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An empirical study on impact of usage of plastic bags and plastic banning's pros and cons with special reference to Erode

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ABSTRACT

Thousands of plastic factories are producing tons of plastic bags which are very popularly used by the people for shopping purposes because of its ease, cheapness and convenience of use but their hazardous negative impact is never highlighted or, it may not be considered as a serious problem. Many countries have banned plastic bags due to public concern over the serious negative impact on the environment and agriculture like India and South Africa. This research explores the impact of usage of plastic bags and plastic banning pros and cons. 50 respondents were administered for the Research Questionnaire after taking their consent. Simple Percentage Analysis and Henry Garrett Ranking were used to analyze the data. The results showed the significant impact of usage of plastic bags.

INTRODUCTION

The word 'plastic' comes from the Greek word 'plastikos', which means to be able to be shaped or Moulded by heat. Plastic especially that used in plastic bags is one of the major Toxic pollutants of our times. Being polyethylene (LDPE), high-density polyethylene (HDPE) and polypropylene (PP) as additives) and most importantly, being a non-biodegradable substance. The central government has passed a ruling under the Provisions of the Environment Protection Act 1986, restricting the sale of some products in plastic carry bags. The Ministry of Environment, Forests and Climate Change (MoEF&CC) has banned the manufacture and use of plastic carry bags less than 8 inches x 12 inches in size and 40 micron⁷ in width. This is not the first time when Tamil Nadu will impose the ban. The Chennai Corporation in 2015 had enforced a strict ban on plastic bags and other polymer based items with a thickness of less than 40 microns. Our state government issued the order to ban the plastic on January 1, 2019. Currently the government follows strict rules to implement the banning.

STATEMENT OF THE PROBLEM

At present plastic plays a very important role in everyday life. But the chemical ingredients present in the plastic produce unwanted health issues and environmental problems. This is the reason behind the banning. The main objective of the study is to find the problems faced by the respondent when they use the plastic bags.

OBJECTIVES OF THE STUDY

- ❖ To identify the Demographic Profile of Respondents.
- ❖ To evaluate the pros & cons of plastic banning by the government.

SCOPE OF THE STUDY

- ❖ The present study will be helpful for analyses the problem faced by people due to plastic usages.
- ❖ This study will helpful to evaluate the pros & cons of plastic banning by government.

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LIMITATIONS OF THE STUDY

- ❖ Many Respondents neglected to respond to the Survey in their Busy Schedule.
- ❖ Many Respondents found it difficult to Rank the Problems faced by them, as they are equally facing all the problems.
- ❖ As the Questionnaire is based on Psychology, respondents took more time to fill it.

LITERATURE REVIEW

1. **Vigneshwaran.R** tells that, in developing countries with little enforcement capacity, plastic banning may not be best possible solution. In fact, no single solution is likely to produce large enough results. Instead, a combination of strategies might be required to create an incentive-based system for the consumer and the retailer. [1]
2. **Priti Banthia Mahesh** tells that, plastic bags banning is quite effective in towns and city sides because they easily adapt to paper bags, but in small villages and remote towns the banning cause a serious issues. Generally vendors are more aware than customers about the ban and there is still a residual fear that prevents plastic bags being openly sold. [2]
3. **Yuvakshi Grover** tells that, rather than banning the plastic government and judiciary should try to suggest and manufacture proper alternatives to plastic as well should make policies and their practical implementation on the plastic waste disposal. [3]

RESEARCH METHODOLOGY

Research design

A Master plan that specifies the method and procedures for collecting and analysing needed information.

Sample design

Sampling is the process of selecting a sufficient number of elements from the population. A Sample Design is a definite plan for obtaining a sample from the sampling frame. It refers to the technique or the procedure the researcher would adopt in

selecting some sampling units from which inferences about the population is drawn.

Non-probability sampling

Non-Probability sampling is a sampling technique where the samples are gathered in a process that does not give all the individuals in the population equal chances of being selected.

Convenience sampling

Convenience sampling (also known as Availability Sampling) is a specific type of non-probability sampling method that relies on data collection from population members who are conveniently available to participate in study.

Size of the sample

The Sample size is 50. (38 male & 12 female)

DATA COLLECTION METHOD

Primary data

These are data which are collected for the first time directly by the Researcher for the Specific study undertaken by him. In this research primary data are collected directly from the Respondent by using Questionnaire cum Enumeration Method.

Secondary data

These are data which are already collected and used by someone preciously. The data's are collected from journals, magazines and websites.

STATISTICAL TOOLS USED

To analyse and interpret collected data the following simple percentage and ranking were used.

Simple percentage analysis

To analyse and interpret collected data the following simple percentage and ranking were used.

Formula

$$\text{Percentage} = \frac{\text{Number of respondents}}{\text{Total number of respondents}} \times 100$$

Henry garrett ranking

Garrett's ranking technique to find out the most significant factor which influences the respondents; Garrett's ranking technique was used. As per this method, respondents have been asked to assign the rank for all factors and the outcomes of such ranking have been converted into score value with the help of the following formula:

Percent Position = $100 (R_{ij} - 0.5) / N_j$ Where R_{ij} = Rank given for the i^{th} variable by j^{th} respondents
 N_j = Number of variable ranked by j^{th} respondents.

DATA ANALYSIS

The Respondents participated in the research are from diversified background with gender, age group, marital status and educational qualification.

Table No 1: Demographic profile of the respondents

Details of the Respondents		No. of Respondents	Percentage	
Age	20-40 years	40	80	
	40-60 years	10	20	
	Above 60	0	0	
	Total	50	100	
Gender	Male	38	76	
	Female	12	24	
	Total	50	100	
Marital Status	Married	21	42	
	Unmarried	29	58	
	Total	50	100	
Educational Qualification	No Formal Education	0	0	
	SSLC/HSC	14	28	
	UG/PG	33	66	
	Professional degree	3	6	
	Total	50	100	
	Occupation	Student	9	18
		Employee	25	50
Business		16	32	
Agri		0	0	
Total		50	100	
Area of Residence		Village	18	36
	Town	22	44	
	City	10	20	
	Total	50	100	

Interpretation

From this study it is evident that age group of the 80% of the respondents fall under the category of 20 -40 years, 20% of the respondents fall under the category of 40-60 years. In gender 76% was male and 24% was and here 42% was married and remaining 58% was unmarried. Among the

respondents 28% was completed their SSLC, 66% was completed UG/PG and 6% completed professional degree. 9% of the respondents are students, 25% was employees and 16% was doing business. The respondents belongs to 36% from village, 44% from town and 20% from city.

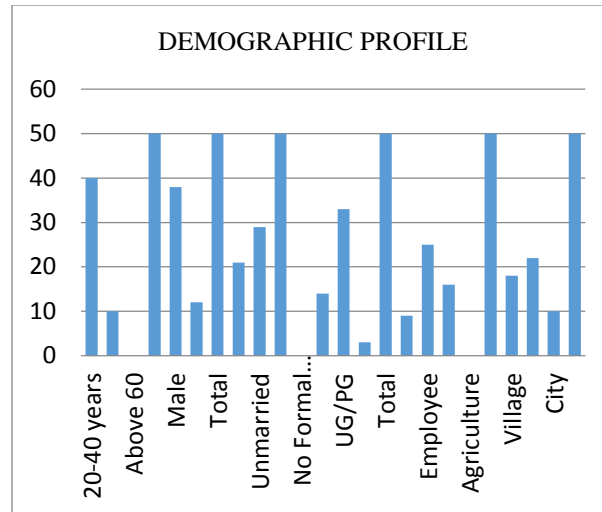


Figure no 1: Demographic profile of the respondents

Table no 2: Problems faced by respondents by using plastic bags revealed through henry garett ranking technique

S.No	Problems	Mean Score	Total Score	Rank
1	Affect Food Chain	245	1715	3
2	Ground Water Pollution	215	1935	1
3	Land Pollution	159	1590	4
4	Air Pollution	228	1824	2
5	Dangerous to Animal	246	1476	5
6	Poisonous	295	1475	6
7	Marine Life Contamination	347	694	9
8	Choking Hazard	344	1032	8
9	Cancer & Abnormal Growth	300	1200	7
10	Increase Growth Of Harmful Micro- organism	371	371	10

Interpretation

From this survey, we can find that Ground water pollution got the first rank with the score of 1935, Air Pollution is ranked as 2 with the total score of 1824, Affect Food Chain ranked as 3 with the total score of 1715, Land Pollution ranked as 4 with 1590 total scores, Dangerous to Animal is

ranked as 5 with the total score of 1476, Poisonous ranked as 6 with 1475 scores, Cancer & Abnormal Growth got 7th rank with 1200 scores, Choking Hazard got 8th rank with 1032 points, Marine Life Contamination ranked as 9 with the total score of 694 and Increase Growth of Harmful Micro-organism got 10th rank with 371 score.

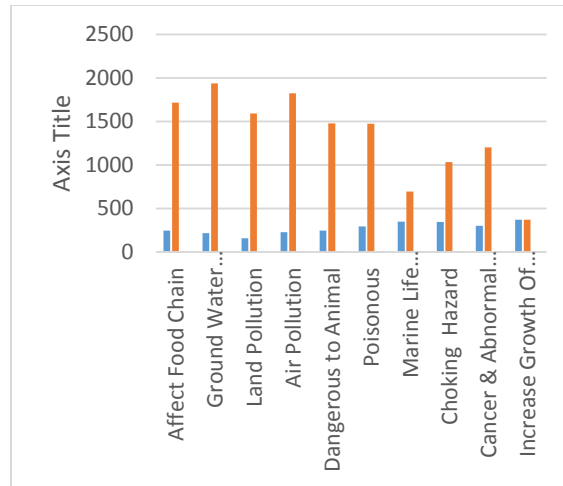


Figure no 2: Problems faced by respondents when using plastic bags

FINDINGS

- 1) In this survey, Ground water pollution got the first rank with the score of 1935.
- 2) Air Pollution is ranked as 2 with the total score of 1824.
- 3) Age group of the 80% respondents fall under the category of 20 -40 years.
- 4) 76% of the respondents fall under the gender group of Male.
- 5) 58% was Unmarried among the 50 respondents.
- 6) 66% of the respondent's educational qualification is UG/PG.
- 7) 44% respondents came from Town area.

SUGGESTIONS

- 1) The respondents can use jute bags and other cloth bags, instead of using plastics carry bags.

- 2) The respondents can carry their own bags to the market and other shopping areas.
- 3) The government can also introduce eco-friendly carry bags.

CONCLUSION

Environment is the only place which gives most valuable things to the human beings. It must be strictly protected in all aspects. If the human being and the technology improvement affect the environment then mind that, the environment is ready to affect the entire earth.

It is the right time to take this corrective measures, if the government postpone this decision there will be a strong downfall in the future. And government also has to take the alternative solution to get rid of economic repercussion. Plastics banning must be agreed to avoid serious environmental and health issues

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