



## Full Length Research Article

### A STUDY OF HIGHER SECONDARY STUDENTS' PARTICIPATION IN ENVIRONMENTAL ACTIVITIES IN RELATION TO ENVIRONMENTAL AWARENESS

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#### ARTICLE INFO

##### Article History:

Received 16<sup>th</sup> March, 2012  
Received in revised form  
04<sup>th</sup> April, 2013  
Accepted 11<sup>th</sup> May, 2013  
Published online 11<sup>th</sup> June, 2013

##### Key words:

Environmental Awareness,  
Participation in Environmental Activities –  
Random Sample,  
Gender, Location of the school,  
Subject group, and  
Type of management.

#### ABSTRACT

The purpose of this research was to study the higher secondary students' participation in environmental activities in relation to environmental awareness. This study correlates certain demographic variables in respect of environmental awareness and participation in environmental activities. Environmental Awareness Scale constructed and validated by Dr. S. Kulasekara Perumal Pillai (2004). The Participation in Environmental Activities Scale for higher secondary students was constructed and validated by the investigator (2009), 1000 higher secondary students studying in Virudhachalam Educational District were selected as sample through random sampling technique. Normative survey method is used in the study. The major findings indicate, the higher secondary students have high environmental awareness, the higher secondary students have higher level of participation in environmental activities and there is significant relationship between environmental awareness and participation in environmental activities of higher secondary students.

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#### INTRODUCTION

Environmental awareness means, "to help the social groups and individuals to gain a variety of experiences in and acquire basic understanding of environment and its social problems". To take part in an environmental organization or voluntarily involve in various environmental activities is known as participation in environmental activities. We explore whether environmental motivation affects environmental behavior by focusing on volunteering. The environmental motivation has a strong impact on individuals' voluntary engagement in environmental organizations. A higher level of environmental motivation due to higher environmental awareness may lead to higher level of participation in environmental activities. To achieve the participation of the community, environmental awareness must be provided to the entire community through environmental education.

##### Statement of the problem

The problem for the present study is entitled as, "A study of higher secondary students' participation in environmental activities in relation to environmental awareness".

##### Objectives of the study

- To study the level of environmental awareness of higher secondary students.

- To study the level of participation in environmental activities of higher secondary students.
- To study the significance of the difference in respect of higher secondary students' environmental awareness if any between the sub samples with regard to
  - a. Gender
  - b. Location of the school
  - c. Subject group
  - d. Type of management
- To study the significance of the difference in respect of higher secondary students' participation in environmental activities if any between the sub samples with regard to
  - a. Gender
  - b. Location of the school
  - c. Subject group
  - d. Type of management
- To study the significant relationship if any between environmental awareness and participation in environmental activities of higher secondary students.

##### Hypotheses of the study

- The level of environmental awareness of higher secondary students is low.

- The level of participation in environmental activities of higher secondary students is low.
- There is no significant difference in the environmental awareness of higher secondary students between the following sub samples
  - a. Gender
  - b. Location of the school
  - c. Subject group
  - d. Type of management
- There is no significant difference in the participation in environmental activities of higher secondary students between the following sub samples
  - a. Gender
  - b. Location of the school
  - c. Subject group
  - d. Type of management
- There is no significant relationship between environmental awareness and participation in environmental activities of higher secondary students.

## METHODOLOGY

Normative Survey Method has been used in the study.

### Tools used

- Environmental Awareness Scale constructed and validated by Dr. S. Kulasekara Perumal Pillai (2004).
- Participation in environmental activities Scale for higher secondary students was constructed and validated by the investigator (2009).

### Sample of the study

Using random selection, 1000 Higher secondary students from virudachalam educational district were selected for the present study.

### Statistical technique used

Descriptive analysis, Differential analysis and Correlation analysis were used in the present study to test the hypotheses and interpret the data.

### Statistical Analysis and Interpretation of Data

#### Descriptive analysis

It could be observed from the Table 1. that mean and standard deviation values of higher secondary students environmental awareness of the entire sample is found to be 42.11 and 4.83 respectively. The mean value of the entire sample is higher than the mid value 27. Therefore, it is found that the higher secondary students have high environmental awareness.

**Table 1. Mean and Standard Deviation of environmental awareness and participation in environmental activities scores of the entire sample**

Variables	N	Mean	SD
Environmental awareness	1000	42.11	4.83
Participation in environmental activities	1000	29.89	5.53

The hypothesis no.1 is rejected. The calculated mean and standard deviation values of higher secondary students participation in environmental activities of the entire sample is found to be 29.89 and 5.53 respectively. The mean value of the entire sample is higher than the mid value 18. Therefore, it is found that the higher secondary students have higher level of participation in environmental activities. The hypothesis no. 2 is rejected.

### Differential analysis

#### Environmental Awareness (Gender and Location of the school - Table 2)

In order to check the null hypothesis with respect to gender, the t- test was employed. The mean of male higher secondary students (N=497) is found to be 42.13 with a SD of 4.64. The mean of female higher secondary students (N=503) is found to be 42.09 with a SD of 5.01. The computed t value is 0.14 which is not significant at 0.05 level. Since the calculated t-value is lesser than the tabulated t- value, the hypothesis no.3 (a) is accepted. In order to check the null hypothesis with respect to location of the school, the t- test was employed. The mean of urban school higher secondary students (N=467) is found to be 41.71 with a SD of 4.86. The mean of rural school higher secondary students (N=533) is found to be 42.46 with a SD of 4.79. The computed t value is 2.44 which is significant at 0.05 level. Since the calculated t- value is greater than the tabulated t- value, the hypothesis 3(b) is rejected.

#### Participation in environmental activities (Gender and Location of school - Table 2)

In order to check the null hypothesis with respect to gender, the t- test was employed. The mean of male higher secondary students (N=497) is found to be 29.99 with a SD of 5.48. The mean of female higher secondary students (N=503) is found to be 29.80 with a SD of 5.59. The computed t value is 0.53 which is not significant at 0.05 level. Since the calculated t-value is lesser than the tabulated t- value, the hypothesis 4(a) is accepted. In order to check the null hypothesis with respect to location of the school, the t- test was employed. The mean of urban school higher secondary students (N=467) is found to be 29.42 with a SD of 5.46. The mean of rural school higher secondary students (N=533) is found to be 30.31 with a SD of 5.57. The computed t value is 2.57 which is significant at 0.05 level. Since the calculated t- value is greater than the tabulated t- value, the hypothesis 4(b) is rejected.

#### Environmental Awareness (Subject group and Type of management - Table 3)

In order to check the null hypothesis with respect to subject group, the F test was made. The F value is found to be 9.36 which is significant at 0.01 level for (2, 997) dfs. It denotes that there is significant difference among the higher secondary students who belongs to different subject group with respect to their environmental awareness. The null hypothesis 3(c) is rejected. In order to check the null hypothesis with respect to the type of management, the F test was made. The F value is found to be 2.85 which is not significant at 0.05 level for (2, 997) dfs. It denotes that there is no significant difference among the higher secondary students who belongs to different type of management with respect to their environmental awareness. The null hypothesis 3(d) is accepted.

### Differential analysis

**Table 2. Significance difference in the sub-samples of Higher Secondary Students' environmental awareness and participation in environmental activities – Gender and Location of the school**

Variables	N	Environmental Awareness				Participation in environmental activities				
		Mean	SD	t- value	Sig*	Mean	SD	t- value	Sig*	
Gender	Male	497	42.13	4.64	0.14	NS	29.99	5.48	0.53	NS
	Female	503	42.09	5.01			29.80	5.59		
Location of the school	Urban	467	41.71	4.86	2.44	S	29.42	5.46	2.57	S
	Rural	533	42.46	4.79			30.31	5.57		

\*Significant at 0.05 level, NS - Not significant, S - Significant

**Table 3. Significance difference in the sub-samples of Higher Secondary Students' environmental awareness – Subject group and Type of management**

Variables	Sources of variation	Sum of squares	df	Mean square	F Value	Level of significance
Subject group	Between groups	429.54	2	214.77	9.36	Significant at 0.01 level
	Within groups	22886.79	997	22.96		
	Total	23316.34	999			
Type of management	Between groups	132.75	2	66.38	2.85	Not Significant at 0.05 level
	Within groups	23183.59	997	23.25		
	Total	233316.34	999			

**Table 4. Significance difference in the sub-samples of Higher Secondary Students' participation in environmental activities – Subject group and Type of management**

Variable	Sources of variation	Sum of squares	df	Mean square	F Value	Level of significance
Subject group	Between groups	96.94	2	48.47	1.59	Not Significant at 0.05 level
	Within groups	30459.82	997	30.551		
	Total	30556.76	999			
Type of management	Between groups	404.53	2	202.27	6.69	Significant at 0.01 level
	Within groups	30152.23	997	30.24		
	Total	30556.76	999			

#### Participation in environmental activities (Subject group and Type of management - Table 4)

In order to check the null hypothesis with respect to subject group, the F test was made. The F value is found to be 1.59 which is not significant at 0.05 level for (2, 997) dfs. It denotes that there is no significant difference among the higher secondary students who belongs to different subject group with respect to their participation in environmental activities. The null hypothesis 4(c) is accepted. In order to check the null hypothesis with respect to the type of management, the F test was made. The F value is found to be 6.69 which is significant at 0.01 level for (2, 997) dfs. It denotes that there is significant difference among the higher secondary students who belongs to different type of management with respect to their participation in environmental activities. The null hypothesis 4(d) is rejected.

#### Correlation analysis

**Table 5. Correlation co-efficient between Environmental Awareness and participation in environmental activities of higher secondary students**

Variables	N	'r' Value	Inference
Environmental awareness	1000	0.424	Significant at 0.01 level
Participation in environmental activities			

The correlation co-efficient (r) between environmental awareness and participation in environmental activities is found to be 0.424 for the sample of 1000 of higher secondary students. It is higher than the Table value of 0.081 at 0.01

level. It is concluded that there is significant relationship between environmental awareness and participation in environmental activities of higher secondary students. Hence the null hypothesis 5 is rejected.

#### Major Findings of the Study

- The higher secondary students have high environmental awareness.
- The higher secondary students have higher level of participation in environmental activities.
- The male and female higher secondary students do not differ significantly with respect to their environmental awareness.
- The urban and rural school higher secondary students differ significantly in their environmental awareness.
- There is significant difference among the higher secondary students who belongs to different subject group with respect to their environmental awareness.
- There is no significant difference among the higher secondary students who belongs to different type of school management with respect to their environmental awareness.
- The male and female higher secondary students do not differ significantly in their participation in environmental activities.
- The urban and rural school higher secondary students differ significantly in their participation in environmental activities.
- There is no significant difference among the higher secondary students who belongs to different subject group

with respect to their participation in environmental activities.

- There is significant difference among the higher secondary students who belongs to different type of school management with respect to their participation in environmental activities.
- There is significant relationship between environmental awareness and participation in environmental activities of higher secondary students.

## REFERENCES

- Hungerford H.R., and Volk T.L. (1990) "Changing Learner Behaviour through Environmental Education". *The Journal of Environmental Education*, 21(3), Pp.8-21.
- Obusegen Akinbote, (2007) "The Study on Student Knowledge Towards Pollution". *The Social Science Medwell Journals*, 2(3), Pp.283-286.
- Said, AiniMat; Yahaya, Nurizan; Ahmadun, Fakhru'l-Razi. (2007) "Environmental Comprehension and Participation of Malaysian Secondary School Students", *Environmental Education Research*, 13(1), Pp.17-31.
- Skanavis, Constantina; Sakellari, Maria; Petreniti, Vassiliki. (2005) "The Potential of Free-Choice Learning for Environmental Participation in Greece", *Environmental Education Research*, 11(3), Pp.321-333.
- Gisela szagun, Vladimir I. Pavlov (1995), Environmental Awareness: A Comparative Study of German and Russian Adolescents, *Youth & Society*, Sage journal, vol. 27, 1: pp. 93-112.
- Selvam, V. and Abdul Nazar, N. (2011), An Analysis of Environmental Awareness and Responsibilities among University Students, *International Journal of Current Research*, Vol. 3, Issue, 11, pp.202-205.
- Prashant Kumar Astalin (2011), A study of Environmental Awareness among Higher Secondary Students and some educational factors affecting it, *International Journal of Multidisciplinary Research* Vol.1 Issue 7.
- Aminuddin Hassan (2009), The Level of Environmental Awareness Among Students to Fulfill the Aspiration of National Philosophy of Education, *American Journal of Scientific Research*, ISSN 1450-223X Issue 5, pp.50-58.
- S. M. Shobeiri, B. Omidvar, N. N. Prahallada (2007), A Comparative Study of Environmental Awareness among Secondary School Students in Iran and India, *International Journal of Environmental Research*, 1 (1): 28-36.
- Jiju N. Vyas \*\* Hemalata J. Patel (2010), A Comparative study of environment awareness among secondary school students of Mehsana city, Gujarat, *International Referred Research Journal*, October,2010. ISSN-0974-2832VoL.II Issue-21

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