



"A STUDY EVALUATE THE EFFECTIVENESS OF PLANNED TEACHING PROGRAMME ON HAZARDS OF PLASTIC USE AMONG HIGH SCHOOL STUDENTS IN SELECTED SCHOOL OF GORAJ, VADODARA, GUJARAT"

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ABSTRACT

The study was conducted on a sample of 40 selected high school students at Goraj, Vadodara, Gujarat. on hazards of plastic use and objectives of the study. To identify the knowledge of high school students about the hazards of plastic use. To develop and validate a planned teaching programme on the hazards of plastic use. To evaluate the effectiveness of planned teaching programme on the hazards of plastic use in terms of gain in knowledge scores. Materials and methods: The instruments used for data collection were structured knowledge questionnaire. The data obtained was tabulated and analyzed in terms of objectives of the study and inferential statistics. A pre-experimental evaluative study was conducted using one group pre-test and post-test research design. Results: The mean post-test knowledge score (11.8) was higher than mean pretest knowledge score (19.1). The post test knowledge score of high school students regarding hazards of plastic use was significantly higher at 0.05 level of significance of paired 't' test. calculated value (16.42) was higher than paired 't' test table value (1.74) at 0.05 level of significance.

KEYWORDS : Hazards, Planned Teaching Programme

INTRODUCTION:

Science and technology is 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 industry. The illness due to chemicals may be either a result of direct or indirect consumption into the body.

As a result of increased production and use of chemicals, a myriad of chemical hazards are present at homes, schools, play grounds and communities. Chemical pollutants are released in to the environment by unregulated industries or are emitted from heavy traffic or toxic waste sites. About 50,000 children aged 0-14 years old die every year as a result of unintentional poisoning.¹

One among the most hazardous manufacture is the plastic. Plastic is a group of different chemical substances, which consists of a substance having a high molecular weight called polymers, that changes from the thin consistency of plastic into solid at the final state.²

Polymers are large molecules that are built up by repetitive linking of many smaller units called monomer.³

The most popular plastic polymer is Polyvinyl Chloride (PVC), when any food material or blood is stored in the PVC plastic containers; the chemical in it gets dissolved. The released chemical may later cause cancers, skin diseases and other health hazards.²

Plasticizers are the chemicals used to make plastic malleable and flexible to give different shapes and forms. They are Diethyl Hexyl Phthalate (DEHP), Polychlorinated Biphenyls (PCBs), Biphenyl-A, lead, Cadmium, Tinuvin, Vinylacetate, low density poly Ethylene, Chromium 2 etc. plasticizers leach in to the content stored in it that further causes health hazard when it is consumed by human body.

The modern risk extra to basic environmental risks are unsafe use of dangerous chemicals, inadequate disposal of toxic waste and environmental hazards, noise, industrial, pollution, unsafe chemicals in toys and household products may also harm children. Emerging potential environmental threats to health include global climate change, ozone depletion, contamination of persistent organic pollutants and chemicals and other hazards and emerging diseases. One among them is the plastic products and its use.

Segregation of waste at the source is very important. After

segregation the material goes to a small industry for re-cycling. Decomposable and bio-degradable is segregated from dry waste such as paper and plastic.⁴

The environmental pollution has an effect on the human life. In a period of ten years the Hooker chemical and plastic corporation dumped 22,000 tones of toxic waste in steel drums in an old canal. They covered the canal with top soil and the property was then turned over to the Niagra falls public school district. Many homes, recreational fields and a school were built on the site. In 1976, the residents began to notice odd smells. The steel drums were leaking toxic waste into sewers, lawns and even the basement of some homes. Due to the action concerned citizen, Lois Gibbs, of the state performed many health studies on the area and by 1978 the Federal government declared Love canal to be a disaster area. It costed the taxpayers about 275 million dollars to clean up the site.⁵

In India plastic consumption trebles every decade. The impacts of plastic can be felt across every stage of life, from fetus to adulthood. No one can ignore the devastating consequences of plastic. In India polyvinyl chloride is commonly used to prepare plastic materials. From slippers to the stationary used in schools, buildings and officers are plastic. The dangers of PVC are pervasive phthalate, one of the plasticizers bond loosely with polymer chains and can easily leach out, leading to severe consequences such as hormonal imbalance, systemic disorders, decline in sperm count in men and also causes cancers.⁶

There is a great need to do more tackle environmental risks to children's health. The burden of disease from environmental related diseases is great and falls disproportionately on children. In September 2002, WHO launched the healthy environment for children initiative. It is with different groups around the world to turn their initiative in to vibrant, global alliance which will be capable of mobilizing local support and intervening to make children's lives healthier where they live, learn and play. Every child has the right to grow up in a healthy home, school and 3 community. The future development of our children and of their world depends on their enjoying good health now.

Children are more vulnerable to the illness. They are also more capable of preventing them. The long lasting ill effects could be brought down through an awareness and modification of the life style at the early age of their life. Use of plastic containers, bottles and other items by children has become common. It leads to many risks in life. However it could be only prevented rather repenting at the following stage. This could be possible through the education

given to them in the school days.

Polystyrene, another commonly used polymer in plastic used to pack food, leaches another toxic chemical namely bisphenol – A, a building block of plastic which causes hormonal imbalance and different types of cancers.

Poly carbonates used for making babies bottles and water bottles can cause severe systemic disorders in children. Other types of plastics such as poly ethylene trephthalate (PET) is used in manufacturing cooking oil containers, low density poly ethylene (LDPE) which is a vital component in plastic bags, poly propylene (PP) used to make caps for containers all impact public health in various ways. 5 Bisphenol A. (BPA) a chemical in the poly carbonate plastic mimics the hormone estrogen and causes chromosomal abnormalities⁷

Plastics are the culprits in the clogging of our storm water drains, the slow poisoning of the animals in the zoo and the cows on our streets. It also causes chemical toxins to the subsoil of our land fills and if burnt it cause atmospheric pollution. For anybody who cares about the future of our environment, plastic is a powerful adversary.⁸

Horror stories about recycled syringes, other plastic materials and quilts packed with used surgical cotton keep pouring out of the dirty backyards of our hospital. Segregation is the key to this waste management. Plastic bags take one million years to degenerate.

MATERIALS AND METHODS:

Effectiveness of planned teaching programme on hazards of plastic use among high school students in selected school of Goraj, Vadodara. The study was conducted on a sample of 40 selected high school students at Goraj, Vadodara. using Convenient sampling. The instruments used for data collection were structured knowledge questionnaire. The data obtained was tabulated and analyzed in terms of objectives of the study and inferential statistics. A pre-experimental evaluative study was conducted using one group pre-test and post-test research design.

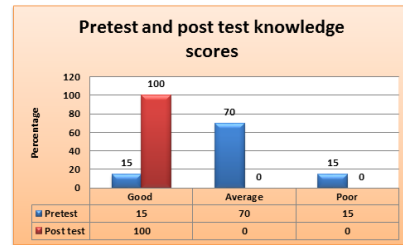
RESULTS:

1. FINDINGS RELATED TO THE SOCIO-DEMOGRAPHIC VARIABLES OF HIGH SCHOOL STUDENTS

The data presented in table 1 indicated that maximum number of high school students (10th std) 03 (7.5%) belonged to the age group of 14-15 years and minimum 16 (40%) were belonged to the age group of 15-16 years and maximum 21 (52.5%). majority of students of 10th std were Hindus 39 (97.5%) and minimum number of students of 10th std were Muslim 01 (2.5%). Maximum numbers of female 23 (57.5%) and minimum number of male 17 (42.5%) . maximum numbers of fathers education were 21 (52.5%) from high school education and minimum numbers of fathers education were 01 (2.5%) from uneducated. maximum numbers of mothers education were 29 (72.5%) from primary and minimum numbers of mothers education were 01 (2.5%) from post graduate. Maximum number fathers Occupation were 21 (52.5%) and minimum number of fathers occupation were government job 2 (5%). Maximum number of mothers occupation were 27 (67.5%) from worker and minimum numbers of mothers occupation were 3 (7.5%). Maximum numbers of monthly family income were 1 (2.5%) and minimum numbers of monthly family income were 17 (42.5%).

2. Findings related to the pre-test knowledge score and post-test knowledge of score high school students.

In pre-test majority 28 (70%) of subjects had an average knowledge, 6 (15 %) had poor knowledge and 15 (16 %) had good knowledge and where as in post-test all of subjects had good knowledge 40 (100%). Hence there gain in knowledge.



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