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A study to assess the knowledge regarding hazards of plastic waste use and its safe disposal among the housewives residing at selected rural area

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Abstract
Objectives: To assess the knowledge level regarding the hazards of plastics and its safe disposal among housewives residing at selected rural areas.
To associate the knowledge level regarding hazards of plastics and its safe disposal among housewives residing at selected rural areas with their selected demographic variables.
Hypothesis: There is statistically significant association between the knowledge level regarding hazards of plastic waste use and its safe disposal among housewives at selected rural area with their selected socio-demographic variables.
Methodology: Non-Experimental (Descriptive) Design was used. 30 subjects selected by Non- Probability (Convenient Sampling) Technique. Self-structured Questionnaire was used.
Results: The study revealed that there is association between the level of knowledge and selected socio-demographic variables such as Age (*0.166) and Cattle shed (*0.434) at 0.05 level of significance.
Conclusion: Teaching programme will need to improve the level of knowledge regarding hazards of plastic waste use and its safe disposal.

Keywords: Hazards of Plastic Waste Use, Safe Disposal, Housewives, Plastic Management Techniques

1. Introduction
Plastic is everywhere in today's lifestyle. It is used for packaging, protecting, saving and even disposing of all kinds of consumer goods. The word "plastic" comes from the Greek word "plastikos" meaning "to form". Plastic is any of a group of synthetic or natural organic materials that may be shaped when soft. Waste management is one of the greatest challenges. These wastes are in form of polymers and plastics which research has shown that they are difficult to manage. Globally there is production of 150 million tons per year. It operates more than 30,000 processing units. Packaging represents the single-largest sector of plastics use (35% of plastic consumption). India generates 5.6 million metric tons of plastic waste annually. India is the fourth highest Asian importer of plastic waste behind Hong Kong, Philippines, Indonesia. Average Indian uses one kilogram of plastics per year.
It is a common practice to see a large number of waste plastic are carelessly scattered or discarded into regions that are inaccessible for waste. The continuous piling up of plastic waste products is becoming a serious global environmental challenge and threat the ecosystem. Research shows that about 10 percent by weight of municipal solid waste content are plastics as plastic waste occupies about 90% of the three populous rivers in the world and is known to be responsible for the death of 20–30% of marine life. There are more than seven million tons of additional plastic waste deposits in the earth annually, and by this plastic growth trend, the sea would have more plastics than fishes and over more 97% of the of the bird would have consumed them .
Plastic is not biodegradable. When buried plastic will choke the drainage and when burnt plastics will emit poisonous gases. To produce plastic one has to use the petroleum products. Plastic production and processing require the use of toxic chemicals. Many manufacturing plants that produce these chemicals also produce hazardous waste and pollute the air. Five of the top six chemicals commonly used by the plastic industry are propylene, phenol, ethylene, polystyrene, and benzene. Inhalation and ingestion of these chemicals can cause serious occupational hazards among people.
Plastic wastes are hazardous not just to land animals but also to aquatic life as well and therefore a global challenge Therefore, plastic waste are environmental disasters already occupying the earth, thus a need for acute adoption of plastic management techniques

2. Methods and materials

Research Design
The research design adopted for the study was (Non-Experimental research) Descriptive design.

Setting of the study
The study was conducted at Melmengalam rural village**.**

Population
1. **Target population**
   Target population of the study was Housewives (18-38 years).
2. **Accessible population**
   Accessible population of the study was Housewives (18-38yrs) who are residing at selected rural area (Melmangalam).

Sample
The sample was who are (18-32yrs) residing at Melmangalam and who are fulfill the inclusion criteria.

Sample size
The sample size was 30 housewives who residing at melmengalam.

Sampling technique
Sample was selected by using Non- Probability (Convenience sampling) technique.

Inclusion criteria
Participants who:
- are willing to participate
- are using plastics more often
- are residing in melmengalam.

Exclusion criteria
Participants who:
- are not willing to participate
- are not present during data collection

Development and description of data collection tools
- **Section A**
  Demographic data which include Age, Education, Religion, Monthly family income and Ways of waste disposal, Cattle shed and Family type.

- **Section B**
  Self-Structured Questionnaire was used to assess the knowledge regarding hazards of plastic waste use and its safe disposal. Questionnaire consist of 20 Multiple Choice Question. Each question has one Correct Answer and three wrong answer so totally four options. If answering correctly from four options, the score "1" was given. If answering wrongly from the four options, the score "0"was given.

Scoring procedure
For the correct answer the score "1".
For the wrong answer the score "0".

Scoring interpretation

Table 1

Level of knowledge	score	frequency
Inadequate knowledge	0-6	5
Moderate knowledge	7-13	13
Adequate knowledge	14-20	7

Data collection procedure
The permission was obtained before conducting the study. The researcher developed a data tool having questions on socio demographic variables and knowledge on hazards of plastic waste use and its safe disposal. The knowledge was categorized as Adequate, Moderate and Inadequate level of knowledge. Consent was taken prior to data collection. The study sample were selected by using Non probability sampling (convenient sampling) technique. Informed consent was obtained from sample. The self-structured questionnaire was selected 30 samples which consist of 20 multiple choice questions with four options. Confidentiality of subjects and data was ensured.

Plan for data analysis
Collected data was analyzed by using descriptive statistics. The descriptive statistics such as frequency, percentage and chi-square test were used to identify the significant relationship of knowledge of housewives regarding hazards of plastic waste use and its safe disposal with their selected socio-demographic variables.

3. Results
The distribution of selected socio- demographic variables of the study subjects showed that, 9(30%) were in the age group between 18-28 years, 8(26.6%), 9 (30%) were studied up to Degree, 9(30%) were earned between Rs. 7000- 11000, 13(43.33%) were belongs to Hindu, 13(43.33%) were using open land, 16(53.3%) had cattle shed along with house, 17(56.66%) were belong to the nuclear family. 7(23.3%) were in adequate level of knowledge and 18(60%) were in Moderate level of knowledge and 5(16.66%) were in Inadequate level of knowledge. The association between the level of knowledge and their selected socio-demographic variables showed that there is significant association between the level of knowledge and selected socio demographic variables such as Age and Cattle shed. There is no significant association between the level of knowledge and the selected socio demographic variables such as Educational status, family income, religion, way of waste disposal and Family type.

4. Discussion
The first objective was to assess the knowledge level regarding the hazards of plastics and it's safe among housewives residing at selected rural areas. According to that the knowledge level were assessed. It revealed that **7** (23.3%) were in adequate level of knowledge and 18(60%) were in Moderate level of knowledge and 5(16.66%) were in Inadequate level of knowledge. Kluvar (2008**)** conducted a study at ullal to assess the knowledge of nursing personnel on plastic waste management by using a structured knowledge questionnaire. The study revealed that among 100 subjects, 64% had poor knowledge, 36% had average knowledge and none of the subjects had good or excellent knowledge on plastic waste. Based on these, the students gave health teaching using A.V. aids and post test revealed 18% of subjects with excellent knowledge and 34% with good knowledge. The investigators then concluded saying that continuing nursing education on plastic waste management was effective in improving the knowledge of subjects on waste management.
The second objectives was to associate the knowledge level regarding hazards of plastics and its safe disposal among housewives residing at selected rural areas with their selected demographic variables. According to that it was assessed by using chi-square test. The results revealed that there is

significant association between the level of knowledge and selected socio demographic variables such as Age and Cattle shed. Hence H1: There is significant association between level of knowledge with their selected socio- demographic variables among housewives residing at selected rural area (Melmangalam) was accepted and null hypothesis was rejected.

5. References

1. Campbell. Plastic hazards among industrial workers, World Journal of Environmental Pollution. 2004; 2:55-61.
2. Gluk. A peer approach to hazards of plastic, a randomized trial in Tokyo. World Journal of Environmental Pollution. 2001; 103(1):17-27.
3. Heera. Environmental Hazards. Science Daily: Pollution Articles, India. 2005; 5(1):32 -39.
4. Horwood. Potential Risks of Plastics. International Journal of Environmental Pollution. 2003; 31(4):277.
5. Kurdi. Threat to Marine Life**.** Cutting Edge Research Papers. 2006; 12:23-26.
6. Velkoff VA. Women's Education in India, Women of the world. 1998; 981(1):22-24.
7. Krishnamoorthy V. Say No to plastic bags, 2003. Retrieved [15 October 2011] from: www.vigyanprasar.gov.in.
8. Bhatia. TLC cooking: Hazards of plastic, 2009. Retrieved [16 July 2011] from: www.howstuffsworks.com.
9. Don Eisher. CSS everyday sciences hazards of plastic bags, 2005. Retrieved [26 September 2011] from: www.cssforum.com.pk.
10. Yadavkumar. Plastic bags become an environment hazards, 2005. Retrieved [25 May 2011] from: www.communityonline.com.
11. Chandrasekar Sunil. Plastic hazards, 2009. Retrieved [12 October 2011] from: www.citehr.com.