



## A STUDY TO ASSESS THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HAZARDS OF PLASTIC USE AND ITS REDUCTION AMONG HOMEMAKERS RESIDING IN SELECTED AREAS OF DISTT. SIRMOUR, HIMACHAL PRADESH.

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**ABSTRACT** **Background-** A look around the house will tell how much plastic we consume daily. People are not aware that plastic affects their health, and because of this, they fail to look for ways to reduce its usage. If we start teaching early about the effects of plastic to them, they will be better informed and will take necessary actions to prevent its usage. **Objectives-** to assess the knowledge and effectiveness of STP regarding hazards of plastic use and its reduction among the homemakers, residing in selected areas of Distt. Sirmour, Himachal Pradesh. **Methodology-** A Pre experimental study was conducted consisting of a total of 80 homemakers, who met the inclusion criteria were selected by using convenient sampling technique. Self structured questionnaire was the tool used to collect data from the subjects. The collected data was analysed by using descriptive and inferential statistics. **Result-** The result of study showed that mean pre-test knowledge score was  $15.98 \pm 3.939$  and post-test mean knowledge score was  $23.51 \pm 3.218$  with mean difference of 7.530. paired 't' test was applied and the value of 't' was 24.304, and P is  $< 0.001$  which was found to be significant. After implementation of structured teaching programme, there was effectiveness seen in knowledge level of 25.1%, which interpreted that majority of homemakers has gained knowledge to adequate level regarding hazards of plastic use and its reduction. **Conclusion-** The study finding implied that the education had a vital role in improving the knowledge of the homemakers.

### KEYWORDS :

Plastic is a polymeric material—that is, a material whose molecules are very large, often resembling long chains made up of a seemingly endless series of interconnected links.

As plastic is less expensive, it is one of the most widely available and overused items in the world today.<sup>(1)</sup>

From its beginning in the year 1950, plastic production globally has increased dramatically from 2 million tonnes to 380 million tonnes in 2015. Over the last ten years, we have produced more plastic than during the whole of the last century and enough plastic is thrown away each year to circle the earth four times<sup>(2)</sup>

In 1907 Leo Baekeland invented Bakelite, the first fully synthetic plastic, meaning it contained no molecules found in nature which is now replaced by high density polyethylene, the commonly used plastic nowadays.<sup>(3)</sup>

As per the estimates by Central Pollution Control Board, plastic waste generated in India in the year 2017-18 was 660,787.85 tonnes. That's enough to fill 66,079 trucks<sup>(11)</sup>

Plastic problem is not bound to any nation. Tiny pieces of plastic have been found in the highest mountains and the deepest oceans. It's consumed by all life on our planet and passed through the food chain.<sup>(4)</sup>

Every day, plastic waste negatively impacts the ecosystem habitats, human health across the world. Despite the vast scale of the problem, the general public and other important stakeholders have not been adequately engaged and educated on how they can become the part of the solution.<sup>(2)</sup>

### OBJECTIVES

1. To assess the pre-test knowledge scores regarding hazards of plastic use and its reduction among the homemakers, residing in selected areas of Distt. Sirmour, Himachal Pradesh.
2. To assess the post-test knowledge scores regarding hazards of plastic use and its reduction among the homemakers residing in selected areas of Distt. Sirmour, Himachal Pradesh.
3. To determine the effectiveness of structured teaching Programme on knowledge regarding hazards of plastic use and its reduction among the homemakers, residing in selected areas of Distt. Sirmour, Himachal Pradesh.
4. To find out the association between the post-test knowledge regarding hazards of plastic use and its reduction among the homemakers and their selected socio-demographic attributes.

### METHODOLOGY

**Research Approach-** Quantative approach

**Research Design-** Pre experimental one group pre test post test design

**Study Population-** Homemakers residing in selected area of district Sirmour (HP)

**Sample Size-** 80 homemakers

### SAMPLING CRITERIA-

#### Inclusion Criteria

The study includes the homemakers who will be:

Present at the time of data collection.

Willing to participate in the study.

#### Exclusion Criteria

The study excludes homemakers who are:

Not available and are not willing to participate in the study.

Sick and are not able to provide information.

**Development of tool-** Self structured questionnaire was prepared to collect data.

**Description of tool-** The tool comprised of two sections: **Section A: Demographic Attributes-** It contains 7 items for obtaining information regarding age, religion, family type, educational qualification, income, and method of disposal, and previous information regarding hazards of plastic use and its reduction. **Section B: Self-Structured Questionnaire-** A self-structured questionnaire was prepared consisting of 30 questions.

**Validity of tool-** To ensure the validity of tool, it was submitted to 8 experts.

**Permission-** Permission was taken from the Chairman of Municipal Committee, Nahan (HP) to conduct the study.

**Ethical Consideration-** Ethical approval was taken from the institutional ethical committee of Murari Lal Memorial School and College of Nursing for conducting the study.

**Data Collection-** The data was collected on my own under the guidance of my supervisor

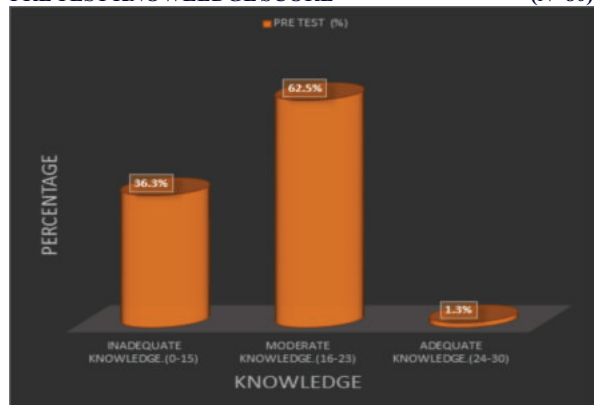
**Data Analysis-** It was done with appropriate statistical test in terms of frequency, percentage, mean, standard deviation and chi square test where  $p < 0.001$  which was found to be statistically significant.

### RESULTS

Frequency and percentage wise distribution of subject according to their socio demographic attributes revealed the major findings that out of 80 homemakers 35% of them were between age of 21 to 30 years. 45 % of homemakers had completed their graduation and above study most of them belonging to nuclear family with 50% and follows hindu religion with 86.3%. and have monthly income between 10,001-20,000 i.e., 28.8%. Majority 88.8% of housewives were using dustbin as their waste disposal method. majority of housewives 92.5% were aware regarding plastic hazards and its reduction and the most

common source of information was mass media with 62.5%.

**PRE TEST KNOWLEDGE SCORE (N=80)**



**Figure 1: Percentage Distribution Of Homemakers According To Their Knowledge Level Regarding Hazards Of Plastic Use And Its Reduction.**

Figure 1 shows the percentage distribution of homemakers knowledge level which shows that majority of homemakers were having moderate knowledge level of 62.5% leading by 36.3% of homemakers with inadequate knowledge level regarding hazards of plastic use and its reduction and 1.3% of the sample lies under adequate knowledge level.

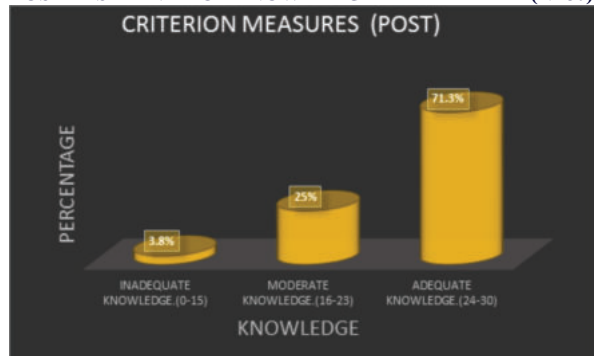
**Table 1: Mean, Standard Deviation And Mean Percentage Of Pre-test Knowledge Level Of Homemakers Regarding Hazards Of Plastic Use And Its Reduction. (N=80)**

DESCRIPTIVE STATISTICS	MEAN	S.D.	MEAN%
PRETEST KNOWLEDGE	15.98	± 3.939	53.30%

Maximum=30 Minimum=0

Table 1 reveals pre-test mean knowledge level 15.98 ± 3.939 which is 53.30% of total mean percentage. Hence it can be interpreted that knowledge of majority of homemakers regarding hazards of plastic use and its reduction was moderate.

**POST TEST LEVEL OF KNOWLEDGE (N=80)**



**Figure 2: Percentage Distribution Of Homemakers According To Their Knowledge Level Regarding Hazards Of Plastic Use And Its Reduction In Post Test**

Figure 2 shows knowledge level of homemakers, where majority of homemakers has adequate knowledge with 71.3% following by 25% having moderate knowledge level and only 3.8% were falling under inadequate knowledge level regarding hazards of plastic use and its reduction.

**Table 2: Mean, standard deviation and mean percentage of post-test knowledge level of homemakers regarding hazards of plastic use and its reduction. (N= 80)**

DESCRIPTIVE STATISTICS	MEAN	S.D.	MEAN%
POSTTEST KNOWLEDGE	23.51	± 3.218	78.40%

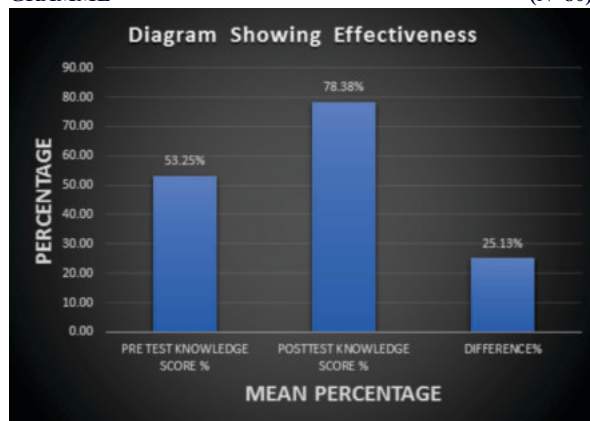
Maximum=30 Minimum=0

Table 2 shows post-test mean knowledge level 23.51 ± 3.218 which is 78.40% of total mean percentage.

Hence it can be concluded that after conduction of post-test, there was

increase in knowledge level as maximum homemakers were having adequate knowledge level regarding hazards of plastic use and its reduction.

**EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME (N=80)**



**Figure 4.3: Percentage Wise Distribution Of Homemakers According To Mean Percentage Of Pre-test, Post-test And Their Differences.**

Figure 4.3 shows percentage wise distribution of homemakers according to mean percentage of pre-test 53.30% and after implementation of structure teaching program, the mean percentage of post-test was 78.40% with the mean percentage difference of 25.1%. Hence it can be concluded that there is an increase in knowledge level of homemakers by 25.1%. which shows that structured teaching programme was effective to enhance the knowledge of homemakers. H<sub>1</sub>: There will be significant difference between pre-test and post-test knowledge level regarding hazards of plastic use and its reduction among homemakers.

**Table 3: Comparison Of Mean, Mean Percentage And Standard Deviation Between Pre-test And Posttest Knowledge Level Of Homemakers Regarding Hazards Of Plastic Use And Its Reduction. (N=80)**

Paired 't' Test	Mean ±S.D.	Mean Diff.	Paired 't' Test	P value	Table value
PRETEST KNOWLEDGE	15.98±3.939	7.530	24.304 *	<0.001	1.99
POSTTEST KNOWLEDGE	23.51±3.218				

\* Significance Level <0.05

Maximum=30 Minimum=0

Table 4.4: Shows that mean pre-test knowledge score is 15.98±3.939 and post-test mean knowledge score is 23.51±3.218 to find the difference, paired 't' test was applied. The value of 't' was 24.304, mean difference is 7.530, and P is <0.001 which was found to be significant. Hence, research hypothesis (H<sub>1</sub>) is accepted in this study.

**Association Of Post-test Knowledge Level With Their Selected Demographic Attributes.**

H<sub>2</sub>: There will be significant association between post-test knowledge level regarding hazards of plastic use and its reduction among homemakers with selected socio demographic attributes

There was no significant association found between the knowledge regarding hazards of plastic use and its reduction among homemakers with age, educational status, the type of family, religion from which they belong, family income, waste disposal method they prefer, previous knowledge regarding hazards of plastic use and its reduction and source of information. Hence the research hypothesis (H<sub>2</sub>) is rejected for this study.

**DISCUSSION**

The pre-test mean knowledge score was 15.98, SD 3.939 and total mean percentage 53.30%. Which indicates that majority of homemakers having moderate knowledge regarding hazards of plastic use and its reduction. These findings are supported from the study conducted by Bai Regi R (2021)

The post-test mean knowledge score was 23.51, SD 3.218 and total

mean percentage 78.40%. This shows that maximum homemakers (71.3%) were having adequate knowledge regarding hazards of plastic use and its reduction. These findings are supported from the study conducted by Bai Regi R (2021)

The mean pre-test knowledge score is 15.98, SD 3.939 and post-test mean knowledge score is 23.51, SD 3.218 with the mean difference of 7.530. paired 't' test was applied and calculated value of 't' test was 24.304 P is <0.001 which was found to be significant. These findings were supported by the study conducted by Bai Regi R (2021)

There was no significant association of post-test knowledge score with their selected demographic attributes regarding hazards of plastic use and its reduction among pre-menopausal women. The findings of present study were parallel with findings of study conducted by Manu Jasmi, Tiwari Divyanshi, Kumar Shiv, Sharma Mani Namrata, Yadav Priyanaka et al. (2020)

## CONCLUSION

The findings of the study revealed that majority of homemakers were having moderate knowledge level of 62.5% leading by 36.3% of homemakers with inadequate knowledge level. There was only 1.3% of the samples who lied under adequate knowledge level. Then structured teaching programme was administered to them which resulted in increase of knowledge level. As a result, there was increase in knowledge level of homemakers with 71.3% majority has adequate knowledge, following by 25% having moderate knowledge level and only 3.8% were falling under inadequate knowledge.

Findings of the study showed that there was no significant association between post-test level of knowledge with their selected socio-demographic attributes.

## IMPLICATION OF THE STUDY

The findings of the present study have important implications for nursing education, nursing practice, nursing administration and nursing research.

## NURSING RESEARCH

- The importance of research in nursing is to build the body of knowledge. The findings of the present study serve as the basis for the professionals and the students to conduct further studies.
- In depth research studies on homemakers regarding hazards of plastic use and its reduction, to reduce the use of plastic, by encouraging and creating awareness about hazards of plastic use and its reduction
- Encourage to disseminate knowledge by publications and organizing journal clubs, workshops, seminars and conferences.
- The study provides baseline for conducting similar studies in different settings.

## NURSING EDUCATION

- The nursing students should be able to give education to the people other than the homemakers also regarding the hazards of plastic use and its reduction when they are posted in the clinicals or in the community area.
- Nursing student should be aware of their responsibility to focus on enhancing people's knowledge regarding hazards of plastic use and its reduction.
- The present study helps the community health nurse to plan for the health education programmes and to aware the general public regarding importance reducing the use of plastic in order to prevent themselves and the community from different hazards of plastic use.

## NURSING PRACTICE

- Nurses working in the community, play a vital role in providing awareness regarding hazards of plastic use and its reduction among homemakers.
- The community health nurse can be resource personnel for the community area and they can also educate them at the gross root level in imparting knowledge regarding hazards of plastics and its reduction
- The community health nurse has to educate the community people regarding hazards of plastics and its reduction both in urban and rural areas.
- Posters can be displayed on the importance of the correct technique of using and disposing plastics in the rural areas to increase the knowledge of the community.

- Not only nurses, but all the health care providers such as auxiliary nurses and midwives, village health guides, nurses working in community center should be provided in-service education regarding hazards of plastic use and its reduction.

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