

Original Research Article

Knowledge, attitude and practice towards general waste management among housewives: evidence from urban slums of Delhi

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ABSTRACT

Background: Waste that cannot be recycled and generated in households and factories or companies, also named as residual waste is called general waste. Materials such as non-recyclable plastic, polythene, kitchen wraps and packing papers are few examples of general waste. The process of collection, treatment, recycle and disposal of different waste materials is waste management. Household waste management can be effectively done if housewives have adequate knowledge, a positive attitude and adopt healthy practices.

Methods: A quantitative research approach was used for this study. The research was conducted in urban slum area, Aali Gaon of New Delhi among 100 using purposive sampling. The tools used were structured knowledge questionnaire, 5- point Likert attitude scale and structured practice checklist.

Results: The findings showed that 55% of housewives had average knowledge, 56% of housewives had unsatisfactory practice level, whereas in attitude score, 67% housewives had positive attitude level. A significant association was found knowledge and attitude with demographic variables.

Conclusions: Thus, there is a need for mass health education amongst the housewives by which knowledge and practice can be enhanced.

Keywords: Knowledge, Attitude, Practice, Domestic waste, General waste management, Housewives

INTRODUCTION

Waste is nothing but unwanted and unusable material or any substance, which is discarded after the core purpose, is fulfilled. According to the basal convention definition waste is a substance, which is required to be disposed of by the provision of the law.¹ In general, solid waste in categorized in terms their material, physical properties, and origin and safety parameters. Whereas, household waste is divided in to biodegradable and non-bio degradable waste. The biodegradable waste can be easily used in the house. Non-biodegradables are kept aside for the recycling. The process of waste segregation is sorting of the waste in their respective waste bins according to the category of the waste.² As there is a continuous growth in the population, the magnitude of the general waste generation has also

increased. In older times, the waste generation was organic and the management of that waste was simple, without causing much impact to the environment. The progression of the population is such that it may increase by 36% in 2051.³ Waste generated in the households can be of great value to the nature by forming into fertilizer controlling soil pollution and soil erosion. The solid waste management generated from households, offices, factories, hospitals and public places need to be properly discarded and managed so environmental health is maintained. If these things are not taken care off then this may lead to breeding grounds for mosquitos and other insects resulting in potential loss of humankind.⁴ An approximate percentage of production of household waste in India varies from 72% of vegetables, 5% of papers, 3% of clothes, 0.5% of metallic elements, 0.4% of glass items and

7.1% miscellaneous. The production of the solid waste differs in terms of state, rural, and urban. Globally about 2.01 billion metric tons of MCD waste produced out of which 25 to 35 million tons generated every day in India.⁵ 300 to 400 grams of waste per person is generated in a normal town but 500 to 800 grams per person in metro cities like Delhi and Mumbai.⁶ India is the third largest producer of garbage and will be leading by 2050 by generating up to 436 million tons of waste. Waste in households is mostly dumped and only 5% is decomposed. General waste management in households is a challenge for the family members.⁷ Government of India has launched various policies and programs, rules and regulations to effectively manage waste management. Still there is a gap in knowledge, attitude and practice regarding general waste management.⁸ Waste management is the top priority of the policy makers, local groups and activists as the primary generation and segregation and management starts from the households. The effective management of the general waste depends on the involvement of the household members. Housewives play a crucial role in managing, collation, segregation, disposal of the household waste. Their role is essential for keeping the family healthy by managing the management of the general waste. However, their role is challenging as it depends on the knowledge, attitude and practice.⁹ There are very few studies done to generalize the findings on knowledge, attitude and practice of homemakers regarding general waste management. Thus, the present study aims to create awareness and assess knowledge, attitude and practice among housewives.

METHODS

Quantitative research descriptive design was used to assess the knowledge, attitude and practice. Sample size was 100 housewives selected using purposive sampling technique. Housewives included who are 18 years and above and willing to participate and employed housewives were excluded from the study. Ethical permission acquired from ethical committee of holy family hospital. Informed written consent was taken by the participants (18 years and above). Anonymity was assured.

Analysis of the research data was calculated by both descriptive as well as inferential statistics. Investigator filled structured socio-demographic data profile. Structured knowledge questionnaire, practice checklist and attitude Likert scale was used for interview schedule among housewives of urban slums of New Delhi.

The content validity of the self-structured tools was established by 6 experts from the field of community health nursing, mental health nursing, medicine, obstetrics and gynecology and medical surgical nursing.

Reliability of the practice checklist were checked using Kuder-Richardson formula 20 (KR 20) and the value of $r=0.77$. The reliability of structured questionnaire and 5-

point Likert scale for attitude assessment, Crohn back's alpha was applied and the value of $r=0.94$.

RESULTS

Table 1 illustrates that 59% were above the age group of 30 years, 28% were between the age group of 24-29 years and 13% were between the age group of 18-23 years. In terms of religion, 97% housewives were Hindu, 3% were Muslim and 0% were Sikh, Christian and other religion respectively. 40% were illiterate, 30% housewives were primary educated, 22% housewives were secondary educated, and 8% housewives were graduate and above. 48% housewives belong to family size 5-8 members, 46% housewives' family belong to ≥ 4 members, and only 6% housewives' family were belonging to family size above 12 members. In terms of family income, majority of the housewives 53% had family income of 10,001-20,000, 40% housewives had family income of less than and equal to 10,000, 4% housewives had family income of 20,001-30,000 and only 3% housewives had family income of equal to and above 30,001. In terms of dietary habit, Majority of the housewives 50% were vegetarian, 46% housewives were non-vegetarian and 4% housewives' family were eggitarian.

Figure 1 illustrates frequency and percentage distribution of knowledge level of housewives related to general waste management shows that most of the housewives 55% had average knowledge level, while 42% housewives had poor knowledge and only 3% housewives had good knowledge level regarding general waste management.

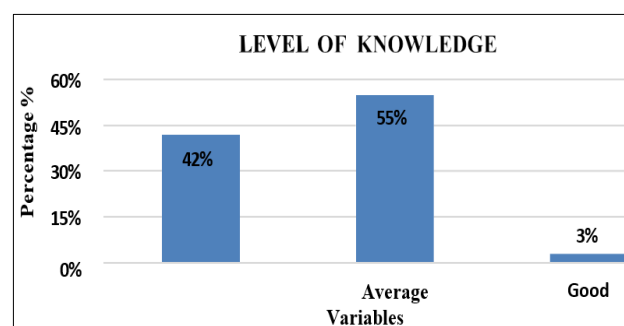


Figure 1: Bar graph showing the percentage and frequency distribution of knowledge scores of housewives regarding general waste management.

Figure 2 represents frequency and percentage distribution of practice level of housewives related to general waste management shows that 56% housewives had unsatisfactory practice level, while 44% housewives had satisfactory level regarding general waste management.

Figure 3 illustrates frequency and percentage distribution of attitude level of housewives related to general waste management shows that 67% housewives had positive attitude, while 33% housewives had neutral attitude and 0% housewives had negative attitude regarding general

waste management. Regarding the level of significance, it was seen that there were significant association found between knowledge scores with demographic variables such as education, family size and dietary habits at 0.05 level of significance. There were significant association

found between Practice scores with demographic variables such as family income and dietary choice at 0.05 level of significance. There were significant association found between attitude score with demographic variables such as family size and family income at 0.05 level of significance.

Table 1: Frequency and percentage distribution of demographic variables of housewives related to general waste management.

S. no.	Demographic variables	Frequency (f)	Percentage (%)
1	Age (in years)		
	18-23	13	13
	24-29	28	28
	>30	59	59
2	Religion		
	Hindu	97	97
	Muslim	03	03
	Sikh	00	00
	Christian	00	00
	Others	00	00
3	Education qualification		
	Illiterate	40	40
	Primary	30	30
	Secondary	22	22
	Graduate and above	08	08
4	Family size (members)		
	<4	46	46
	5-8	48	48
	9-12	06	06
	>12	00	00
5	Family income (per month)		
	<10,000	40	40
	10,001-20,000	53	53
	20,001-30,000	04	04
	>30,001	03	03
6	Dietary choice		
	Vegetarian	50	50
	Eggetarian	04	04
	Non-vegetarian	46	46

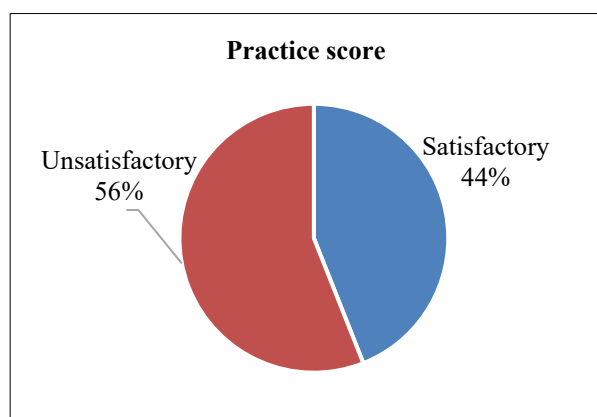


Figure 2: Pie chart showing the percentage and frequency distribution of practice scores of housewives regarding general waste management.

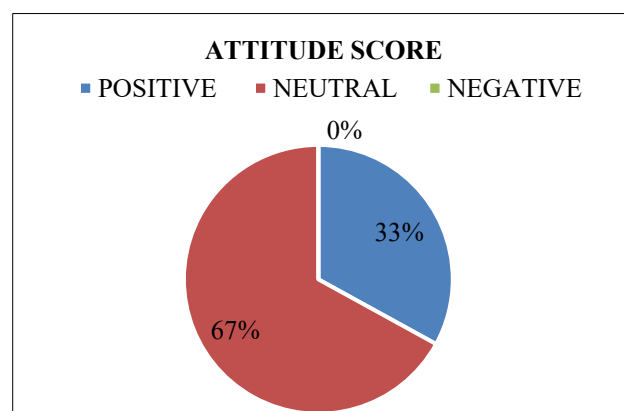


Figure 3: Pie chart showing the percentage and frequency distribution of attitude scores of housewives regarding general waste management.

DISCUSSION

Urban slums of New Delhi have an unorganized sanitation structure and poor quality of housing leading disturbed general waste management in the area.¹⁰ Sanitation related issues persists in the environment due to lack of waste management, unless there is a proper system, the diseases cannot be eliminated.¹¹ The sustainable development goals aim to achieve universal access to WASH. The Government of India has enhanced the focus on universal sanitation coverage through the Swachh Bharat Mission (SBM) launched on 02 October 2014, by the prime minister of India.¹²

The result of the present study shows that among housewives, majority of the sample 55% had average knowledge level, while 42% had poor knowledge and only 3% had good knowledge score. Whereas in the practice score, majority of the sample that is 56% had unsatisfactory practice level, while 44% had satisfactory level. Majority of the sample that is 67% had positive attitude level while 33% had neutral attitude level.

Similar findings were seen in a study by Shelke M which concluded that 98% of the housewives had average knowledge and only 2% of them had good knowledge, 16% of the housewives had poor practice, 72% of them had average practice and 12% of them had good practice regarding household waste management.¹³

Study by Sherpa et al in Nepal concluded that majority respondent had moderate level of knowledge whereas majority of respondent had poor practice level. There was no association found between knowledge and practice. Thus, there is a need to run community programs to spread awareness regarding general waste management in the community.¹⁴

Another study by Thomas et al in Kerala concluded that majority of the respondents were not aware about the methods of waste management and were having lack of awareness and had educational challenges thus require knowledge programs to promote the environmental health and sustainability.¹⁵

The researcher felt that dissemination of mass knowledge is necessary among the family members to ensure the correct and effective way of waste management. Education plays a major role in changing the attitude and practice among the people.

CONCLUSION

The present study focused on the assessment of knowledge, practice and attitude of the housewives towards the general waste management. Housewives manage the daily chores of the house and carry the burden of the whole house, which in term give them a huge responsibility of managing the household waste management as well. Future interventions are required to

raise the awareness especially in those areas where there is lack of facilities.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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