



# “A study to assess the effectiveness of information booklet regarding ill effects of plastic materials use on health and environment among street food vendors at selected urban area of Bhopal (M.P).”

**Naresh Salvi, Vipin Tanwar**  
Lecturer  
geetanjali college of nursing

## ABSTRACT

The global environment is changing day by day and now it has become a challenge to living life forms due to a very ugly fact that every nation is trying to develop their countries without taking into account the environmental impact of degradation. People are using plastic bags which are environmentally dangerous products and harmful to health. The impact of plastics in their numerous desirable properties made diverse material properties of plastic such as resistance to chemicals and, ease of shaping and molding, has contributed to the development of high-volume manufacturing facilities capable of producing millions of tons of plastic products per year. Plastic waste in India is about 4.5 million tons a year and it takes 500-1000 years to degrade. In the future, there is already a strong global movement to ban plastic as it can cause damage, not just to the environment but also to human beings. **“A study to assess the effectiveness of information booklet regarding ill effects of plastic materials use on health and environment among street food vendors at selected urban area of Bhopal (M.P).”** Objectives: To assess the pretest and posttest level of knowledge regarding ill effects of plastic material use on health and environment among street food vendors at Bhopal. To determine the effectiveness of the information booklet regarding ill effects of plastic material use on health and environment among street food vendors at selected urban area of Bhopal. To find out the association between post-test knowledge level and selected demographic variables on knowledge regarding ill effects of plastic material use on health and environment among street food vendors at selected urban area of Bhopal. The research approach adopted for this study was quantitative research approach. A descriptive research design will be used for this study. Formal permission was obtained from the medical officer Kolar Bhopal. The investigator selected 60 samples by non-probability convenient sampling technique. After obtaining informed and written consent approximately 8-10 samples were selected everyday. A pre-test was conducted by using a structure questionnaire, followed by Information Booklet to the participants regarding ill effects of plastic usage. After 7 days post-test was conducted. The finding of the study revealed that Information Booklet had improved the knowledge of street food vendors regarding ill effects of plastic usage. In pretest street food vendors had 7.4 mean score and in post-test homemakers had 16.7 mean score. The difference is 9.3 score. There is a statistically significant difference between pretest and posttest. Difference between pretest and posttest score was analysed using paired t-test. The computed ‘t’ value ( $t=12.9$ ) was higher than the table value

( $t=2.05$ ) at 0.05 level of significance. The result study shows that Information Booklet was effective in improving the knowledge of street food vendors on ill effects of plastic material use.

**Key Words:** ill effects of plastics, video assisted teaching, Food vendors

## INTRODUCTION

Plastics have become an integral part of daily life worldwide, but their widespread use poses significant challenges to the environment and living organisms. Derived from the Greek word "Plastikos," meaning "fit for molding," plastics encompass a broad range of synthetic or semi-synthetic materials known for their malleability and versatility. These materials, primarily composed of polymers, are essential for manufacturing various products, from everyday items like bags and packaging to complex machinery and medical supplies.

However, the rampant use of plastic bags, in particular, has raised environmental concerns due to their non-biodegradable nature and adverse effects on health. Plastic bags, widely utilized for shopping and daily needs, contribute to pollution of the environment and agricultural lands, posing threats to ecosystems and human well-being.

Recognizing the urgency of addressing plastic pollution, governments worldwide have implemented regulations to curb plastic usage. For instance, the Indian government has enforced restrictions on the manufacturing and sale of plastic carry bags below specific dimensions, aiming to mitigate environmental degradation and promote sustainable practices.

Despite these efforts, the global production of plastic continues to escalate, reaching staggering figures that exacerbate waste management challenges. Inadequate recovery and recycling mechanisms result in millions of tons of plastic accumulating in landfills and oceans, posing hazards to ecosystems and human health. The disposal of plastic waste through littering, dumping, or incineration further compounds environmental degradation, leading to air and water pollution, as well as adverse health effects.

Research underscores the urgent need to address the adverse impacts of plastic consumption and disposal. Studies have highlighted the negative externalities associated with plastics recycling difficulties and the harmful decomposition processes, emphasizing the importance of transitioning to sustainable alternatives. Efforts to raise awareness and promote responsible consumption practices are crucial in mitigating the detrimental effects of plastic on the environment and public health.

In conclusion, while plastics have revolutionized various industries and daily conveniences, their indiscriminate use poses significant challenges to global sustainability. Addressing plastic pollution requires concerted efforts from governments, industries, and individuals to adopt eco-friendly alternatives, improve waste management practices, and promote environmental stewardship. Only through collective action can we mitigate the adverse impacts of plastics and safeguard the planet for future generations.

## METHOD AND MATERIAL

The research employs a quantitative approach, utilizing a pre-experimental one-group pre-test post-test design. Conducted over four weeks in the urban area of Bhopal, the study targets food vendors. The target population encompasses urban areas of Bhopal, while the accessible population specifically includes food vendors operating in these areas. A sample size of 60 food vendors from urban Bhopal was selected using a non-probability convenient sampling technique. This approach allows for a focused investigation into the knowledge and practices of food vendors regarding plastic usage and its implications, providing valuable insights for addressing environmental concerns and promoting sustainable practices in the region.

## RESULT

Based on demographic data findings, the majority (41.67%) of street food vendors fall within the age range of 21-40 years. Education-wise, most vendors (53%) have received schooling up to the 1st to 5th standard. A significant portion (60%) of these vendors belong to nuclear families, and half of them (50%) report an income bracket of Rs 5001-10000. In terms of religion, Hindus comprise the largest group (68%) within the study. Regarding waste disposal methods, a majority (61%) dispose of waste in garbage collecting vehicles.

Before the implementation of an information booklet, a considerable percentage (66.7%) of street food vendors had inadequate knowledge, with 28.3% having moderate knowledge and only 5% possessing adequate knowledge. After the implementation, there was a notable improvement, with only 6.67% having inadequate knowledge, 16.67% with moderate knowledge, and a significant 76.6% now possessing adequate knowledge. On average, there was a 48% increase in knowledge compared to the pre-test.

The effectiveness of the information booklet was evident, with a statistically significant improvement in knowledge levels post-implementation. The mean score increased from 7.4 in the pre-test to 16.7 in the post-test, with a significant difference of 9.3 points, as confirmed by a paired t-test analysis.

Furthermore, post-test knowledge scores were found to have significant associations with various demographic variables. Age, education level, and family income of street food vendors were all significantly correlated with post-test knowledge scores, as determined by chi-square tests ( $\chi^2= 14.5, 30.8, \text{ and } 13.4$  respectively, with critical values of 12.59, 5.99, and 5.99). These findings underscore the importance of demographic factors in understanding and improving knowledge levels among street food vendors.

## CONCLUSION

Demographic data reveals significant insights into street food vendors' characteristics and knowledge levels. The majority are aged 21-40, with basic education and modest incomes, predominantly from nuclear families and Hindu backgrounds. Waste disposal practices mostly involve garbage collection vehicles. Pre-implementation, most vendors had inadequate knowledge, but post-implementation, there was a remarkable improvement, with a 48% average knowledge increase. The effectiveness of an information booklet was evident, significantly boosting knowledge levels. Moreover, post-test scores correlated significantly with demographic factors like age, education, and income, emphasizing their role in shaping knowledge outcomes. These findings underscore

the need for targeted interventions considering demographic diversity to enhance street food vendors' knowledge and potentially improve practices in this vital sector.

## REFERENCES

1. National Environment Agency .app2.nea.gov.sg/topics ,wastestats.aspx Waste Statistics and Recycling Rate for 2010. Available, from: URL:<http://www.cpcb.nic.in>.
2. Plastic: A Problem of Global Proportions.[online]. [Cited 2011 Nov 22];Available from; <http://www.ecologycenter.org/iptf/>.
3. Central pollution control board (CPCB) India 2014 Plastics and the Environment Assessing the Impact of the Complete The Ecotourism & Conservation Society of Sikkim[http://www.plasticsresource.com/manufacture/how\\_plastics\\_are\\_made.html](http://www.plasticsresource.com/manufacture/how_plastics_are_made.html)
4. Kari Embree : Global plastic packaging materials by 2020,july 29 2016.WWWplastic today.com.
5. Global plastic production rises recycling lags ; New worldwide institute analysis explore trends in plastics consumption and recycling for immediate release /Jan 28, 2015 .Gaelle gourmelon.
6. Plastic consumptions Jan 13 [cited 2011 Nov 26]; Available from: <http://www.business-standard.com/india/news/plastic-consumption-to-double-by-2011/345971/>.
7. Dr.parveshbhawan, central pollution control board [Online]. 2009 [cited 2009 Dec]; Available from: URL:<http://www.cpcb.nic.in>.
8. Environmental Toxicology. National Environmental Engineering Research Institute for the Brihan Mumbai Municipal Corporation plastic Industries 2002 Nov; 13(9): 8-10.
9. The globalwar against plastic. 2007 Oct 24 [Cited 2011 Nov 26];Availab<http://nitawriter.wordpress.com/2007/10/24/the-global-war-against-plastic/>
10. Hammami. M.B.A,. Survey on awareness and attitude of secondary school regarding plastic pollution, implication for environmental education and public health , cited[2017 July 15 ],10: 10007.
11. Lithner et.al ,environment and health hazards ranking and assessment of plastic polymer .science total environment , v olume 40, issue 18 ,[15 Aug2016] ,pg- 3309-3324.
12. Legesse adane, Diriba Muleta,. Journal of toxicology and environment healthscience :Volume [3,August 2016].pp-234-248.
13. Amaral,Kimberly ,plastic in oceans ,sea education association web[ may 4,2015] volume 14 :pg 342-356
14. Gray .L,Hill,Feet.plastic bags use falls by 26%in 2 years and purpose and itseventual riddance into the dust bins .[14 sep (2014)] PP -1-84.
15. Rhian Tough, plastic shopping bag environment in fall and policy options,volume 30, issue 10 ,[15 Aug2014] ,pg- 309-324:URL <http://handlenet.1006>.
16. Yuan-Tien Su. environmental hazards due to plastic uses and respiratoryhealth in young children, Vol 4[2013 Dec 5] PP -1-84
17. Girum Bahri A study on plastic waste and environment degradation[3 jan2013],:publication list of org. PP -345-384.



18. Thiel et.al (2013) Floating marine debris in coastal water: marine pollution 46:229 PP -23-44.
19. Karlner, J ..corporate planet ,ecology and politics in age of globalization san 111(4) [Apr 2012], A208. PP -12-18
20. Lin CY, Shen FY, Lian GW, Chein KL, Sung FC, Chen PC, Su TC. Level of serum bisphenol , harmful chemical in plastic container and atherosclerosis [2015 Aug 24] pp – 245-256.

