

AWARENESS ON GLOBAL WARMING AMONG HIGHER SECONDARY STUDENTS IN TAMIL NADU: A STUDY

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Abstract

Disasters are dangerous events or conditions that cause injury; loss of life, damage to property, agriculture or environment. Disasters are of two types as natural and man-made. Man-made disasters are of technological in nature. They are human errors or deliberate acts like rural or urban fires, terrorist attacks, accidents, riots, wars, crowd stampede from nuclear reactors etc. Global warming or green house effect is the increase in warming of the earth due to emission of the harmful gases from the earth, which forms the blanket cover over the earth and not allow the gases to move upward to the atmosphere. When the concentration of this gas increases in the environment it blocks the heat radiations to go up in the atmosphere, leading to the increase in the temperature of the earth. Methane, chlorofluorocarbons, nitrous oxides are some of the green house gases. Everyone will suffer by many problems due to increased temperature of earth in future. The brief discussion about Global warming and its remedies was done in the 'National Conference of G8' held in Germany. Finally G8 countries lead to a decision to overcome this problem upto2050. The temperature of earth goes on increasing continuously. At the end of this century the earth temperature will rise 1.8 – 4°C, according to scientists. This will lead to melting of ice which ultimately increases the water level of sea by 1 ½ to 2 feet. The topic is an investigation of the awareness on Global warming among higher secondary school students. Since this is the survey study. The investigator has attempted to know the awareness on Global warming among higher secondary students.

Key words: *nature-warming-atmosphere-temperature -resources -solving social problems - quality education.*

Introduction

In future, the probability of wars may not be avoided due to limitation of resources such as food, water, space, etc. Man is responsible for 'Global Warming one of the main causes of Global warming is air pollution. Carbon-dioxide, carbon monoxide makes the coating above earth in air, just like greenhouse, hence these gases also called as green house gases.

Education is very closely linked with solving social problems such as improvement in the state of health, population control, and the eradication of poverty, thus constituting a major contributing factor to a country's socio economic development, and as such it represents one of the most important in international cooperation. A quality education is custom design that addresses the unique abilities of each student and has a positive emotional experience custom education evaluates natural talent and how the student learns.

Statement of the Problem

The present study is entitled "Awareness on Global warming among higher secondary students at Salem District of Tamil Nadu".

Objectives Of The Study

1. To find out the level of awareness on Global warming among higher secondary students.
2. To find out the level of awareness on Global warming between Male and Female higher secondary students.
3. To find out the level of awareness on Global warming between Rural and Urban higher secondary students.
4. To find out the level of awareness on Global warming between Government and Aided higher secondary students.
5. To find out the level of awareness on Global warming between Government and Matriculation higher secondary students.
6. To find out the level of awareness on Global warming between Aided and Matriculation higher secondary students.
7. To find out the level of awareness on Global warming between Hosteller and Day scholar higher secondary students.
8. To find out the level of awareness on Global warming between Tamil and English medium higher secondary students.
9. To find out the level of awareness on Global warming between Government boys and girls higher secondary students.
10. To find out the level of awareness on Global warming between Aided boys and girls higher secondary students.

Hypothesis of the Study

1. There is no significant difference on the awareness of Global warming between Male and Female higher secondary students.
2. There is no significant difference on the awareness of Global warming between Rural and Urban higher secondary students.
3. There is no significant difference on the awareness of Global warming between Government and Aided higher secondary students.
4. There is no significant difference on the awareness of Global warming between Government and Matriculation higher secondary students.
5. There is no significant difference on the awareness of Global warming between Aided and Matriculation higher secondary students.
6. There is no significant difference on the awareness of Global warming between Hosteller and Day scholar higher secondary students.
7. There is no significant difference on the awareness of Global warming between Tamil and English medium higher secondary students.
8. There is no significant difference on the awareness of Global warming between Government boys and girls higher secondary students.
9. There is no significant difference on the awareness of Global warming between Aided boys and girls higher secondary students.
10. There is no significant difference on the awareness of Global warming between Matriculation boys and girls higher secondary students.

Design of the Study

Research design is a plan, a structure and a strategy of investigation conceived to obtain answers to various issues in research. The object of research design is to test the research

hypothesis. The research design, therefore, is built in the principle of maximization of variance. A research design however, is not a highly specific plan to be followed without direction. Rather, it is series of guide post to keep right direction. Thus, research designs are the process of planning a research, objective methods and procedures that can be expected to yield meaningful and most interpretable results.

The present study belongs to normative survey research. The variables used are Gender, locality, type of schools, medium and residence among the higher secondary school students. The investigator to access the awareness on global warming among Higher Secondary school students at Salem District separately, along with a personal Data sheet to know the background of the students. Stratified random sampling technique was followed in this study. Data was collected from 175 students of seven different schools of Salem District. The statistical Techniques were used Mean, Standard Deviation and ‘t’ test.

Method of Study

In this present study normative survey method is used. Normative survey method is connected with collection of data and describing the present status. Normally the data be collected either by interview or by questionnaire. It deals with describing, recording, analyzing and interpreting the conditions that exist.

Sample of the Study

For the present study the stratified Random sampling method is used. This method of sampling is used when the population is composed of diverse segments otherwise natural subdivisions of units. The method consists a classifying the population units into a certain number of groups called strata (plural) and then selecting random samples independently from each group or stratum (singular).

Selection of the Sample

The sample was selected stratified randomly representing 175 students from different school of Salem District. A total number of 175 student comprising 92 male and 83 female were drawn from the following school as shown in table.

Table 1: School wise distribution of the sample

S.No	Name of the School	Sample		Total
		Male	Female	
1	Government Girls higher secondary school, Salem	-	22	22
2	Municipal boys higher secondary school, Salem	17	-	17
3	Sengunthar Mahajana higher secondary school, Tharamangalam	12	11	33
4	Neelambal subramaniyam higher secondary school, suramangalam	8	16	24
5	Sri Gayathri higher secondary school, Sidhanoor	21	16	37
6	V.S.A higher secondary school, S.Palam	20	10	30
7	Government girls higher secondary school, Muthunaickkanpatty	14	8	22

Details of the Sample

In this study a total member of 175 students at higher secondary level in Salem District were taken as samples. The samples are categorized in the following table.

Table 2: Distribution of the sample details

Variables	Sub-Categories	Size	Percentage	Total
Gender	Male	92	53	175
	Female	83	47	
Locality	Rural	75	43	175
	Urban	100	57	
Type of Schools	Government	61	35	175
	Aided	47	27	
	Matriculation	67	38	
Residency	Hosteller	51	29	175
	Day scholar	124	71	
Medium of Instructions	Tamil	112	64	175
	English	63	36	

Questionnaire Method

The questionnaire method is the chief and most often used in any educational research and the investigator has also made use of this questionnaire method. It cannot be said to be a method without errors. However it is indispensably helpful to the investigation to collect data from a large sample.

Tools Used for the Study

The instruments employed for collecting data are called tools. “Tools employ distinctive ways of describing and qualifying the data”, (**Best, 1992**) the tools of research are instruments that provide for the collection of data upon which hypothesis may be tested. There are large numbers of tools and techniques available for data collection in research from these tools, the researcher selects the most appropriate forms of information that could be most useful. By the evaluation of the different data gathering devices used in educational research the investigator was fully convinced that the development of an objective type will help in collecting data.

Pilot Study

The investigator being a teacher educator was going on to write appropriate statements related to the objects of the study. Moreover she was consulted the higher secondary students. The steps on the different issues based on the experiences of teachers, twenty higher secondary students and other aspects the investigator refines. For the present study initial sixty statements were constructed for the pilot study. After careful examination of the critical ratio for each item, it was decided to have forty statements for the final study.

Collection of Data

The investigator obtained adequate number of copies of the Global warming Questionnaire type for the actual collection of data. The samples of higher secondary schools were visited and their heads and teachers were contacted for getting permission and co-operation for the collection of data. The Global warming questionnaire was then distributed among the students. Adequate instructions were given for marking the responses. Strict uniform procedures were adopted in the administration of the Global warming questionnaire to higher secondary school students of different schools. The following steps were invariably followed while administrating the Global warming questionnaire.

1. Distribution of the individual Global warming questionnaire to each student

2. Giving directions of how to mark the responses in the Global warming questionnaire
3. Clearing the doubts of the students and giving additional instructions wherever necessary.
4. Giving sufficient time to mark the responses.
5. Strictly enquiring the marking of independent responses.
6. Collecting all distributed Global warming questionnaire.

Scoring Key

The opinionnaire of the forty statements in Global warming questionnaire. The questions were score as 1 or 0. Total marks scored forty marks only.

Personal Data Sheet

The personal data sheet serves to collect personal information. Students were asked to write their name, gender, locality, type of schools, medium of instruction and residence that they studied in higher secondary schools.

Limitations of the Study

1. This study is limited to a sample of 175 students studying in higher secondary school. As Salem in sprawling city, having a good no. of higher secondary schools of all types, the investigation could visit only a small number of schools.
2. The investigation is confined to 61 Government school students, 47 Aided school students and 67 Matriculation school students in the present study.

Analysis and Interpretation of the Data

Testing of Hypothesis

Hypothesis – 1

There is no significant difference on the awareness of Global Warming between Male and Female higher secondary students.

Table 3: Table Showing The‘t’ Value of Male and Female Higher Secondary Students Regarding the awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Male	92	48.087	11.2849	0.7231	1.97
Female	83	49.3192	11.2325		

The arithmetic mean scores of Male and Female higher secondary students are 48.087 and 49.3192. The calculated ‘t’ value is 0.7231. It is less than tabulated ‘t’ value at 0.05 level for df – 173. Hence the Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global warming between Male and Female higher secondary students. From the mean value it is concluded that Female have more awareness on Global warming than Male.

Hypothesis – 2

There is no significant difference on the awareness of Global Warming between Rural and Urban higher secondary students.

Table 4: Table Showing the ‘t’ Value of Rural and Urban Higher Secondary Students Regarding the awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Rural	75	50.7667	12.3044		1.97
Urban	100	47.1	10.1607	2.0993	

The arithmetic mean scores of Rural and Urban higher secondary students are 50.7667 and 47.1. The calculated ‘t’ value is 2.0993. It is greater than the tabulated ‘t’ value at 0.05 level for df – 173. Hence the Null hypothesis is rejected.

This indicates that there is significant difference of the awareness on Global warming between Rural and Urban higher Secondary Students. From the mean value it is concluded that rural students have more awareness on Global warming than urban students.

Hypothesis – 3

There is no significant difference on the awareness of Global Warming between Government and Aided higher Secondary Students.

Table 5: Table Showing the‘t’ Value of Government and Aided Higher Secondary Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Government	61	45.6475	8.8884		1.98
Aided	47	51.3086	14.1580	2.4009	

The arithmetic mean scores of Government and Aided higher secondary students are 45.6475 and 51.3086. The calculated ‘t’ value is 2.4009. It is greater than the tabulated ‘t’ value at 0.05 level for df – 106. Hence the Null hypothesis is rejected.

This indicates that there is significant difference on the awareness of Global Warming between Government and Aided higher secondary students. From the mean value it is concluded that Aided students have more awareness on Global warming than government students.

Hypothesis – 4

There is no significant difference on the awareness of Global Warming between Government and Matriculation higher secondary students.

Table 6: Table Showing the‘t’ Value of Government and Matriculation Higher Secondary Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Government	61	45.6475	8.8884		1.98
Matriculation	67	49.575	10.2761	1.3679	

The arithmetic mean scores of Government and Matriculation higher secondary students are 45.6475 and 49.575. The calculated ‘t’ value is 1.3679. It is less than tabulated ‘t’ value at 0.05 level for df – 126. Hence the null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Government and Matriculation higher Secondary students. From the mean

value it is concluded that Matriculation students have more awareness on Global warming than Government students.

Hypothesis – 5

There is no significant difference on the awareness of Global Warming between Aided and Matriculation higher secondary students.

Table 7: Table Showing the‘t’ Value of Aided and Matriculation Higher Secondary Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Aided	47	51.3086	14.1580		
Matriculation	67	49.575	10.2761	0.7173	1.98

The arithmetic mean scores of Aided and Matriculation higher secondary students are 51.3086 and 49.575. The calculated ‘t’ value is 0.7173. It is less than tabulated ‘t’ value at 0.05 level for df – 112. Hence the Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Aided and Matriculation higher secondary students. From the mean value it is concluded that Aided students have more awareness on Global warming than Matriculation students.

HYPOTHESIS – 6

There is no significant difference on the awareness of Global warming between Hosteller and Day scholar higher secondary students.

Table 8: Table Showing the‘t’ Value of Hosteller and Day Scholar Higher Secondary Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Hosteller	61	47.6372	9.8		
Day Scholar	124	49.0161	11.8016	0.7953	1.97

The arithmetic mean scores of Hosteller and Day Scholar higher secondary students are 47.6372 and 49.0161. The calculated ‘t’ value is 0.7953. It is less than tabulated ‘t’ value at 0.05 level for df – 173. Hence the Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Hosteller and Day scholar higher secondary students. From the mean value it is concluded that Day scholar students have more awareness on Global warming than Hosteller students.

Hypothesis – 7

There is no significant difference on the awareness of Global warming between Tamil and English medium higher secondary students.

Table 9: Table Showing the‘t’ Value of Tamil and English Medium Higher Secondary Students Regarding te Awareness on Global Warming

CATEGORY	N	MEAN	STANDARD DEVIATION	‘t’ VALUE	SIGNIFICANT AT 0.05 LEVEL
Tamil Medium	112	47.7142	12.1165		
English Medium	63	49.8969	9.7308	1.3013	1.97

The arithmetic mean scores of Tamil and English medium higher secondary students are 47.7142 and 49.8969. The calculated ‘t’ value is 1.3013. It is less than tabulated ‘t’ value at 0.05 level for df – 173. Hence the Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global warming between Tamil and English medium higher secondary students. From the mean value it is concluded that English medium students have more awareness on Global warming than Tamil medium students.

Hypothesis – 8

There is no significant difference on the awareness of Global Warming between Government Boys and girls higher secondary students.

Table 10: Table Showing the‘t’ Value of Government Boys and Girls Higher Secondary Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Govt. Boys	31	44.5	8.03181		
Govt. Girls	30	47.166	9.9779	1.4589	2.00

The arithmetic mean scores of Government Boys and Girls higher secondary students are 44.5 and 47.166. The calculated ‘t’ value is 1.4589. It is less than tabulated ‘t’ value at 0.05 level for df – 59. Hence Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Government Boys and Girls higher secondary students. From the mean value it is concluded that Government Girls have more awareness on Global warming than Government Boys.

Hypothesis – 9

There is no significant difference on the awareness of Global warming between Aided Boys and Girls higher secondary students.

Table 11: Table Showing the ‘t’ Value of Aided Boys and Girls Higher Secondary Students Regarding The Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Aided Boys	20	53.5	14.4913		
Aided Girls	27	51.9075	14.0331	0.3779	2.02

The arithmetic mean scores of Aided Boys and Girls higher secondary students are 53.5 and 51.9075. The calculated ‘t’ value is 0.3775. It is less than tabulated ‘t’ value at 0.05 level for df – 45. Hence the Null hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Aided Boys and Girls higher secondary students. From the mean value it is concluded that Aided Boys have more awareness on Global warming than Aided Girls.

Hypothesis – 10

There is no significant difference on the awareness of Global warming between Matriculation Boys and Girls higher secondary students.

Table 12: Showing the ‘t’ Value of Matriculation Boys and Girls Higher Secondary School Students Regarding the Awareness on Global Warming

Category	N	Mean	Standard Deviation	‘t’ Value	Significant at 0.05 Level
Matric Boys	41	49.622	11.0702	0.8441	2.00
Matric Girls	26	51.8077	9.8285		

The arithmetic mean scores of Matriculation Boys and Girls higher secondary students are 49.622 and 51.8077. The calculated ‘t’ value is 0.8441. It is less than tabulated ‘t’ value at 0.05 level for df – 65. Hence the Null Hypothesis is accepted.

This indicates that there is no significant difference on the awareness of Global Warming between Matriculation Boys and Girls higher secondary students. From the mean value it is concluded that Matriculation Girls have more awareness on Global warming than Matriculation Boys.

Conclusion and Discussion of the Study

Higher Secondary Students over all awareness of Global Warming is 48.70%. So, these students not have sufficient knowledge about Global warming. The Government and Teachers are creates the awareness to the students about Global Warming. The three types of higher secondary school students express different awareness towards Global warming. On noticing the results with regards to the higher secondary school students between Rural and Urban student there is significant different on the awareness of Global warming. Rural students having more awareness about Global warming. Because rural students gaining the knowledge by TV programmes and sharing their ideas in the leisure time but urban students using their leisure time for extracurricular activities. So, urban students not having time to share their ideas. There is significant difference on the awareness of Global warming between Government and Aided higher secondary school students. Because Aided students having management support with Government. But Government students not having the proper support.

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