressed as frequency and percentage. Non-parametric tests (Chi-square test/Fisher's exact test) were used for comparison between different subgroups of the participants and their KAP. The statistical significance level of the test was expressed as $p < 0.05$. Graphs and tables were included wherever necessary.

RESULTS

The study was conducted among 142 participants of which majority (65.5%) were females. The mean age group of the study population was 42.02 ± 15.32 years. Table 1 gives an overview of the descriptive data collected in the study.

From the table, we saw that majority of the participants were of the age group 18-37 years (45.1%), followed by 38-57 years (34.5%) and 58-77 years (20.4%). Females (65.5%) were more than males (34.5%). Urban population (68.3%) was more than rural population (31.7%). Majority were graduates or postgraduates (24.6%) and participants who had received high school education comprised 21.1% in this study. A little more than half of the study population was either illiterate or homemaker (59.2%).

We also found that urban people had significantly better practices towards the prevention of COVID-19 infection than rural people. People who had lost their jobs due to COVID-19 had more knowledge about the pandemic than others which was statistically significant.

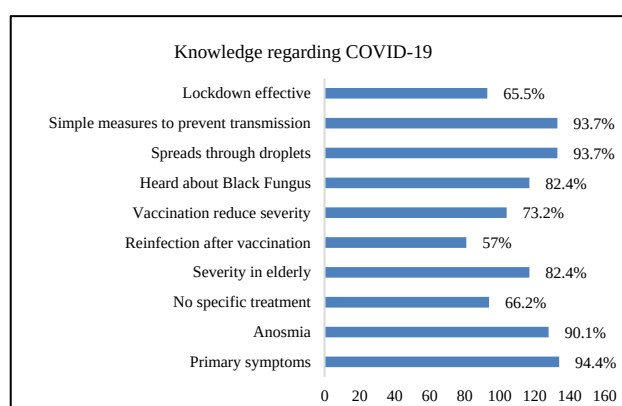


Figure 1: Distribution of people based on knowledge.

Figure 1 is a summary of the data collected on the knowledge of the study participants on COVID-19. We see that 94.4% of the subjects knew about the primary symptoms of COVID-19 such as fever, cold, cough and

breathlessness, 90.1% knew about other symptoms like anosmia, ageusia, vomiting, diarrhoea, 93.7% knew that COVID-19 spreads through droplets and simple measures like wearing a mask, handwashing and social distancing prevent its spread. 82.4% had heard about black fungus and that the severity was more in the elderly and people

with comorbid conditions. 73.2% were aware that vaccination reduces the severity of reinfection, 66.2% knew that there is no specific treatment for COVID-19, 65.5% agreed that lockdown was effective in controlling the infection and 57% knew after vaccination reinfection could occur.

Table 1: Association between Socio-demographic variables and KAP.

Socio-demographic variables		N	%	Good knowledge	Positive attitude	Good practices
Age group (years)	18- 37	64	45.1	36 (50)	18 (40.9)	55 (47)
	38-57	49	34.5	25 (34.7)	17 (38.6)	40 (34.2)
	58-77	29	20.4	11 (15.3)	9 (20.5)	22 (18.8)
Gender	Male	49	34.5	29 (40.3)	14 (31.8)	42 (35.9)
	Female	93	65.5	43 (59.7)	30 (68.2)	75 (64.1)
Residence	Urban	97	68.3	52 (72.2)	30 (68.2)	75 (64.1) *
	Rural	45	31.7	20 (27.8)	14 (31.8)	42 (35.9) *
Education	Illiterate	23	16.2	39 (54.2)	24 (54.5) #	69 (59) #
	Primary school	8	5.6	3 (4.2)	5 (11.4) #	9 (7.7) #
	Middle school	23	16.2	9 (12.5)	6 (13.6) #	13 (11.1) #
	High school	30	21.1	13 (18.1)	6 (13.6) #	14 (12) #
	PUC/diploma	23	16.2	7 (9.7)	1 (2.3) #	9 (7.7) #
	Degree/post graduate	35	24.6	1 (1.4)	2 (4.5) #	3 (2.6) #
Occupation	Unemployed/homemaker	84	59.2	5 (6.8) *	8 (18.2)	21 (17.9) #
	Unskilled	11	7.7	2 (2.8) *	4 (9.1)	6 (5.1) #
	Semi-skilled	16	11.3	9 (12.5) *	6 (13.6)	21 (17.9) #
	Skilled	17	12	13 (18.1) *	8 (18.2)	25 (21.5) #
	Professional	11	7.7	13 (18.1) *	7 (15.9)	15 (12.8) #
	Lost job	3	2.1	30 (41.7) *	11 (25)	29 (24.8) #

Chi-square test, * p value <0.01 and significant, #Fischer Exact test

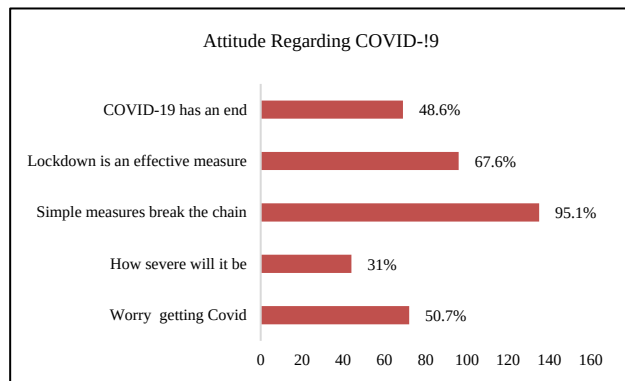


Figure 2: Distribution of people based on attitude.

Figure 2 is a summary of the attitude of the subjects towards COVID-19 infection. Majority (95.1%) of them believe that simple measures break the chain, but only 67.6% thought the lockdown was effective, 50.7% were worried about getting COVID-19 infection, 48.6% thought COVID-19 has an end and 31% were worried about the severity of the infection.

Figure 3 is a summary of the practices of the study subjects to combat COVID-19. Majority (>97%) of the

study population were following good practices like wearing masks, handwashing and social distancing. However, only 87.7% had avoided social gatherings or functions.

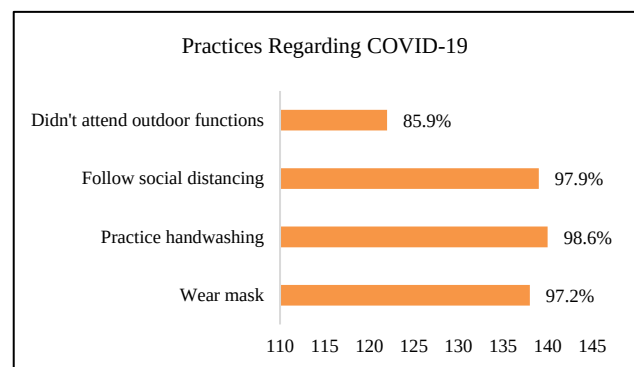


Figure 3: Distribution of people based on practices.

Figure 4 is a summary of the responses of the participants on the second wave of COVID-19. We found that the majority of the participants (82.4%) followed good practices and nearly half of the participants (50.7%) had good knowledge but a negative attitude (31%) towards COVID-19.

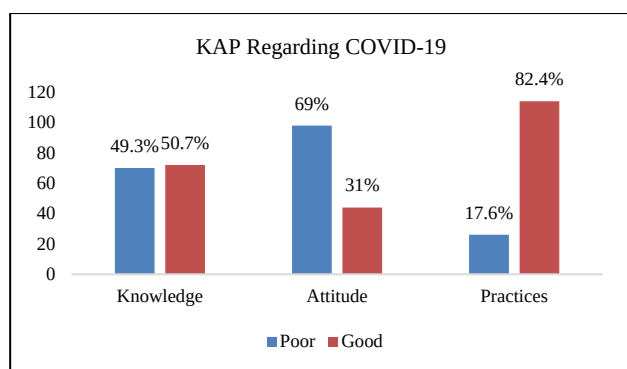


Figure 4: Distribution of people based on KAP regarding the second wave of COVID-19.

DISCUSSION

This study was conducted among 142 participants of which 65.5% were females, with a mean population age of 42.02 years. Urban population comprised of 68.3% of the sample size and 24.6% of the participants had received education upto graduation/postgraduation. However, 59.2% of this study population were either illiterate or homemakers.

When knowledge of the participants was assessed in the current study, it was found that 94.4% of the subjects knew about the primary symptoms of COVID-19 and 90.1% knew about the associated symptoms. We also found that 93.7% of the participants knew how to stop the spread of the infection. Study by Tomar et al showed that the overall knowledge for their study population was 80.64%. They found that 89.4% knew how to stop the spread of the infection.³

Among the present study population, 73.2% were aware that vaccination reduces the severity of reinfection and 57% were also aware that there is a chance for reinfection after the vaccination. Study conducted by Huynh et al in Vietnam also showed that those with a higher total score on knowledge were more likely to be willing to be vaccinated ($p < 0.05$).⁴

Study conducted by Islam et al among students to assess their KAP regarding black fungus showed that the knowledge about black fungus among 32.9% of their students was low and 26% had high scores.⁵ In the present study, we find that 82.4% of the participants had heard about black fungus.

Study conducted by Padmanaban et al among higher education students of India to understand their KAP on COVID-19 showed that 86% of the students had a positive attitude towards COVID-19. 56.7% disagreed that COVID-19 was non-curable disease and 94.5% were clear that the patients with COVID-19 should be kept in isolation. In the present study too, 95.1% of the participants believed that simple measures such as social distancing was effective to combat the pandemic.⁶

Study by Padmanaban et al also showed that 86% of the students had desirable score in the practices followed during the pandemic.⁶ They found that more than 85% of the students had refrained from playing outside, wore a mask when stepping out and maintained social distancing. The present study also found that more than 97% of the population had good practices for the prevention of COVID-19 infection. 87.7% of the participants had refrained from social gatherings.

Study by Yue et al in China showed that the practices with respect to COVID-19 were better among the urban population. In the present study too, it was found that adults in the urban area had better practices.⁷

Limitation of this study were lack of scientific calculation of sample sized, day time females were more and small sample size.

CONCLUSION

To combat any social health issue, it is essential that the issue becomes a part of the “felt needs” of a person. Unless the change comes from within, the interventions/measures taken cannot have long-lasting effects on society.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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