



Assess the Effectiveness of Self Instructional Module on Knowledge and Practice regarding Domestic Waste Management among Housewives

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ABSTRACT

Domestic waste is a waste that is generated as a result of the ordinary day – to – day consumption of households, includes remains of food, plastics, bottles, papers. It's a output of daily waste depends on :Dietary habits, Life style , living standards, Degree of urbanization and industrialization.The negative impact of improper domestic waste management is soil contamination, water contamination, extreme weather caused by climate change, air contamination, harm towards animal and marine life and human damage. It can be prevent by through awareness. **Objectives:** To assess the effectiveness of self instructional module on knowledge and practice regarding domestic waste management among housewives. **Design :** Pre experimental one group pre test and post test design was used. **Setting:** Housewives, kumarapalayam. Housewives, fulfilling the inclusion criteria were selected by convenient sampling technique. The inclusion criteria were housewives who are living in kumarapalayam rural area, who are willing to participate in the study and who are present at the time of the study & who are able to either read and write in Tamil either English language. A study was conducted with 60 housewives. The data were collected by using structured questionnaire and self prepared practice scale. **Results:** From the findings of the study, it can be concluded that the pre test knowledge score of mean was 9 post test knowledge score of mean was 15 and the difference in mean percentage was 24%. The pre test practice score of mean was 17, post test practice score of mean was 28 and difference in mean percentage was 27.5%. It seems that the self instruction module was effective. Paired 't' test knowledge score was 15.49 and paired 't' test practice was 21.298 at the level of significant (P < 0.05). Extremely significant difference was found table value of 2.00. Significant association between the knowledge of housewives and their selected demographic variables (family breadwinner occupation, source of information in waste disposal and common method of disposal of waste). No significant association between the practice of housewives and their selected demographic variables. From the findings of the study, the self instruction module were highly effective on domestic waste management among housewives.

Key words. Domestic waste management, Self instruction module, Knowledge, Practice, Housewives

INTRODUCTION

Domestic waste is the waste produced in the course of a domestic activity. Waste from accommodation used purely for living purposes (and without commercial gain) and which is disposed via the normal mixed domestic refuse collection. It's also known as municipal solid waste that are commonly called as trash, garbage and refuse or rubbish waste which is a type waste that are consisting of everyday items that are discarded by the public. (UkhtiNurAtira 2015).

According to Journal of environmental and public health 2020, Domestic waste composition is most of the waste generated were. organic wastes (69.1%), plastic wastes (10.6%), inert wastes (8.7%), paper wastes (4.6%), textile wastes (2.5%), metal wastes (1.2%), glass wastes (1.1%), wood wastes (0.6%), hazardous materials (1.6%).

The negative impact of improper domestic waste management is soil contamination, water contamination, extreme weather caused by climate change, air contamination, harm towards animal and marine life and human damage.

The world generates 2.01 billion tonnes of municipal solid waste annually, in which most of the percentage of waste generates due to humans domestic purposes, with at least 33 percent of that extremely conservatively not managed in an environmentally safe manner. Worldwide, waste generated per person per day averages 0.74 kilogram but ranges widely, from 0.11 to 4.54 kilograms. In india generates 62 million tonnes of waste every year.

According to central pollution control board 2020- 2021 ,gives status of waste generating units in tamilnadu the total number of corporation 15, 121 municipalities and 528 town panchayat, the total quantity of wastes generation is 13422 tones/ day as reported by the local bodies out of which 12844 tones/ day of solid waste is being collected and 9430.35 tones / day of solid waste is treated and 2301.04 tones / day of municipal solid waste is land filled in the land fill and dumpsites located in the state of Tamil nadu.

STATEMENT OF THE PROBLEM

Astudy to assess the effectiveness of self instructional module on knowledge and practice regarding domestic waste management among housewives at kumarapalayam.

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding domestic waste management among housewives .
2. To assess the level of practice regarding domestic waste management among housewives
3. To assess the effectiveness of self instructional module on knowledge regarding domestic waste management among housewives.
4. To assess the effectiveness of self instructional module on practice regarding domestic waste management among housewives.
5. To assess the association between level of knowledge regarding domestic waste management among housewives before self instruction module with selected demographic variables
6. To assess the association between level of practice regarding domestic waste management among housewives before self instruction module with selected demographic variables

MATERIALS AND METHODS

Pre experimental research approach was used for this present study. The research design selected for the present study was one group pre test and post test design design was selected to evaluate the effectiveness of self instructional module on domestic waste management among housewives. The present study was conducted in kumarapalayam area. The population for then present study was housewives, the sample selected for the present study was housewives were fulfilling the inclusion criteria. The inclusion criteria were housewives who are living in kumarapalayam rural area, who are willing to participate in the study and who are present at the time of the study & who are able to either read and write in Tamil either English language. A study was conducted with 60 housewives. The sample were selected by using convenient sampling technique. I excluded who are not willing to participate in the study and who are absent at the time of the study. Statistical methods adopted were mean, median, mode, paired and unpaired, chi - square value for assessing the effectiveness of self instructional module.

Development of the Tool

There are 2 parts of tools were used. They are,

Part - I

Demographic Variables - it consists of demographic characteristics of housewives,

- ❖ Age in years
- ❖ Religion
- ❖ Area of living
- ❖ Educational status
- ❖ Type of family
- ❖ Language
- ❖ Family breadwinner occupation
- ❖ Previous knowledge regarding domestic waste management
- ❖ Source of information in waste disposal
- ❖ Common method of disposal of waste

Part - II

It consists of 2 sections they are,

- ❖ Section - A : knowledge regarding 25 structured questionnaire
- ❖ Section - B : Practice regarding self prepared scale

Scoring procedure :

Part - I:

It consist of structured questionnaire of 25 questions to assess the knowledge of housewives regarding domestic waste management. A score of 1 is given for each correct response and a score of 0 is given for incorrect response. The total knowledge score is 25. The knowledge level is categorized in the following group.

Table :1 Scoring procedure for knowledge level

Category	Range of Scores
Inadequate	0 - 8
Moderately adequate	9 - 16
Adequate	17- 25

Part - I:

Practice scale consists of 10 questions. The total score was 40. Level of practice regarding proper domestic waste management was categorized as **Table2 :Interpretation of practice scale**

Category	Range of Scores
Poor	0-10
Average	11- 20
Good	21- 30
Very good	31- 40

Ethical consideration :

- ❖ The research proposal was approved by the dissertation committee prior to conduct the pilot study.
- ❖ Ethical clearance was obtained from the ethical committee of SreSakthimayeil Institute of nursing and research.
- ❖ The information oral consent was obtained from each subject before starting the data collection.
- ❖ The subjects privacy confidentiality and anonymity was maintained throughout the study.

Validity : On the basis of the reviewed literature and guidance of the experts, the tool was prepared by the investigator to accomplish the objectives stated. After which the tool was evaluated and approved by the research committee experts. The content validity of the tool was secured from the research experts in the field of community health nursing.

Period of data collection

Data was collected with in 2 weeks.

Pre test

Immediately after selection of sample to conducted the pre test by using knowledge structured questionnaire and self prepared practice scale.

Implementation of self instructional module

After conduction of pre test administered the self instructional module on domestic waste management among housewives.

Post test

Post test was conducted after a week of administration of self instructional module by using same knowledge structured questionnaire and self prepared scale.

RESULTS**DISCUSSION****Table 3****Frequency and percentage distribution of demographic variables of housewives****(N = 60)**

S.No	Demographic variables	Housewives	
		Frequency(F)	Percentage(%)
1.	Age in years		
	18 - 30 years	23	38.33%
	31 - 45 years	23	38.33%
	Above 45 years	14	23.34%
2.	Religion		
	Hindu	39	65%
	Christian	20	33.33%
	Muslim	01	1.67%
	Others	-	-
3.	Area of living		
	Urban	07	11.67%
	Rural	53	88.33%
4.	Educational status		
	Primary school / high school	19	31.67%
	Higher secondary school	25	41.67%
	Graduate	16	26.66%
5.	Type of family		
	Nuclear family	33	55%
	Joint family	27	45%
6.	Language		
	Tamil	46	76.66%
	English	-	-
	Others	14	23.34%
7.	Family breadwinner occupation		
	Business	19	31.67%
	Private sector/ government sector	25	41.67%
	Coolie / others	16	26.66%

8.	Previous knowledge regarding domestic waste management		
	Yes	11	18.33%
	No	49	81.67%
9.	Source of information in waste disposal		
	Mass media	19	31.67%
	Health care persons	23	38.33%
	Family and friends	18	30%
	Others	-	-
10.	Common method of waste disposal followed in home		
	Use municipality dustbin	21	35%
	Burning	15	25%
	Thrown away	10	16.66%
	Dumping	14	23.34%

In Table 3: Frequency and percentage distribution of demographic variables among housewives are 38.33% (23) of housewives were in the age group of 18 - 30 years and 38.33% (23) 31- 45 years , 65% (39) were Hindus, 88.33% (53) were in rural area, 41.67%(25) of them had higher secondary education, 55% were belongs to nuclear family, 76.66% (46) of them in Tamil, 41.67% (25) of them were private / government sector workers, 81.67% (49) of them had no previous knowledge regarding domestic waste management, 38.33% (23) of them received information regarding domestic waste disposal from health care persons, common method of waste disposal 35% (21) of them follows use municipality dustbin.

Table 4

Frequency and percentage distribution of pre test and post test knowledge scores of housewives regarding domestic waste management

(N = 60)

S.No	Level of knowledge	Range of marks	Pre Test		Post Test	
			F	%	F	%
1.	Inadequate	0 - 8	32	53.33	5	8.33
2.	Moderately adequate	9 - 16	28	46.67	32	53.33
3.	Adequate	17 - 25	0	0	23	38.34
Total			60	100	60	100

Table 4: shows that the frequency and percentage distribution of pre test knowledge score regarding domestic waste management among housewives, 53.33% (32) of them had inadequate level of knowledge, 46.67% (28) of them had moderately adequate level of knowledge and none of them had adequate knowledge, where as in post test, 8.33% (5) of them had inadequate level of knowledge, 53.33% (32) of them had moderately adequate level of knowledge and 38.33% (23) of them had adequate knowledge. This shows that the self instructional module on domestic waste management among housewives was more effective.

Table 5**Frequency and percentage distribution of pre test and post test practice scores of housewives regarding domestic waste management**

(N = 60)

S.No	Level of knowledge	Range of marks	Pre Test		Post Test	
			F	%	F	%
1.	Poor	0 - 10	4	6.67	1	1.67
2.	Average	11 - 20	53	88.33	3	5
3.	Good	21 - 30	3	5	35	58.33
4.	Very good	31- 40	0	0	21	35
Total			60	100	60	100

Table 5: shows that the frequency and percentage distribution of pre test practice score regarding domestic waste management among housewives, 6.67% (4) of them had poor level of practice, 88.33% (53) of them had average level of practice, 5% (3) of them had good level of practice and none of them had very good level of practice, where as in post test 1.67% (1) of them had poor level of practice, 5% (3) of them had average level of practice, 58.33% (35) of them had good level of practice and 35% (21) of them had very good level of practice. Thus self instructional module on domestic waste management among housewives was more effective.

Table 6**Paired 't' test value of pre and post test knowledge and practice scores of housewives**

(N = 60)

Level	't' value	df	Table value	'p' value	Inference
Knowledge	15.49	59	2.00	P < 0.05	Significant
Practice	21.298	59	2.00	P < 0.05	Significant

Table 6 : shows that the paired 't' value was calculated to analyze the effectiveness between pre and post test knowledge and practice scores of housewives. The paired 't' value for knowledge was 15.49 and for practice was 21.298, which is high when compared with table value 2.00 at 59 of degree of freedom. The self instructional module on domestic waste management among housewives was significantly effective.

Table 7**Mean , standard deviation, mean percentage and difference in mean percentage of pre and post test knowledge and practice scores of housewives**

Level	Maximum scores	Level of knowledge and practice			
		Mean	SD	Mean (%)	Difference in mean (%)
knowledge	25				
Pre test		9	2.902	36%	24%
Post test		15	4.002	60%	
Practice	40				
Pre test		17	3.605	42.5%	27.5%
Post test		28	4.769	70%	

Table 7: shows that the pre test knowledge score of mean was 9, standard deviation was 2.902, mean percentage was 36% , whereas post test knowledge score of mean was 15, standard deviation was 4.002, mean percentage was 60%, and the difference in mean percentage was 24% .The pre test practice score of mean was 17, standard deviation was 3.605, mean percentage was 42.5% , whereas post test practice score of mean was 28, standard deviation was 4.769, mean percentage was 70% and the difference in mean percentage was 27.5%. The result revealed that the self instructional module on domestic waste management had significant effect in increasing the knowledge and practice of housewives.

Table 8**Chi square value of association between pre test knowledge scores of housewives with their demographic variables****(N = 60)**

S.no	Variables	Level of knowledge				
		X ² value	df	Table value	P value	Inference
1.	Age in years	0.104	4	9.49	P > 0.05	NS
2.	Religion	1.5931	6	12.59	P > 0.05	NS
3.	Area of living	0.47	2	5.99	P > 0.05	NS
4.	Educational status	8.666	4	9.49	P > 0.05	NS
5.	Type of family	2.344	2	5.99	P > 0.05	NS
6.	Language	0.106	4	9.49	P > 0.05	NS
7.	Family breadwinner occupation	24.025	4	9.49	P < 0.05	S
8.	Previous knowledge regarding domestic waste management	2.93	2	5.99	P > 0.05	NS
9.	Source of information in waste disposal	27.6	6	12.59	P < 0.05	S
10.	Common method of disposal of waste	39.421	6	12.59	P < 0.05	S

Table 8: shows that the chi square calculation find out the association between pre test knowledge scores of housewives with their selected demographic variables regarding domestic waste management. It revealed that there was significant association (P<0.05) found between pre test knowledge scores of housewives and their demographic variables like occupation of family breadwinner, source of information in waste disposal and common method of waste disposal. There was no significant association found between pre test knowledge scores and other demographic variables like age, religion, area of living, educational status, type of family, language and previous knowledge regarding domestic waste management.

Table 9**Chi square value of association between pre test practice scores of housewives with their demographic variables****(N = 60)**

S.no	Variables	Level of practice				
		X ² value	df	Table value	P value	Inference
1.	Age in years	2.659	6	12.59	P > 0.05	NS
2.	Religion	0.735	9	16.92	P > 0.05	NS
3.	Area of living	3.8235	3	7.82	P > 0.05	NS
4.	Educational status	11.607	6	12.59	P > 0.05	NS
5.	Type of family	1.276	3	7.82	P > 0.05	NS
6.	Language	1.563	6	12.59	P > 0.05	NS
7.	Family breadwinner occupation	3.714	6	12.59	P > 0.05	NS
8.	Previous knowledge regarding domestic waste management	4.274	6	12.59	P > 0.05	NS
9.	Source of information in waste disposal	9.732	9	16.92	P > 0.05	NS

10.	Common method of disposal of waste	4.937	9	16.92	P > 0.05	NS
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Table 9 : shows that the chi square was calculated to find out the association between pre test practice scores of housewives with their selected demographic variables regarding domestic waste management. It revealed that there was no significant association (P >0.05) found between pre test practice scores of housewives and their demographic variables like age, religion, area of living, educational status, type of family, language, family breadwinner occupation, previous knowledge regarding domestic waste management, source of information in waste disposal and common method of waste disposal.

CONCLUSION

From the findings of the study it can be concluded that,

- More housewives had inadequate knowledge in pre test but more housewives had moderately adequate and adequate knowledge in post test regarding domestic waste management.
- Housewives had average level of practice in pre test but they had good and very good level of practice in post test regarding domestic waste management.
- The mean post test knowledge and practice scores were higher than the mean pre test knowledge and practice scores, it indicated that the self instructional module on domestic waste management among housewives was more effective.

ACKNOWLEDGEMENTS

We be in debt a grateful thanks to Dr. Jamuna Rani, Ph.d. Principal of sre sakthimayeil institute of nursing and research, who made us what we are now, who has given inspiration, the amenable constant and tremendous encouragement.

It 's our great privilege to thank respected Mrs.M. Arockia mary M.Sc., (N)., HOD of community health nursing department of sre sakthimayeil institute of nursing and research, for their continuous encouragement.

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