



# A Study on the Awareness of Plastic Waste Generation and Management among School Teachers

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Abstract

The rapid rise in population and urbanization has led to an increase in the amount of waste generated each day. This is a major problem today in Ernakulam city. The main reason for this is lack of awareness among the people. The present study was conducted among the teachers of two schools in Ernakulam, to find their level of awareness regarding the generation and management of plastic wastes from their households. The results show that all the respondents are aware of the problem and they take steps to reduce the harmful effects. The respondents have also given practical suggestions for effective plastic waste management.

Key words: Awareness, Waste management, urbanization.

## Introduction

India is a developing country. Features of development like industrialization and urbanization as well as increase in population can be observed in all parts of our country. But these factors have negative effects too, of which the most evident is an increase in the generation of waste materials. These wastes include both household and industrial wastes. Since industrial waste is produced in large amounts and contain many harmful chemicals, people in general are more concerned about it. Laws are enforced for the

proper management of industrial wastes and violators are prosecuted. But there seems to be a low level of awareness among the public regarding the problems caused by accumulation of household wastes. The increasing amount of plastic wastes from residential areas causes adverse environmental impacts, public health risk and other socio-economic problems.

### **Need and Significance of the Study**

Ernakulam is a very good example for rapid increase in urbanization and population. Effective waste management is a serious problem here. A lack of facilities for regular waste collection affects many parts of the city. Most people are unaware of the need for segregation of wastes as recyclable and non-recyclable. All these have caused dumping of plastic wastes along with other wastes, greatly harming the ecosystem. Science education is expected to make people aware of such problems and contribute to solving them. Hence this study was conducted among school teachers of two schools in this city, to evaluate their level of awareness regarding the generation and management of plastic wastes from their households.

### **Statement of the Problem**

The present study is entitled “A Study on the Awareness of Plastic Waste Generation and Management among School Teachers”

### **Objectives**

The objectives of the study are

- ❖ To know the level of awareness of school teachers regarding the generation and management of plastic waste in their households
- ❖ To collect the suggestions of school teachers for better management of plastic waste

### **Hypothesis of the study**

1. The respondents are aware of the harmful effects if the plastic wastes from their households are not disposed properly
2. They take measures to decrease the generation of plastic waste in their houses

## Methodology

**Method:** The method used for the present study was Survey Method.

**Population:** The population selected for the study was school teachers.

**Sample:** The study was conducted on a sample of 17 school teachers belonging to two schools in Ernakulam city.

**Tool:** The tool used for the study was questionnaire

**Statistical technique:** The statistical technique used in this study was percentage analysis

## Analysis and interpretation

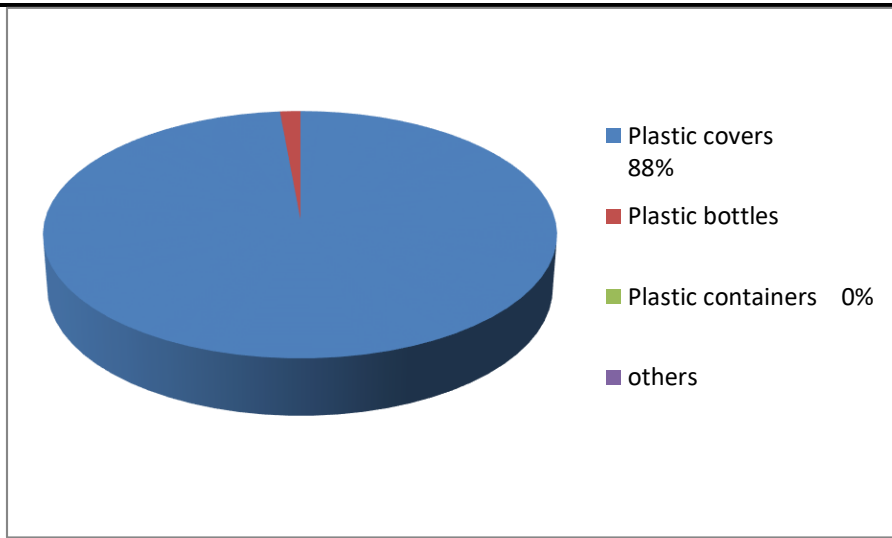
Table: 1 Waste generated by your home consists of?

Type	Percentage	Percentage of respondent
papers	25%	18%
disposables	50%	12%
food items	50%	4%
garden Wastes	25%	18%
Electronic waste	25%	12%
Plastic waste	75%	36%
Total		100%

The above table indicates that plastic wastes from more than half of house hold wastes for 36% of the respondents.

Table: 2 which is the major constituent of plastic waste generated from your home?

Types	No. of respondent	Percentage
plastic covers	15	88%
plastic bottles	2	12%
plastic containers		
others		
Total	17	100%



The above table indicates that 88% of the respondent's plastic covers form major constituent of plastic waste.

Figure 1: The major constituent of plastic waste generated from home

Table: 3 Do you reuse any plastic materials?

Response	No. of respondent	Percentage
Yes	7	42%
No	10	58%
Total	17	100%

The above table indicates that 42% of the respondents reuse plastic materials for different purposes.

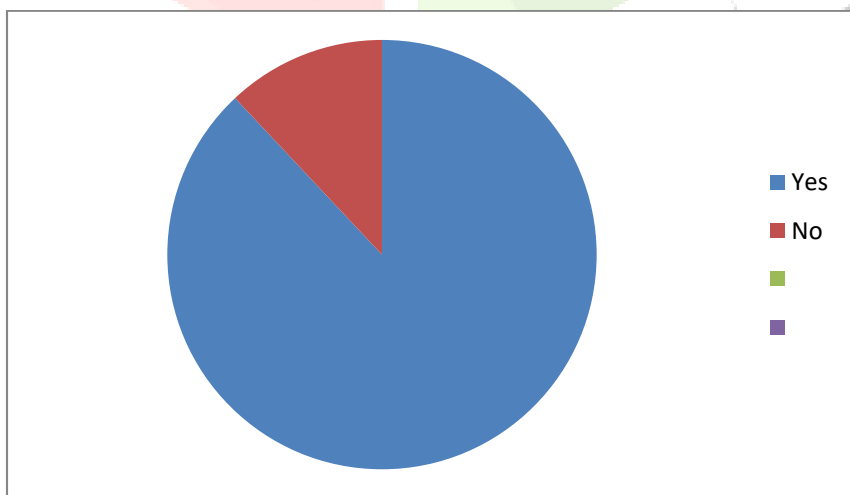


Figure 2: The No. of respondents reuse plastic materials for different purposes.

Table: 4 If yes, how?

Types	No. of respondent	Percentage
Interior decoration	6	36%
gardening	4	24%
jewellery making	2	12%
other use	5	28%
Total	17	100%

The above table indicates that 36% of the respondents reuse plastic materials for Interior decoration and 24% of the respondents reuse plastic materials for gardening and 12% of the respondents reuse plastic materials for jewellery making and rest of them use it for other purposes.

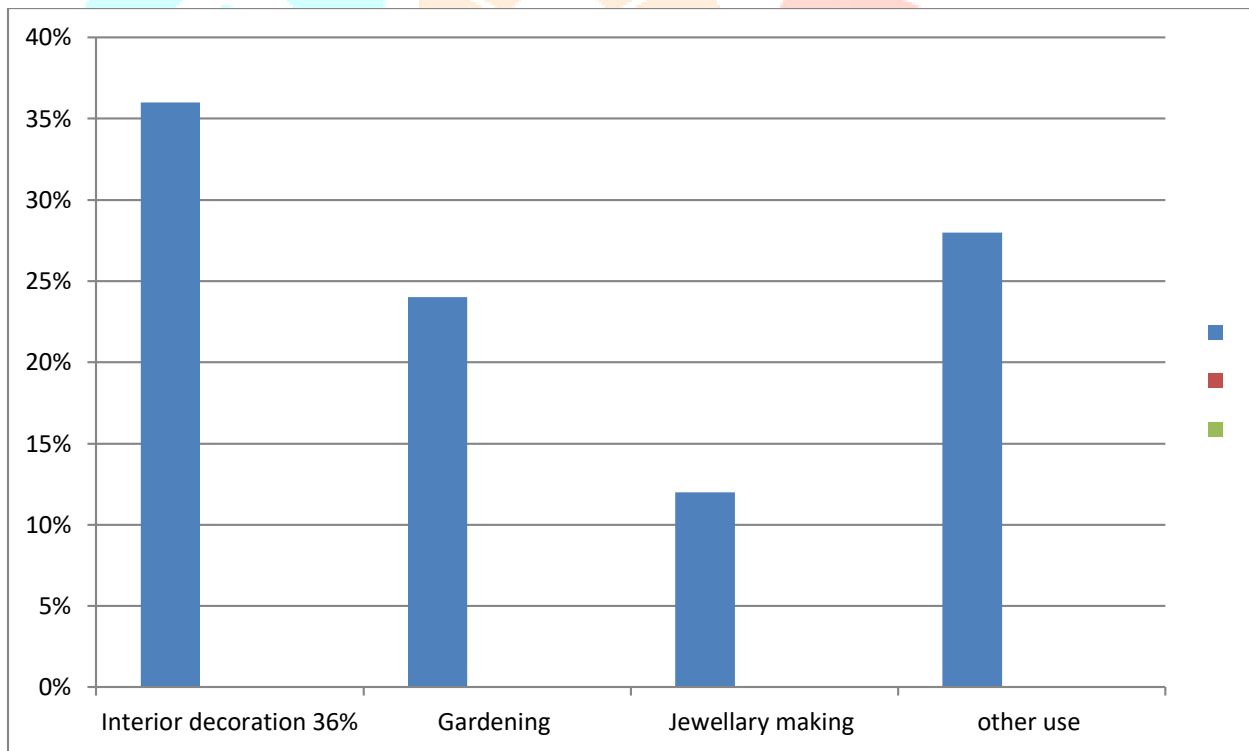


Figure 3: Reuse plastic materials for different purposes

Table: 5 Do you carry big shoppers while you go for shopping, to reduce the use of plastic bags?

Response	No. of respondent	Percentage
Yes	15	88%
No	2	12%
Total	17	100%

The above table indicates that 88% of the respondents use their own eco friendly bags for shopping.

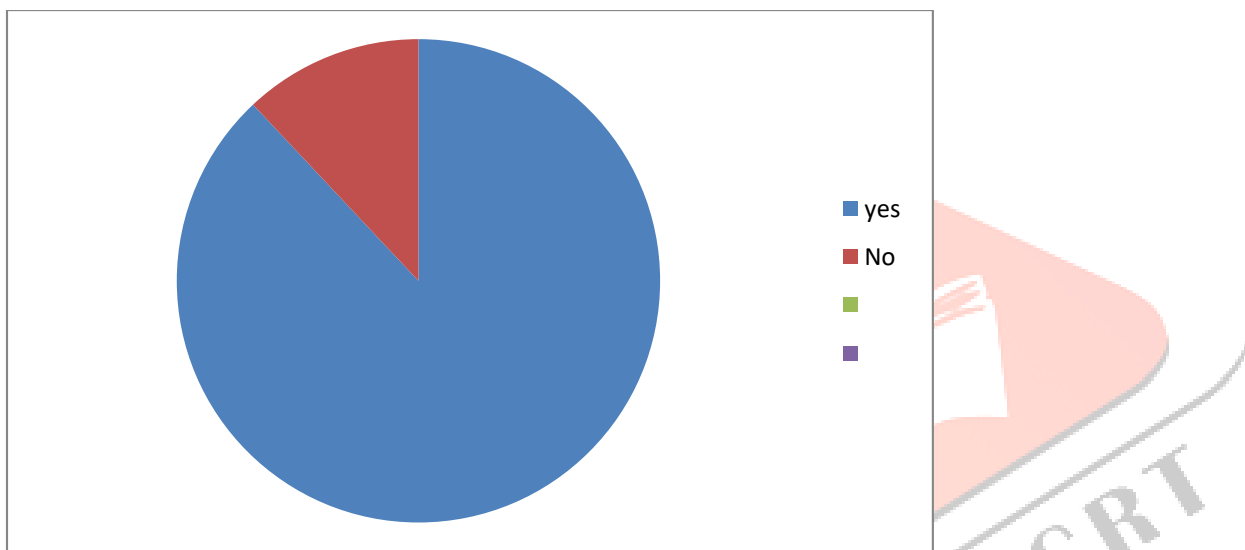


Figure 4: carry big shoppers while go for shopping, to reduce the use of plastic bags

Table: 6 Do you burn the plastic waste in your compound?

Response	No. of respondent	Percentage
Yes	1	6 %
No	16	94%
Total	17	100%

The above table indicates that only 6% of the respondents resort to burning of plastic wastes.

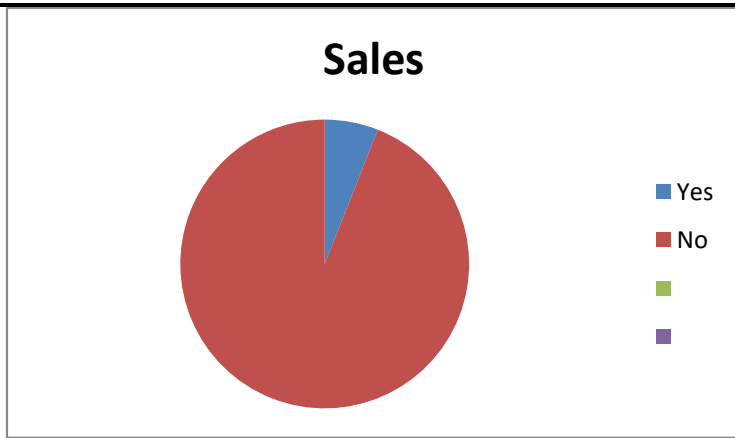


Figure 5: Burn the plastic waste in compound

Table: 7 Do you buy eco –friendly products to reduce the use of plastics?

Response	No. of respondent	Percentage
Yes	15	88%
No	2	12%
Total	17	100%

The above table indicates that 88% of the respondents buy eco friendly products to reduce the use of plastics.

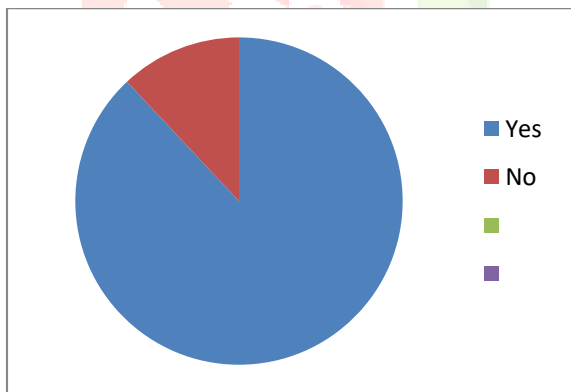


Figure 6 : Buy eco –friendly products to reduce the use of plastics

Table: 8 whether plastic should be reduced for the benefit of the environment

Response	No. of respondent	Percentage
Yes	17	100%
No		
Total	17	100%

The table shows that 100% of the respondents agree that reducing the use of plastic will be beneficial to the environment. Being teachers all of them are aware of the harmful effects of plastic on the environment.

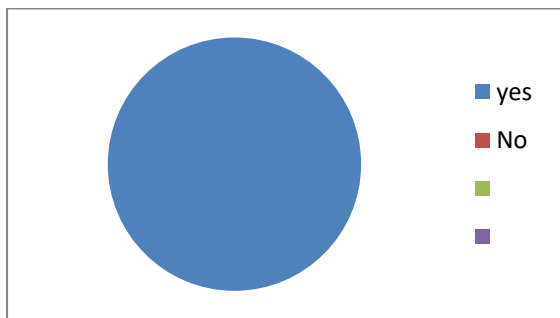


Figure 7: whether plastic should be reduced for the benefit of the environment

Table: 9 Method of disposal of plastic waste

Methods	No. of respondent	Percentage
Burning		
Throwing together with other wastes	2	12%
Selling	5	29%
Giving for recycling	10	59%
Total	17	100%

The above table indicates that 53% of the respondents are giving plastic waste for recycling .29% of the respondents selling plastic waste. The rest 12% are throwing it. Majority of the respondents are giving for recycling .Thus they help to prevent the production of plastic, by reducing the old ones.



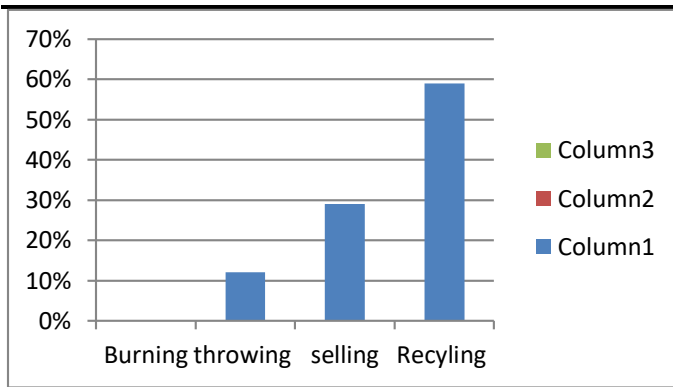


Figure 8: Method of disposal of plastic waste

## Findings

The data obtained on survey were interpreted and analyzed. Plastic wastes from more than half of household wastes for 31% of respondents. For 88 of the respondents, plastic covers form the major constituent of plastic waste. The survey shows that 88% of respondents use their own eco-friendly bags for shopping and 42% reuse plastic materials for different purposes. Only 6 resort to burning of plastic wastes. Such wastes items are given for recycling by 59 of respondents while 29 sell them and 12 throw them together with other wastes.

All respondents agreed to the statement that reducing the use of plastics will be beneficial to the environment. They gave the following suggestions for effective plastic waste management:

- Conduct awareness programmes among the public
- Set up plastic waste collection centers and more recycling units
- Ban plastic covers
- Take steps to reduce the use of plastic containers and other widely used plastic objects
- Carry own bags for shopping

## Results

This survey was conducted among school teachers. Their education and very profession demands a responsible attitude regarding the management of plastic waste. The results of the survey clearly indicate that all of the respondents are aware of the harmful consequences of the accumulation of plastic waste and are of the opinion that plastics' use should be reduced. Majority of them do not burn plastic waste in their houses, but give them for recycling. They buy eco-friendly products to reduce the use of plastic and take their own non-plastic carriers for shopping. Many of them use plastic leftovers for gardening, interior decoration etc. all these are extremely positive signs.

## Conclusion

Plastic has become so much a part of our daily life that discarding it at once is quite impossible. But awareness can be created among the public regarding the harmful effects of plastic waste accumulation. The government should take initiative to set up treatment plants for plastic waste. They should appoint enough staff to take care of waste management. It is a relief to note that now plastic covers have been banned. This is expected to be a first step in effective plastic waste management in our state. The high level of awareness among teachers needs to be transmitted to the students. This will complement the efforts of the government and the net result would be a cleaner, greener and healthier environment.

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