

## Research Article

## A Study on Awareness about Water Conservation among selected High School Students

**Dr. T. Malliga,**

Principal, Vellalar College of Education, Erode-12.

### Abstract

The study was carried out to find out the awareness about water conservation among high school students. Three hundred and eighteen (318) high school students were selected from Erode District by using a simple random sampling technique. Investigator used a self-constructed tool for collecting the data. The validity and reliability of the tool were checked and used for data collection. Mean, Standard Deviation, and t-test was computed for data analysis. This study found that high school students who were studying in Erode district had a moderate level of awareness about water conservation.

**Key Words:** Awareness, Water Conservation, High School Students

### Introduction

Life originates in water. Water is called squid gold without which we cannot survive in their earth. Nature has gifted some precious and valuable resources and water is one of them and is the basic need. All living beings need water for their survival and to carry out their vital life processes. Earth, has three –fourths of its surface area covered with water and only one-fourth has land masses. It covers about 70 percent of the Earth for a total of approximately 332.5 million cubic miles (1,386 million cubic kilometres). Water dominates the surface of Earth and is vital to life on the planet. Only if a place has water, there will be life. Of all the planets there is life only on earth because it has water. Even today, millions of years later, water continues to be an essential requirement of life. Students have incredibly absorbent brains. They remember what they are taught in their childhood days and follow them in their life. So, it is important to make them aware of the problems faced by the society and the student's role in it. The students may or may not be aware of the scarcity of water and hence they should be introduced about the contribution, they had to give in conserving water in their day-to-day life. It will thereby bring a significant change in their view about water preservation.

### **Need For the Study**

The need of water is very huge. All plants, animals and human beings need water to stay alive. Without water, life would lose its primary food source. Clean, fresh water is a limited resource. Every person on earth needs water to survive. Without it, many of us would get sick and even result in death. In recent years water table is facing serious threat due to rapid population increase, industrial and urban development, over usage, climate change, global warming, shrinkage in glaciers in Arctic and Antarctic, natural calamities (shifting of precipitation and reduced snow pack) and negligence of people to use the water in proper way and slow replenishment of natural waters.

Besides, drastic economic expansion, energy demand and shrinkage of replenished waters are point of major concern. The rainfall has been changed during the current years and catchment of rainwater is decreasing in several countries. Very recently, with increasing demand of water requirement, preservation of water resources has been increased. It is anticipated that water level may go further down and their necessity may increase more in future. It is utmost necessity for the humans to take care of the water resources, usage pattern and sustainable management/conservation at great importance.

The need of the hour is to educate tomorrow's leaders about water conservation. When children are trained to save and use water economically, they can help to reduce water wastage now and in the future. They will be able to do a greater number of daily activities with less amount of water, and these good habits will become a way of life for them.

### **Objectives of the Study**

1. The main objective of the study is to identify the level of awareness about water conservation among high school students in Erode District.
2. To find out whether there is any significant difference in the awareness about water conservation among high school students with respect to the background variables gender, residential area, family type, father's education, mother's education, type of house, major water source, type of school and volunteering in social clubs.

### **Hypotheses of the Study**

1. The hypotheses framed for this research is as follows:

2. The awareness of water conservation among high school students is high.
3. There is no significant difference in the awareness of water conservation among high school students based on their gender.
4. There is no significant difference in the awareness of water conservation among high school students based on the residential area.
5. There is no significant difference in the awareness of water conservation among high school students based on the family type.
6. There is no significant difference in the awareness of water conservation among high school students based on fathers' education.
7. There is no significant difference in the awareness of water conservation among high school students based on mothers' education.
8. There is no significant difference in the awareness of water conservation among high school students based on type of house.
9. There is no significant difference in the awareness of water conservation among high school students based on major water source.
10. There is no significant difference in the awareness of water conservation among high school students based on type of school.
11. There is no significant difference in the awareness of water conservation among high school students based on participation in volunteer services.

### **Methodology**

**Method used-** The investigator has chosen survey method for studying the awareness of water conservation among high school students.

### **Population and Sample of the study**

High school students those who were studying in Erode District were considered as Population of this study. In this study, the investigator used simple random sampling technique. Three hundred and eighteen (318) high school students were selected as the samples for this study.

### **Tools used**

In order to measure the awareness of water conservation among high school students, the investigator used the self-made water conservation tool which had 30 items. The inventory

was in the form of yes / No types. The investigator established the content validity for the tool. The reliability of the tool has been established by using test-retest method. It was found to be 0.71.

### Statistical Techniques Used

The investigator employed descriptive statistics (Mean and SD), parametric statistics (students “t” test) to process the data collected from the samples.

### Analysis of Data

**Table 1**

*Level of Awareness About Water Conservation Among High School Students*

Variable	Low		Moderate		High	
	Count	%	Count	%	Count	%
Water Conservation Awareness	12	4	219	69	87	27

From the table 1, 69% high school students scores fall in moderate category; 27% students' scores fall in high category and only 4% of students' scores fall in low category. Therefore, the hypothesis 1 is rejected.

**Table 2**

*Difference in awareness about water conservation scores of high school students based on selected variables*

Variable	Sub variables	N	M	S.D.	't' value	Remarks
Gender	Boys	104	17.73	4.12	0.88	Not Significant
	Girls	214	18.15	3.85		
Residential Area	Urban	66	18.21	3.95	0.44	Not Significant
	Rural	252	17.96	3.94		
Family Type	Nuclear	225	18.18	3.80	1.12	Not Significant
	Joint	93	17.61	4.25		
Volunteer service participation	Yes	128	18.56	3.93	2.02	Significant
	No	190	17.65	3.92		

From the table 2, the calculated 't' values between the awareness about water conservation scores of high school students with respect to their gender, residential area and family type are 0.88, 0.44 and 1.12 respectively. These 't' values are less than the table value 1.96 at 0.05 level of significance. Therefore, the hypotheses 2, 3 and 4 are accepted.

On the other hand, the calculated 't' value between the awareness about water conservation scores of high school students with respect to participation in volunteer services 2.02 which is greater than the table value 1.96 at 0.05 level of significance. Therefore, the hypotheses 10 is rejected.

**Table 3**

*Analysis of Water Conservation Awareness with Respect to Selected Variables*

Variable	Sub Variables	Source of Variance	SS	df	MS	F-value	Remarks
Fathers' Education	Illiterate	Between groups	184.56	2	92.28	6.12	Significant
	School Education	Within groups	4745.31	315	15.06		
	Graduate	Total	4929.88	317			
Mothers' Education	Illiterate	Between groups	179.11	2	89.55	5.93	Significant
	School Education	Within groups	4750.76	315	15.08		
	Graduate	Total	4929.88	317			
Type of House	Own	Between groups	270.67	2	135.33	9.14	Significant
	Rental	Within groups	4659.20	315	14.79		
	Lease	Total	4929.88	317			
Major Water Resource	Ground water	Between groups	7.94	2	3.97	0.25	Not Significant
	Corporation water	Within groups	4921.93	315	15.62		
	Others	Total	4929.88	317			

Type of School	Government	Between groups	722.802	2	361.40	Significant	
	Aided	Within groups	4207.08	315	13.35		27.05
	Self-Finance	Total	4929.88	317			

From the table 3 reveals that the calculated 'F' values 6.12, 5.93, 9.14 and 27.05 are higher than the table value 3.02 at 0.05 level. Hence, there is significant difference in the awareness about water conservation among high school students based on their father's education, mother's education, type of house and type of school. So, the null hypothesis 5, 6, 7 and 9 are rejected. But the calculated 'F' value 0.25 is lesser than the table value 3.02 at 0.05 level. Hence, there is no significant difference in the awareness about water conservation among high school students based on their major water source.

## Findings

### Findings through Descriptive Analysis

High school students those who were studying in Erode district had moderate level of awareness about water conservation.

### Finding through Differential Analysis

1. Among high school students, boys and girls did not differ in their awareness of water conservation.
2. High school students from rural and urban area have similar level of awareness about water conservation.
3. High school students from joint family and nuclear family did not differ in their awareness of water conservation.
4. High school students whose father completed graduation (M=19.20) had better awareness of water conservation than the high school students whose father comes under school education (M=17.99) and illiterate categories (M=15.83).
5. High school students whose mother completed graduation (M=18.81) had better awareness of water conservation than the high school students whose father comes under school education (M=18.17) and illiterate categories (M=16.19).
6. High school students who are living in their own house (M=19.19) had the better

- water conservation awareness than the high school students who is living in the
7. leased house (M=18.60) and rental house (M=17.27).
  8. High school students did not differ in their awareness about water conservation based on major water source of home.
  9. Self-financing high school students (M=20.15) had better awareness of water conservation than the government (M= 16.23) and aided high school students (M=17.83).
  10. High school students those who are participated in volunteering service (M=18.56) had better water conservation awareness than the non-participants (M=17.65).

### **Discussion**

This study found that Erode district high school students had moderate level of awareness about water conservation. This might be because of the way that Erode area is situated in the bank of Cauvery River and there is no water shortage issue because of this. Due to this reason, school students may not encounter the water shortage issue. So their consciousness of water protection may not be high.

This study reveals that high school students whose father or mother completed graduation had better awareness than the high school students whose father or mother have completed school education or they are illiterate. This may be due to the fact that graduate parents may impart more knowledge related to water conservation and encourage them to participate in environmental related volunteering services.

This study reveals that there is significant difference in the awareness of water conservation among high school students based on the type of house where they live. Students who live in their own houses had better awareness than students who live in leased houses and rental houses. This may be due to the fact that high school students who live in their own house may have more responsibility in handling the water in them home. It might be a result of self-instinct of own house. This study reveals that self-finance school students had better awareness about water conservation than the government and aided school students. This may be due to the fact that self-financed institutions may have many social, environmental clubs where students can learn about water problems. Many private schools celebrate environmental related days and organizes competitions, meetings etc. which thereby increases the awareness of water conservation of the students.

This study reveals that significant difference found between the high school students those who participated in volunteering service and the non-participants. This might be because of the way that high school students may involve in cleaning lakes, ponds and participate in many environmental related events through the member of N.C.C. and N.S.S. in schools. It may lead their awareness about water conservation.

In this study, the demographic variables - gender, residential area, family type and major water resource did not influence the awareness of water conservation among high school students.

### **Conclusion**

Education is the most powerful weapon in bringing out the changes in the mind of the people in global level. Education gives us knowledge of the world around us and changes it into something better. The future of the world is in the hands of the children. Whether the future is positive or negative one depends on the children and the education they receive. The education of a child is so valuable that one needs to consider the importance of the child's education. Creating awareness is one of the prime duties of education. Education is disseminated by various stakeholders. So, it is the duty of the teachers, management, policymakers, educationalist and the government to disseminate the awareness about water conservation in the society. Through this study, an attempt is made to torch on the awareness about water conservation among high school students in Erode District.

### References

Çoban, G. Ü., Akpınar, E., Küçükçankurtaran, E., Yıldız, E., & Ergin, Ö. (2011). Elementary school students' water awareness. *International Research in Geographical and Environmental Education*, 20(1), 65–83.

<https://doi.org/10.1080/10382046.2011.540103>

Costin, C. (2017). *What is the role of teachers in preparing future generations?* Brookings.

<https://www.brookings.edu/opinions/what-is-the-role-of-teachers-in-preparing-future-generations/>

Ghosh, L. (2020). *Teach Your Kids About Water Conservation*. [Www.Parentcircle.Com](http://www.parentcircle.com).

<https://www.parentcircle.com/article/how-to-teach-your-child-about-water-conservation/>

Henebery, B. (2017). *Schools take action to address water conservation*. The Educator K/12.

<https://www.theeducatoronline.com/k12/news/schools-take-action-to-address-water-conservation/242827>

John W. Best and James V. Kahn. (2006). *Research in Education*. New Delhi: PHI private limited.

Manzoor, J. (2020). *An Assessment of Environmental Awareness among the Residents of Tehsil Mendhar, District Poonch J&K, 185211, India*. Semantic Scholar.

<https://www.semanticscholar.org/paper/An-Assessment-of-Environmental-Awareness-among-the-Manzoor/56dd0fd58168c6fa1ce891706a1b7ac4fc167120>

Muralidharan, K. (2019). *The News Minute | Tamil Nadu*. The News Minute.

<https://www.thenewsminute.com/article/sangam-era-silappadhikaram-what-tamil-literature-tells-us-about-harvesting-water-104736>