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IMPACT OF STRUCTURED TEACHING PROGRAMME ON RURAL HOUSEWIVES REGARDING KNOWLEDGE OF HOUSEHOLD WASTE MANAGEMENT

Nursing Science

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ABSTRACT

Introduction: Waste management is a key factor for a better environment and its initial step begins in the management of household waste. Proper disposal of waste prevent pollution that could endanger human health and environment. The house in which one and one's family live needs to be clean and tidy as well as hygienic for the good health of their family. **Aims and Objectives:** The aim of this structured teaching programme was to add on to the knowledge of housewives regarding household waste management besides to promote health and hygiene and to encourage them to establish healthy patterns of behavior that influence their health, environment and psychological wellbeing. **Materials and methods:** A pre-test and post-test experimental design was used in the study to evaluate the effectiveness of structured teaching programme on knowledge regarding household waste management among housewives in rural community of Wasoora Pulwama, J&K, India. Systematic random sampling technique was used for selection of 60 housewives from accessible population. **Results:** The findings revealed that in pre-test group, maximum number of the study subjects (51.7%) had average level of knowledge, 38.3% of study subjects had poor knowledge and only 10% of study subjects were found to have adequate knowledge. Whereas in post-test group majority of the study subjects (76.7%) had adequate knowledge, 23.3% of study subjects had average knowledge and none of the study subjects were found to have poor knowledge regarding household waste management. The mean post-test knowledge score (82.3±2.36) of the study subjects regarding household waste management is significantly higher than that of the mean pre-test knowledge score (46.5±2.32) indicating that structured teaching programme was effective in enhancing the knowledge of housewives. There was a significant association between pre-test knowledge score and the selected demographic variables like age, educational status and monthly income. However, non-significant association was found between pre-test knowledge score of study subjects with one demographic variable, i.e., Mode of waste disposal at $p \leq 0.05$. **Conclusion:** The structured teaching programme was found effective in improving the knowledge of study subjects regarding household waste management. Significant association was found between pre-test knowledge with majority of the selected demographic variables (age, educational status, family income).

KEYWORDS

Effectiveness, structured teaching programme, housewives, household waste management, knowledge, pre-test, post-test.

INTRODUCTION

Man is behind every developmental endeavor. Today the world is facing the greatest threat from the activities of humans. Waste management is a key factor for a better environment and its initial step begins in the management of household waste. Reduction and recycling of household waste conserves resources and energy that would be expended in the production of more products. Proper disposal of waste prevent pollution that could endanger human health and environment. The house in which one and one's family live needs to be clean and tidy as well as hygienic for the good health of their family. Waste is useless, unwanted material for which no use is intended. Human and animal activities generate waste. Solid waste could be defined as non-liquid and nongaseous products of human activities, regarded as being useless. Solid waste which is of no use is called garbage, refuse or rubbish. Percentage of production of solid waste in Indian families varies for vegetables 72%, papers 5%, textiles 3%, dust 12%, metals 0.5%, glass 0.4% and miscellaneous 7.1%. With the increase in population, there will be increase in solid waste production resulting in pollution. According to estimates of Central Pollution Control Board, total solid waste production in urban areas is about 4,000 tons per day and in rural areas 8.4 million livestock population roughly produces 84,850 tons of dung daily (1).

Globally millions of tons of waste is produced by various human activities every day. About 2.01 billion metric tonnes of municipal solid waste (MSW) is produced annually worldwide (16). solid waste produced differs from country to country, state to state, and rural to urban (1). In India 25-35 million tons of waste is generated every day (1). In 2008, India produced 48 million tons of solid waste as per one estimate. In 2011, Delhi produced 6,800 tons per day, Mumbai 6,500 tons per day, Chennai 4,500 tons per day, Hyderabad 4,200 tons per day, Kolkata 3,670 tons per day (CPCB with NEERI). By 2016, this had risen to 52 million tonnes (CPCB) (2). Regionally on an average Jammu & Kashmir generates 3134 tonnes solid waste per day. Waste generation in Kashmir valley grows at more than 2% rate annually (3). Pertinently, Prime Minister of the country, Shri Narendra Modi launched the ambitious 'Swachh Bharat Abhiyan' (Clean India Mission) on 2nd October 2014, on the occasion of Mahatama Gandhi'S 145th birth anniversary. This campaign was launched by government to clean the streets, roads and infrastructure of the country (4). For ensuring hygiene, waste management and sanitation across nation, a "Swachh Bharat Mission" was launched, as a tribute to Mahatma Gandhi on his 150th birth anniversary that was celebrated in the year 2019 (4). World over, large number of studies have been conducted to assess the knowledge among the people regarding various issues pertaining to the household waste generation, its disposal and problems thereof. A descriptive study was conducted among 366 residents at coastal area of Boac, Marinduqueon to assess solid waste generation, disposal practices and problems encountered. The required information was gathered from the respondents through survey questionnaire and unstructured interviews. The data revealed that 5.74% of the respondents produced biodegradable, 8.20% produced non-biodegradable and the majority i.e., 86.07% of respondents produced an equal amount of biodegradable and non-biodegradable waste every day from their daily needs like food and others (5). A relevant descriptive study conducted in Indian metros as well as in

rural areas to assess the Solid Waste Management Challenges and Options for Treatment revealed that the generation of solid waste in villages is in between 50 gm/ cap/ day to 250 gm/ cap/ day and in Rural (Peri urban or urban outgrowth) is from 150 to 250 gm/ cap/ day and Rural (Remote/ Tribal) is 50 to 150 gm/ cap/ day (6).

To assess the Municipal Solid Waste Management, an important survey type descriptive study was conducted on 15 wards of Srinagar, Kashmir, India having total strength of 68 wards. The findings revealed that highest waste generation of 60% tons was registered by the ward Jawahar Nagar harbouring population of 28033, followed by the wards of Parimpora and Hazratbal each of which registered 50 tons of MSW generation. The waste generation in other wards followed the pattern: Buchpora (45 tons), Lal Bazar (40Tons), Brein (38 tons), Batmaloo (32tons), Hawal (30 tons), Nowshera (20 tons), Hari Singh High Street (13 tons), Pandach (10 tons), HMT (10 tons), Shalteng (10 tons), Lal chowk (8 tons) and Khumani Chowk (8 tons). The mean waste generation in different wards was calculated to be 31.11tons (7). Balakrishnan in 2016 conducted a non-experimental survey type study among residents of 200 Households in Kodungaiyur, Chennai to assess the knowledge regarding solid household waste management. The data generation was done through a predesigned questionnaire depicting different household generators from 200 Households. The study revealed that most of the respondents (80%) were concerned about the current state of the natural environment but had a shallow knowledge on what constitutes the natural environment. A majority (73.4%) of the respondents had no idea of what the Natural environment entails. A greater percentage of respondents (36.7%) considered household garbage to be the major issue that affects the environment and was closely followed by sewage pollution (36.5%). The individual person was believed by majority of the respondents (60%) to have the most effect on the environment. Generally, the majority of respondents showed concern about issues of solid waste management. All respondents (100%) were concerned about the diseases related to improper waste storage and disposal and only a few (3.3%) were not concerned about the health-risk related to burning garbage (8). Both the primary and secondary data was collected in a related study conducted among 108 females of Punjab, India to assess the knowledge regarding problems of household disposal. The primary data was collected with the help of structured and pre-tested interview schedule through personal interview method. The result showed that a few respondents (nearly 29%) considered the improper disposal of garbage as the cause of disease. The separation of waste before disposing was done only by 33.9% (9).

A study conducted by Bernard & Mildred in 2015 among 248 households in Baraton Centre Africa to assess household waste management systems revealed that majority of the respondents (78%) knew about solid waste management, 56.6% were using open dumping, 9.9% burying in the soil, 25.5% burning and 17.9% compositing (10). A descriptive study was conducted among 1750 females (25 -65 years of age) from Kermanshah city in Iran to assess the knowledge, attitude and practice of the Kermanshahi females towards reducing, recycling and reusing of solid household waste. The results indicated that the said women had satisfactory levels of knowledge (79%) and attitude (86%) regarding solid waste management (11). A correlative study was conducted among 60 housewives (25-65 years) in selected rural community at Mangalore, Karnataka, India with a view to provide an information pamphlet to assess the knowledge and practice of household waste management. The findings of the study revealed that out of 60 study subjects, majority (71%) had poor knowledge, 20% were having average level of knowledge and only 9% of study subjects had poor knowledge regarding waste management and also majority of study subjects 88% had poor practice of waste management. The findings also showed that there was positive correlation between knowledge and practice score among housewives regarding household waste management (12). Gracy in 2012 conducted a descriptive study among 60 housewives (25-60 years) in the selected rural area of Hesaraghatta village, Bangalore, Karnataka to assess the knowledge and practice regarding the proper disposal of refuse and sewage. The findings revealed that out of 60 study subjects maximum (54 %) had poor knowledge, 38% had average knowledge and only 8% of study subjects had good knowledge (13).

A related study was conducted among 160 Women (25-50 years) of Muhamma Gramapanchayath, Alappuzha District, India to assess the Effectiveness of a Structured Teaching Programme on Knowledge and Practice of Household Waste Management. The findings revealed that pre-test mean of knowledge score was 8.87 with standard deviation of 2.49 and the post-test mean of knowledge score was 18.79 with standard deviation of 1.71. The mean difference in pre-test and post-test score is 9.93. The t value is 70.58 and is significant ($P < 0.0001$). This indicate that the average increase of 9.93 score is not due to chance variation, and is because of the effectiveness of the structured teaching programme on household waste management (14). In other pre-experimental study conducted among 60 housewives (20-65 years of age) at selected urban community, Bangalore, India to assess the effectiveness of planned teaching programme on knowledge regarding domestic waste disposal, the findings showed that the pre-test mean of knowledge score was 12.38 (25.26%) while the post-test mean score was 39.78 (81.78%), so there was significant ($p<0.01$) gain in knowledge of housewives after planned teaching programme (15). A pre-experimental study was conducted among 60 housewives (20-60 years) in urban community of Mangalore Karnataka, India to assess the effectiveness of a structured teaching programme (STP) on domestic waste management and its effect on health and environment. The findings revealed that pre-test mean score was 36.38±5.52 and post-test mean score was 87.16±3.81and the knowledge improvement score was 50.78. The effectiveness of structured teaching programme was statistically tested by paired' test and the result was found to be statistically significant ($P< 0.001$) (16).

For implementation of the objectives of "Swachh Bharat Mission" and on the basis of above facts and figures and personal experiences of the investigators, the investigators realized that being as community health workers, academicians and with other inter-sectoral approaches, knowledge can be provided to the housewives regarding proper disposal of household waste as they have a key role in housekeeping and disposing domestic waste, so it is best to find out housewives knowledge regarding household waste management and to enhance knowledge among them with structured teaching program.

MATERIALS AND METHODS

A pre-experimental group of pre-test and post-test design was used for the study in order to evaluate the effectiveness of structured teaching programme on knowledge regarding household waste management among housewives in rural community of Wasoora, Pulwama, Kashmir. Systematic random sampling technique was used for recruitment of 60 housewives from accessible population. The prepared tool (self-structured interview schedule) and intervention (structured teaching programme) was validated by a panel of experts. Pre-testing of the tool and Intervention was done to check them for the clarity and feasibility. Pilot study was conducted on housewives other than the study sample to assess the feasibility of the study. The main study was conducted from 17th April 2019 to 6th May 2019. Pre-test was done on 6 housewives per day by administering self-structured interview schedule individually followed by structured teaching program in a group from 17th April 2019 to 26th April 2019 and on day 11th post-test was conducted on 6 housewives per day individually by using same self-structured interview schedule from 27th April 2019 to 6th May 2019. The data collected was analyzed by using descriptive and inferential statistics.

RESULTS

Data revealed that out of 60 study subjects recruited in the study, 24 (40%) belonged to the age group of 36-45,18 (30%) belonged to the age group of 25-35, 10 (16.7%) belonged to the age group 56-65 and 8(13.3%) belonged to the age group of 46-55 (Figure 1).

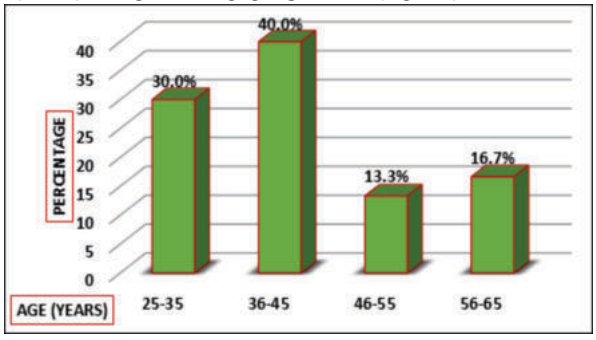

Figure 1: Distribution of study subjects in various age groups

In-terms of family income, 20 (33.3%) belonged to the families having income more than Rs 20000, 20 (33.3%) belonged to the families

having income Rs 16000-20000, 18 (30%) belonged to the families having income Rs 10000-15000 and only 2(3.3%) belonged to the families having income less than 10000 (Figure 2).

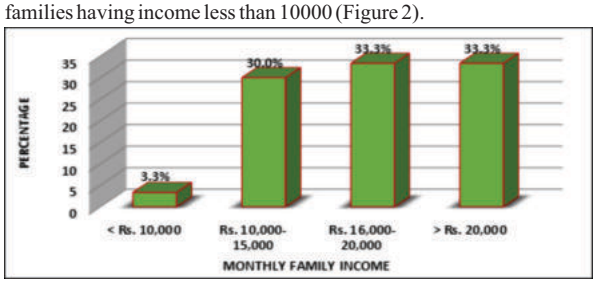

Figure 2: Monthly income of the study subjects

Data depicted that among the recruited subjects 24 (40%) were illiterate,13 (21%) were read upto 10th, 10 (16%) were read upto 12th, 8 (13.3%) were middle pass, 3 (5%) were above graduates and only 2 (3.3%) were graduates (Figure 3).

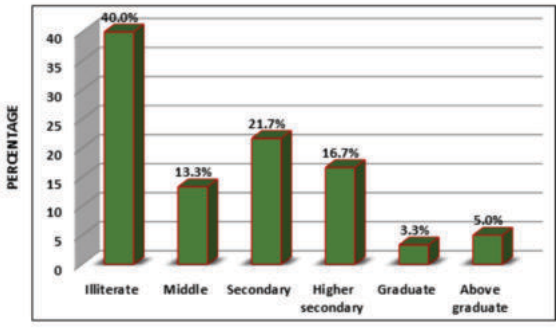

Figure 3: Educational status of the study subjects

Through the length of our study we found that out of 60 study subjects, majority 50 (83.3%) were throwing waste outside their house, 5 (8.3%) were burning the solid waste generated from their houses, 3 (5%) were burying the solid waste generated from their houses and only 2 (3.3%) were throwing the solid waste generated from their houses into the manure pits (Figure 4).

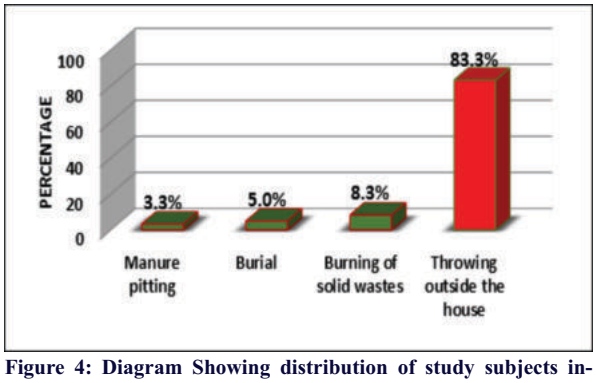

Figure 4: Diagram Showing distribution of study subjects in-terms of mode of waste disposal.

The pre-test knowledge scores of study subjects regarding household waste management was analyzed and it was observed that out of 60 study subjects 31 (51.7%) had average knowledge, 23 (38.3%) had poor knowledge and only 6 (10%) of study subjects had good knowledge (Figure 5).

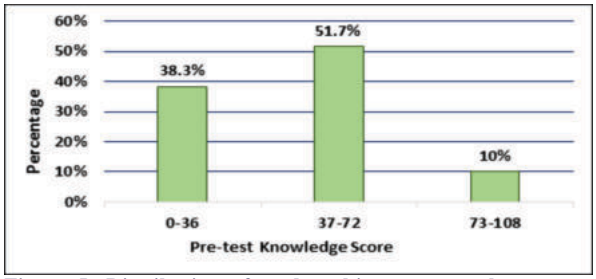

Figure 5: Distribution of study subjects as per the pre-test knowledge scores.

The post-test knowledge scores of study subjects regarding household waste management was also analyzed and it was found that out of 60 study subjects, majority 46 (76.7%) had good knowledge, 14 (23.3.0%) had average knowledge while as none of the subjects (0.0%) was found with poor knowledge scores (Figure 6).

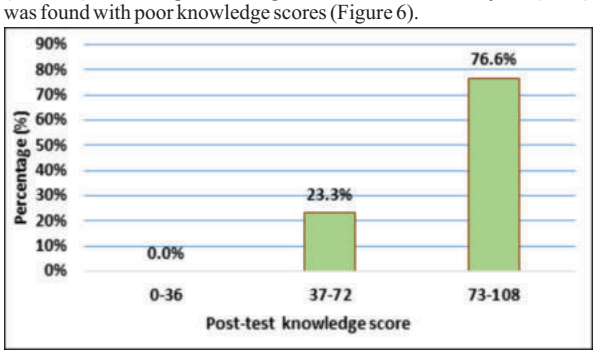

Figure 6: Distribution of subjects as per the post-test knowledge scores.

Comparison of mean pre-test and mean post-test knowledge scores of study subjects regarding household waste management was carried out and the study revealed that in pre-test, 31 (51.7%) had average knowledge, 23 (38.3%) had poor knowledge and only 6 (10%) of study subjects had good knowledge before administration of structured teaching program. Whereas in post-test majority of study subjects 46 (76.7%) had good knowledge, 14 (23.3%) had average knowledge while as none of the study subjects 0 (0.0%) was found with poor knowledge. This indicates that most of study subjects had gained knowledge in post-test (Figure 7).

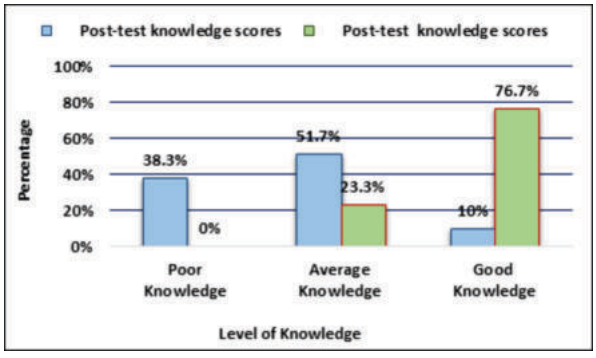

Figure 7: Distribution of study subjects by pre-test and post–test knowledge scores.

The data further revealed that mean post-test knowledge scores (82.3±2.36) was significantly higher than mean pre-test knowledge score (46.5±2.32) of study subjects with mean difference (35.8) (Table 1).

Table 1: Comparison Of Pre-test And Post-test Mean Knowledge Scores and SD Of Study Subjects (N=60)

Knowledge assessment	Mean ± SD	Median	Mean %	Min	Max	Mean difference	Paired 't' test	P-value	Result
Pre-test	46.5± 2.32	43	43.05 %	25	94	35.8	28.87	<0.001	significant
Post-test	82.3± 2.36	88	76.2 %	47	107				

The above findings reveal that there is significant increase in post-test knowledge scores as compared to pre-test knowledge scores regarding household waste management among housewives of 25 to 65 age group ($p \leq 0.05$). Thus, it was inferred that average increase of post-test knowledge score of 35.8 (60%) regarding household waste management among housewives occurred after the implementation of structured teaching program and the same was not by chance.

As revealed by the data shown in Figure 8, the post-test knowledge score of study subjects regarding Household waste management in various aspects was higher than the pre-test knowledge score because

of the effectiveness of Structured Teaching Programme.

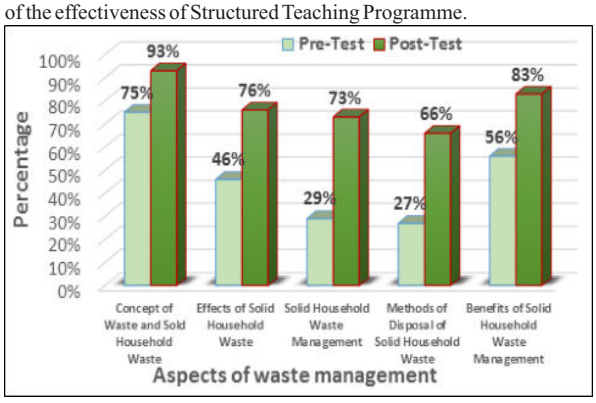

Figure 8: Mean percentage of study subjects with respect to pre-test and post-test knowledge scores among various aspects of household waste management.

The data presented in Table 2 shows that there was significant association between pre-test Knowledge scores of study subjects and the selected demographic variables like Age, Educational status, Monthly income of the family. However, no significant association was found between pre-test Knowledge scores of study subjects and the selected demographic variable like Mode of waste disposal. The reasons that were found to be responsible for the findings included that the younger age group of Housewives among all was more concerned about the health problems, updated and highly qualified, active in reading newspaper and watching news, more possessive in maintaining the hygiene of their houses, that is why it showed significant association with the level of knowledge regarding household waste management. Housewives with high educational status were having more knowledge regarding household waste management because, the more the individual is qualified the more he will be concerned about the health and environmental hygiene, the more he will be able to get knowledge regarding waste management from other sources e.g. books, internet, Mass media. The housewives who belonged to the families having monthly income more were able to spend money for the betterment of their family, like in education, kept good facilities at their homes like dust bins, could avail services for various disposal methods, that is why income showed direct association with the level of knowledge regarding waste management. Majority of the housewives 50 (83.3%) were throwing the daily waste generated from their houses outside their houses, because of the unavailability of resources and facilities for different waste disposal methods and were having no knowledge regarding the proper steps of waste disposal methods and felt that it is easy to throw the solid waste outside their houses, that is why this variable (mode of waste disposal) didn't show any significant association with the pre-test level of knowledge regarding household waste management.

Table 2: Association Of Pre–test Knowledge Scores Of Study Subjects With Their Selected Demographic Variables (N=60).

Variable		Level of Knowledge			Chi-square	P-value	df	Result
		Poor	Average	Good				
Age (years)	25-35	1	14	3	20.289	0.002	6	S*
	36-45	9	13	2				
	46-55	4	3	1				
	56-65	9	1	0				
Educational status	Illiterate	23	1	0	104.91	<0.001	10	S*
	Middle	0	8	0				
	Secondary	0	13	0				
	Higher secondary	0	9	1				
	Graduate	0	0	2				
	Above graduate	0	0	3				
Monthly Income	< Rs. 10,000	1	1	0	24.656	0.001	6	S*
	Rs. 10,000-15,000	13	5	0				
	Rs. 16,000-20,000	7	13	0				
	> Rs. 20,000	2	12	6				
Mode of waste disposal	Manure pitting	0	1	1	5.291	0.507	6	NS
	Burial	1	2	0				
	Burning of solid wastes	2	2	1				
	Throwing outside the house	20	26	4				

S*= Statistically Significant, NS=Non-Significant

DISCUSSION

In the present study it was found that, out of 60 housewives of selected rural community of Wasoora, Pulwama, Kashmir, most of the study subjects 24 (40%) belonged to the age group of 36-45 years, 18 (30%) belonged to the age group of 25-35 years, 10 (16.7%) belonged to the age group 56-65 years 8 (13.3%) belonged to the age group of 46-55 years. Most of the study subjects 24 (40%) were illiterate, 13 (21.7%) were having 10th standard educational qualification, 8 (13.3%) were middle pass, 3 (5%) were above graduate and only 2 (3.3%) were having complete graduation. Equal number of study subjects 20(33.3%) belonged to the family having monthly income more than Rs 20,000 and 20(33.3%) belonged to the family having monthly income between Rs 16,000-20,000,18(30%) belonged to the family having monthly income between Rs 10,000-15,000 and only 2(3.3%) belonged to the family having income less than Rs 10,000. Majority of study subjects 50 (83.3%) were throwing waste outside their house, 5 (8.3%) were burning the solid waste generating from their houses, 3 (5%) were burying the solid waste generated from their houses and only 2 (3.3%) were throwing the solid waste generated from their houses into the Manure pit. The findings of the present study are supported by the findings of a related study conducted by Omambia et al., to assess Household Solid waste management systems among 233 households in Baraton centre, Afirca. The study revealed that Maximum number of study subjects 120 (56.6%) were using open dumping, 54 (25.5%) were burning the solid waste generated from their houses, 21 (9.9%) were burying the waste in the soil, 38 (17.9%) were using the compositing method of waste disposal (10). Study conducted by S. Ani Grace Kalaimathi et al., to assess the effectiveness of Structured Teaching Programme on Knowledge regarding Hazards of Plastic Waste and its safe disposal among adults (20 -50 years of age) of Kizhkatchirapattu rural village Tiuvannamalai, Tamil Nadu, India also supports our findings. The findings revealed that majority 36 (72%) of subjects disposing in open places (17). The findings of our study are comparable to the study conducted by Bimel Kottarathil on effectiveness of a structured teaching programme on knowledge and practice of Household Waste Management among 160 women in the age group 25-50 years of Gramapanchayath, Alappuzha District. The findings of the study showed that most of the study subjects 63(39.4%) were in the age group of 40-50 years, Majority of the study subjects 128(80%) were having family income less than Rs 5000. Minimum of the study subjects 5(3.1%) were graduates (14).

In the present study, regarding Household waste management, analyzing the pre-test knowledge score, it was seen thatr out of 60 study subjects, most of the study subjects 31(51.7%) had average knowledge, 23 (38.3%) had poor knowledge and only 6 (10%) had good knowledge. The findings of the study were supported by a study conducted by Bimel Kottarathil on Effectiveness of a structured teaching programme on knowledge and practice of Household Waste Management among 160 women in the age group of 25-50 years of Gramapanchayath, Alappuzha District, India. The study revealed that most 65.6% of the women had average knowledge regarding household waste management, 28.1% had poor knowledge and only 6.3% had good knowledge regarding house hold waste management (14).

In the present study regarding household waste management,

analyzing the post-test knowledge scores, out of 60 study subjects, majority of the study subjects 46(76.7%) had good knowledge, 14 (23.3%) had average Knowledge, while as none of the subjects (0.0%) was found with poor knowledge scores. The findings of the study were supported by a study conducted by Bimel Kottarathil on Effectiveness of a structured teaching programme on knowledge and practice of Household Waste Management among 160 women in the age group (25-50years) of Gramapanchayath, Alappuzha District, India. The study revealed that majority (79%) of the women had good knowledge, 20% had average knowledge and only 1% had poor knowledge regarding house hold waste management. In the present study while comparing the pre-test and post-test Knowledge score of study subjects regarding Household Waste Management, the mean post-Test knowledge scores obtained from study subjects (82.3±2.36) was higher than Mean pre-Test knowledge score of study subjects (46.5±2.32) at 0.05 level of significance. The mean difference in pre-test and post-test Knowledge score is 35.8. The t value is 28.87 and it is significant at P <0.001. This gives an inference that intervention i.e. Structured Teaching Programme was effective in improving the Knowledge score of subjects regarding Household Waste Management (14). The findings of the study were supported by a study conducted by Bimel Kottarathil on effectiveness of a structured teaching programme on knowledge and practice of Household Waste Management among 160 women in the age group (25-50years) of Gramapanchayath, Alappuzha District, India. The study revealed that the Mean post-test knowledge scores obtained from study subjects (18.79±1.71) was higher than Mean pre-Test knowledge score of study subjects (8.87±2.49) at 0.05 level of significance. The mean difference in pre-test and post test score is 9.93. The t value is 70.58 and it is significant at P <.0001. This indicate that the average increase of 9.93 score is not due to chance variation, and is because of the effectiveness of the Structured teaching programme on Household waste management (14). The findings of the study were also supported by a study conducted by Alphona Thomas among 60 housewives (20-60 years) in urban community of Mangalore Karnataka, India to assess the effectiveness of a structured teaching programme (STP) on domestic waste management and its effect on health and environment. The findings revealed that pre-test mean score was 36.38±5.52 and post-test mean score was 87.16±3.81and the knowledge improvement score was 50.78. The effectiveness of structured teaching programme was statistically tested by paired' test and the result was found to be statistically significant at P< 0.001 level. In the present study, it was found that there was significant association between pre-test Knowledge score with selected demographic variables i.e., age, educational status, family income with pre-test Knowledge score (0.002, 0.001,0.001 respectively) and no significant association between the pre-test knowledge score for demographic variable i.e. mode of waste disposal (p=0.507) at the 0.05 level of significance (16). The findings of the study are supported by a study conducted by Bimel Kottarathil in Muhamma Gramapanchayath, Alappuzha district, India, on Effectiveness of a structured teaching programme on knowledge and practice of Household Waste Management among 160 women in the age group (25-50years) of Gramapanchayath, Alappuzha District. The study revealed that there was significant association between pre-test knowledge score and demographic variable i.e., Educational status (p=0.026) at the 0.05 level of significance (14). The findings of the study are supported by the study conducted by Ali Almasi et al., to assess the knowledge, attitude and practice of the 1750 women towards separation and reduction in source, recycling, harmful effects of solid waste mismanagement on the environment and human health from Kermanshah city in Iran. The study revealed that, there was significant association between knowledge score and demographic variables i.e, Age (0.001), Educational status (0.0001) at the 0.05 level of significance (11). The findings of the study are also supported by the study conducted by S.Ani Grace Kalaimathi et al., to assess the Effectiveness of Structured Teaching Programme on Knowledge regarding Hazards of Plastic Waste and its Safe Disposal among Adults (20 -50 years of age) of Kizhkatchirapattu rural village Tiuvannamalai, Tamil Nadu, India. The study revealed that, no significant association was found between the pre-test knowledge score and demographic variables Like- sex, occupation and method of waste disposal at p>0.05 (17). The findings of the study conducted by Adogu et al., to assess the knowledge and practice among 282 residents (20-60 years of age) regarding waste management of Owerri Municipal, Imo state, Nigeria also support our findings. The study revealed that, no significant association was found between knowledge score and demographic variable Like- method of waste disposal (open dumping, burning, burying, landfilling,) at (p>0.05) (18).

CONCLUSION

The aim of the study was to assess the effectiveness of Structured Teaching Programme (STP) on knowledge regarding Household waste management among rural Housewives in order to prevent ill effects of improper waste management at household level. Information was given to the Housewives of 25-65 years' age through a Structured Teaching Programme (STP) which includes five steps of Household waste management. Pre-test findings revealed that only 6(10%) of the study subjects had good knowledge regarding Household Waste Management, so there was a need to enhance the knowledge of study subjects regarding Household waste management. The Structured Teaching Programme was found effective in improving the knowledge of study subjects regarding Household Waste Management. Significant association was found between pre-test knowledge with majority of their selected demographic variables (age, educational status, family income).

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Competing interests: The authors declare that there were no competing interests.

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Search Strategy

The PubMed database was searched for related work done. Moreover, reference lists of suitable articles were reviewed to find relevant material.

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Ethical statement

Ethical approval that was required was sought before the start of the work from Sher-i-Kashmir Institute of Medical Sciences Soura.

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