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A DESCRIPTIVE STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE REGARDING HEALTH PROBLEMS RELATED TO CLIMATE CHANGE AMONG PEOPLE IN SELECTED COMMUNITY AREAS AT VIRUDHUNAGAR

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ABSTRACT

Background: Climate change is widely recognized as a significant public health concern, contributing to heat-related illnesses, vector-borne diseases, respiratory disorders and water-borne infections, especially among vulnerable populations. The knowledge and attitude of community members are essential in facilitating effective adaptation and mitigation of these health risks¹. **Objective:** The purpose of this study was to assess knowledge and attitude among people in selected community areas at Virudhunagar regarding health problems related to climate change. **Methodology:** 50 community people were chosen as samples using the convenience sampling technique. Data were gathered using a structured interview schedule and a five-point Likert scale. The collected data was arranged, tabulated and analysed using descriptive and inferential statistical techniques. **Results:** The study's key findings were that, of the 50-community people, only 3(6%) had adequate knowledge, 37(74%) had Moderately adequate knowledge and 10(20%) had inadequate knowledge and regarding attitude no one had positive attitude, 36(72%) had neutral attitude and 14(28%) had negative attitude regarding health problems related to climate change. According to the study's findings, a large number of community people had Moderately adequate knowledge and had neutral attitude toward health problems related to climate change.

KEYWORDS

Health problems related to climate change, Community people, Knowledge and Attitude.

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INTRODUCTION

Climate change is now widely acknowledged as a significant public health concern, impacting populations globally through increasing temperatures, extreme weather events and evolving disease patterns. These environmental changes lead to various health issues, including heat-related

illnesses, respiratory conditions, vector-borne diseases and waterborne infections². Developing nations such as India are particularly at risk due to high population density, limited resources, and existing health disparities³. Awareness and perceptions at the community level play a vital role in reducing the health impacts of climate change⁴. Adequate knowledge about climate-related health risks empowers individuals to adopt preventive measures and strengthens community resilience⁵. Attitudes toward climate change and its health effects significantly influence people's willingness to participate in adaptation and mitigation efforts⁶. In semi-urban and rural areas like Virudhunagar, assessing public awareness is essential for developing effective health education programs⁷. Despite this, a gap often exists between knowledge and actual practices, emphasizing the need for systematic evaluation⁸. This descriptive study is useful in identifying the current levels of knowledge and attitude among the community people⁹. The results of such studies can assist policymakers and healthcare professionals in creating targeted interventions to minimize climate-related health risks in vulnerable communities¹⁰.

Need For Study

Climate change is a major global health challenge affecting millions of people through heatwaves, floods, air pollution and the spread of diseases. According to the World Health Organization, climate change is expected to cause about 250,000 additional deaths per year between 2030 and 2050, mainly due to malnutrition, malaria, diarrhoea and heat stress. Nearly 3.6 billion people are already living in highly vulnerable areas¹¹.

Despite the increasing burden of climate-related health problems, awareness and preparedness among the general population, particularly in developing countries, remain inadequate. The World Health Organization emphasizes that low- and middle-income countries are less equipped to cope with these health risks due to limited resources and lack of knowledge. Therefore, assessing the knowledge and attitude of people regarding health problems related to climate change is essential to identify gaps and plan effective health education interventions¹².

In this context, a community-based study in selected areas of Virudhunagar is necessary to understand the level of awareness, perceptions and attitudes of the population toward climate-related health issues. The findings of this study will help in developing targeted educational programs, improving community preparedness, and strengthening public health strategies. Additionally, this study will be beneficial for nursing professionals in planning and implementing appropriate health promotion activities to mitigate the impact of climate change on human health¹³.

Problem Statement: A descriptive study to assess the knowledge and attitude regarding health problems related to climate change among people in selected community areas at Virudhunagar

Aim

To assess the knowledge and attitude regarding health problems related to climate change among people

To find out the correlation between knowledge and attitude regarding health problems related to climate change among people

To find out the association between knowledge regarding health problems related to climate change among people with the selected socio demographic variables.

To find out the association between attitude regarding health problems related to climate change among people with the selected socio demographic variables.

METHODOLOGY

Quantitative research strategy was selected for this study. A non-experimental descriptive research design was adopted. The study was conducted in Meesalur village at Virudhunagar. It's about five kilometres from V.V. Vanniaperumal Nursing College for Women, Virudhunagar. People from Meesalur village were selected as samples for this study. Convenience sampling technique was used to choose 50 People from meesalur village as the samples. The tool is divided in to three sections: Section I includes Socio demographic information; Section II is a structured interview schedule designed to assess knowledge and Section III is a five-point

Likert scale used to assess attitude of the community people regarding climate change.

RESULTS AND DISCUSSION

The findings were organized in the following section.

Section - II

Of 50-community people, only 3(6%) people had adequate knowledge, majority 37(74%) had Moderately adequate knowledge and 10(20%) had inadequate knowledge regarding health problems related to climate change, according to the statistics shown in Table No.2.

Section - IV

Table No.4 shows that the obtained knowledge mean score was 43.7 with the standard deviation 30.46. The obtained attitude mean score was 38.18 with the standard deviation of 57.812. The obtained 'r' value 0.9 which was strongly positive and significant at 0.05 level. It was referred that there was a significant relationship between knowledge and attitude of sample regarding health problems related to climate change among people.

Section - I

Table No.1: Classification of subjects based on the socio demographic variables: (n= 50)

S.No	Socio demographic variables	Frequency	Percentage (%)
Age in years			
1	21-30 years	28	56 %
2	31-40 years	18	36 %
3	41-50 years	3	6 %
4	More than 51	1	2 %
Sex			
5	Male	12	24 %
6	Female	38	76 %
Religion			
7	Hindu	48	96 %
8	Christian	2	4 %
9	Muslim	0	0 %
Type of family			
10	Nuclear family	42	84 %
11	Joint family	8	16 %
12	Extended family	0	0 %
Educational Status			
13	Illiterate	12	24 %
14	Primary Education	8	16 %

Section 5: Association between sample knowledge and attitude with selected demographic variables

Knowledge of health problems related to climate change was significantly associated with certain demographic factors, such as sex and water supply of community people and regarding attitude toward health problems related to climate change was not significantly associated with socio demographic variables of community people.

15	Secondary Education	8	16 %
16	Higher Secondary Education	8	16 %
17	Graduate	14	28 %
18	Post graduate	0	0
Source of information			
19	Television	20	40 %
20	Newspaper	10	20%
21	Radio	0	0 %
22	Mobile phone	20	40 %
Occupation			
23	Unemployment	18	36 %
24	Farmer	10	20 %
25	Self-employment	11	22 %
26	Private employee	6	12 %
27	Government employee	5	10 %
Type of house			
28	Terraced	15	30 %
29	Tiled	31	62 %
30	Sheet	0	0 %
31	Thatched	4	8 %
Water supply			
32	Well	5	10 %
33	Pipeline	44	88 %
34	Tube well	0	0 %
35	Other	1	2 %
Monthly Income of the family			
36	>Rs 10000	22	44 %
37	Rs 10001-20000	25	50 %
38	<20001	3	6 %

Section - II

Table No.2: Distribution of sample based on the knowledge level (n=50)

S.No	Level of Knowledge	Frequency	Percentage (%)
1	Adequate Knowledge	3	6 %
2	Moderately Adequate Knowledge	37	74 %
3	Inadequate Knowledge	10	20 %
4	Total	50	100%

Section - III

Table No.3: Distribution of sample based on the attitude level (n=50)

S.No	Level of Attitude	Frequency	Percentage (%)
1	Positive Attitude	0	0 %
2	Neutral Attitude	36	72 %
3	Negative Attitude	14	28 %
4	Total	50	100%

Section - IV

Table No.4: Correlation between knowledge and attitude regarding health problems related to climate change among people

S.No	Variables	Mean	Standard Deviation	'r' value
1	Knowledge	43.7	30.46	0.9*
2	Attitude	38.18	57.812	

*Significant at 0.05 level

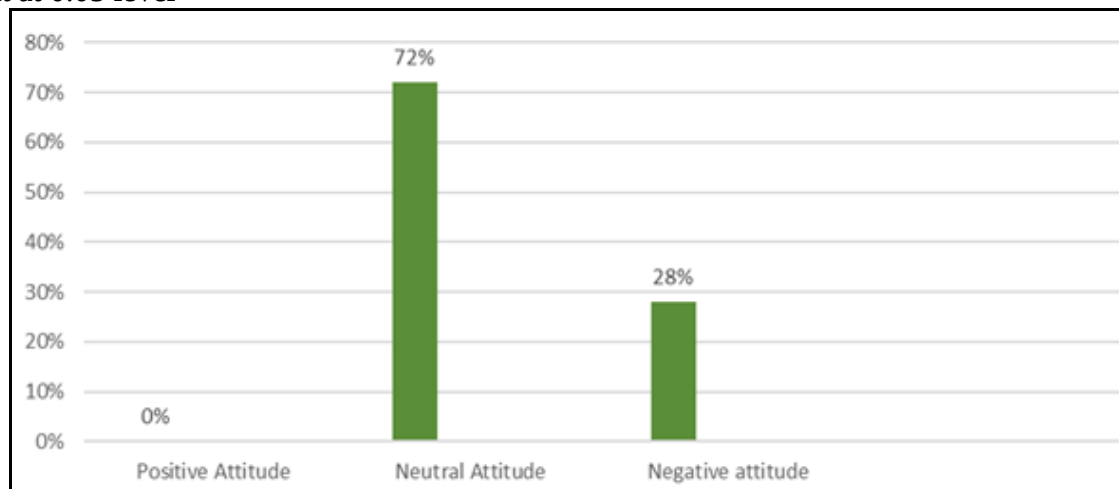


Figure No.1: Level of Attitude

CONCLUSION

The findings of this study demonstrate that community awareness regarding the health impacts of climate change remains inadequate, with the majority of participants exhibiting only moderately adequate knowledge and a predominantly neutral attitude. The observed strong positive correlation between knowledge and attitude underscores the critical role of health education in shaping favourable perceptions and promoting climate-responsive health behaviours. The significant association of knowledge with selected socio-demographic variables further highlights the need for targeted educational interventions tailored to specific population groups. These findings reinforce the urgent need to strengthen community-based climate and health literacy through evidence-based health promotion strategies, with nurses serving as key facilitators of public education and community engagement. Integrating climate change education into primary health care services and public health programmes has the potential to enhance community preparedness, foster adaptive behaviours, and reduce the burden of climate-related health risks. Future

large-scale, multi-centre studies involving more diverse populations are recommended to generate robust evidence that can inform policy development and strengthen climate-resilient public health systems.

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CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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