

# A Study to Evaluate the Effectiveness of Structured Teaching Program on Knowledge and Attitude Regarding Environmental Pollution and Control among the School Going Children in a Selected Setting

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## Abstract

The relationship between the living organisms and the environment is very important to maintain the harmony and smooth survival of the living organisms. Our health depends on our environments' health. The changing patterns of the diseases made us to think and to inculcate the knowledge needed to preserve a safe environment to the present and future generation. Hence it had been decided to educate school children on environmental pollution prevention and control. A quantitative approach with pre experimental design was adopted in the study. Ethical clearance was obtained from the Institutional Ethical Committee. The study was conducted in the Government Victoria Girls Higher Secondary School, Palakkad. Fifty children between the age group of 10 -12 were selected by using simple random sampling technique. The data were collected by using a structured questionnaire method. The knowledge and attitude of the children on environmental pollution prevention and control were assessed. After conducting the pre-test, structured teaching program was conducted to the selected samples by using lecture method. Pamphlets were given at the end of the session. After a week post test was conducted. The study results revealed that there is significant improvement in the knowledge and attitude of children on environmental pollution prevention and control. Hence, it can be concluded that educating the children may be helpful in preserving and maintaining safe environment for the present and future generation.

“Earth provides enough to satisfy every man’s need, but not every man’s greed” - *Mahathma Gandhi*

**Key words:** *Environment, pollution, control, school children*

## Introduction

All living organisms in the earth depend on the environment for their survival. Among all the creatures of God, human beings are considered as supreme. We constantly interact with the environment. We make lots of changes in it to make our life convenient. Most of the time we do not realize that we are spoiling the environment which includes land, water, air etc., by our activities. It is believed that the industries are the major cause for environmental pollution, but individual’s greed to have a sophisticated life is costing environmental pollution<sup>1</sup>. We enjoy all the resources gifted by the Mother Nature, but we forget that protecting and preserving the environment is our duty. WHO defines environmental health as “the control of all factors in

man’s physical environment which exercise harmful effect on physical development, health and survival? WHO also reports that waste water treatment facilities, sewage disposal systems are poor in India? It is also reported that Indian cities alone generate 100 million tons of solid waste in a year. It totally spoils the natural resources. If the same situation continues the earth may not be a conducive place for the human beings to live. Indian Education Commission (1964 – 66) emphasized on including environmental education with school education to create awareness among young children and by adding the responsibility among them to prevent environmental pollution and protect the environment<sup>4</sup>. Environmental education helps people to apply right attitude when encountering the environment. It also

improves the critical thinking, decision making and problem solving skills in day to day activities related to the environment<sup>5</sup>.

### **Need for the study**

We experience a massive change in the disease pattern now a day. The growing incidence of cancer and other deadly diseases are the alarming sign to the human society to act now. Recently in New Delhi the daily life of the public was disturbed because of severe air pollution. We are not sure that, Do we breathe safe air? or Do we drink safe water? or Do we take safe food?. In countries like India population explosion is adding fuel to the fire. Pollution is a major challenge to us. We must act now to protect at least the remaining part of nature.

We think someone else will protect the planet. It should start from us. We say the earth is dying, it is not true, and we are killing her. If the same situation continues there won't be any society. Today's children will build tomorrow's nation. Rapid deterioration in the environment requires environmental education to all concerned <sup>2</sup>. Educating the children is educating the future. Hence it was decided to educate the school children on environmental pollution and its control.

### **Statement of the problem**

A study to evaluate the effectiveness of structured teaching program on knowledge and attitude regarding environmental pollution and control among school going children in Government higher secondary school, Chittur, Palakkad, Kerala.

### **Objectives**

1. Evaluate the effectiveness of structured teaching program on knowledge regarding environmental pollution and control among school going children
2. Evaluate the effectiveness of structured teaching program on attitude regarding environmental pollution and control among school going children

### **Hypotheses**

1. There is a significant difference in the knowledge of school children on environmental pollution and control before and after the intervention.

2. There is a significant difference in the attitude of school children on environmental pollution and control before and after the intervention.

### **Materials and Methods**

Research approach: Quantitative approach was adopted in this study.

Research design: The present study was carried out by using pre experimental design.

Setting: The study was done in Government Victoria Girls' higher secondary school, Chittur, Palakkad.

Target population: The target population for the study is the children studying in the selected school between the age group of 10 to 12 years.

Sample: Fifty children were selected as samples by adopting simple random sampling method.

Data collection: Data were collected by using a structured questionnaire through structured interview method.

Ethical consideration: Obtained ethical clearance from the institutional ethics committee.

### **Data Analysis**

Data were analysed by using both descriptive and inferential statistics. The demographic data were analysed by using percentage analysis. The effectiveness of the intervention was assessed by using paired t test.

### **Results and Discussion**

Majority of the children were at the age of 10. Most of the children are living in a nuclear middle class family. The knowledge of the children on environmental pollution and control. The children were classified into five categories based on the knowledge scores obtained by them in the pre-test and post-test. During the pre-test 40% of them were in the good category and 38% of them were in the very good category. Only 4% were in the excellent category during the pre-test. None of them was in the poor category. In the post-test 58% of the children were progressed to excellent category. 28% were in the very good category. Similarly the children were classified based on their attitude score also. During the pre-test nearly half of them were having very good

attitude. 24% of them had excellent attitude. 22% were having good attitude. None of them were in the poor category. During the post-test 46% of the children had excellent attitude. 40% were with very good attitude and 10% with good attitude. None of them were in the poor category during the post-test.

The effectiveness of the intervention on the knowledge and attitude of children on pollution control was assessed by conducting a paired t test and explained in table 1. The null hypothesis stated was that there is no significant difference in the knowledge and attitude of the children on pollution control before and after the intervention. The mean knowledge score of the children during the pre-test was 6. It was increased to 8.34 in the post test. The calculated t value was 14.57. As the calculated 't' value was higher than the table value the null hypothesis was rejected. It can be said that the educational intervention was effective in promoting the knowledge of the children on pollution control. Similarly the attitude of the children also were assessed and presented in table no 2. The pre test attitude score of the children was 7.2 and it was increased to 8.14 during the post test. The calculated t value was 8.98. As the

calculated value was higher than the table value it can be said that the intervention is effective in promoting the attitude of the children on pollution control.

## Conclusion

Inculcating values on preserving and protecting the environment among the children is one of the most important social responsibilities of every adult. Various modalities like activity based outdoor education, role plays, project methods shall be used to create awareness among young children on environmental protection and preservation<sup>3</sup>. A study conducted in West Bengal found that students may not aware about the environmental pollution unless they get in depth knowledge on the sources and effects of environmental pollution<sup>4</sup>. Globally environmental issues are the most important reasons for diseases. Day by day the environment is becoming worse making the human life a difficult one. As per the saying, better late than never, we must realize the importance of preserving and retaining a safe and clean environment. It is found even the breast milk is contaminated. Environmental pollution is major threat right now Indian Cities are facing. Hence, it is high time to take steps to preserve the nature and its environment.

**TABLE No 1: Mean, SD and 't' value of pre test and post test on knowledge regarding environmental pollution and control.**

S.No.	Aspect	Knowledge		't' test	Table value
		Mean	SD		
1	Pre test	6.06	1.6	14.57	0.05
2	Post Test	8.26	1.73		

**Table No 2: Mean, SD and 't' value of pre test and post test on attitude regarding environmental pollution and control.**

S.No.	Aspect	Attitude		't' test	Table value
		Mean	SD		
1.	Pre test	7.2	1.46	8.98	0.05
2.	Post test	8.14	1.6		

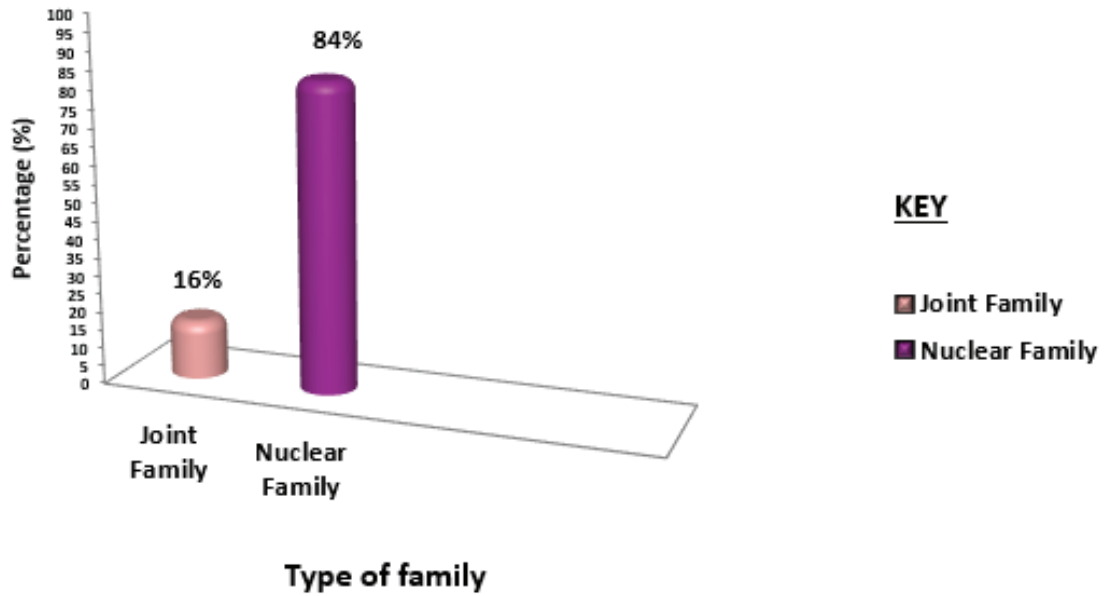


FIGURE 1 DISTRIBUTION OF SAMPLE ACCORDING TO FAMILY TYPE

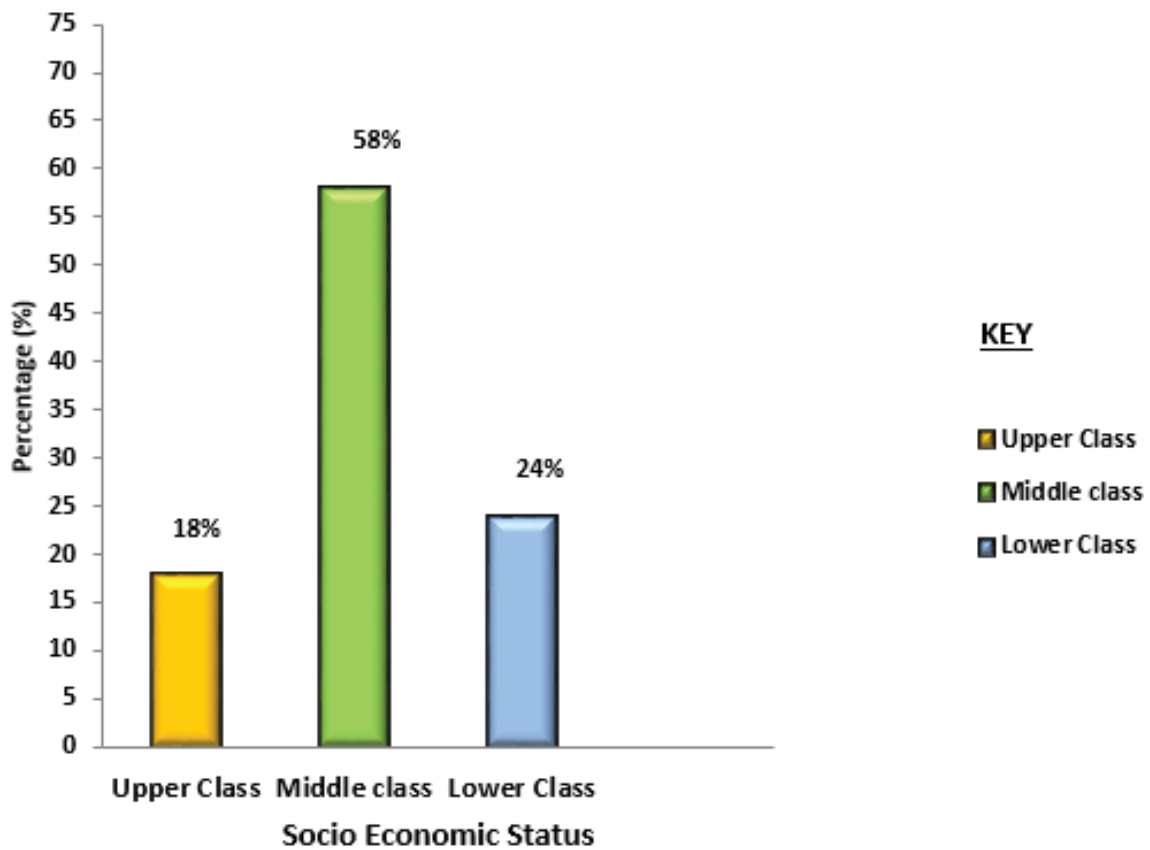


FIGURE 2 DISTRIBUTION OF SAMPLE ACCORDING TO SOCIO ECONOMIC STATUS

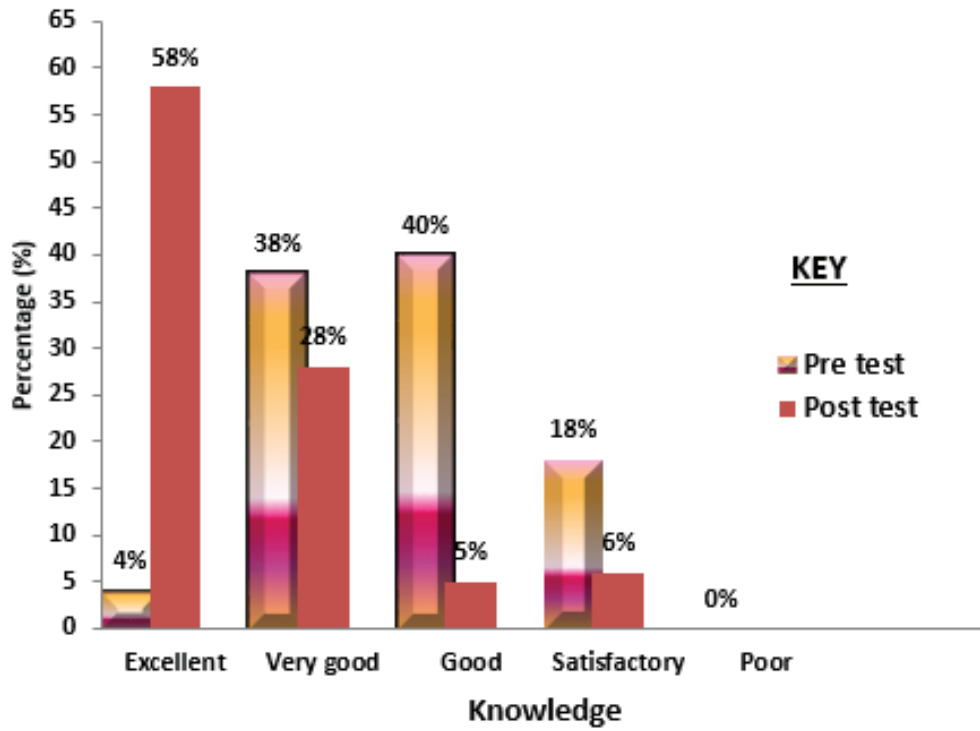


FIGURE 3 PRE TEST AND POST TEST LEVEL OF KNOWLEDGE

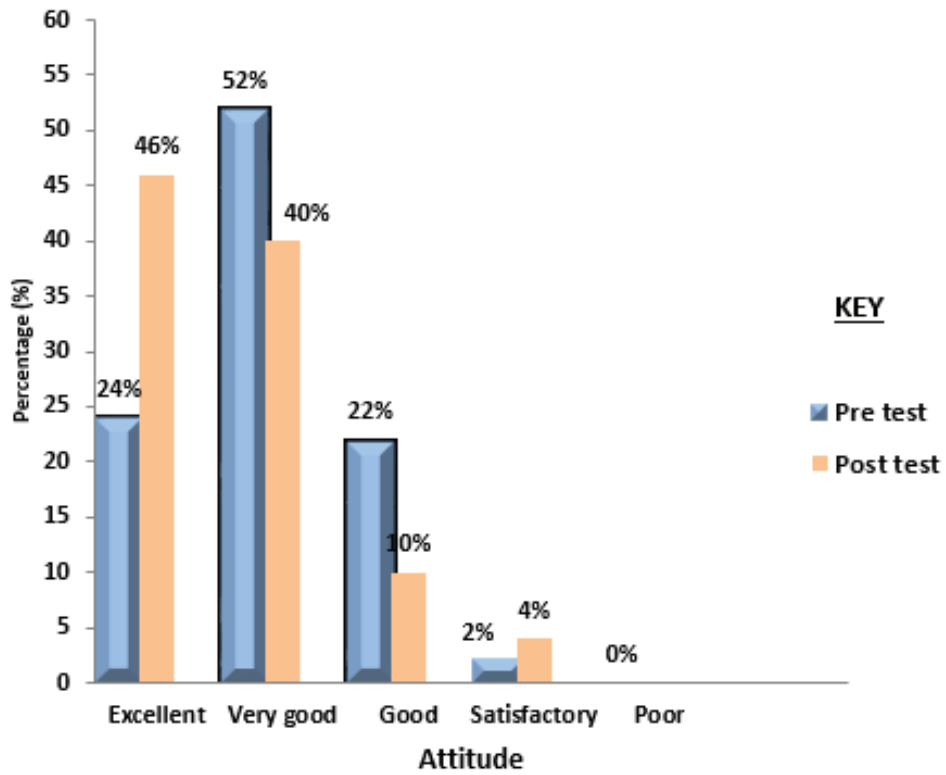


FIGURE 4 PRE TEST AND POST TEST LEVEL OF ATTITUDE

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**Conflict of Interest :** Nil

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