Evaluate the Impact of Interventions on Household Waste Disposal Knowledge and Practices among Women at Selected Villages of Mohali, Punjab

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ABSTRACT

INTRODUCTION: Improper waste disposal is the major cause of pollution and outbreak of diseases in many parts of world. There is no permanent solution for environmental problems, only things we can reduce and control waste generation by proper awareness and practices. Household waste management has three basic components namely collection, transportation, disposal.

AIM: The study is intended to evaluate the impact of interventions on household waste disposal knowledge and practices.

MATERIAL AND METHODS: A quasi experimental study was conducted at two rural areas which were selected by non-probability convenient sampling technique from village Gharuan and Village Mamupur, Mohali, Punjab. Subjects with self- structured questionnaire distributed to all subjects and practices were observed within 30 days. The answers were analyzed and evaluated & after observational checklist of practices structured teaching was given to experimental group and after that post test was conducted from both groups after 7 days.

RESULTS: The results reveled that in pretest level of knowledge scores women, 3(10%) women have good knowledgein experimental group and in control group 6(20%) having good knowledge regarding household waste disposal.

KEYWORDS: *Household waste disposal, structured teaching programme, knowledge, practices*

Pretest level of practices scores among experimental group were, 9 (30%) women having satisfactory practices and in control group, 4 (13.33%) having satisfactory practices scores regarding household waste disposal. In posttest level of knowledge scores among experimental group 5(16.67%) having excellent knowledge and in control group, there is no any significant change in posttest level of knowledge scores regarding household waste disposal. And in posttest level of practices scores among experimental group 27(90%) women having satisfactory practices regarding household waste disposal.

CONCLUSION: The study revealed that even though the women had less knowledge and practices regarding household waste disposal but they had kept interest to gain knowledge and improve practices regarding household waste disposal. It was concluded that structured teaching programme on household waste disposal knowledge and practices was effective.

INTRODUCTION AND BACKGROUND OF THE STUDY

Improper Waste disposal is the major cause of pollution and outbreak of diseases in many parts of world. There is no permanent solution for environmental problems, only things we can reduce and control waste generation by proper awareness and practices. Household waste management has three basic components namely collection, transportation, disposal. Comprehensive waste management incorporate a diverse range of activities including reduction, recycling, segregation, modification,

treatment and disposal which have varying level of sophistication. There may be different types of waste such as domestic waste, factory waste, waste from oil factory, construction waste, agricultural waste, food processing waste, bio-medical waste, nuclear waste, slaughter house waste etc. we can classify waste as follows: Solid waste- vegetable waste, kitchen waste, household waste etc.**,** E-waste- discarded electronic devices such as computer, tv, music system etc., Liquid waste- water used for different industries, tanneries, distilleries, thermal power plants.**,** Plastic waste- plastic bags, bottles, buckets etc.**,** Metal waste- unused metal sheets, metal scraps etc.**,** nuclear waste- unused material from nuclear power plants.[3]For individual households can reduces amount of waste they send to landfills by recycling. Papers, aluminum, glass and plastic containers are most commonly recycled material.[5] Every year, the average citizen of a developed country produces about half a ton of waste, that waste management is an essential industry.[4] Globally, 2.6 billion people or 39 percent of the world population do not use proper methods for waste disposal. Some 1.1 billion people still disposed of waste in the open places. Improper waste disposal most widely practices in rural areas. So, that people face many health-related problems.[8]Waste collection in India: Primarily by the city municipality. **a**. No gradation of waste product e.g., bio-gradable, glasses, polybags, paper shreds etc. **b**. Dumps these wastes to the city outskirts Local raddiwala/ kabadiwala (rag pickers). **c**. Collecting glass bottles. **d**. Collecting papers for recycling. Moreover, there were no proper dustbins for proper disposal of waste.[9]The central govt. has been implementing Swachh Bharat Abhiyan (a nation- wide campaign in India for the period 2014 to 2019 that aims to clean up the streets, roads and infrastructure of India's cities, towns and rural areas) emphasizing management at different stages of generation, collection and disposal.[6] This study will be conducted in rural area, to evaluate the impact of interventions on household waste disposal knowledge and practices among women. And practices can be improved by providing knowledge regarding household waste disposal. Waste disposal mass media, television, radio, all can play an important role in improvement of knowledge and practices regarding waste disposal**.** [9]

OBJECTIVES OF THE STUDY

1. To assess pre-test level of knowledge and practices regarding household waste disposal among women.

2. To assess post-test level of knowledge and practices regarding household waste disposal among women.

MATERIAL AND METHODS

1. **Research approach & design:** A quantitative research approach and quasi experimental design was used.

2. **Sample and sampling technique:** non- probability convenient sampling technique was used to select the sample size was 60 women.

3. **Data collection procedure:** 60 women selected underwent pre and post with self-structured questionnaire distributed to all subjects and practices were observed within 30 days. After collecting the filled forms, the answers were analysed and evaluated & after observational checklist of practices structured teaching was given to experimental group and after that post test was conducted from both groups after 7 days.

4. **Data analysis:** Data was analysed by descriptive and inferential statistics and presented through tables and figures. The content validity of tool was determined by the 17 experts from the field of Nursing.

ETHICALCONSIDERATION:

written permission for conducting the study was taken from the gram panchayat of two villages, Mohali, Punjab. And informed verbal consent form subjects were taken. Anonymity of subjects and confidentiality of information was maintained.

RESULTS

Table 1 Characteristics of subjects in experimental and control group

N=60

Socio-Demographic Variables	Categorization	Experimental Group (n=30)		Control Group (n=30)	
		Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Age in years	21 to 30	5	16.67	7	23.33
	31 to 40	4	13.33	6	20.00
	41 to 50	10	33.33	6	20.00
	Above 50	11	36.67	11	36.67

Educational status	Primary	10	33.33	8	26.67
	Secondary	7	23.33	8	26.67
	Matric	7	23.33	9	30.00
	Senior secondary	3	10.00	5	16.67
	Graduation	2	6.67	0	0.00
	Post-graduation	1	3.33	0	0.00
Type of family	Nuclear	16	53.33	20	66.67
	Joint	10	33.33	6	20.00
	Extended	4	13.33	4	13.33
Type of house	Pucca	9	30.00	12	40.00
	Kaccha	9	30.00	12	40.00
	Slum	12	40.00	6	20.00
Occupational status	Self-employee	11	36.67	9	30.00
	Employee	9	30.00	8	26.67
	Farmer	5	16.67	8	26.67
	Laborer	3	10.00	3	10.00
	House-maker	2	6.67	2	6.67
Monthly income	Less than 10,000/Rs	10	33.33	7	23.33
	10,001- 20,000/Rs	7	23.33	7	23.33
	20,001-50,000/Rs	3	10.00	8	26.67
	Above 50,000/Rs	10	33.33	8	26.67

Table No. 1: shows that regarding to educational in the experimental group 10(33.33%) of them were primary and 7(23.33%) of them were completed secondary, 7(23.33%) of them were completed metric, 3 (10%) of them were completed senior secondary and 02 (6.67%) of them were graduate and 1(3.33%) of them were post graduate. In control group 8(26,67%) of them were primary and 8(26.67%) of them were completed secondary, 9(30%) of them were completed metric, 5(16.67%) of them were completed senior secondary and none of them were graduate and post graduate. Regarding type of family in the experimental group 16(53.33%) of them belonged to the nuclear family and 10(33.33%) of them belonged to the joint family and 4(13,33%) of them belonged to extended family. In the control group 20(16.67%) of the belonged to the nuclear family and 6(20%) of them belonged to the joint family and 4(13.33) of them belonged to extended family. According to type of house shows that, in experimental group 9(30%) of them living in pucca house, 9(30%) of them were living in Kaccha house and 12(40) of them were living in slum area. In control group 12(40%) of them living in pucca house, 12(40%) of them were living in Kaccha house and 06(20) of them were living in slum area. Regarding occupational status, in the experimental group 11(36.67%) of them were self-employee, 9(30%) of them were employee, 5 (16.67%) of them were farmer and 3(10%) of were labourer and 2(6.67%) of them were house maker. In control group 09(30%) of them were self-employee, 8(26.67%) of them were employee, 8 (26.67%) of them were farmer and 3(10%) of were labourer and 2(6.67%) of them were house maker. Regarding monthly income, in the experimental group 10(33.33%) of them had monthly income of less than 10000, 7(23.33%) of them had monthly income of 11001-20000, 3 (10%) of them had monthly income of 20001-50,000 and 10(33.33) of them had above 50,000. In control group 7(23.33%) of them had monthly income of less than 10000, 7(23.33%) of them had monthly income of 11001-20000, 8 (26.67%) of them had monthly income of 20001-50,000 and 8(26.67) of them had above 50,000.

Table 2 Percentage distribution among experimental group and control group to their pre-test level of knowledge

N=60

Knowledge Level	Range of score	Experimental group (n=30) Respondents		Control group (n=30) Respondents	
		Frequency (n)	Percentage	Frequency (n)	Percentage
Excellent	≥ 23	0	0.00	0	0.00
Good	15-22	3	10.00	6	20
Average	8-14	10	33.33	15	50
Below Average	≤ 7	17	56.67	9	30

Maximum score: 26   Minimum score: 0

Table No. 2: represent the experimental group, (10 %) of women have good knowledge, whereas (33.33%) of women have average knowledge, (56.67%) of women have below average knowledge regarding household waste disposal. Hence it can be concluded that women had some knowledge regarding household waste disposal among experimental group**.** In control group, 9 (30%) women having below average knowledge, 15(50%) having average, 6(20%) having good knowledge regarding household waste disposal. Hence it can be concluded that women had little knowledge regarding household waste disposal among control group.

Table 3 Percentage distribution among experimental group and control group to their pre-test level of practices

N=60

Practice	Range of score	Experimental group (n=30) Respondents		Control group (n=30) Respondents	
		Frequency (n)	Percentage	Frequency (n)	Percentage
Unsatisfactory Practices	12-18	21	70	26	86.67
Satisfactory Practices	19-24	9	30	4	13.33

Maximum score= 24   Minimum score= 12

Table No. 3: represent the pre-test level of practice in experimental group and shows that 21 (70%) women having unsatisfactory practice, 9(30%) having satisfactory practice regarding household waste disposal. Hence it can be concluded that women had some practices regarding household waste disposal among experimental group. In control group and shows that 26 (43.33%) women having unsatisfactory practice, 4(6.67%) having satisfactory practice regarding household waste disposal. Hence it can be concluded that women had some practices regarding household waste disposal among control group.

Table 4 Percentage distribution among experimental group and control group to their post interventional level of knowledge

N=60

Knowledge level	Range of score	Experimental group(n=30) Respondents		Control group (n=30) Respondents	
		Frequency (n)	Percentage	Frequency (n)	Percentage
Excellent	≥ 23	5	16.67	0	0.00
Good	15-22	23	76.67	6	20
Average	8-14	2	6.67	15	50
Below Average	≥ 7	0	0.00	9	30

Maximum score=26   Minimum score=0

Table No.4: represent the post-test level of knowledge in experimental group and shows that 5 (16.67%) having excellent knowledge, 23(76.67%) women having good knowledge, 2(6.67%) having average knowledge regarding household waste disposal. Hence it can be concluded that women's level of knowledge improved after interventions regarding household waste disposal knowledge among experimental group. In control group, there were no any change in post -test level of knowledge regarding household waste disposal

Table 5 Percentage distribution among experimental group and control group to their post interventional level of practices

N=60

Practice	Range of score	Experimental group (n=30) Respondents		Control group (n=30) Respondents	
		Frequency (n)	Percentage	Frequency (n)	Percentage
Unsatisfactory Practices	12-18	3	10.00	26	86.67
Satisfactory Practices	19-24	27	90.00	4	13.33

Maximum score= 24   Minimum score=12

Table No. 5: represent the post-test level of practice in experimental group and shows that 3 (10%) women having unsatisfactory practice, 27(90%) having satisfactory practice regarding household waste disposal. Hence it can be concluded that women's level of practices enhanced after interventions regarding household waste disposal among experimental group. In control group, there were no any change in post- test level of practices regarding household waste disposal.

DISCUSSION

The findings of the study revealed that in pre-test knowledge score of experimental groups, 3 (10%) having good, 10 (33.33%) having average, 17 (56.67%) women having below average knowledge and control group of pre-tests 6 (20%) having good knowledge, 15 (50%) having average knowledge, 9 (30%) women having below average knowledge regarding household waste disposal. And pre-test practices scores of experimental groups, 21(70%) women having unsatisfactory practice, 9 (30%) having satisfactory practices and pre-test practices scores of control group 26 (43.33%) women having unsatisfactory practices, 4 (6.67%) having satisfactory practice regarding household waste disposal. **Shahzadi et. al (2018)** study conducted on waste disposal is one of the major environmental problems in all over the world. The knowledge of waste disposal is necessary for health of the people. A cross-sectional study was carried out in rural area and 100 households were the population. The data collected by pre-tested questionnaire and the direct interviewing the people about their routine waste disposal. Majority of respondents (72%) was aware about adverse effect of improper waste removal and (28%) respondents was not aware, 95% of people have good attitude about waste disposal. Regarding practices most of the respondents (52%) had the poor practices towards waste disposal and 41% was satisfactory practices. The knowledge regarding waste disposal in the most respondents was found good and in minimum of respondents having satisfactory knowledge. In spite of good knowledge, the respondents having poor practice regarding waste disposal due to lack of awareness unavailability of public dustbins.The finding of the study revealed that in post-test level of knowledge score of experimental group, 5 (16.67%) having excellent knowledge, 2(6.67%) having average knowledge, 223(76.67%) women having good knowledge and post-test level of practices score of experimental group, 3 (10%) women having unsatisfactory practices, 27(90%) having satisfactory practices regarding household waste disposal. Hence it was concluded that there was a significant impact of interventions on household waste disposal knowledge and practices among experimental group. **Pandey Umesh Rama, Surjan Akhilesh (2017)** the study conducted on exploring the linkage between sustainable consumption and prevailing green practices in reuse and recycling of household waste in Bhopal city, India. Promotion of reuse and recycling practices at the households' level can have a considerable influence in reducing generation of waste as well. This study aims have examined the existing waste generation patterns and identified the green practices adopted at household level. The primary survey was conducted to cover four income groups categories spanning across 'formal' and 'informal' housing typologies, to understand and examine the linkage between waste generation and life style. Reuse/recyclable practices adopted by the households and the extent of the usage of such practices was examined.

CONCLUSION

The study revealed that even though the women had less knowledge and practices regarding household waste disposal but they had kept interest to gain knowledge and improve practices regarding household waste disposal. It is concluded that structured teaching programme on household waste disposal knowledge and practices was effective as a teaching strategy that helped the women to improve their knowledge and skills.

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