ORIGINAL RESEARCH PAPER
Volume - 11 | Issue - 02 | February - 2022 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

KNOWLEDGE ABOUT SYMPTOMS, MODE OF TRANSMISSION OF COVID 19 INFECTION AND PREVENTION AMONG THE COMMUNITY AND THEIR PRACTICE OF PREVENTIVE MEASURES IN WADHAWAN TALUKA OF SURENDRANAGAR DISTRICT.

Community Medicine

Dr. Solanki Nikita G.* Junior Resident Second Year, Department Of Community Medicine, C.U.Shah Medical College, Surendranagar. *Corresponding Author

Dr. Koringa Hetal T. Associate Professor, Department Of Community Medicine, C.U.Shah Medical College, Surendranagar.

Dr. Goswami Mital G. Junior Resident Second Year, Department Of Community Medicine, C.U.Shah Medical College, Surendranagar.

Dr. Vekariya Dhruvil V. Junior Resident Second Year, Department Of Community Medicine, C.U.Shah Medical College, Surendranagar.

Dr. Girija P. Kartha Retired Professor, Department Of Community Medicine C.U.Shah Medical College, Surendranagar.

ABSTRACT

Background: People's observance of the prevention measures is essential for controlling the spread of COVID-19, which is affected by their knowledge and adopted preventive practices towards COVID-19 infection.
Objectives: To Assess knowledge of community about Symptoms, Mode of transmission and Preventive measures of covid-19. To find out the measures adopted to prevent covid-19 infection by the study population.
Method: Multistage simple random technique was used for sampling. House to house survey was carried out among total 308 study participants and they were interviewed with the help of semi structured questionnaire among urban and rural population of Wadhawan taluka. The data was analyzed using Microsoft excel 2013.
Results: Mean age of study participants was 36.99 ± 14.70 years. Majority (72.73%) of them knew about the major symptoms like High fever, Dry cough and Breathing difficulty and about half (54%) of participants knew that the disease transmission was through Sneezing and Coughing. Majority of participants (90%) were aware about major preventive measures like Use of facemask, Practice of hand hygiene and maintaining social distance, though only 172(55.81%) participants practice major preventive measures on daily basis. Television was the major source of information.
Conclusion: To fulfill knowledge - practice gap regarding covid -19 found in this study, health promotion activities and repeated reinforcement of the same is needed to control the pandemic.

KEYWORDS

Covid-19, pandemic, knowledge, Practice, Preventive measures

INTRODUCTION

The novel Coronavirus (2019-nCoV, officially known as SARS-CoV-2 or COVID-19) was first reported in December 2019, as a cluster of acute respiratory illness in Wuhan, Hubei Province, China, from where it spread rapidly to over 198 countries.[1] It was declared as a global pandemic by WHO on 12th March 2020.[2] In India , The first case of COVID-19 infection reported in Kerala on January 27, 2020.[3] In India, from 3 January 2020 to 13 September 2021, there have been 33,264,175 confirmed cases of COVID-19 with 442,874 deaths, reported to WHO.[4] Control of this pandemic is high in need and as soon as possible with best preventive measures. Regarding this context, public awareness is definitely one of the most important measures that can help to control the diseases and further fatal outcomes. [5]

OBJECTIVE

1. To Assess knowledge of community about Symptoms, Mode of transmission and Preventive measures of covid-19.
2. To find out the measures adopted to prevent covid-19 infection by the study population.

MATERIAL AND METHOD

A cross sectional study carried out during the period of January to May 2021 in Surendranagar district, Gujarat, India. Multistage sampling technique was used. Surendranagar District has total 10 Talukas. One taluka (Wadhawan) was selected by using simple Random Sampling In Wadhawan taluka there are total 13 Wards (Urban) and 45 Villages (Rural). From urban area ward No. 2 and ward no. 10 were selected and from rural area Katuda and Memka villages were selected by using simple random sampling.

The sample size was 283. (p= 85% at allowable error (I) 5% of p in Formula 4pq/l2) To improve the precision further Sample size of 300 was decided for the study [6,7].

A Cross sectional house to house survey was carried out including all members (age >15 year) present at the time of visit. At the end of survey, we interviewed 80 participants from ward no.-2, 76 participants from ward no.-10, 76 participants from Katuda village, 76 participants from Memka village. So, that at the end we reached sample size of 308.

Data was collected by using predesigned, pretested Semi- structured questionnaire with prior consent of participant. Ethical approval has been taken from institutional Ethical Committee (IEC) prior the start of the study.

Statistical Analysis:

Data entry and analysis were done using MS Excel 2013. The descriptive analysis was done by calculating numbers and percentage regarding frequency. Graphical presentation and appropriate statistical test were applied relevantly.

RESULTS

Out of total 308 study participants, almost half (58.44%) were 20-40 years old and only 5% of participants were of less than 20 years with mean age of 36.99 ± 14.70 years. Female study participants were somewhat lesser (42.21%) as compared to male (57.79%). Almost 50% of participants were graduates and very few (11%) were illiterate. One third (35%) of participants were engaged in either government or private job. and Only 7% of participants were students. Study participants from joint or nuclear family were almost same. [Table- 1]

Table: 1 Socio demographic variables of study participants (N=308)

Socio Demographic characteristics	No.	Percentage
Age (in years)		
<20	15	4.87
20-40	180	58.44
40-60	84	27.27
>60	29	9.42

Gender		
Male	178	57.79
Female	130	42.21
Educational status		
illiterate	34	11.04
Primary	22	7.14
Secondary	16	5.19
Higher secondary	35	11.36
Graduate	155	50.32
Post graduate	46	14.94
Occupation		
Student	21	6.82
Housewife	28	9.09
Unemployed	24	7.79
Self employed	70	22.73
Job (Govt./private)	107	34.74
Retired	58	18.83
Type of family		
Joint	157	50.97
Nuclear	151	49.02
Grand Total	308	100.00

Table-2 shows knowledge regarding covid-19 infection among study participants, Majority of them (81.17%) knew that covid-19 infection is caused by virus and 93% of study participants knew that any of the age group can be infected by this virus. Only half (56.5%) of participants knew that asymptomatic person can also have covid-19 infection.

Majority of study participants had noted breathing difficulty (81.49%), high fever (73.05%), dry cough (63.96%), runny nose (51.30%) and fatigue (42.21%) as symptoms of covid -19. Few participants also noted, muscle pain (23.38%), diarrhea, vomiting, skin patches (1.62%) as symptoms of covid-19. When inquiring regarding transmission of covid-19, 57% Study participants recognized contact with contaminated object and 54% answered Sneezing and coughing as modes of transmission of disease. Very few study participants had myths that drinking polluted water (2.92%), eating stored food (3.25%) and eating non vegetarian food (5.19%) can also spread covid infection. Most of the participants had knowledge that use of face mask (89.94%), use of hand sanitizer (85.06%), maintaining social distancing (84.42%) and frequent hand wash (66.68%) can prevent covid-19 infection. Almost one fourth of them knew that steam inhalation and gargling can also provide prevention. Television (94.16%) was the most common source of the information. Others were newspaper (76.62%) and social media (62.34%). Only one fourth of them got a knowledge regarding covid -19 from health personnel in our study. [Table-2]

Table 2: Knowledge regarding covid-19 infection among study participants (N=308)

Knowledge about	Frequency	Percentage
Covid-19 infection is caused by		
Virus	250	81.17
Bacteria	16	5.19
Don't know	42	13.63
Which of the following age group/s can be infected by covid-19?		
Teenagers and children only	1	0.32
Young Adult only	2	0.65
Old people only	18	5.84
Anyone can be infected	287	93.18
Will all persons infected with covid -19 infection have symptoms?		
No	174	56.49
Yes	134	43.50
Knowledge regarding symptoms of covid-19		
High fever	225	73.05
Runny nose	158	51.30
Dry cough	197	63.96
Breathing Difficulty	251	81.49
Muscle pain	72	23.38
Fatigue	130	42.21
Other (Diarrhea, Vomiting, Weakness, skin patches)	5	1.62
Knowledge regarding Mode of transmission of covid-19 infection		
Sneezing & coughing	166	53.90
Contact with contaminated surface	176	57.14
Touching and hugging a patient infected with covid-19	117	37.99
By drinking polluted water	9	2.92
By eating stored food	10	3.25
Eating non vegetarian food	16	5.19
Knowledge of prevention of covid-19 infection		
Use of Face mask	277	89.94
Use of hand sanitizer	262	85.06
Frequently hand wash with soap and	206	66.88
Maintain social distancing	260	84.42
Use of steam inhalation	122	39.61
Gargling (betadine/salt water/any other)	81	26.30
Use of natural herbs (ginger /garlic/turmeric)	138	44.81
Use of ayurvedic / homeopathic immunity booster drugs	117	37.99
Vaccination against covid-19	139	45.13
Source of information regarding covid-19 infection		
TV	290	94.16
Newspaper	236	76.62
Social Media	192	62.34
Friends	104	33.77
Family	176	57.14
Health personnel	80	25.97

Table 3 shows knowledge regarding covid-19 vaccination among study participants. Majority of study participants (88.63%) knew that vaccine is available against covid-19, among them two third of the participants (65.56%) knew that if any person having symptoms like fever & cough then he should not take vaccine. Almost three fourth study participants (73.63%) knew regarding two doses of covid vaccine and among them two third of participants (65.17%) confess minimum 28 days gaps between two doses.

Table 3: Knowledge regarding covid-19 vaccination among study participants

Knowledge about	Frequency	Percentage
Do you know that vaccine is available to prevent covid-19 infection? (N=308)		
Yes	273	88.63
No	35	11.36
In case person has symptoms like fever& cough, can he/she take vaccine? (N=273)		
Yes	94	34.43
No	179	65.56
How many doses of covid-19 vaccine need to be taken? (N=273)		
One	18	6.6
Two	201	73.63
More than two	31	11.35
Don't know	23	8.42
How many days of gap to be kept between two doses? (N=201)		
<28	70	34.82
>28	131	65.17

Figure-1 depicts practice of preventive measures of covid-19 infection among study participants, more than half of study participants uses face mask (56.17%) and follows hand hygiene practice (41.88%) on regular basis. Only one third of study participants (31.17%) follows norms of social distancing regularly.

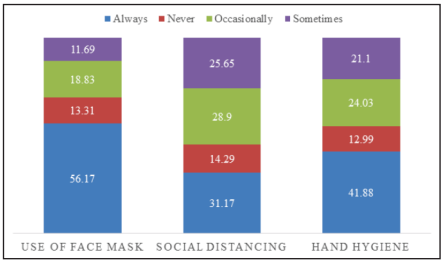

Figure 1: Practice of preventive measures of covid-19 (N=308)

Table 4 shows association of knowledge and practice of major preventive measure of covid -19 infection. Those participants who have better knowledge regarding use of face mask and social distancing, actually do practice of the same. But the significant association was not found statistically. (p<0.05)

Those participants who had adequate knowledge that hand hygiene can prevent disease transmission, practices proper hand hygiene on regular basis and this association was also found significant statistically. (p<0.05) [Table-4]

Table 4: Status of Knowledge and Practice of Major preventive measures of Covid -19 infection

Use of face mask	Practice +ve	Practice -ve	χ2 (P value)	Not significant at p <0 .05
Knowledge +ve	159	118	1.69 (0.19)	
Knowledge -ve	14	16		

Social Distancing	Practice +ve	Practice -ve	χ2 (P value)	Not significant at p <0 .05
Knowledge +ve	84	36	1.00(0.31)	
Knowledge -ve	12	176		

Hand Hygiene	Practice +ve	Practice -ve	χ2 (P value)	Significant at p <0 .05
Knowledge +ve	110	124	10.51(0.001)	
Knowledge -ve	19	55		

DISCUSSION

Preventive measures are the most needed strategies during this current phase of covid -19 Pandemic. People should be quite knowledgeable regarding various aspects of covid-19, so that preventive measures can be easily adopted by them. With an intention to find out knowledge and practice among general population, this study was conducted among 308 study participants. Mean age of participants was found 36.99 ± 14.70 years with equal participation of both genders in our study. Similar results were also noted by Kutikruppala LV et al[6] and Kartheek AS et al[8] in their respective studies.

Majority of study participants knew that covid-19 infection is caused by virus in the studies done by Yosuf M. A. et al[7] (91.9%) and Narayana G. et al[9](96.4%), whereas in our study this knowledge was found slightly lower (81.17%). Narayana G. et al[9] mentioned in their study that only one fourth of study participants (24.1%) knew that asymptomatic person can also have covid-19 infection, whereas in our study we found that half of study participants (56.5%) knew about the same.

In our study, majority of study participants knew that breathing difficulty, high fever, dry cough, runny nose & fatigue are symptoms of covid-19. Similar results were also found by Yousaf M.A. et al[7], Gupta p. et al[10] and Narayana G. et al [9] in their studies

In a study done by Yousaf M.A. et al [7], majority of study participants (93%) recognized contact with contaminated surface can spread covid-19 infection While in our study only half (57%) of study participants knew that. In our study, some myths that drinking polluted water, eating stored food and eating non- vegetarian food can spread covid-19 infection were found among few of the study participants. Likewise other myth that covid-19 infection can be transmitted by mosquitoes and flies was also found in the study.[6]

Almost all study participants knew that use of face mask, use of hand sanitizer, maintaining social distancing and frequent hand wash can prevent covid-19 infection in our study. Similar results were also found in study by Narayana G. et al[9].

TV, Newspaper and social media found to be effective source of information regarding covid-19 infection as per this study. Narayana G. et al[9] and Gupta P. et al[10] also found the same results in their studies. We can utilize these channels in more efficient way to control the pandemic.

In this study, majority of study participants knew regarding different aspects of vaccine e.g., Vaccine is available or not, Doses of vaccine, minimum gap between doses etc. at satisfactory level. While study done among the general population of Jammu Kashmir shows only 9.6% of study participants knew that vaccine is available to combat the covid-19.[7] But this might be due to time duration of the study as at that time vaccine was under trial phase.

This study shows, 57.17% were using face mask, 31.17% were maintaining social distance & frequent hand washing was done by 41.88% of study participants. Gupta P. et al[10] mentioned in their study that more than two third of the population out of total 386, followed these three practices regularly. Other several studied done by Kutikruppala LV et al[6], Yosuf M. A. et al[7], Narayana G. et al[9] and Tomar BS et al[11] found correct practice rate as 83.5%, 93%, 88.1% and 93.8% in their studies respectively.

Our study showed statistical association between knowledge and practice with regard to hand hygiene only while other preventive measures show knowledge – practice gap. This gap should be fulfilled as early as possible to beat the pandemic. The knowledge – practice gap was also noted by Kutikruppala LV et al[6] and Narayana G. et [9] in their studies respectively. Contrary to this, Tomar B.S. et al[11] found strong association between knowledge and practice of preventive measures of covid-19 in their study during earlier phase of pandemic (2020).

CONCLUSION

Majority of the participants were knowledgeable regarding symptoms, mode of transmission and major preventive measures of covid-19 infection. Practice of proper hand hygiene was found among majority of the study participants but many were not maintaining prescribed social distance to prevent covid-19 infection. Use of face mask was also found improper and infrequent.

Recommendation:

To fulfill this knowledge - practice gap, health promotion activities and repeated reinforcement are high in need to remove existing barriers for containment of the covid-19 pandemic.

REFERENCES

1. Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. EuroSurveill. 2020;25(5):pii=200131e. https://doi.org/10.2807/1560-7917.ES.2020.25.5.200131e
2. World Health Organization. WHO announces COVID-19 outbreak a pandemic. http://www.euro.who.int/en/health-topics/health-emergencies/coronavi rus-covid 19/news/news/2020/3/who-announces-covid-19-outbreak-a-pandemic
3. Andrews M. A., Areekal B., Rajesh K. R., Krishnan J., Suryakala R., Krishnan B., Muraly C. P., & Santhosh P. V. (2020). First confirmed case of COVID-19 infection in India: A case report. The Indian journal of medical research, 151(5), 490–492. https://doi.org/10.4103/ijmr.IJMR_2131_20
4. Anon., 2021. WHO. [Online] Available at: https://covid19.who.int/ region/ searo/ country/in [Assessed on 13 September 2021]
5. David M. Bell, World Health Organization Working Group on Prevention of International and Community Transmission of SARS, Emerging Infectious Disease. 2004 Nov; 10(11), 1900–1906. doi: 10.3201/eid1011.040729
6. Kutikuppala LV, Kiran A N, Suvvari TK. Knowledge, attitude, and practices toward the COVID-19 pandemic among the indian general population: A cross-sectional survey. Indian Journal of Respiratory Care, 10(1),88-92. http://www.ijrc.in/ text.asp? 2021/ 10/1/88/308468
7. Yousaf M. A., Noreen M., Saleem T., & Yousaf I. (2020). A Cross-Sectional Survey of Knowledge, Attitude, and Practices (KAP) Toward Pandemic COVID-19 Among the General Population of Jammu and Kashmir, India. Social work in public health, 35(7), 569–578. https://doi.org/10.1080/19371918.2020.1806983
8. Kartheek A S, Gara K H, Vanamali DR. Knowledge, attitude and practices towards COVID-19 among Indian residents during the pandemic: A cross-sectional online survey. J NTR Univ Health Sci,9(2),107-115. https://www.jdrntruhs.org /text.asp? 2020/9/2/107/289897
9. Narayana G., Pradeepkumar B., Ramaiah J. D., Jayasree T., Yadav D. L., & Kumar B. K. (2020). Knowledge, perception, and practices towards COVID-19 pandemic among general public of India: A cross-sectional online survey. Current medicine research and practice, 10(4), 153–159. https://doi.org/10.1016/j.cmrp.2020.07.013
10. Gupta P., Gupta A., Dixit S., & Kumar H. (2020). Knowledge, attitude, and practices regarding COVID-19: A cross-sectional study among rural population in a northern Indian District. Journal of family medicine and primary care, 9(9), 4769–4773. https://doi.org/10.4103/jfmpc.jfmpc_1206_20
11. Tomar BS, Singh P, Nathiya D, Suman S, Raj P, Tripathi S, Chauhan DS. Indian community's knowledge, attitude, and practice toward COVID-19. Indian J Soc Psychiatry 37(1).48-56. Available from: https://www.indjsp.org/ text.asp? 2021/37/ 1/48/312878