
Management Practices of Household Solid Waste by Homemakers

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Abstract:

This Study was taken up to find out the amount of waste generated, to know whether waste is segregated and about reduction and recycling techniques adopted by the homemakers. Using interview schedule, 60 homemakers from coffee board layout in Hebbal, Bangalore were randomly surveyed. Majority of the homemakers were graduates and living in nuclear families. The type of waste generated varied from Organic, plastics, textiles, glass, metal and paper. Organic and paper waste was generated everyday ranging from <1 Kg to > 4 Kg per/week. A majority of them segregated the waste before disposal using old buckets. Homemakers were found to be responsible to dispose the waste from house to public bin. 65% of the homemakers were aware of landfill method and ill effects of improper disposal. Chi-Square test did not show any significant relationship between education of the homemakers and awareness of various disposal techniques by municipality. Repair rather than replace was the method adopted for reducing waste by 50% of the homemakers along with purchasing durable and reusable items, purchase products in bulk, recycle packing containers and composting yard and kitchen waste. 83% of the homemakers recycled waste like bottles and clothes and sold other items like paper, tins/metals, old books and plastics. Chi-Square test revealed that education of the homemakers did not have any relationship to different ways of reducing and recycling of waste. It was found that, 62% of them did not want charges to be levied for waste collection, while those who wanted were ready to pay between Rs 10 to Rs 30 per month.

Introduction

There have been significant changes in the composition of household waste over the last 100 years which can be traced back to fundamental social and economic shifts affecting the way we live our everyday lives. Waste arising can be difficult to quantify, and it is only over the last few decades that there have been any real attempts at estimating the composition of household waste.

Since the 1980's, household waste arising has risen from just under 400 Kg per person to over 500 Kg per person per year. Such an increase can be attributed to economic growth, social change, and waste collection methods. Waste management is the collection, transport, processing, recycling or disposal, and monitoring of waste materials. The term usually relates to materials produced by human activity, and is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management is also carried out to recover resources from it. Waste management can involve solid, liquid, gaseous or radioactive substances, with different methods and fields of expertise for each.

Review

Urban domestic garbage is ever increasing and the recoverable materials and energy in garbage composition are also increasing. Majority of the urban residents is in favor of the garbage reduction policy (Jiang Yuan, 2006).

Waste management practice that currently encompasses disposal, treatment, reduction, recycling, segregation and modification has developed over the past. In spite of ever increasing industrialization and urbanization, the dumping of solid waste, particularly in landfills, remains a prominent means of disposal and implied treatment (Hamer, 2003).

Household solid waste was comprised of nine categories of wastes with vegetable or food waste being the largest component. Dwellers were found to take the service from the local waste management initiative shows that household solid waste can be converted from burden to resource through segregation at the source. (Huda, 2007).

Methodology:

Aim:

The aim of the study is to the Management practices of household solid waste by Homemakers.

Objectives:

1. To find out the amount of waste generated in the house.
2. To know whether the waste is segregated before disposal.
3. To gather information about reduction and recycling techniques followed.

Hypothesis: Homemakers did not practice any waste management techniques.

Research Design & Sample: Survey method was used to collect the required information from 60 randomly selected homemakers belonging to coffee board layout, Hebbal, Bangalore. The tool used was interview schedule.

Results and Discussion:

Table 1: Educational Qualification of the homemakers

Sl.No	Education	Percentage
1.	SSLC	16
2.	PUC	18
3.	Graduate	60
4.	Post graduate	06

It can be observed from the above table that, a majority of the homemakers were graduates, followed by PUC & SSLC. A few are educated up to post graduation.

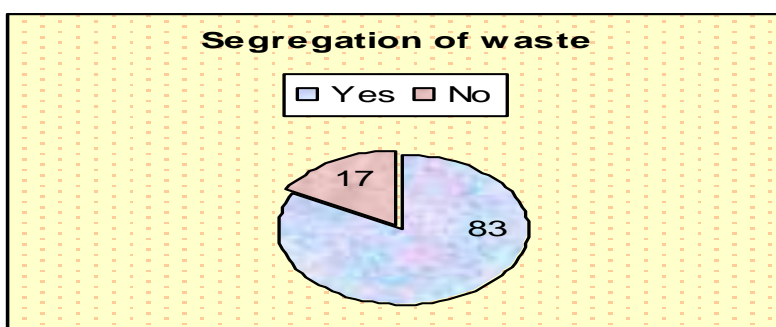
Table 2: Type and Quantity of Waste Generated.

Quantity Of waste	Type of waste								
	Organic	Plastic	Textile	Metal	Glass	Paper	Garden Waste	Electronic	Others
< 1Kg	25	63	50	08	03	20	23	05	02
1-2 kg	30	22	13	-	-	20	47	-	-
2-3 kg	30	02	05	-	-	22	10	-	-
3-4 kg	07	02	-	-	-	25	-	-	-
>4 kg	08	-	-	-	-	08	-	-	03

Table 2 discusses the type of waste generated per week by the households. About 30 percent of the homemakers said the organic waste generated for a week was between 1-3kgs. About 63 percent of homemakers said the plastic waste generated for a week was less than

1kg it includes, oil covers, milk covers, plastic covers obtained during purchase of groceries and other household items. About 50 percent of homemakers said the textile waste generated for a week was less than 1kg. The paper waste generated for a week was between 3-4 kg's by 25 percent of the homemakers. About 47 percent of homemakers had generated garden waste between 1-2 kg for a week. The other wastes like metal, glass and electric waste generated was less than 1 kg for a week by 8 percent of the homemakers.

Figure:1 Segregation of Waste at source



It can be observed from the figure 1 that a majority of the home makers segregate the waste at source.

Table No 3: Knowledge about waste disposal by municipality

Sl.No	Awareness	Percentage
1.	Yes	95
2.	No	05
1.	Landfill	63
2.	Incineration	03
3.	Composting	23
4.	Others	03

It can be seen that a majority of the home makers were aware of various disposal methods followed by municipality like Landfills (65%), and Composting (23%).

Table 4: Methods of reducing waste

Sl.No	Methods of Reducing Waste	Percentage	X2 value
1.	Purchase products in bulk.	43	7.44 * N.S
2.	Use packaging that can be recycled.	40	
3.	Repair rather than replace equipment.	50	
4.	Use rechargeable batteries	18	
5.	Purchase durables instead of and throw disposals.	48	
6.	Use cloth towels to paper napkins	50	
7.	Use durable cups and plates instead of paper or plastic products.	47	
8.	Compost yard and kitchen waste	12	

*N.S – Non Significant at 5% level of significance.

The results show that waste can be reduced by various ways. About 50 percent of home maker opined that waste can be reduced by repairing equipment than replacing it. And another 50percent felt using cloth towels instead of paper napkins was one of the methods of reducing waste.48 percent said by using and purchasing durable and reusable product waste can be reduced. 47 percent of the home maker said waste can be reduced by using durable cups and plates instead of paper and plastic products. Chi-Square test shows no significant difference between the levels of education of the homemakers and waste reduction methods followed.

Table 5: Reuse or selling the items

Sl.No	Reuse or Selling of items	Reuse	Sell	X2 Value
		Percentage	Percentage	
1.	Bottles	75	25	9.42 * N.S
2.	Plastic covers	53	47	
3.	Metal	12	88	
4.	Old Clothes	72	28	
5.	Tin or Cans	27	73	
6.	Newspaper	02	98	
7.	Old Books	27	73	

* N.S – Non Significant at 5% level of significance.

According to table 5, home makers reuse and sell items according to its priority. 53 percent home maker reuse plastic covers while 47 percent sell them. 75 percent reuse bottles while 25 percent sell them. 98 percent sell newspaper, 88 percent sell metal and 73 percent sell tins or cans and old books while 72 percent reuse old cloths and 28 percent said they sell them. Chi-Square test reveals that there is no association between education of the homemakers and reuse techniques followed.

Table No 6: Amount to be charged for waste disposal

Sl.No	Quantity of waste(Kg)	Amount to be charged(Rs)	Percentage
1.	< 0.500	-	-
2.	0.500 – 1	10	12
3.	1 - 2	20	20
4.	2 - >	30	07

Table 6 shows that 20 percent of homemakers said that Rs 20 should be charged for 1 kg – 2 kg of waste and 12 percent felt Rs 10 must be charged for 0.500 kg – 1 kg of waste.

Conclusion:

Industrialization and urbanization lead to increased waste generation. Majority of household waste comprise of organic waste and most of the homemakers segregated waste at household level. Homemakers were aware of Landfills, and contributed for waste reduction by repairing rather than replacing equipment, by purchasing durables rather use and throw articles and purchase articles in bulk. Some of the homemakers were willing to pay rupees 20 for 2 kgs of the household waste generated.

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