

“EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING HAZARDS OF PLASTIC USE AMONG HIGH SCHOOL CHILDREN AT SRI RAM JANKI INTER COLLEGE BITHOOR, KANPUR.”

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ABSTRACT

Plastic is a group of the different chemical substance having a high molecular weight called polymers, that changes from the thin consistency of plastic into solid at the final state. Polymers are large molecules that are built up by repetitive linking of many smaller units called monomer. In this present study the effectiveness of structured teaching programme on knowledge regarding hazards of plastic use among high school children at Sri Ram Janki Inter College Bithoor, Kanpur was assessed. The research approach was quantitative evaluator approach and research design was one group pre-test and post-test design. The population was high school children selected by non-probability convenient sampling technique. The sample size was 60. The setting of the study was Sri Ram Janki Inter College Bithoor at Kanpur. The mean total knowledge score before the intervention was 10.615 which has increased 26.5 after intervention the paired 't' test 34.298 was found to be significant a very high levels ($p=2.00$). The above inference it is made clear that the structured teaching programme has a positive impact on knowledge regarding hazards of plastic use ($p=2.00>0.05$ level) so H_1 was accepted. We concluded that the study significantly proofs that there is a remarkable improvement in the knowledge of high school children regarding the hazards of plastic use after a structured teaching programme.

Key words: Plastic luggage, Negative impact, STP, Effectiveness, Hazards.

INTRODUCTION

Science and technology are developing very rapidly in the world, these developments cause positive and negative effects on people. A significant negative effect is increasing incidents of illness like cancers, birth defects and many more, many of these are due to the varieties of chemicals used in the Industry. The illness due to chemicals may be either a result of direct or indirect consumption into the study.^[1]

As a result of increased production and use of chemicals, chemical hazards are present at homes, schools, playgrounds, and communities. Chemical pollutants are released into the environment by unregulated industries or are emitted from heavy traffic or toxic waste cities. About 50000 children aged 1-14 years old die every year as a result of unintentional poisoning. One of the most hazardous manufactures is plastic. Plastic is a group of the different chemical substance having a high molecular weight called polymers, that changes from the thin consistency of plastic into solid at the final state. Polymers are large molecules that are built up by repetitive linking of many smaller units called monomer.^[2]

The most popular plastic polymer is polyvinyl chloride (PVC). When any food material or blood is stored in the p v c plastic containers the chemical in it gets dissolved. The released chemical may later cause cancer, skin diseases and other health hazards. Plastic has become a part of every aspect of human living. It is made important from birth by its use in the form of catheters, masks, sheets, etc. It has become the health and environmental hazards.^[3]

NEED FOR THE STUDY

Plastic is widely used in our daily life. Beginning from a pen to a polythene bag in which we carry fruits and books are forms of plastic. Through convenient in our day to day use, it has posed an alarming threat to the environment.^[4]

Plastic is everywhere in today's lifestyle. It's used for packaging, protecting, serving, and even disposing of all kinds of consumer goods. Through the industrial revolution, mass production of goods started and plastic seemed to be a inexpensive and effective raw material. Today, every vital sector of the economy starting from agriculture to packaging, automobile, building construction, communication or InfoTech has been effectively revolutionized by the applications of plastics.^[5]

STATEMENT OF THE PROBLEM

“A study to assess the effectiveness of structured teaching programme on knowledge regarding hazards of plastic use among high school children Sri Ram Janki Inter College Bithoor, Kanpur.”

The objectives of the present study were:

1. To assess the existing level of knowledge regarding the hazards of plastic use among high school children.
2. To determine the effectiveness of structured teaching programme on knowledge regarding hazards of plastic use among high school children.
3. To find out the association between pre-test knowledge scores with their selected demographic variables.

Hypothesis:

H₁: There is a significant difference between the pre-test and post-test knowledge score after a structured teaching programme regarding the hazards of plastic use.

H₂: There is a significant association between the pre-test knowledge score with their selected demographic variables.

METHODS AND MATERIALS:**Research approach:**

The quantitative evaluative approach study was used in this study.

Research design:

The research design adopted for the current study was pre-experimental one group pre-test and post-test design.

Setting of the study:

The study was conducted in Sri Ram Janki Inter College Bithoor at Kanpur.

VARIABLES:**Independent variable:**

In this present study, a structured teaching programme on knowledge regarding the hazards of plastic use was independent variables.

Dependent variable:

Knowledge of high school children regarding hazards of plastic use was the dependent variables.

Demographic variables:

The demographic variables are age, gender, religion, place of residence, Family Income, type of family and method of waste disposable.

POPULATION:

Population for the present study was all high school children of Kanpur.

Target population: All high school children who are studying in Bithoor, Kanpur

Accessible population: All high school children of Sri Ram Janki Inter College Bithoor were the accessible population in this study.

SAMPLE:

In this study, the sample was high school children of Sri Ram Janki Inter College Bithoor, Kanpur who fulfilled the sampling criteria for the present study.

Sample size:

The sample size in the present study was 60 high school children.

Sampling technique:

Non-probability convenient sampling technique was used to select all high school children.

Sampling criteria:

Criteria sampling involves selecting cases that need some predictor mined criterion of importance.

Inclusion criteria:

1. High school children from selected school.
2. High school children were available at the time of the study.
3. Those who know Hindi and English.

4. Those who are studying in 10th class.

Exclusion criteria:

1. High school children who were not willing to participate in the study.

Method of data collection:

The tool used to collect the data was a demographic performer and structured knowledge questionnaire regarding the hazards of plastic use among high school children.

DEVELOPMENT AND DESCRIPTION OF TOOLS USED IN THE STUDY:

The tool used for the study was a structured knowledge questionnaire.

The tool consists of two sections.

Section-A. It deals with the demographic data such as age, gender, religion, place of residence family income, type of family and method of waste disposal.

Section-B: Consist of 32 multiple choice questions related to hazards of plastic use.

Scores:

There were 32 items, each item had an option with one most appropriate answer.

The maximum score for the correct response to each item “one” and incorrect “zero”.

Data collection procedure:

- The data collection done in the month of April 2019 two weeks (24-04-2019 to 06-05-2019). Before the data collection, the investigator obtained prior permission from the Sri Ram Janki Inter College Bithoor, Kanpur to connect the study in their Institution. Written consent taken from the samples. Before Structured teaching programme pretest given to the children to assess the knowledge regarding hazards of plastic use and after 5th day of STP conducted post test among high school children.

RESULTS AND FINDINGS

Section-A

The major findings of our study were:

- Majority of the high school children 51.7% were aged 14 years.
- Majority of the high school children 46.7% were male and 53.3% were female.
- All 100% of students were studying in 10th class.
- Majority of the high school children 96.6% belong to Hindu and 3.4% belong to the Muslim religion.
- Majority of the high school children 76.7% were from a rural area.
- Majority of the high school children 76.7% had a monthly income below Rs.5000/-
- Majority of the high school children 50% belong from a nuclear family.
- Majority of the high school children 55% uses dustbin as a method of waste disposal.

Section-B

Pretest and posttest knowledge score regarding hazards of plastic use.

Table no. 1 percentage-wise distribution of pretest and posttest knowledge regarding hazards of plastic use.

N= 60

Level of knowledge	Pretest		Posttest	
	Frequency	Percentage	Frequency	Percentage
Poor	15	25%	0	0%
Good	45	75%	0	0%
Very good	0	0%	10	16.7%
Excellent	0	0%	50	83.3%
Total	60	100%	60	100%

Section-C**Effectiveness of a structured teaching programme on hazards of plastic use in high school children.****Table no.2: Paired 't' value of pre and post-test knowledge score of high school children regarding the hazards of plastic use.**

N=60

SL. NO.	AREA	't' VALUE	REMARK
1	Hazards of plastic use	34.298	Significant Table value = 2.00 p>0.05 level df = 59

T = Table value ,df = Degree of freedom

Above table shows that paired 't' test which was calculated to assess the significant difference between pre and post-test knowledge of high school children, findings show that there is a significant difference between pre and post-test overall mean score. Hence, there was a statistically significant difference between the pre-test and post-test practice score on the hazards of plastic use. Hence, the intervention i.e. structured teaching programme on hazards of plastic use which was adopted by the researcher was found to be effective hence, H_1 accepted

Section-D**The association between the demographic variables and knowledge score regarding the hazards of plastic use in school.**

This section deals with an association between the demographical variables and knowledge score of subjects on the hazards of plastic use.

Table no. 3: association of knowledge of high school children according to their demographic variables.

N=60

Sl. No	Poor	Good	Very good	Excellent	X^2	Df	Inference
1. Age							
a. 14	9	22	0	0	5.714	9	N.S At 0.05 level probability =16.92
b. 15	3	19	0	0			
c. 16	3	2	0	0			
d. 17	0	2	0	0			
2. Gender							
a. Male	9	19	0	0	1.427	3	N.S At 0.05 level probability = 7.82
b. Female	6	26	0	0			
3. Religion							
a. Hindu	15	43	0	0	6.43	9	N.S At 0.05 level probability =16.92
b. Muslim	0	2	0	0			
c. Christian	0	0	0	0			
d. others	0	0	0	0			
4. place of residence							
							NS

a. Rural	12	34	0	0	7.568	3	At 0.05 level probability = 7.83
b. Urban	3	11	0	0			
5. Family Income							
a. Below Rs. 5000/-	10	36	0	0			NS
b. Rs. 5001-10000/-	2	1	0	0	6.17	9	At 0.05 level probability = 16.92
c. Rs. 10,001-15,000/-	2	8	0	0			
d. >15,000/-	1	0	0	0			
6.Type of Family							
a. Nuclear	11	19	0	0			NS
b. Joint	2	20	0	0			At 0.05 level probability = 12.59
c. Extended	2	6	0	0	5.146	6	
7. Method of waste disposal							
a. open land	7	14	0	0			NS
b. Dustbin	6	27	0	0			At 0.05 level probability = 16.92
c. Burning	1	2	0	0	1.814	9	
d. Other methods	1	2	0	0			

NS: Non significant, df: Degree of freedom, X^2 : Chi-square

Chi-square was calculated to find out the association between knowledge score & demographic variables of high school children. The above table shows that there was no association between the pre-test knowledge score and selected demographic variables such as age in year, gender, religion, place of residence, family income, type of family and method of waste disposal. Hence the hypothesis H_2 rejected.

Recommendation:

Based on the finding of the study the following recommendation has been made for further study.

1. A similar study can be repeated by increasing the size of the sample.
2. A similar study can be conducted by using a true experimental approach.
3. A similar study can be repeated in other high schools.

CONCLUSION

From the finding of the present study, it can be concluded that a structured teaching programme on knowledge regarding hazards of plastic use was effective among the high school children in Sri. Ram Janki Inter College Bithoor, Kanpur. As the finding reveals that the pre-test mean knowledge score was 10.617 with a standard deviation of 2.8 whereas, in post-test, the mean knowledge score was 26.5 with the standard deviation of 2.55 ($t = 34.298$) [$p = 2.00 > 0.05$ level] There was a significant difference in pre-test and post-test level of knowledge regarding the hazards of plastic use among high school children in Sri. Ram Janki Inter College Bithoor, Kanpur. No significant knowledge was found between knowledge and age, gender, religion, place of residence, family type, family income and method of waste disposal at 0.005 level.

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