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A Study to Assess the Effectiveness of Information Booklet on Knowledge Regarding Hazards of Plastic Usage and its Safe Disposal among Community People in a Selected Area at Nagpur District

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ABSTRACT

Plastics are used on a daily basis throughout the world. India generates nearly 26,000 tonnes of plastic waste every day, making it the 15th biggest plastic polluter globally. Lok Sabha has prohibited the use of non- reusable plastic water bottles and other plastic items within the parliament from august 20, the government run railways is also set to ban single use plastic at all stations and on trains. Plastic accounts for 8% of the total solid waste generated in the country annually, with Delhi producing the biggest quantity, followed by Kolkata and Ahmedabad, said 2018 report by the Delhi-based the energy and resource institute (TERI), Citing data from India's central pollution control board (CPCB).[1]

Methodology: This study was conducted on 30 parents of Basic B.Sc. Nursing 3rd year students of Suretech College of Nursing, Nagpur and probability simple random technique was used. Research design was quasi experimental one group pre-test post-test research design. Knowledge regarding hazards of plastic usage and its safe disposal was assessed.

Result: Findings of the study revealed that the overall post-test mean score was 17.15 (57.16) with standard deviation 4.58 and the respondent knowledge were significantly higher than, the overall mean pre test knowledge score 16.5 (55%) with standard deviation 3 and computed paired ''t'' value 3.03 is higher than the table value 2.05 at $p<0.05$ level.

Conclusion: Hence the information booklet on knowledge regarding hazards of plastic usage and its safe disposal was effective and statistically significant. The study reveals that there is no significant association between selected demographic variable with post-test knowledge score at $p<0.05$. Data was analysed using descriptive and inferential statistics.

Keywords: Information booklet, knowledge, plastic, hazards.

INTRODUCTION

Plastics are used on a daily basis throughout the world. The "plastic" is a common word that is used for many materials that are synthetic and semi-synthetic in nature. The term "plastic" is derived from a Greek word "plastikos" which means "fit for moulding". They are used for shellac, cellulose, rubber and asphalt. We also synthetically manufacture items such as clothing, packaging, automobile electronics, electronics, aircraft, medical supplies and recreational items. The list could go on and on and it is obvious that much of what we have today would not be possible without plastic.[2]

Plastic is non- biodegradable product and do not decompose by biological action of microbes. It takes about 1,000 years for plastic product for break down. They remain

in the same state in the environment as we throw them. This in turn pollutes the land, sea and atmosphere. On land the plastic wastes block sanitary lines and pipes, leading to water logging on the streets. This causes the outbreak of several airborne disease, such as cholera, malaria, dengue, etc. plastic bottles or container thrown into the sea or on the mountains remain there for ages. Sometimes animals and birds that plastic items consume them as food. After consuming the plastic waste animal die slowly as a result of chocking or toxin. It is estimated that around one million mammals and sea birds die every year as a result of consuming plastic wastes. This is one of the severe hazards of plastic usage. Burning plastic product emits toxic chemical gases like carbon monoxide (co), carbon dioxide (co2), nitrous oxide (NO), sulphur dioxide (SO2), methane (CH4), etc. which in turn pollute our environment. Hence recycling is a better way to do away with the plastic wastage. Government should issue strict norms for plastic usage. Only recyclable plastic object should be allowed for use. As a responsible citizen we should always discard all the plastic wastes in proper dustbins.[3]

Currently in India, there is only one law that is in place- no manufacturer or vendor can use a plastic bag which is below 50 microns as thinner bags pose a major threat to the environment due to its non-disposability. The usage of plastic bag is still high as the ban is not implemented on all plastic bags. Currently cities including Delhi, Mumbai, Karwar, Tirumala, Vasco, Rajasthan, Kerala, Punjab, and now Madhya Pradesh to name a few have the ban on the plastic bags in place. But its enforcement and implementation is an issue.[4]

MATERIAL AND METHODS

PROBLEM STATEMENT:

"A study to assess the effectiveness of information booklet on knowledge regarding hazards of plastic usage and its safe disposal among community people in a selected area at Nagpur district."

OBJECTIVE:

- To assess the existing knowledge regarding hazards of plastic usage and its safe disposal among community people in a selected area at Nagpur district.
- To evaluate the effectiveness of information booklet on knowledge regarding hazards of plastic usage and its safe disposal among community people in a selected area at Nagpur district.
- To compare the pre-test and post-test knowledge regarding the hazards of plastic usage and its safe disposal.
- To associate the post-test knowledge scores regarding hazards of plastic usage and its safe disposal with selected demographic variable.

HYPOTHESIS

- H_1= There will be significant difference between the pre-test and post-test knowledge score of community people regarding hazards of plastic usage and its safe disposal after providing information booklet.
- **H_0=** There will be no significant difference between pre-test and post-test knowledge score of community people regarding hazards of plastic usage and its safe disposal after providing information booklet.

RESEARCH DESIGN:

Quasi experimental one group pre-test post- test research design

SAMPLE SIZE:

Sample of 30 Basic B.Sc. Nursing 3rd year student's parents of Suretech College of Nursing, Nagpur were selected for conducting the study. Probability simple random technique was used for selecting the samples.

SAMPLING TECHNIQUE:

Probability simple random technique

VALIDATION:

In order to obtain content validity, the tool was given to 7 experts who includes one each from department of community health nursing, one each from department of

child health nursing, one from psychiatric department, two from department of obstetrics and midwifery and two from department of Medical- Surgical nursing. Receiving opinion from the experts and consultations from the guide some modifications where done in framing the item and same where incorporated into the tool.

RELIABILITY:

Reliability analysis was done for questionnaire by split half Coefficient, and was 1. So tools were reliable.

DATA COLLECTION METHOD:

The data gathering process began from 10th October to 17th October 2020. The investigator visited to selected community and obtained the necessary permission from the concerned authorities. Online method used for main study data collection. The investigator introduced himself and informed them about the nature of the study so as to ensure better co-operation during the data collection.

The investigator approached the Basic Bsc. Nursing 3rd year student's parents and explained the purposes of the study and explained how it will be beneficial for them. Investigator enquired their willingness to participate in the study and obtain consent from them, the investigator personally visited each house and made them comfortable and oriented to the study and administered questionnaire to them. For main study, questionnaire administered through online method. Investigator instructed them not to interact with other, doubts were clarified. Once the questionnaire completed, investigator collected them back each sample required mean time of 30 min to complete the structured questionnaire. After the pre-test information booklet is given.

Post- test was administered with the same questionnaire on the 7th day. The collection of data was performed within the stipulated time. After the data gathering process the investigator thanked all the study samples as well as the authorities for their cooperation.

RESULT

The analysis and interpretation of the observations are given in the following section.

- **Section A:** Distribution of community peoples with regards to demographic variables.
- **Section B:** Assessment of knowledge regarding hazards of plastic usage among community people.
- **Section C:** Effectiveness of information booklet on knowledge regarding hazards of plastic usage and its safe disposal among community people
- **Section D:** Association of knowledge of community people with selected demographic variables.

SECTION A: DISTRIBUTION OF COMMUNITY PEOPLES WITH REGARDS TO DEMOGRAPHIC VARIABLES.

Table No. 1: Distribution of community people according to their demographic characteristics. N = 30

Demographic Variable	Frequency	%
Age		
20 – 25 years	0	0%
25 – 30 years	0	0%
30 – 35 years	1	3.33%
Above 35 years	29	96.6%
Gender		
Male	14	46.6%
Female	16	53.3%
Transgender	0	0%
Education		
Secondary	9	30%
Higher secondary	14	46.6%
Graduate	7	
Illiterate	0	
OCCUPATION		
Self-employed or Business	1	3.33%
Labour	7	23.3%
Government Servant	5	16.6%
Housewife	15	50%
Private Job	2	6.66%
MONTHLY INCOME OF FAMILY		
Below Rs. 5000	2	6.66%
Rs. 5000 to Rs. 10,000	4	13.3%
Rs. 10000 and above	24	80%
METHOD OF WASTE DISPOSAL		
Open Dumping	0	0%
Dustbin	27	90%
Burning	1	3.33%
Other	2	6.66%
PREVIOUS SOURCE OF KNOWLEDGE		
Mass Media	8	26.6%
Health Worker	12	40%
From elders and relative	2	6.66%
Others	3	10%
No previous knowledge	5	16.66%

SECTION B: ASSESSMENT OF EXISTING KNOWLEDGE REGARDING HAZARDS OF PLASTIC USAGE AND ITS SAFE DISPOSAL

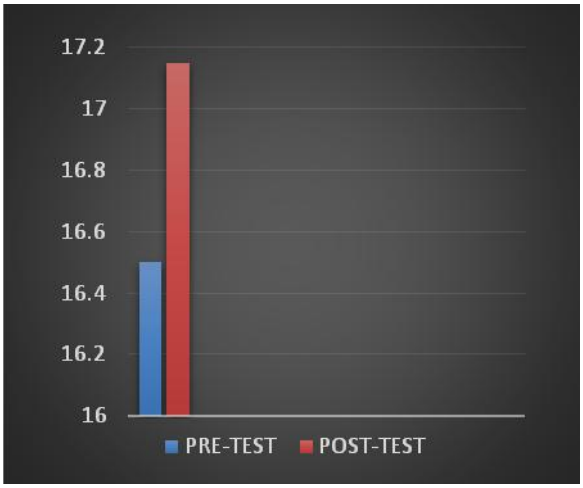

Fig. No. 1: Bar diagram shows that significance of difference between knowledge score in pre-test and post-test of community people in relation to knowledge regarding hazards of plastic usage and its safe disposal.

In pre-test 0% participant have poor knowledge, 90% have average knowledge and 10% have good knowledge. Whereas in post- test 3.33% of community people have poor knowledge, 76.6% peoples have average knowledge and 20% people have good knowledge.

SECTION C: ANALYSIS OF EFFECTIVENESS OF INFORMATION BOOKLET ON KNOWLEDGE REGARDING HAZARDS OF PLASTIC USAGE AND ITS SAFE DISPOSAL.

Information booklet regarding hazards of plastic usage and its safe disposal was effective as mean value of data highly increases from pre-test (16.5) to post-test (17.15).

SECTION D: ASSOCIATION OF KNOWLEDGE REGARDING HAZARDS OF PLASTIC USAGE AND ITS SAFE DISPOSAL AMONG COMMUNITY PEOPLE WITH SELECTED DEMOGRAPHIC VARIABLES.

Paired 't' test showed that the mean percentage for overall knowledge was 57.16% with the t value of 3.03 which was significant at 0.05 level. X^2 analysis revealed that there was no significant association between the post-test knowledge of community people with their selected demographic variable such as age, gender, education, occupation, income, methods of waste disposal and previous source of information.

DISCUSSION

Present study was undertaken to assess the effectiveness of information booklet on knowledge regarding hazards of plastic usage and its safe disposal among community people in a selected area at Nagpur district. The study shows that information booklet regarding hazards of plastic usage and its safe disposal was effective and there was no significant association between the post-test knowledge of community people with their selected demographic variable such as age, gender, education, occupation, income, methods of waste disposal and previous source of information.

Study conducted by Ms. Usha Rani, JSS college of Nursing Mysore, to assess effectiveness of structured teaching programme on knowledge regarding hazards of plastic usage among housewives in selected community area, Bangalore a pre experimental design was used. The housewives were selected by purposive sampling technique. Findings of the study revealed that overall post-test mean score was 22.76 (75.8) with standard deviation 1.9 and respondent knowledge were significantly higher than the overall mean pre-test knowledge score 8.83 (29.431) with standard deviation 3.1 and computed paired and value 20 is higher than table value 2.23 at $P<0.05$ level. Hence teaching programme on knowledge regarding hazards of plastic usage was effective and statistically significant.[5]

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