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KNOWLEDGE AND PRACTICE OF COVID-19 AMONG RURAL POPULATION

Premalatha Paulsamy*[1], Krishnaraju Venkatesan[2], Geetha Kandasamy[2]

[1*]College of Nursing for Girls, King Khalid University, Khamis Mushayit, Asir Province, Saudi Arabia.
[2]Department of Pharmacology, College of Pharmacy, King Khalid Universiy, Abha, Asir Province, Saudi Arabia.

ABSTRACT

COVID-19 is a global health menace and a worldwide public health emergency that is inflicting extraordinary morbidity and mortality. The behaviour of the people will certainly have a significant impact on coronavirus disease 2019 (COVID-19) pandemic. As human behaviour is influenced by people's knowledge and perceptions, this study was undertaken to assess the rural population's knowledge and practices regarding the disease. A cross-sectional questionnaire-based study was conducted with 300 participants living in selected rural areas of Tamil Nadu. The results showed that television (44.8%) and WhatsApp (35.2%) were the most prevalent sources of information for them. Males were more aware of the pandemic and practiced preventive measures than females in our survey which is statistically significant. There was also a statistically significant association between knowledge and practice of the rural population at p=0.001. The study concludes that the knowledge and practice of COVID-19 is low among rural population and mass health education measures to reach them to be implemented especially on importance of vaccination.

KEYWORDS

COVID-19, Knowledge, Practice and Rural population.

Author for Correspondence:

Premalatha Paulsamy,

College of Nursing for Girls,

King Khalid University, Khamis Mushayit,

Asir Province, Saudi Arabia.

Email: pponnuthai@kku.edu.sa

INTRODUCTON

Coronaviruses are a type of large enveloped viruses with a single-stranded, positive-sense RNA genome that can cause a wide range of respiratory disorders in humans, ranging from the common cold to severe acute respiratory syndrome (SARS). The pathogen causing coronavirus disease was first identified as a novel coronavirus, currently known as severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2/ (COVID-19) was first identified in December 2019 and within a few months, it had spread to become a pandemic. It has wreaked havoc all throughout the

world, including in India. Globally, it is highlighted that preventive actions are critical in curbing COVID-19's rapid spread.

As this disease is very contagious, people with particular medical problems are more likely to have serious problems if they contract it. Chronic Obstructive Pulmonary Illness (COPD) and asthma, heart diseases, immune system conditions like HIV, cancer, obesity, diabetes, renal illness, liver disease, pregnant women and the elderly are among these health conditions[1].

As it is highly contagious and needs stringent hygienic measures, people must be informed of any government alerts, warnings and instructions, as well as follow the prevention measures for their own safety and well-being. Despite these attempts, because of attitudinal and behavioural challenges, people neglect the benefits of social distancing, hand washing, staying at home, using hand sanitizer and wearing a mask.

In India, 68 percent of the population lives in rural areas and this rural community behaviour will be critical in containing the spread of the disease. This rural population is oblivious to the socioeconomic and health effects of the COVID-19 pandemic and they lack the resources necessary to control and prevent the disease. Recognizing the rural population's critical role in COVID-19 control and prevention, this study was undertaken to analyze the rural population's knowledge and practices regarding COVID-19.

MATERIAL AND METHODS

A cross-sectional questionnaire-based study was conducted with 300 participants living in selected rural areas of Tamil Nadu. A sample size of 300 was calculated using *P* value as 0.5 at 95% confidence level and 5% precision, as it gives the maximum sample size. A questionnaire was developed with the help of WHO training material for the detection, prevention, response and control of COVID-19, keeping in mind the local needs and practice of the population under study. The Cronbach's alpha coefficients (Reliability) were calculated and found to be satisfactory for the two aspects of the questionnaire (knowledge - 0.71 and practices = 0.63). The Google forms questionnaire was shared via social media channels such as e-mail and WhatsApp especially, to prevent direct contact and two reminders were made to urge people to complete the form. Ethical clearance to conduct the study and participants' consent was obtained before the data collection.

RESULTS AND DISCUSSION

Two hundred seventy-two persons completed the questionnaire were included in the study analysis. Seventy-one percent of the participants were male and more than half (61%) of the participants were 25-30 years old, while 28% of them were less than 25 years. More than half of the participants had only completed the 12th grade and 12% were graduates. The majority of the participants (87%) were aware that a coronavirus pandemic was underway and television (44.8%) and WhatsApp (35.2%) were the most prevalent sources of information for them. This is consistent with the study by Pandey *et al*,[2] (48.1%) and Wang *et al*,[3] (93.5%), in which the participants' primary sources of information were social media and the internet, respectively.

Regarding knowledge, the participants had knowledge in the following aspects such as cause of COVID-19 (81%), Mode of transmission (67%), Body organ/system affected (61%), symptom and incubation period (57%), possibility of recovery (55%), people with high mortality rate (48%) and importance of vaccination (37%). Males were more aware of the pandemic and practiced preventive measures than females in our survey, which is statistically significant (Table No.1). We also observed that as participants got older, the number of persons wearing face masks declined which was statistically significant at $p<0.05$. People over the age of 50 were also shown to be less religiously following social distancing than younger participants. Similar findings were reported by few studies[4-7] which conclude that among the study participants, males and younger population had better knowledge and practice. Also, education status and travel history of the participants also influence their knowledge and practice on COVID-19.

According to Table No.2, there is a statistically significant association between knowledge and practice of the rural population at $p=0.001$. The similar finding was found in a study by Gebretsadik

D *et al*, (2021)[8] that there was statistically significant association between poor practice, educational status, travel history and poor knowledge level of study participants. Hence, it becomes mandatory to improve the knowledge of the rural population on the preventive measures of COVID-19 so that it can improve their practice related to hygienic measures, social distancing, wearing masks etc. Because the rural people are comparatively less educated, we need to find the means to reach them and educate them on these preventive aspects of COVID-19.

Table No.1: Frequency of preventive practices of participants

S.No	Practices	Frequency	Male (%)	Female (%)
1	Washing hands frequently with soap and water or hand sanitizers	Always	68.1	62.5*
		Often	19.5	23.4
		Occasionally	6.8	6.7
		Never	5.6	7.4
2	Avoiding crowds and public places and following social distance	Always	71.4	68.6**
		Often	15.2	16
		Occasionally	4.5	6.7
		Never	9	9.5
3	Using mask and gloves	Always	46	36.2*
		Often	22.6	30.6
		Occasionally	20.2	19.5
		Never	11.2	13.7
4	Frequency of going out	Always	10.8***	21.5
		Often	12.6	27.9
		Occasionally	41.6	34.6
		Never	35.1	15.8

Table No.2: Correlation between Knowledge and practice of Participants

S.No	Variables	Mean	S.D	"r" value
1	Knowledge	19.31	2.3	r = 0.569, p=0.001
2	Practice	5.12	0.77	

CONCLUSION

From the findings of the study, there was alarmingly poor knowledge and practice regarding the COVID-19 pandemic among the selected rural population. Therefore, health education programs aimed at mobilizing and improving COVID-19-related knowledge and practice, especially knowledge regarding importance of vaccination are urgently needed in the rural population to a great extent.

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DECLARATION OF CONFLICTING INTERESTS

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript, or in the decision to publish the results.

BIBLIOGRAPHY

1. CDC. Coronavirus disease 2019 (COVID-19): If you are at higher risk, Get ready for COVID-19 now, Atlanta, *Department of Health and Human Services, GA: US,* 69(12), 2020, 343-346.
2. Pandey S, Gupta A, Bhansali R, Katira P, Fernandes G. Coronavirus (COVID-19) awareness assessment- A survey study amongst the Indian population, *J Clin Med Res,* 2(4), 2020, 1-10.
3. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho C S *et al.* Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China? *Int J Environ Res,* 17(5), 2020, 1729.
4. Sakr S, Ghaddar A, Sheet I *et al.* Knowledge, attitude and practices related to COVID-19 among young Lebanese population, *BMC Public Health,* 21(1), 2021, 653.
5. 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, 1-23.
6. Roy D, Tripathy S, Kar S K, Sharma N, Verma S K, Kaushal V. Study of knowledge, attitude, anxiety and perceived mental healthcare need in Indian population during COVID-19 pandemic? *Asian J Psychiatr,* 51, 2020, 102083.
7. Yoseph A, Tamiso A, Ejeso A. Knowledge, attitudes and practices related to COVID-19 pandemic among adult population in Sidama Regional State, Southern Ethiopia: A community based cross-sectional study, *Plos One,* 16(1), 2021, e0246283.
8. Gebretsadik D, Gebremichael S, Belete M A. Knowledge, Attitude and practice toward COVID-19 pandemic among population visiting dessie health center for COVID-19 screening, Northeast Ethiopia, *Infect Drug Resist,* 2021(14), 2021, 905-915.

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