

KNOWLEDGE, ATTITUDE AND APPROACH TOWARDS VIRAL INFECTIOUS DISEASES AMONG RURAL AREAS.

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Abstract:

Introduction: The India has experienced outbursts and epidemics of many viral infectious diseases. As about 75% of medical facilities are concentrated in urban sectors the rural areas are primary victims of such a diseases. 21st century has far experienced more than 10 pandemic viral outbursts including fatal coronavirus disease. Therefore, it is necessary to have knowledge about viral diseases and also positive attitude towards them. There is also requirement of dynamic approaches about for use in future disease outbreaks. This study is aimed to know the knowledge, attitude and approach about viral infectious diseases among people living in rural areas.

Objectives: To assess knowledge, attitude and approach towards viral infectious diseases among rural areas with the help of questionnaire.

Method: This study was carried out in rural areas around Karad.

Participants were enrolled from villages around Karad city and they are interviewed by using a structured questionnaire and results are obtained.

Results: Study result shows that knowledge about viral infectious diseases is 53.46%, attitude towards viral infections is 53.61%, and approach towards viral infectious diseases is 56.36%. The mean age of participants is 36.65 years.

Conclusion: The knowledge about viral infectious diseases among rural residents is adequate to prevent spread of viral diseases. Attitude is positive towards viral diseases in western Maharashtra and they approaches quite positively towards viral diseases.

Keywords: Knowledge, Attitude, Approach, Viral infectious diseases, Rural areas

Introduction:

India is second most populated country of the world. About 75% of medical facilities & health resources are concentrated in urban sectors. Infectious diseases such as diarrhea, hepatitis, tuberculosis, respiratory tract infections, AIDS influenza, mumps, measles, chickenpox, herpes infections may influence morbidity especially in rural areas.^[1]Rural population are 1st to work in

most hazardous atmosphere & live in dreadful conditions & hence they are the 1st victim of epidemics. The nature of rural health problems is accredited to lack of knowledge about lack of knowledge about viral infectious diseases.^[1] Knowledge of the disease have an impact on attitude & approach towards viral infections diseases erroneous attitude & approaches can increase the risk a infection. Since, the world has faced one pandemic recently, so people should have adequate knowledge about viral infections diseases & positive attitude towards them and they should know how to approach towards such viral infections, there would be less morbidity. Due to inadequate knowledge, people ignored the symptoms instead of visiting health center leading to increased severity & spread of the disease. If there is lack of adequate knowledge ,poor attitude towards disease prevention strategies & poor approach in controlling source of infection & then their will be spread of infection.^[2] Rural areas are more susceptible to viral infections as rural health is risk of spread of viral infections diseases as they can spread in any region causing increased morbidity & mortality. Positive attitude such as social distancing hygienic practices, exercises, vaccinating regularly can reduce/decrease the morbidity. India is 2nd most populous country in the world.^[1] The country has accomplished out breaks & epidemics of many viral infectious diseases .Active interaction of biological, social-cultural & ecological factors, jointly adds challenges in disclosure of infectious diseases.^[3,4] The revelation of viruses & re-establishment of several diseases are main concerns. In such disclosures recognition of presence of viral diseases is important to prevent the spread of viral diseases is important. The knowledge about viral diseases, attitude towards viral diseases & approach of rural areas towards such diseases are important factors to avoid spread of these diseases. Viral pathogens are known to cause eruption that have infestation & prevalent prospective. Majority of outbursts of viral diseases has been occurring in rural areas due to increasing population, poverty, malnutrition, economic factors migration. Gathering & other events create public health concern. Transmission of respiratory & gastrointestinal in infections remains in concern in such gatherings.^[3,4] As 21st century has experienced more than 10 major viral events including destructive corona virus disease 2019 pandemic. As viral disease exposure is expected to accelerate, these disease recite a need for proactive approaches to develop active therapeutics for use in future disease outbreaks.^[4]

Methods :

Population and sampling:

This cross-sectional study was conducted between March2022 to August 2022 in rural areas of Karad in western Maharashtra. Residents aged 18 to 80 years old were recruited into this study. The study was approved by the Ethical Committee of KIMS University. The study population was obtained by random sampling method .The population from various villages were recruited and were selected as the target population.

Demographic variables are shown in the following table :

(n = 600)

Gender	n	%

Male	294	49%
Female	306	51%

Age	n	%
18 -29	199	33.16%
30-44	183	30.5%
44-59	138	23%
>60	80	13.33%

Occupation	n	%
Farmer	204	34.00%
Employee	251	41.83%
Business	66	11%
Student	14	2.33%
Others	65	10.83%

Education	N	%
Illiterate	25	4.16%
Primary school	44	7.33%
Middle school	23	3.83%
High school	133	22.16%
Intermediate	134	22.33%
Graduate	213	35.55%
Postgraduate	28	4.66%

Questionnaire and data collection:

The questionnaire self designed questionnaire pre-tested among 100 people who did not participate in the study and was modified as necessary. The questionnaire consisted of 30 questions and the demographic data which includes name, age, gender, education. That 30 questions were divided into 3 sections. Each section consists of 10 questions. The first 10 questions were about the knowledge of viral infectious diseases. Next 10 questions were about attitude towards viral infectious diseases and remaining questions were consists of approach of rural residents towards viral infectious diseases. Each question was allotted 1 mark if the answer is Yes and 0 mark if answer is No. Total score of the questions was obtained separately of knowledge ,

attitude and approach. Participants who are literate ,were given the copy of structured questionnaire and those who are illiterate were asked the questions and samples were collected .If there was any problem in understanding questions, the questions was repeated again without any explanation. All candidates participating in the study provided verbal informed consent before the survey. In case of denial to participate the subject was dropped.

Data analysis:

The Instat software was used for statistical analysis in this study. Variables were described as means with standard deviation. The total scoring rate for knowledge, attitude and approach were calculated by dividing the total score of an individual with total score of questionnaire and multiplying by 100. Chi-square test was used for knowledge, attitude and approach scores and the statistically significant variables identified and those considered as significant factors.

Results :

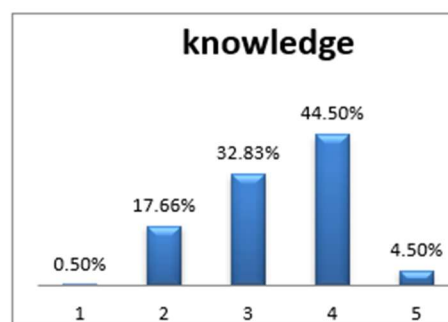
A total 611 people participated in the study. 11 surveys were debarred because of incomplete survey responses. As a result, 600 participants completed the interview. Age of the study participants ranged from 18and 80 years and the mean age was 36.65 years .The most people in this study are educated and are were exposed to viral infectious diseases. Total 30 were asked .Each question was allotted 1 mark if the answer is Yes and 0 mark if answer is No. Total score of the questions was obtained separately of knowledge , attitude and approach. Participants who are literate ,were given the copy of structured questionnaire and those who are illiterate were asked the questions and samples were collected .If there was any problem in understanding questions, the questions was repeated again without any explanation. All candidates participating in the study provided verbal informed consent before the survey. In case of denial to participate the subject was dropped.

Knowledge of viral infectious diseases

The responses to questions related to knowledge of viral infectious diseases are given in Table1.

	N	Percentage
<u>No knowledge</u>	3	0.5%
Poor	106	17.66%
Fair	197	32.83%
Good	267	44.5%
Excellent	27	4.5%

Table 1



Graph 1

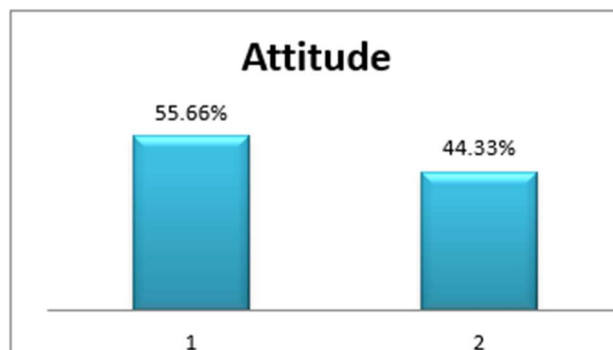
The graph shows that 44.50% population have good knowledge about viral infectious diseases, whereas 0.50% population don't have any knowledge .Only 4.50% population have excellent knowledge towards viral infectious diseases whereas 17.66% population is having poor

knowledge and 32.83% population have fair knowledge of viral infectious diseases.

The responses to questions related to attitude towards viral infectious diseases are given in Table 2 .

Attitude	n	Percentage
Positive	334	55.66%
Negative	266	44.33%

Table 2



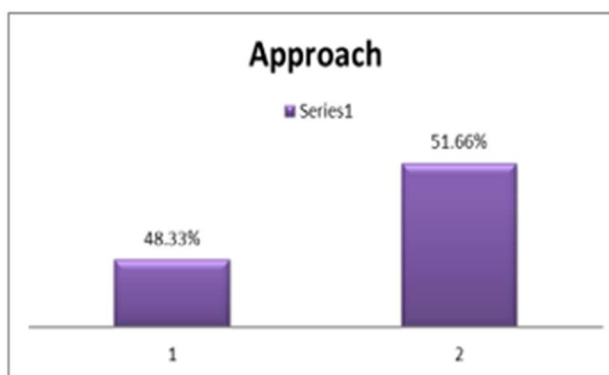
Graph 2

The above graph shows that 55.66% population of rural areas is having positive attitude towards viral infectious diseases, whereas 44.33% population don't have positive attitude towards viral infectious diseases.

The responses to questions related to approach towards viral infectious diseases are given in Table 3.

Approach	n	Percentage
Positive	290	48.33%
Negative	310	51.66%

Table 3.



Graph 3

The above graph is indicating that 48.33% positive approach towards viral infectious diseases and 51.66% have negative approach towards viral infectious diseases.

Distribution of knowledge about viral infectious diseases among rural population (N= 600)

There were 10 questions for knowledge and the responses for each question is given in below table :

Questions related to knowledge	Yes (n/%)	No(n/%)
1.Do you know about infectious diseases? (what is meant by infectious diseases)	338 (56.33%)	262(43.66%)

2.Are these viral infectious diseases?(flu, HIV, chickenpox)	382(63.66%)	218(36.33%)
3. Can viral infections be transmitted at barber's shop?	315(52.5%)	285(47.5%)
4. Is there any treatment of these infections?	302(50.33%)	298(49.66%)
5. Do you have any source of knowledge?	319(53.16%)	281(46.83%)
6. Are you aware of clinical features of infectious diseases?	309	291(48.5%)
7. Are you aware about dangers of viral infectious diseases?	311(51.83%)	289(48.16%)
8. Do you know the routes of spread of viral infectious diseases?	329(54.83%)	275(45.83%)
9. Are you aware that physiotherapy is also helpful in management of infectious diseases?	292(48.66%)	310(51.66%)
10.Do you know the risk factors of infectious diseases?	301(50.16%)	299(49.83%)

There were 10 questions for attitude and the responses for each question is given in below table

Questions related to attitude	Yes(n/%)	No(n/%)
1.Is it important to keep distance from others to avoid spread of viral diseases?	290(48.33%)	310(51.66%)
2.Do you take precautionary measures to stop spread of viral diseases	292(48.66%)	308(51.33%)
3.Do you feel worried or scared after knowing the information on number of cases of viral diseases in your region?	285(47.5%)	315(52.5%)

4.Do you think that the spread of viral diseases can be prevented?	365(60.83%)	235(39.16%)
5.Is it correct to isolate the infected person without providing proper medical help?	269(44.83%)	331(55.16%)
6.Do you think hygiene will help in prevention of these diseases?	263(43.83%)	337(56.16%)
7.Do you maintain bronchial hygiene ?	355(59.16%)	245(40.83%)
8.Are you aware about the importance of aerobic exercises ?	364(60.66%)	236(39.33%)
9.Do you maintain proper ventilation in your home?	316(52.66%)	284(47.33%)
10.Do you follow the immunization schedule?	386(64.33%)	214(35.66%)

There were 10 questions for approach and the responses for each question is given in below table:

Questions related to approach	Yes(n/%)	No(n/%)
1. Do you visit doctor when you become ill?	304(50.66%)	296(49.33%)
2.Is there any healthcare services which provides primary care about viral diseases?	291(48.5%)	309(51.5%)
3.Do you go for regular health care check up to clear your doubts?	269(44.83%)	331(55.16%)
4.Is health care awareness provided to you in your area where you can reach easily?	355(59.16%)	245(40.83%)
5.Can you reach hospital in emergency situation within an hour?	403(67.16%)	197(32.83%)
6.Are you aware of using handwash and sanitizer regularly ?	351(58.5%)	249(41.5%)

7.Do you maintain cleanliness in and around the home?	387(64.5%)	213(35.5%)
8.Are you aware about food items which are to be avoided in infectious diseases?	294(49%)	306(51%)
9.Do you know about the food items which are to be taken adequately in infectious diseases?	296(49.33%)	304(50.66%)
10.Are you aware of some preventive measures to be taken to avoid the spread of infection?	392(65.33%)	208(34.66%)

The statistical values as follows :

	Male	Female
Knowledge	130	163
Attitude	124	142
Chi-square value	0.2007	
P value	0.6541	

Discussion :

This is the study to assess knowledge, attitude and approaches towards viral infectious diseases in rural areas. Having knowledge about viral infectious diseases is an important factor to prevent and control the spread of disease .This is even more necessary factor during epidemics where a large section of population is susceptible for infection. In our study, knowledge about agent was fair 53.46 % .This is lower than studies from China and Pakistan where 99% and 100% respondents were correct.^[12]Expanding the level of knowledge of viral infectious diseases could not only help the rural population to protect themselves, but also aid those suspected suffers of being infected to seek medical help early and treat more efficiently.^[6]In this study, respondents have 53.46% of knowledge about viral infectious diseases which is quite fair. Many studies have been conducted about the Knowledge , Attitude and practices towards viral diseases in which researchers had studied about specific viral diseases such as HIV, Zika virus ,Covid-19 ,etc. In this study we included Knowledge ,Attitude and Approaches towards overall viral infectious diseases which are commonly seen in rural areas. Recently, rural areas had faced a pandemic along with urban areas. In urban areas facilities to cope up with such situations are available but in rural areas , there is lack of such facilities , therefore people in the rural areas face several challenges during such periods. Population living in rural areas should have good knowledge and positive approaches towards viral infectious diseases accordingly to reduce the risk of being infected and transmitting the virus to others. Knowledge about risk factors was low in our study (49.66%) compared to HCWs in China (67%).Knowledge influences the attitude and approaches towards the viral

diseases. In current study , the knowledge about viral infectious diseases is fair in comparison with other studies .In this study, we noticed that attitude towards viral infectious was also considered to be significantly associated with good knowledge about the disease. Rural residents who had a positive attitude were more likely to have good knowledge than those with a negative attitude. This was supported by previous studies in Nigeria ^[9,11], China ^[11,17], Bangladesh^[11,18,21], and in Nepal ^[11,19]. Our study indicated that 55.66% of the rural residents had a positive attitude towards viral infectious diseases. This result is low than studies in Northwest Ethiopia 66.1% and 70.65% ^[20,21] and in Syria 63.5% ^[23]. This dissimilarity might be seen as a result of differences in target groups and type of questions used.^[11]In our study, positive attitude was correlated with age, educational level and knowledge about viral infectious diseases .Educational level of secondary or above was significantly associated with good knowledge about the viral infectious diseases. This result was similar to other studies in Ethiopia^[11,21,24]. As the previous study indicates that attitude about viral infectious diseases is related to knowledge towards viral infectious diseases in the same way approaches are also dependent on the knowledge. This study also indicates that Knowledge about viral diseases is adequate as the people are known about viral diseases, routes of spread of viral diseases. They have lack of knowledge about the role of physiotherapy in viral infection. People have positive attitude towards precautionary measures to be taken in viral infections .They are aware about importance of aerobic exercises. People living in rural areas are adequately aware about viral diseases because of which they have positive attitude towards immunization. Nowadays, rural residents does not hesitate to visit clinic when they become ill or having some symptoms of infection. Use of hand wash and sanitizer frequently is necessary to avoid viral infection and is followed by many people in rural areas, as it is a result of awareness made in Covid-19 pandemic. People in rural areas take preventive measures such as taking steam frequently, maintaining cleanliness, etc. The knowledge about various diseases, its preventive measures and impact on health is more common in females²⁵ and people are even aware of how infections could lead to diseases²⁶. Few people are even aware about therapies like physiotherapy, occupational therapy and the role they play in health disorders²⁷.

Conclusion : This study concluded that knowledge about viral infectious diseases in western Maharashtra is adequate to prevent spread of viral diseases. Attitude is quite positive towards viral diseases in rural residents and they approaches quite positively towards viral diseases. The knowledge is more in females than males and also positive attitude is more seen in females .

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