

Attitude towards Recycling: A Survey of High School Students in Coimbatore District, Tamilnadu, India

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ABSTRACT

The principal objective of this study was to assess student attitude towards recycling in the attempt towards increasing recycling participation in schools. The research is based on quantitative research design and a descriptive survey of 9th standard students in Coimbatore district, Tamilnadu, India. Samples were selected using the simple random sampling method. Using a questionnaire, the researcher surveyed 100 students from various schools in Coimbatore to assess the attitude of 9th standard students towards recycling. In the questionnaire, participants were asked to provide demographic information and their attitude towards recycling. Data were analyzed using percentages, t-test and One-Way Analysis of Variance (ANOVA). Respondent's attitude towards recycling is good and positive.

INTRODUCTION

Understanding the attitude of students towards recycling is the key to improving their environmental performance. Positive attitude towards recycling may help students to participate in recycling and may lead to their responsible behaviour towards the green earth. School teachers have a major duty of developing a positive attitude towards recycling among students through the subjects they are teaching in school. This study will determine whether there are individual and societal factors that affect recycling attitudes. It is clear that recycling attitudes are affected by various factors and in order to increase positive recycling attitudes among the students, these factors need to be overcome. The attitudes of this age group will have a direct effect on the near future of the community. In the present study, the researcher used a tool regarding students' attitude towards recycling and assessed how they feel about recycling.

NEED FOR THE STUDY

A few researchers in India have studied the recycling attitude among Indians. Even fewer research studies have addressed recycling attitudes among school students. Students come

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from home environment where recycling is a part of daily life. However, they must make a conscientious decision to continue that behaviour when at away from home. The school years are an excellent time to increase environmental awareness in the students who are unfamiliar with recycling practices and to promote this behaviour. Environmental awareness and recycling behaviours learned in school may lead to a lifelong habit of recycling. Berger (1997) found that individuals who are better educated are more likely to recycle. The young student population segment is a good vehicle for disseminating recycling information to other consumer groups, such as parents and peers (Koch & Domina, 1997).

STATEMENT OF THE PROBLEM

India's urban population generates tonnes of waste every day. Maximum percentage of waste comprised of domestic waste, the rest being commercial waste. Various kinds of waste get generated and disposed of in nearby areas without caring for any kind of treatment. The Government of India, Local Governments and voluntary agencies have spent millions of rupees over the past few years in advertisements and campaigns related to recycling. These efforts were aimed at the public to increase their participation in recycling schemes. However, most Indians do not take part in any recycling scheme. Thus, most wastes end up in landfills and this is worsened by the fact that most landfills in India are open dumps. The main problem caused by the rapid increase of solid wastes is its detrimental effect to both humans and the environment. To reduce the amount of waste being disposed of at landfill sites, the public need to start reducing their waste and reuse and recycle (3R).

There are uncertainties in consumer recycling attitude towards a number of waste management issues that may hinder the implementation of effective recycling. For students this is not an issue in the forefront of their minds. If they develop a positive attitude towards recycling and they will take the message to the people from all walks of life. Being a teacher educator, the investigator has a strong contention that the destiny of the future world is in the hands of children. Most of the studies on solid waste management in India are technical in nature. To date there has been only a few studies conducted to explore the attitude of school students to recycling. Hence, the researcher took up the study intending to explore the attitude of school students towards recycling and to make them actually participate in recycling everything.

OBJECTIVE OF THE STUDY

To assess the high school students' attitudes towards recycling.

HYPOTHESES OF THE STUDY

H₀ -1: There is no significant difference in the mean scores of male and female students with respect to (i) recycling attitude and its dimensions (ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle.

H₀ -2: There is no significant difference in the mean scores of high school students based on type of school with respect to (i) recycling attitude and its dimensions(ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle.

H₀ -3: There is no significant difference in the mean scores of high school students based on locality of school with respect to (i) recycling attitude and its dimensions(ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle.

METHODOLOGY

The investigators used the normative survey method to study the recycling attitude of high school students.

Sample: A total sample of 100 students was taken up for the present study. The simple random sampling technique was used for selecting the sample. The stratification was done on the basis of gender, type of school, and locality of school. Accordingly 100 questionnaires were distributed among the students.

Tool: The investigators developed a tool containing twenty three statements to measure the attitude towards recycling in high school students. They opted to follow Likert's method of summated ratings to develop this scale. The tool has four dimensions namely, Recycling Value, Personal Belief, Reduce and Reuse, and Recycle.

Data collection: For data collection, the investigators approached the students in various high schools in Coimbatore. The data were collected with the help of the developed tool. The investigators assured that their responses would be kept confidential and used for research purpose only. The gathered responses were scored.

Statistical Techniques: The data collected were analyzed by using descriptive and inferential analysis. The investigators employed percentage, t-test and One-way Analysis of Variance (ANOVA) for the analysis and interpretation of the data.

ANALYSIS OF DATA

Table 1

ATTITUDE TOWARDS RECYCLING IN HIGH SCHOOL STUDENTS

Table 1(a)

N	Mean	%
100	83.65	72.74

Table 1(b)

Variables	Categories	N	Mean	%
Gender	Male	52	81.77	71.10
	Female	48	85.69	74.51
Type of School	Aided	13	82.31	71.57
	Private	38	83.61	72.70
	Government	49	84.04	73.07
Locality of School	Urban	36	80.75	70.21
	Rural	51	84.59	73.55
	Semi-urban	13	88.00	76.52

From table-1(a), it is clear that irrespective of gender, type of school, or locality of school all the high school students showed a highly positive attitude towards recycling. Table-1(b) shows that the female respondents showed a more positive attitude towards recycling (74.51%) than male respondents. The above table further reveals that students from Government schools have a slightly more positive attitude towards recycling (73.03%) than the students from aided and private schools. Semi-urban students showed a more positive attitude towards recycling (76.52%) than rural and urban students.

Hypothesis 1

There is no significant difference in the mean scores of male and female students with respect to (i) recycling attitude and its dimensions (ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle.

Table 2

DIFFERENCE IN THE MEAN SCORES OF MALE AND FEMALE STUDENTS WITH RESPECT TO THEIR ATTITUDE TOWARDS RECYCLING AND ITS DIMENSIONS

Dimension	Category	N	Mean	S.D	t-Value	Result
Recycling Attitude	Male	52	81.77	9.164	2.057	p<0.05
	Female	48	85.69	9.885		
Recycling Value	Male	52	27.54	3.455	1.482	p>0.05
	Female	48	29.02	4.633		
Personal Belief	Male	52	23.77	4.350	1.650	p>0.05
	Female	48	25.21	4.366		
Reduce and Reuse	Male	52	18.67	2.785	1.701	p>0.05
	Female	48	19.52	2.124		
Recycle	Male	52	11.79	2.703	0.243	p>0.05
	Female	48	11.94	3.405		

*Significance at 0.05 level

Table – 2 shows that there is significant difference between male and female high school students in the mean scores of their attitude towards recycling. The calculated value of 't' (2.057) is greater than the table value. Hence the null hypothesis – 1(i) is rejected. However, there is no significant difference between male and female high school students in the mean scores for their attitude towards recycling with respect to its dimensions. Hence, the null hypotheses – 1(ii, iii, iv and v) are accepted.

Hypothesis 2:

There is no significant difference in the mean scores of high school students with respect to (i) attitude towards recycling and its dimensions-(ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle based on type of school.

Table 3
DIFFERENCE IN THE MEAN SCORES OF HIGH SCHOOL STUDENTS WITH
RESPECT TO THEIR ATTITUDE TOWARDS RECYCLING AND ITS
DIMENSIONS BASED ON TYPE OF SCHOOL

Dimension	N	Sum of Squares		Mean Square Variance		F-Value	Result
		Between	Within	Between	Within		
Recycling Attitude	100	30.983	9227.767	15.492	95.132	0.163	p>0.05
Recycling Value	100	18.081	1654.669	9.041	17.058	0.530	p>0.05
Personal Belief	100	14.064	1898.776	7.032	19.575	0.359	p>0.05
Reduce and Reuse	100	26.612	598.748	13.306	6.173	2.156	p<0.05
Recycle	100	2.070	915.970	1.035	9.443	0.110	p>0.05

Table 3 (i)
POST ANOVA

Dimensions	Variables	N	Subset for alpha = 0.05	
			1	2
Reduce and Reuse	Type of School Aided	13	17.77	

	Private	38	19.16	19.16
	Govt	49		19.37

Table – 3 shows that there is significant difference among the students of private, aided and Government schools in their mean scores with respect to ‘reduce and reuse’. The calculated value of ‘F’ (2.156) is greater than the table value. Hence the null hypothesis – 2(iv) is rejected.

The output of Duncan test in table 3(i) indicates that students from aided schools are significantly different from students from Government schools. As the students from private schools fall in the two subsets (i.e. in subset 1&2) they do not significantly differ from students from aided schools and students from Government schools.

Hypothesis 3

There is no significant difference in the mean score of high school students with respect to (i) attitude towards recycling and its dimensions-(ii) recycling value, (iii) personal belief, (iv) reduce and reuse and (v) recycle based on locality of school.

Table 4

**DIFFERENCE IN THE MEAN SCORES OF HIGH SCHOOL STUDENTS WITH
RESPECT TO THEIR ATTITUDE TOWARDS RECYCLING AND ITS
DIMENSIONS BASED ON LOCALITY OF SCHOOL**

Dimension	N	Sum of Square		Mean Square Variance		F-Value	Result
		Between	Within	Between	Within		
Recycling Attitude	100	593.647	8665.103	296.824	89.331	3.323	p<0.05
Recycling Value	100	110.078	1562.672	55.039	16.110	3.416	p<0.05
Personal Belief	100	95.352	1817.488	47.676	18.737	2.544	p<0.05
Reduce and Reuse	100	43.967	581.393	21.984	5.994	3.668	p<0.05
Recycle	100	14.545	903.495	7.272	9.314	0.781	p>0.05

*Significance at 0.05 level

Table – 4 shows that there is significant difference among the students of urban, rural and semi-urban schools in their mean scores with respect to their attitude towards recycling, recycling values, personal belief, and reduce & reuse. The calculated values of ‘F’ (3.323,

3.416, 2.544, and 3.668) are greater than the table value. Hence the null hypothesis – 2(i), 2(ii), 2(iii), and 2(iv) are rejected.

Table 4 (i)
POST ANOVA

Dimensions	Variable	Category	N	Subset for alpha = 0.05	
				1	2
Recycling attitude	Locality	Urban	36	80.75	
		Rural	51	84.59	84.59
		Semi-urban	13		88.00
Recycling value		Urban	36	26.89	
		Rural	51	28.86	28.86
		Semi-urban	13		29.62
Personal Belief		Urban	36	23.69	
		Rural	51	24.39	24.39
		Semi-urban	13		26.85
Reduce and Reuse	Urban	36	18.42		
	Rural	51	19.18	19.18	
	Semi-urban	13		20.54	

The output of Duncan test in table 4 (i) indicates that students from urban schools are significantly different from students from semi-urban schools with respect to their attitude towards recycling, recycling value, personal belief and reduce and reuse. As the students from rural schools fall in the two subsets (i.e. in subsets 1&2) they do not significantly differ from students from urban schools and students from semi-urban schools.

FINDINGS

1. High school students have a positive attitude towards recycling.
2. Female high school students have a more positive attitude towards recycling than male students.
3. Government high school students have a more positive attitude towards recycling than the aided and private school students.
4. Students from Semi-urban schools have a more positive recycling attitude than the urban and rural school students.

5. There is significant difference in the attitude towards recycling in male and female high school students. Female high school students have a more positive attitude towards recycling than the male students.
6. There is significant difference between aided and government school students with respect to the dimension 'reduce and reuse'.
7. There is significant difference between urban school students and semi-urban school students with respect to the dimensions 'recycling value', 'personal belief', 'reduce and reuse' and 'recycling attitude'.

CONCLUSION

The results of this research indicate that high school students have a high positive attitude towards recycling. It was determined that female high school students have a more positive attitude towards recycling than male students. Students from semi-urban schools have a more positive attitude towards recycling than urban and rural school students. Based upon the findings one can conclude that the high school students already have a positive attitude towards recycling.

Recycling programs in schools will not be effective if we do not change the attitude of students towards recycling waste. This study may provide some insight into improving current recycling programs in schools. It is clear that the attitude towards recycling is affected by various factors and in order to develop a positive recycling, these factors need to be overcome. Generally, the students demonstrate concern for the environment and are aware about the importance of recycling. However, there is need to apply the knowledge of waste recycling into effective and affirmative action.

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