

AWARENESS OF CLIMATIC CHANGES AMONG HIGHER SECONDARY STUDENTS

By

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Abstract

Climate change is a complex phenomenon that encompasses alterations in various aspects of Earth's climate system over extended periods. Human activities have been the main driver of climate change, primarily due to the burning of fossil fuels like coal, oil and gas. The consequences of climate change include intense droughts, water scarcity, severe fires, rising sea levels, flooding, melting polar ice, catastrophic storms and declining biodiversity. Because of the effects climate change has on the planet, awareness on climate change is important among every individual. So, the present study investigates the awareness of climate change among higher secondary students. Here the investigator used survey method to collect data from a sample of 300 higher secondary school students in Kanyakumari district. The tool used for the present study was Awareness Scale on Climatic Change constructed and validated by the Investigator and the guide. Mean, Standard deviation, Percentage analysis, Differential analysis t – test and 'F' Test are the statistical techniques used for data analysis. The findings of the study revealed that gender have significant difference in awareness of climate change among higher secondary students. The findings of the study revealed that locality and type of the institution have no significance difference in the awareness of climate change among higher secondary students.

Keywords: awareness, climatic changes, students.

Introduction

Climatic change is a global phenomenon that has been the subject of research, debate, and discussion in recent years. The causes of climatic change are primarily human activities, such as the burning of fossil fuels and

deforestation, which release greenhouse gases into the atmosphere and contributes the warming of the planet. Rising temperatures can lead to sea level rise, increased frequency and intensity of natural disasters such as hurricanes, floods, and wildfires, and changes in precipitation patterns,

which can impact agriculture and water resources. Addressing climatic change will require significant changes in policy, behaviour, and technology, and it is critical that action is taken now to mitigate its effects and ensure a sustainable future for generations to come.

Significance of the Study

Climate change affects the social and environmental determinants of health such as clean air, safe drinking water, sufficient food and secure shelter. Its rapid emergence in the past decades together with health inequality and infectious diseases is a major challenge to public health. Education is an essential element of the global response to climate change. Climate change education helps young people comprehend and address the impact of global warming. Furthermore, it encourages changes in their attitudes and behaviour and helps them adapt to the climate change related trends. Knowledge on climate change is perceived as a part of formal environmental education that helps in development of a sense of responsibility through the creation of

informed awareness. Thus, such awareness is necessary to guide students' behavior towards concerted improving actions. Higher secondary school students have some knowledge and awareness of climate change. Thus, awareness related to climate change and its impact on earth creates a better adaptive capacity for the teenagers. Since limited studies are conducted in this topic regarding climatic change among higher secondary students. So it is important to assess the awareness of climate change among higher secondary students. Thus, an attempt is made to conduct a study on "Awareness of Climatic Changes among Higher Secondary Students".

Title of the study

The problem is entitled as "Awareness of Climatic Changes among Higher Secondary Students".

Objectives

To find out significance difference, if any, in the awareness of climate change among higher secondary students with regard to gender, locality of the institution and type of institution.

Hypotheses

1. There is no significant difference in awareness of climatic changes among higher secondary students with regard to gender.
2. There is no significant difference in awareness of climatic changes among higher secondary students with regard to locality of institution.
3. There is no significant difference in awareness of climatic changes among higher secondary students with regard to type of institution.

Method Adopted for the present study

The method adopted for the present study is survey method.

Population

The population of the study consists of higher secondary school students of Kanyakumari district.

Sample

The sample consists of 300 higher secondary school students of Kanyakumari district.

Tools Used

The tool used for the present study was Awareness Scale on Climatic Change (2022) constructed and validated by the Investigator and the guide.

Establishing validity and reliability

(a) Validity of the tool

The item validity was already found by doing item analysis. It was also carefully analysed by the guide. Some alternations were made according to their suggestions. Thus, the content validity of the tool was established.

(b) Reliability of the tool

The reliability of the tool was established by split half method using spearman prophecy formula. This was done by collecting the scores on the odd items of the test (1,3,5,7 & so forth) against the even item (2,4,6,8, & so forth).

The coefficient of reliability was calculated by using the following Spearman's Brown Prophecy formula.

$$r = \frac{2r}{1+r}$$

The reliability value of the scale was found to be 0.518.

Analysis of Data

Hypothesis 1: There is no significant difference in awareness of climatic changes among higher secondary students with regard to gender.

Table 1. Difference in awareness of climatic changes among higher secondary students with regard to gender

Variable	Gender	N	Mean	Standard Deviation	Calculated 't' Value	Remarks at 5% Level
Climatic Change	Male	150	69.65	6.374	4.152	S
	Female	150	72.62	5.996		

S – Significant (The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above table that the calculated 't' value is greater than the table value at 5% level of significance. Hence there is significant difference in awareness of climatic changes among higher secondary

students with regard to gender and the null hypothesis is rejected.

Hypothesis 2: There is no significant difference in awareness of climatic changes among higher secondary students with regard to locality of institution.

Table 2. Difference in awareness of climatic changes among higher secondary students with regard to locality of institution

Variable	Locality of Institution	N	Mean	Standard Deviation	Calculated 't' Value	Remarks at 5% Level
Climatic change	Urban	190	70.76	6.242	1.359	NS
	Rural	110	71.79	6.519		

NS – Not Significant (The table value of 't' at 5% level of significance is 1.96)

It is inferred from the above table that the calculated 't' value is less than the table value at 5% level of significance. Hence there is no significant difference in awareness of climatic changes among higher secondary students with regard to locality of institution and the null hypothesis is accepted.

Hypothesis 3: There is no significant difference in awareness of climatic changes among higher secondary students with regard to type of the institution.

Table 3. Difference in awareness of climatic changes among higher secondary students with regard to type of the institution

Variable	Sum of Variance	Sum of Squares	df	Mean Square Variance	Calculated 'F' Value	Remarks at 5% Level
Climatic Change	Between groups	106.366	2	53.183	1.320	NS
	Within Groups	11965.031	297	40.286		

NS – Not Significant (The table value of 'F' at 5% level of significance is 3.03)

It is inferred from the above table that the calculated 'F' value is less than the table at 5% level of significance. Hence there is no significant difference in awareness of climatic changes among higher secondary students with regard to type of the institution and the null hypothesis is accepted.

Findings and Discussions

Significant difference is revealed between male and female in their

awareness of climate change. There is a small but consistent gender gap in climate change awareness, with women being slightly more aware of the issue than men. One possibility is that women are more likely to be exposed to information about climate change through the social networks and they are more likely to be concerned about the environment and its impact on human health and well-being.

No significant difference is revealed between rural and urban students in their awareness of climate change. This may be due to the fact that students from both urban and rural area are aware about various natural disasters like severe droughts, changes in crop yields, loss of biodiversity, soil erosion, deforestation, livestock death, flood and earthquake. All students attain the basic environmental education for overcoming all these disasters from lower classes irrespective with locality. No significant difference is revealed in awareness of climate change with regard to type of the institution. This may be due to the fact that incorporation of climate change topics into their curriculum, can contribute to higher levels of awareness among students. Awareness regarding climate change and environmental education can still be integrated into subjects like science, social sciences, or geography. Irrespective with type of institution all students got opportunities to engage

with local communities, NGOs, or government initiatives focused on climate change awareness programmes, which can enhance their understanding and involvement.

Conclusion

Awareness of climate change is a critical aspect of addressing the challenges posed by environmental degradation and global warming. Research on climate change awareness encompasses various areas, including public perception, factors influencing awareness, communication strategies, educational approaches, regional and cultural variations, and understanding climate change denial. Enhancing climate change education, promoting media literacy, improving access to information and resources, and fostering interdisciplinary collaboration are key elements in raising awareness and empowering individuals to take meaningful action against climate change.

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To cite this article

Beena Florence Donark, R. J. (2024). Awareness of Climatic Changes among Higher Secondary Students. *John Foundation Journal of EduSpark*, 6(1), 24-30.

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