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Original Research Article

Assessing the Knowledge Attitude Practice of COVID-19 among the General Population in India: A Community Based Cross Sectional Study

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Abstract:

Background: The COVID-19 pandemic in India is a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020.The most common symptoms of COVID-19 are Fever, Dry cough and Fatigue.

Methods: A cross sectional study was conducted among 307 participants to study the knowledge, attitude and practice of COVID 19 among general population of India. The study was done by using a pre- tested, semi structured questionnaire to collect data from the participants through Google Forms. Descriptive statistics were used for statistical analysis.

Result: In the study population 59% (181) were male and 41% (126) were female in the study. Among the study participants 26.7% (82) were in the age group of between 20-30 years, the mean age of the study participants is 31.12± .96.Among the study participants 72% (221) were educated up to post graduate, 26.1% (80) were educated up to diploma and under graduate. The place of residence of the study participants were distributed among various states in India with the majority coming from rural areas is 54.4%, the study participants from Tamilnadu 87.3% (268), and remaining are Pondicherry 3.3% (10) and other states. Among the study participants, about 4.6 % have been affected by COVID 19 and the remains are free from COVID 19, the study participants 29.3% (90) were in vaccinated and the remaining peoples are not vaccinated.

Conclusion: The study provides valuable insights into the knowledge, attitudes, and practices of COVID-19 among a diverse sample of participants in India. The findings underscore the importance of targeted health education interventions to address knowledge gaps and promote adherence to preventive measures.

Keywords: Cross sectional study, Knowledge, Attitude, Perception, SARS-COVID 19.

Introduction

India is one among the worst affected countries in the world. The COVID-19 pandemic in India is a part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020. The most common symptoms of COVID-19 were fever, dry cough and fatigue. Other symptoms that are less common and may affect some patients include: Loss of taste or smell, Nasal congestion, Conjunctivitis (also known as red eyes), Sore

throat, Headache, Muscle or joint pain, Different types of skin rash, Nausea or vomiting, Diarrhea, Chills or dizziness. People of all ages who experience fever and/or cough associated with difficulty breathing or shortness of breath, chest pain or pressure, or loss of speech or movement should seek medical care immediately.

Since December 2019, there has been a series of unexplained cases of pneumonia reported in Wuhan, China. The Chinese government and researchers took rapid measures to control the epidemic and carried out etiological research. On 12 January2020, the World Health Organization (WHO) tentatively named this new virus as the 2019 novel coronavirus (2019-nCoV). [1] The outbreak of coronavirus SARS-CoV-2 (COVID-19) in Wuhan (China) last December 2019 exceeded previous virus outbreaks, such as severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), is spreading globally with a great impact on social life.2The effect of the COVID-19 pandemic has been vast, and ramifications on health care systems, educational systems, economic structures, trade and finance and our societies remain catastrophic. [2] Due to the nature of medical and dental education, major challenges are to be expected in the post-pandemic era. Thus, many issues and arrangements need to be considered for medical and dental educators, healthcare professionals, and students to cope with the possible intensive teaching curricula.2 Many studies have investigated the mental status of students and healthcare professionals by evaluating their anxiety and stress levels in response to clinical learning and practice modifications.2 One threat to the COVID-19 response in India is the ubiquitous spread of misinformation by raising falsehoods like rinsing the nose with saline, spraying of alcohol and chlorine or 5G mobile networks inhibiting the spread of the virus, during the crisis is dangerous because it can mislead and confuse the public. [3] Over 3 billion posts and 100 billion interactions are present on COVID-19 making infodemic spread faster than a pandemic. [3] the most important factor in containing the spread is by right information and preventive measures as directed by Ministry of Health and Family Welfare. The ministry of health and family welfare has given guidelines regarding various issues (home isolation, when to seek medical help, how to use face masks etc.) relating to COVID 19, these information are being disseminated via various sources via television, radio, telephonically. [4] The experiences learned from the previous SARS outbreak in 2003 suggest that knowledge and attitudes toward infectious diseases are associated with a level of panic and emotional disturbances among the population that can further complicate attempts to prevent the spread of the disease. There is a necessity to understand the public's awareness of COVID-19 at this critical moment to facilitate the outbreak management of COVID-19 in India While controlling the movement of people can limit the spread, empowering citizens with the right information and encouraging their strict adherence to government advisories play a crucial role in outbreak management. [5] Therefore, the aim of this study was to assess the levels of awareness and knowledge regarding COVID-19 among healthcare professionals and students in the aforementioned areas.

Materials and Methods:

This study was a community based cross-sectional study to assess the level of knowledge, attitude and perception of COVID 19. The study was done between April to June 2021 (3 months). In this study it has been decided to have the general population of various states in India. A total of 307 study participants were included in the study, the data was collected through Google form the study participants were invited from various disciplines. Those study participants who were willing to participate were included in the study and non-consenters were excluded. The purpose of the study was explained to the participants and an informed consent was obtained from them.

The sample size was calculated on the basis of prevalence is 52% and the precision error taken by 15% of the prevalence, using the formula n=4pq/l2. The sample size comes to 164. Assuming 10% non-responsiveness, the required sample size is 181. But we have collected a total of 307. The data was collected using a pre- tested, pre-validated semi structured questionnaire. The study questionnaire was divided into four parts as follows: Part I- Basic details such as age, gender, education, occupation, place of residence etc., Part II- knowledge of COVID 19; Part III- attitude of COVID 19 and Part IV is perception of COVID 19. Data collected through Google form downloaded into MS Excel and then analyzed using SPSS 23.0 software. Descriptive statistics like frequency, percentage, mean and standard deviation and Chi square test was done to find the association between the categorical variables with P value < 0.05 was taken as statistically significant

Ethical consideration: Institutional ethical committee clearance was obtained before the start of the study and consent from each participant was obtained before including them in the study.

Results

A cross sectional study was conducted among 307 participants to study the knowledge, attitude and practice of COVID 19. The basic details of the study participants are it was observed that 59% (181) were male and 41% (126) were female in the

study. Among the study participants 26.7% (82) were in the age group of between 20-30 years, 26.4% (81) were in the age group between 30-40, 24.8% (76) were in the age group of less than 20 years. 72% (221) were educated up to post graduate, 26.1% (80) were educated up to diploma and under graduate. Among the study participants the majority of 28% (86) were in students. 26.4% (81) were in semi profession, 18.9% (58) were in professional workers. 8.5% (26) were in unemployed. 6.5% (20) were in semi-skilled workers. 6.2% (19) their own in clerical/ shop/ farm, and remaining 5.5% (17) are skilled workers. The place of residence of the study participants were distributed among various states in India with the majority are from rural areas 54.4% (167) and remaining 45.6% (140) are from urban. The most of the study participants are from Tamilnadu (87.3% (268), and remaining are Pondicherry 3.3% (10) and other states. Among the study participants, about 4.6 % have been affected by COVID 19 and the remains are free from COVID 19, the study participants 29.3% (90) were in vaccinated and the remaining peoples are not vaccinated. The mean age of the study participants is 31.12± .96.

Knowledge about SARS-COVID 19

The details of knowledge about SARS-COVID 19 are mentioned in Table 1. The majority of the study participants 68.4% have been known to the incubation period of novel coronavirus is 2 to 14 days, the remaining of the study participants are not aware of the incubation period of the novel coronavirus. Among the study participants the knowledge about the symptoms of coronavirus except skin rash were mentioned correctly in 39.4% (121) and the remaining people they are not clear about the same. The most of the study participants are mentioned the origin of novel coronavirus is from bats around 74.3% (228) and the remaining peoples they are not aware of the origin of COVID 19. The majority of the study participants 95.12% (292) have been known to the to reduce the risk of transmission of novel coronavirus like, to maintain the social distancing, wear the face mask whenever people went to the community area and frequent hand wash about to the novel coronavirus (Table 1).

Attitude about SARS-COVID 19

In the present study, it was found to that 79.8% (245) felt that to wear the face mask can prevent the novel coronavirus, 83.1% (255) felt that to frequent hand wash with soap and sanitizer also can prevent the novel coronavirus, 87.6% (269) felt that to prevent the novel coronavirus can maintain the social in public places, 58.6% (180) felt that vaccination gives production against the novel coronavirus, 33.2% (102) of the study participants may be the vaccine can support to prevent the novel coronavirus. The most of the study participants the mentioned about the type treatment is better towards the novel coronavirus is Allopathic 29% (89), Siddha 19.9% (61), Ayurveda 13.4% (41) and self-treatment it was found to be 22.1% (68), Government initiative to the people who ever they wants to such type of treatment respectively (Table 2).

Perception about SARS-COVID 19

The present study showed that 86.3% (265) were says that it is believed that symptoms of the novel coronavirus (SARS-COV-19) may appear in as few as 2 or as long as 14 after exposures. 80.1% (246) were mentioned about there is no possibility of survive only in cause of novel coronavirus, 76.5% (235) they are accepting even in areas experiencing outbreaks, meat products can be safely consumed if these items are cooked thoroughly and properly handled during food preparation. 83.7% (257) the study participants are aware of the, If anyone has a fever, cough, and difficulty breathing seek medical care early and share previous travel history with the health care providers (Table 3).

Table 1: Distribution of Knowledge about SARS-COVID 19

Variables	Frequency (n=307)	Percentage
What is the incubation period of Novel coronavirus?		
2 to 14 days	210	68.4
4 to 6 days	25	8.1
< 1 week	27	8.8
14 to 28 days	45	14.7
Symptoms of novel coronavirus (SARS-COV-19) are all Except?		
Fever	98	31.9
Skin rash	121	39.4
Body pain	14	4.6
Loss of smell	74	24.1
Novel Coronavirus (SARS-COV-19) origin is thought to be from?		
Pigs	26	8.5
Fish	21	6.8
Bats	228	74.3

Birds	32	10.4
Novel Coronavirus (SARS-COV-19) transmission occurs through?		
Airborne		
Close contact with COVID patients		
Close contact with COVID patients and Airborne		
Droplet		
Close contact with COVID patients and Droplet		
All the above		
COVID 19 infection is higher among people aged more than 60 years		
Yes	155	50.5
No	46	15.0
May be	106	34.5
COVID 19 will not affect children		
Yes	31	10.1
No	190	61.9
May be	86	28.0
How to reduce the risk of transmission?		
Wear mask	04	1.3
Social distancing	04	1.3
Frequent hand wash	07	2.28
All the above	292	95.12

Table 2: Distribution of Attitude about SARS-COVID 19

Variables	Frequency (n=307)	Percentage
Do you think wearing masks can prevent COVID 19?		
Yes	245	79.8
No	08	2.6
May be	54	17.6
Do you think frequent hand wash with soap and sanitizer can prevent COVID 19?		
Yes	255	83.1
No	12	3.9
May be	40	13.0
Do you think maintaining social distancing in public places can prevent COVID 19?		
Yes	269	87.6
No	08	2.6
May be	30	9.8
Do you think vaccination gives protection against COVID 19?		
Yes	180	58.6
No	25	8.1
May be	102	33.2
According to you which type treatment is good for COVID 19		
Allopathic	89	29.0
Ayurveda	41	13.4
Siddha	61	19.9
Unani	02	0.7
Homeopathy	10	3.3
Self treatment	68	22.1
Others	36	11.7

Table 3: Distribution of Perception about SARS-COVID 19

Variables	Frequency (n=307)	Percentage
It is believed that symptoms of the novel coronavirus (SARS-COV-19) may appear in as few as 2 or as long as 14 after exposures.		
True	265	86.3
False	42	13.7
If anyone contracts novel coronavirus (SARS-COV-19), there is no possibility of survival.		
True	61	19.9
False	246	80.1

Even in areas experiencing outbreaks, meat products can be safely consumed if these items are cooked thoroughly and properly handled during food preparation.		
True	235	76.5
False	72	23.5
If anyone has a fever, cough, and difficulty breathing seek medical care early and share previous travel history with the health care providers.		
True	257	83.7
False	50	16.3
If anyone works in a "wet market" it is recommended to disinfect the equipment and working area at least once a day.		
True	257	83.7
False	50	16.3
As per WHO guidelines for the novel coronavirus, you only need to wash your hands when they are visibly dirty.		
True	126	41.0
False	181	59.0
If anyone had a flu shot, vaccination against the novel coronavirus (SARS-COV-19) is sufficient.		
True	122	39.7
False	185	60.3

Discussion

A community based cross sectional study was conducted among 307 participants to study the knowledge, attitude and practice of COVID 19. It was observed that 59% (181) were male and 41% (126) were female in the study. Among the study participants majority of them were in the age group of between 20-30 years. The most of the study participants are from Tamilnadu 87.3% (268), and remaining are Pondicherry 3.3% (10) and other states. Among study participants 29.3% (90) were in vaccinated and the remaining peoples are not vaccinated. A similar study conducted by chandana krishna et al states that Out of 409 study subjects, 51% of subjects were female followed by 49% of male population.6A study done by suvvari et al shows that,in Dehradun50.3% were male and 49.7% were female and belonged to 21–23 years of age group. [7]

In this study, the overall response was satisfactory on the KAP questionnaire, which indicates that most respondents are knowledgeable about COVID-19. This can be due to extensive mass media and awareness programs being implemented throughout the nation.In our study, the majority of the study participants 68.4% have been known to the incubation period is 2 - 14 days, the knowledge about the symptoms of coronavirus except skin rash were mentioned correctly in 39.4% (121) and the origin of coronavirus is from bats around 74.3% (228) were known.In a study by Rugarabamu et al. on Tanzania residents, 84.4% of the participants had a good knowledge of COVID-19. [8] Another study done in tamilnadu shows that About 87.5% knew about the mode of spread, 86.8% knew about symptoms of COVID-19, 51.7% knew that there is no definite treatment for COVID-19.6 A similar study in Anantapur showed that 96.4% knew that the first case of COVID was reported in China, 94.5% knew about the symptoms of COVID-19, 90.8% of study participants have an idea about the mode of spread of COVID-19, and 96.5% knew about the steps of prevention of COVID-19. [7]

This study, was found that 79.8% (245) wearing face mask can prevent the disease, 83.1% (255) shows that hand wash done using soap and use of sanitizer also can prevent the infection , 58.6% (180) responded that COVID vaccination gives some sort of production against the disease. Another study done in south India, shows 51.7% felt that quarantine is for COVID-19 suspects, and 29.9% felt that face masks are effective in preventing the spread of virus. [13,14]. This study shows that major population had a habit of frequent hand washing with soap and water regularly and regular use of sanitizer after contact, people wore mask to prevent transmission of disease.

The study showed that 86.3% (265) were believed that symptoms of the coronavirus (SARS-COV-19) may appear as early within 2 days to as long as 14 days after exposure. 83.7% (257) the study participants are aware that if anyone has a fever, cough, and breathing difficulty seek medical care early and should inform previous travel history to the health care. [10-12] Another study in Anantapur showed that 97.9% stayed home during the pandemic, 96.9% practiced social distancing while meeting other people, 98.2% washed their hands regularly, and 98.2% wore mask to avoid corona transmission. [16]

Conclusion

The study provides valuable insights into the knowledge, attitudes, and practices of COVID-19 among a diverse sample of participants in India. The findings underscore the importance of targeted

health education interventions to address knowledge gaps and promote adherence to preventive measures. Moreover, efforts to improve access to healthcare services and vaccination coverage are crucial for mitigating the impact of the pandemic and preventing further transmission.

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