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RESEARCH ARTICLE

A Study to Assess the Effectiveness of Information Education and Communication of Knowledge Regarding Hazards of Plastic Waste and its Disposal Among Women Residing in Nammandi Village at Kanchipuram

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Abstract: The study was conducted to ascertain the effectiveness of video assisted teaching about the hazards of plastics and its safe disposal among the women's residing in selected rural area at Nammandi in Kanchipuram. It was quantitative approach. The main objective of the study is to assess the level of knowledge with one group pre-test and post test design. It was found suitable for this study. 30 women's were included in the study based on the inclusion criteria. Self-administered questionnaire was used to determine the level of knowledge among women. All these tools were also translated in Tamil language. In assessing the pre-test level of knowledge 62.0% of the women are having inadequate knowledge, 31.0% of them are having moderate knowledge and 7% of them are having adequate knowledge. In post-test none of the women's are having inadequate knowledge, 19.0% of them are having moderate knowledge and 81% of them are having adequate knowledge. On an average, After VAT, women's are gained 34.2% of the knowledge than pre-test. There is a good correlation between post test knowledge and the score is statistically highly significant (p=0. 001). There is significant improvement in the level of knowledge after the video assisted teaching programme.

Keywords: Women, Plastic waste, Information, Education, Communication, and Knowledge .

INTRODUCTION

Plastic waste is recycled in India in an "unorganized" way. 60% of the plastic-waste collected and segregated gets recycled back into materials for further processing into consumer products, while the balance is left unutilized. Regulations and legislations are being enforced in some States of India, but it is not found in the majority of the states of India. Moreover, we have not come to a stage where we can tackle issues related to plastic production, use and its disposal. Industrial growth results in a huge number of goods for human activities and a massive quantity of waste in the environment as a result of used items being discarded following human activities. These wastes include gaseous, liquid, and solid waste. Plastic waste (PW) is a typical industrial waste, and its disposal into landfills creates serious environmental concerns. Plastic items have become an essential part of people's everyday lives and are utilized in a variety of sectors, including construction, healthcare, electronics, agriculture, the automotive industry, and packaging. Plastic demand continues to grow due to its numerous advantages, including resistance to erosion, durability, convenience, simplicity of production, and cheap cost.

Aimed to 1) assess the pre-test level of knowledge about the hazards of plastics waste and its disposal among women residing in Nammandi Village at Kanchipuram, 2) assess the post test knowledge level regarding hazards of plastics and it's safe disposal among womens residing in Nammandi Village at Kanchipuram, 3) compare the pre-test and post test knowledge about the hazards of plastics and its safe disposal among womens residing in Nammandi Village at Kanchipuram, and associate the findings with the selected demographic variables.

MATERIALS AND METHODS

The research approach adopted for this study is a quantitative approach. This study aims at assessing the effectiveness of information education & communication of the hazards of plastics among women residing at Nammandi Village at Kanchipuram.

Research design

The research design selected for the present study was true experimental one group pre-test and post test design.
Target population

The women, who full fill the age between 20 to 45, are residing in Nammandi Village at Kanchipuram. Total sample size is 30 women who are residing in Nammandi Village at Kanchipuram. For this study, a non - probability convenience sampling technique was used for this study.

Inclusion criteria

1. Women who are residing in Nammandi Village at Kanchipuram
2. Women who are willing to participate.

Exclusion criteria

1. Women who are not available at the time of data

collection.

2. Women who are not able to understand Tamil and English.

Settings and variables

- This study was conduct in selected village at Nammandi Village at Kanchipuram.
- Independent variable - Information Education & Communication
- Dependent variable – Knowledge
- Demographic variable - Age, education, occupation, income, religion and Method of Waste disposal.

Research tool and technique

It has two sections A and B

Section A: Demographic data which include age, occupation, education, religion, Monthly family income and ways of waste disposal

Section B: Structured Questionnaire.

The tool consists of 20questions related to hazards of plastics and its safe disposal method. Demographic variables were coded to assess the background of women and there by subject it for statistical analysis. It consists of 20 structured questionnaires to assess the knowledge on hazards of plastics and its safe disposal method

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DATA COLLECTION AND DATA ANALYSIS

Formal permission was obtained from the Village Authority. Data collection procedure was planned for a period of four weeks and the time taken for each subject was 10-15 minutes. Based on the Inclusion Criteria 8-10 subjects will select on each day. The subjects were assured of confidentiality of data collection. Pre-test data collection was conducted by using self structured questionnaire, Subsequently Information Education & Communication was given on same day for 20 minutes using Power point presentation. On the seventh day post-test data collection was conducted using same self structured questionnaire. Based on the Inclusion Criteria 8-10 subjects will select on each day. The subjects were assured of confidentiality of data collection.

Collected data was analyzed by using descriptive and inferential statistics. Frequency and percentage analysis was used to describe demographic characteristics of womens. Range, Mean and standard deviation was used to assess the knowledge of womens. Paired t-test was used to test to compare the pre-test and post-test knowledge. Chi-square analysis was used to find out the association between the pre-test knowledge scores and demographic variable.

RESULTS

Section -A –Description of women's by a their demographic variables

Table 1. Ddemographic profile (N=30)

raphic variables		Frequency	%
	/rs rs rs s		
onal status	l td a		
ily income per month	)-4726 6-7877		

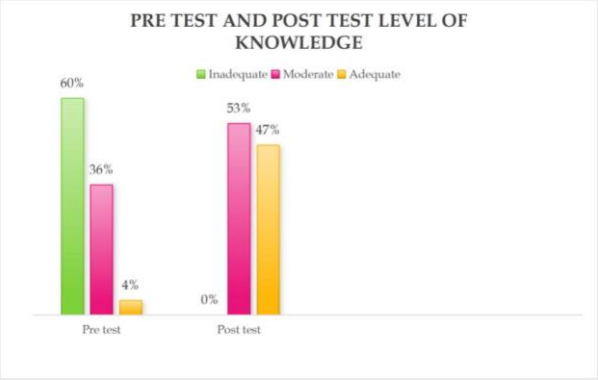
	3-11,816 ,816		
n	an		
nod of water disposal	nd g methods		

The above table reveals that study group of 37% of womens were in the age group of >32 yrs, 13% of womens were in the age group of 28-32 yrs, 30% of womens were in the age group of 23-27 yrs, and 20% were in 18- 22 yrs of age Educational status of the study group reveals that 27% of womens had education up to 7-12th std, 20% had education up to diploma, 10% of women had education up to 1-6th std. 43% had education up to degree. The data regarding monthly income of study group reveal that 27% of womens were in Rs 4272-7877 income, 27% were at Rs 7878-11,816 income, 33% were in > Rs 11,817, and 13% of womens were at Rs 1590-4726. Regarding religion most of the study group (ie). 40% of them were Hindus, 30% were Christian, 30% of them were Muslims and 0% of them were other type of religion. The data regarding method of waste disposal of study group illustrate that 17% were in disposing in open land, 33% were disposed in the dustbin, 40% were using another method, and 10% were burning the waste. Pre-test and post-test level of knowledge among womens regarding hazards of plastics and its safe disposal

Level of score	**Frequency of pre-test**	**Percentage of pre-test**	**Frequency of post-test**	**Percentage of post-test**
Inadequate 0-8	18	60%	0	0%
Moderate 9-15	11	36%	16	53%
Adequate 16-20	1	4%	14	47%
TOTAL	30	100%	30	100%

Shows the pre-test knowledge level of women regarding hazards of plastics and its safe disposal according to the level of score the knowledge of women is categorized into inadequate, moderate, adequate the inadequate level of score is (0 to 8).the moderate level of score is (9 to 15) the adequate level of score is (16 to 20) . the maximum number of subject in the study 60%had inadequate level of knowledge lies between (0 to 8) the minimum number of subject 4% had adequate level of knowledge lies between (16 to 20) shows this post test knowledge about the hazards of plastics and its safe disposal among women . In post test none of women are having inadequate knowledge, 53% of them are having moderate knowledge and 47% of them are having adequate knowledge.

Pre-test and post test level of knowledge among women



Association between pre-test and selected demographic variables

S	Demographic	Inadequate	Moderately	Adequate	Degree of	X2	Table	Signifi

No	Variable		Adequate		Freedom		Value	cation
1	Age 18-22yrs	6	0	0				
	23-27yrs	8	1	0				
	28-32yrs	3	6	0	6	17.25	12.59	NS
	>32yrs	1	4	1				
2	Education 1-6th std	3	0	0				
	7-12th std	2	6	0				
	Diploma	5	1	0	6	9.374	12.59	S
	Degree	8	4	1				
3	Family income month RS.1590-4726	2	2	0				
	RS.4727-7877				6	5.092	12.59	S
	RS.7878-11,816							
	>RS.11,816							
4	Religion Hindu							
	Muslim							
	Christian					1.53	12.59	S
	Others							
	Method of waste disposal open land					4.663	12.59	S
	Dustbin							
	Burning							

DISCUSSION

The present study was focused to assess the effectiveness of video assisted teaching about the hazards of plastics and its safe disposal among the women residing in selected rural area at Nammandi in Kanchipuram. The study sample consisted of 30 women selected through the convenient sampling technique. The investigator found that the women were co-operative in the study. The investigator collected the demographic data from the women. The study findings reveal that study group of 37% of women were in the age group of >32 yrs, 13% of womens were in the age group of 28- 32 yrs, 30% of women were in the age group of 23-27 yrs, and 20% were in 18 – 22 yrs of age. 27% of womens had education up to 7 – 12th std, 20% had education up to diploma, 10%of womens had education up to 1 – 6th std, 43% had education up to degree. 27%of womens were in Rs 4272-7877 income. 13% of womens were in RS 1990-4726. 27%of women were in RS 7878-11816. 33% of womens were in >11816. With regard to the religion 40%were Hindus, 30% were Christian, 30% of them were Muslims.

The data regarding method of waste disposal 17% of the womens were disposing the waste in open land and 33% were disposed in the dustbin. And 10% are burning the waste .40% are using other methods of waste disposal.

The discussion about the study findings were presented in this chapter to arrive at a conclusion based on the objectives, the related literatures and hypothesis. In assessing the pre-test level of knowledge 60% of the womens are having inadequate knowledge, 36% of them are having moderate knowledge and 4% of them are having adequate knowledge. The present study was supported by BSc nursing students (2020), in an analysis which was conducted among thirty peoples about the harmful effects of plastic and its management. Primary data was collected through questionnaire. The overall response pattern is very good. In assessing the post test level of knowledge, none of the womens are having inadequate knowledge, 53% of them are having moderate knowledge and 47% of them are having adequate knowledge. After comparing the pre-test and the post test mean score of knowledge, there is a significant difference between the pre-test and the post test mean score and it is statistically significant. It was assessed by using a paired t - test. The finding was supported by Kaur M (2012) that the overall mean score of pre-test was 9.66 with the S.D. 3.003, whereas in post-test the overall mean score of 16.16 with S.D. of 2.16. The t-test value was -24.8* which is statistically significant at $p<0.05$ level of significance. The study finding implied that the education had a vital role in improving the knowledge of womens regarding plastic

management. The study concluded that there is a good correlation between post-test knowledge score and the score is statistically highly significant (p=0.05) with the religion of the womens (1.53 p=0.05), education of the womens (9.374p=0.05) and income of the womens (5.092 p=0. 05).. It means adequate education which increases the knowledge among the samples.

CONCLUSION

The study was conducted to ascertain the effectiveness of video assisted teaching about the hazards of plastics and its safe disposal among the womens residing in selected rural area at Nammandi in Kanchipuram. It was quantitative approach. The main objective of the study is to assess the level of knowledge with one group pre-test and post test design. It was found suitable for this study. 30 womens were included in the study based on the inclusion criteria. Self administered questionnaire was used to determine the level of knowledge among womens. The study was conducted to assess the effectiveness of video assisted teaching on level of knowledge of womens regarding hazards of plastic use and its safe disposal in selected urban area at Nammandi. The finding of the study showed that the video assisted teaching was very effective in improving the level of knowledge. This study will help the health care professionals to develop appropriate teaching materials. Video assisted teaching is a proven method to improve the knowledge of the womens which will help to facilitate the healthy growth and development and healthy practices in day to day activities. On the basis of the present study the following recommendations have been made for further study. The study can be repeated on the large scale sample to validate and for better generalization of the findings. Descriptive study can be conducted to assess knowledge, attitude and practice of womens regarding hazards of plastic use and its safe disposal. Comparative study may be conducted to find out the similarities or differences between the knowledge and practices of urban and rural people. Video Assisted Teaching programme on plastic use can be compared with other teaching Strategies. A similar study can be done by using various teaching methods. School syllabus may include topic related to plastic use and environmental hygiene.

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