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Original Research Article

Knowledge, attitude and practice towards COVID 19 among the rural community: a cross sectional study during outbreak

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ABSTRACT

Background: Corona virus disease 19 (COVID-19) is an infectious disease caused by newly discovered corona virus. In order to reduce the cases of COVID-19, it is important to practice strict control measures. People adherence to control measures is affected by their knowledge, attitude and practices towards COVID-19. Hence, this study was conducted with an objective to assess the knowledge, attitude and practice towards COVID-19 in the rural community in the vicinity of Adichunchanagiri Institute of Medical Sciences (AIMS), B.G. Nagar.
Methods: This cross sectional study was carried out among 572 households in the rural field practice area of AIMS, B. G. Nagar for a period of 3 months. Personal interview of the households was done using pretested semi structured questionnaire after obtaining the consent. Data was entered in MS Excel and descriptive statistical measures like percentage, mean, and standard deviations were calculated.
Results: Among 572 households, more than half (53.9%) of the interviewed subjects were less than 40 years old. Majority, 94.6% of the respondents responded correctly that the spread of the disease is by close contact with an infected person and respiratory droplets, 96.2% knew correctly the early sign/s of COVID-19. 94.2% of them had the confidence that the world will win the battle against COVID-19. Most (98%) of the study subjects were taking proper preventive measures while leaving home.
Conclusions: Majority of the study participants exhibited good knowledge, favorable attitude, and sensible practices regarding COVID-19. This good knowledge of the study population towards COVID-19 was mainly due to wide awareness created by the Government through various social media.

Keywords: Attitude, COVID 19, Knowledge, Practices

INTRODUCTION

Awareness is the greatest agent for change" Eckhart Tolle Corona virus disease 19 (COVID-19) is an infectious disease caused by newly discovered corona virus. Severe acute respiratory syndrome Corona virus-2 (SARS-CoV-2) which was first identified in December 2019 in Wuhan, China has spread rapidly, evolving into a full blown pandemic.[1] Most people infected with Covid-19, experiences mild to moderate respiratory illness. Symptoms may appear 2 to 14 days after exposure to virus and include symptoms like fever, chills, dry cough, sore throat, pneumonia and may lead to further fatal complications especially among people with associated co morbid conditions.

The best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease

and its spread. The COVID-19 virus spread primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. At this time, there is no specific vaccine or treatment for COVID-19. However, there are many ongoing clinical trials evaluating potential treatment.[2] Two kinds of tests are available for COVID-19; Viral test and Antibody test. A viral test tells if a person have current infection. An antibody test tells if the person had a previous infection. An antibody tests may not be able to show if the person have a current infection, because it can take one to three weeks after infection to make antibodies.[3] Till 10-06-2020, globally 7,458,921 confirmed cases of COVID-19 including 419,020 deaths were reported to World Health Organization.

In India, 2,86,870 confirmed cases, 8,107 deaths, out of which 6,041 confirmed cases and 69 deaths in Karnataka. In Mandya district, there were 334 confirmed cases and 0 deaths.4Protective measures like regularly and thoroughly cleaning once hands with an alcohol based hand rub, or washing them with soap and water, maintain at least one meter distance between oneself and others, avoid going to crowded places, avoid touching eyes, nose and mouth can prevent from COVID 19 infection. Other measures include following good respiratory hygiene by covering mouth and nose with bent elbow or tissue when the person cough or sneeze and dispose the used tissue and further wash hands. Staying home and self-isolate even with minor symptoms such as, cough, headache, mild fever, until one recover is advisable to prevent the spread. If anybody present with symptoms like fever, cough or difficulty breathing, it is advisable to seek medical attention.[5]

In order to reduce the cases of COVID-19, it is important to practice strict control measures. People adherence to control measures is affected by their knowledge, attitude and practices towards COVID-19. Hence, this study was conducted in order to assess the knowledge, attitude and practice towards COVID-19 in the community in the vicinity of Adichunchanagiri Institute of Medical Sciences.

METHODS

Descriptive cross sectional Study was conducted in rural field practice area of department of Community Medicine, AIMS, B. G. Nagara, Bellur Hobli, Nagamangala Taluk, Mandya District, Karnataka, which includes Mandya Primary Health Care centre(P.H.C), A.C.Giri P.H.C, Bindiganavile P.H.C, among which 6 villages were chosen by using random sampling method. The study was conducted during period of 3 months from 1st May to 31st July 2020.

Study population

Study subjects were selected from the following 6 villages in proportion to size of population, around 95 study subjects from each village Bellur, Nayakanakoppalu, Nagalapura, Yeladahalli, Bommenahalli and Varahasandra

Sample size

The sample size was calculated on the hypothesis that knowledge prevalence (P) would be 50%, with an allowable error (d) of 5% and a confidence level of 95% (z=1.96) for which minimum sample size required was 384. Total population covered in our study was 572.

Inclusion criteria and Exclusion criteria

People who consented to participate were included in the research work. Houses which were locked were excluded.

Study tool

Information was obtained using pre tested semi structure questionnaire (Part 1 and part 2) by interview method.

Part-I

Selected demographic variables, such as age, gender, religion, education status, family, family income, etc. were included.

Part-II

Questions regarding knowledge about signs, preventive measures about COVID-19, attitude regarding social distancing, lock down practices and practice regarding stocking food items at home and preventive measures.

Procedure for data collection

A pre designed, pre tested, semi structured questionnaire was prepared for collection of data. The villages were visited as per planned schedule for gathering information from the people. The questionnaire was designed in English initially, later translated to Kannada and back translated to English, to check the validity of translated questionnaire. Study subjects were explained about the purpose of study and were assured of confidentiality. A detailed proforma including social demographic profile of study participants and awareness about COVID-19 and also practices to be followed was taken. Following data collection, queries from the participants relating to COVID-19 were clarified by the investigator.

Statistical analysis

Data was cleaned and entered in Microsoft Excel 2016 spreadsheet and frequencies were presented in along with the percentages wherever appropriate. Data obtained was analyzed using SPSS, statistical software package, version 20 and findings were reported in the form of descriptive statistics.

RESULTS

A total of 572 respondents were included in the study. More than half (53.9%) of the interviewed subjects were aged less than 40 years old, while majority of them were between 30-40years (30.9%). 65% of the participants were male. Almost all respondents (95.3%) were Hindu. 74.3% of study subjects had education less than 10th standard, while 17.7% were illiterate. 27.8% were agriculturist followed by laborer (16.7%).

Table 1: Knowledge about COVID-19 among study participants.

Knowledge items	Yes		No	
	Frequency	%	Frequency	%
COVID-19 spreads by contact with an infected person and through respiratory droplets.	541	94.6	31	5.4
Early sign of COVID-19 are fever, difficulty breathing, cough and sore throat.	550	96.2	22	3.8
Do you agree washing hands regularly is an effective measure to kill the novel Corona virus?	564	98.6	8	1.4
Do you think that risk of spread of the novel corona virus is both from symptomatic as well as non symptomatic cases?	444	77.6	128	22.4
Symptomatic treatment, early screening, social distancing are important measures to stop the spread of the novel Corona virus.	551	96.3	21	3.7
The disease is more dangerous in people with cancer, diabetes and chronic respiratory disease.	423	74	149	26
Do you agree that isolation and quarantine are an important step to stop the spread of the novel corona virus?	564	98.6	8	1.4
An isolation period of 14 days is important for a person who had contact with corona virus infected patients.	540	94.4	32	5.6
Currently there is no specific vaccine and cure for COVID-19.	442	77.3	130	22.7
Do you think pregnant women are more at a risk towards COVID-19?	401	70.1	171	29.9
Do you think eating non-vegetarian food is responsible for spread of COVID-19?	128	22.4	444	77.6
Do you agree that eating citrus fruits and gargling with salt water can help prevent infection with novel corona virus?	291	50.9	281	49.1
Do you think drinking alcohol can prevent you from COVID-19?	68	11.9	504	88.1

Table 2: Attitude of the study participants towards COVID-19.

Attitude:	Yes		No	
	Frequency	%	Frequency	%
In recent days, have you gone to populated place?	115	20.1	457	79.9
Are you confident that the world will win the battle against COVID-19?	539	94.2	33	5.8
Do you agree with the idea of lockdown to prevent the spread of COVID-19?	553	96.7	19	3.3

Table 3: Practices of the study participants against COVID-19.

Practices:	Yes		No	
	Frequency	%	Frequency	%
Do you agree with the idea of grocery and medicine stocking?	305	53.3	267	46.7
Are you taking proper preventive measures while leaving home?	563	98.4	9	1.6
Do you feel more bonded to your family and friends in the duration of a lockdown?	477	83.4	95	16.6

Regarding knowledge on mode of spread of COVID-19 disease, 94.6% of the respondents responded correctly that the spread is by close contact with an infected person and through respiratory droplets, 96.2% knew the early

sign/s of COVID-19. Most of the respondents (98.6%) agreed that washing hands regularly is an effective measure to kill the novel Corona virus, 22.4% didn't know that risk of spread of the novel corona virus is both from symptomatic as well as non symptomatic cases. 96.3% of participants were aware that symptomatic treatment, early screening, social distancing are important measures to stop the spread of the novel Corona virus. Nearly all were married (90.4%). 241 (42.1%) had monthly income of Rs.5000-10000. 75.7% lived in nuclear families.

Most of them were aware of the fact that the disease is more dangerous in people with co-morbidities. Only 1.4% didn't agree that isolation and quarantine are an important step to stop the spread of the novel corona virus, 3/4th (77.3%) of them believed that there is no specific vaccine and cure for COVID-19. More than half of study participants felt that pregnant women are more at a risk towards COVID-19. 22.4% had wrong notion that eating non-vegetarian food is responsible for spread.

More than 50% of participants agreed that eating citrus fruits and gargling with salt water can help prevent infection with novel corona virus. 11.9% felt that drinking alcohol can prevent oneself from covid-19 infection. More than three fourth of participants (79.9%) had not been to any populated place recently. Bulk of participants (94.2%) believed that world will win the battle against covid-19 pandemic. Only 3.3% didn't agree with the idea of lockdown.

More than half of the study participants were stocking the groceries and medicines. While leaving home, almost all (98.4%) of them were following proper preventive measures. 83.4%% of participants were feeling more bonded to their family and friends during lockdown.

DISCUSSION

COVID-19 disease was first identified during the outbreak of severe acute respiratory syndrome in Wuhan, China in December 2019.6 On the 11th of March 2020, the World Health Organization (WHO) characterized the disease as the first pandemic caused by Corona virus.[7] The disease had spread in more than 200 Countries with a mortality rate of about 5.7%.[8]

This cross sectional study which was conducted in 6 villages in Mandya District aimed mainly in assessing the knowledge about COVID-19 in community and population of Mandya regarding the information about COVID-19 prevention and treatment plan as well as to create awareness regarding age groups being affected. Based on our findings, the study significantly consisted of middle age, male and mainly agriculturists, since we conducted house to house visits in a rural population.

In general, participants in our study had good knowledge about the disease, its methods of spread and prevention. Nearly half of the study population (50.9%) believed that, eating citrus fruits and gargling with salt water can help to prevent infections, whereas more than 1/3rd of the participants in Indian community study had similar positive attitude towards this.[9] This may be mainly due to ancient myths and concepts followed in the rural populations. According to W.H.O., gargling warm or salt water and consuming citrus fruits will not kill novel corona virus.[10]

11.9% of the respondents believed that, drinking alcohol can prevent COVID-19, 14% of the respondents had similar belief in Indian community study.[9] Excessive consumption of alcohol can cause severe health related complications and no study substantiates that, consumption of alcohol can kill the virus. 70.1% of the respondents were aware of higher risk of developing COVID-19 in pregnancy, similar school of thought was found in Indian community study (83.19%).[9] According to our study, 94.4% of participants believed that, isolation is important for a person who had contact with Corona infected patients, whereas 99.1% of respondents in Malaysian study had similar opinion. This can be attributed to the study setting and population.[11]

Our study participants had notable positive attitude and practice with a strong coalition of knowledge. Majority of the population showed an optimistic attitude towards the idea of lockdown, grocery and medicine stocking, way of taking proper preventive measures while leaving home and to keep themselves away from crowded places. Apart from that, they strongly believed that world can win the battle against COVID-19, similar findings were founded in the community study.[9].

CONCLUSION

The study participants from rural area exhibited good knowledge, favorable attitude, and sensible practices regarding COVID-19. This good knowledge of the study population towards COVID-19 was mainly due to wide awareness created by the Government and by Ministry of health and family welfare through various social media, helpline numbers, television advertisements and mobile messages.

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