

# A Survey on Plastic Usage Among the Teenagers, Khammam

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**Abstract:** The survey was done to analyze the usage of plastic among other teenagers of mamatha dental college, Khammam. The sample population belonged to 19,20,21,22,23 only minimum people are teenagers. It is evident from the survey that without stringent control measures or ban from the side of government, the unhealthy usage of plastic as well as the pollution of the environment by plastic waste would increase alarmingly. Though 77% of the surveyed subjects are of the opinion that plastic bags obtained from shopping at shops and 65% are presently prefer cloth bags for shopping and 35% are preferring plastic bags for shopping.

Most of them like 44% are using plastic bottles as plastic item in their daily life. 47% of students have no idea about which grade plastic is safe. Even though Tupperware is famous and mostly using plastic now a days. But 59% have no idea about Tupperware is BPA free or not, and 54.5% students never check the grade number of plastic items before purchasing. 69.4% are supporting to ban on plastic but pollution of plastic is increasing according to this survey. people have no idea about bisphenol A, alchemical that leaks from plastic.

**Keywords:** Survey, plastic, Bisphenol A, Khammam, plastic carry bags

## 1. Introduction

Plastic bags have been introduced in the 1970's [3]. Plastic pollution has become a global problem that an incredible number of research is being carried out to study the effect it is causing on living organisms [1]

It is well known that plastics as inexpensive yet durable materials have been widely used in daily life. They have been beneficial in many fields, including transportation, telecommunications, food, clothing [5].

Plastic bags gained an increasing popularity amongst consumers and retailers. It is estimated that around 500 billion plastic bags are used every year worldwide [3].

Plastic bags are used for both solids and liquids heavily to wrap gat and everything. Previously, paper and cotton bags and local baskets were used to bring different merchandise from the market place, ceramic pots and glass bottles were used for liquids [4].

Plastic being non-biodegradable cannot be removed from

Earth. It was after world war-1, the mass production of plastic started. The First created polymers were polystyrene and polyvinyl chloride [1].

According to Eriksen's findings plastic pollution is the dominant type of anthropogenic debris ubiquitous throughout the marine environment large number of marine species is known to be harmed and killed by plastic debris [1].

Another common problem associated with these waste is death of domestic and wild animals this necessitates for proactive measures in order to safeguard animal species against extinction. Blockage of sewerage system is becoming a common problem in cities and towns of developing countries. This creates foul smell and favorable habitats for mosquitoes and other vectors [3].

According to Raman Sharma (2014) the one to blame is not the plastic but the misuse of the human beings to plastic. Some plastic products are resistant to degradation under the effect of Sun and microorganisms and can persist in the environment for thousands of years. In addition, the process of plastic production contributes to global warming and air pollution [5].

Government agencies as well as various NGOs are involved in instituting rules and regulations to control the use of plastic such as pollution control board, BIS. Investigation carried out by the central pollution control board of India in their railway station and two airports in Delhi envisaged that 6758kg/day and 3662 kg/day of waste [1]. Basic reason could be poor waste management and perhaps lack of awareness about the negative impact of plastic bags. More over ingestion of plastic bags was reported to cause a reduction in milk yield [3].

Many plastic products were collected by poor families for recycling. This was not practical in case of these things plastic bags they are too thin to be caught and too cheap to be collected [4]. In fact, the prediction was 'how much brighter and cleaner than that which preceded this plastic age'.

## 2. Methodology

### A. Permission

Permission was taken from the head of the department of

public health dentistry. Questionnaire is explained and informed consent was taken prior to study from study subjects.

**B. Study design**

A cross sectional questionnaire based study was conducted among students of Mamatha Dental College, Khammam.

**C. Pilot study**

Questionnaire framed are distributed among 20 students to know reliability of questionnaire.

**D. Inclusion criteria**

All internes, final year students and 2nd,3rd year students who were present during the day of survey are included in the study. The duration of the study was from 31-5-2019 to 6-6-2019.

**E. Exclusion criteria**

Students who were absent during the day of survey were excluded.

**F. Study procedure**

The study was conducted among 200 dental students. Questionnaires were distributed to 2nd,3rd,4th year students and interns during their working hours, that is from 9.00am to 4.00pm. Questionnaire includes personal data and questions.

**G. Statistical analysis**

After the data is collected through questionnaire, they are entered in excel sheet and sent for analysis.

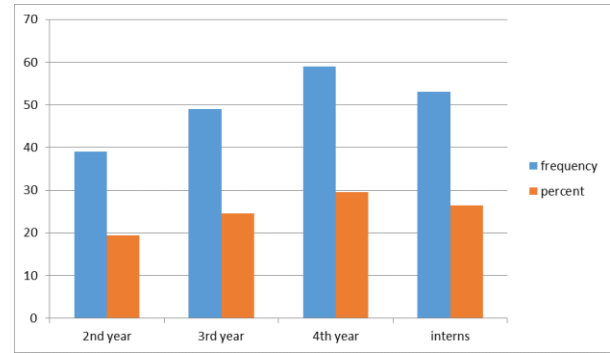


Fig. 2. Frequency and percentage distribution

Frequency and percentage distribution in year of study includes 2nd year students 39(19.5%), 3rd year 49(24.5%), 4th year students 59(29.5%), interneer students 53 (26.5%).

	Frequency	Percent	Valid percent	Cumulative percent
Yes	168	84.0	84.0	84.0
No	20	10.0	10.0	94.5
No idea	11	5.5	5.5	100.0
Total	200	100.0	100.0	

For the statement have you heard of environmental impact of plastic bag wastes the majority of students (84%) answered yes while (5.5%) answered no idea. In 160females, majority of females 144answered yes while few 8students answered no idea. In 40 males, majority of them 24 answered yes while 3 males answered no Idea. Hence statistical significance was observed (p-0.000).

**3. Results**

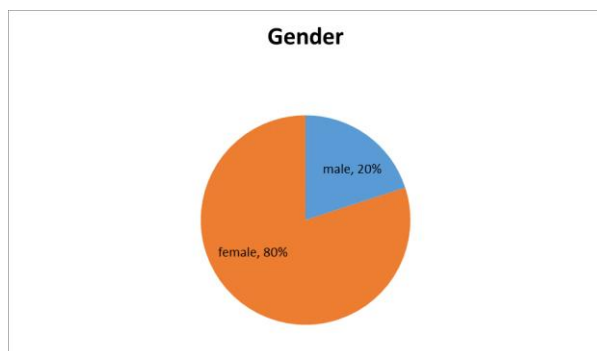


Fig. 1. Gender

Demographics collected include dental students 200(100%) out of which 160 are females (80%)and 40are males (20%).

	N	Minimum	Maximum	Mean	Std. deviation
Age	200	19	26	21.11	1.374
Valid N	200				

Mean age group of study group is 21.11 and standard deviation is 1.374.

	Frequency	Percent	Valid percent	Cumulative percent
Grade 2, Grade 4, Grade 5	28	14.0	14.0	14.0
Grade 1, Grade 3,Grade 6	42	21.0	21.0	55.0
Grade 2, Grade 3, Grade 7	15	7.5	7.0	42.0
No idea	115	57.5	57.5	99.5
Total	200	100.0	100.0	

For the statement do you know which number plastic bottles are safe to reuse the majority of students (57.5%) answered no idea while (7.5%) answered grade 2, grade 3, grade 7. In 160 females, majority of them 100 answered no idea, while 23 answered grade 1, grade 3, grade 6. In 40 male’s majority of them 19 answered grade 1 grade 3, grade 6 while 3 answered grade 2, grade 3, grade 7 and grade 2, grade 4, grade 5. Hence statistical significance was observed (p-0.000)

	Frequency	Percent	Valid percent	Cumulative percent
Supermarket	92	46.0	46.0	46.0
Convenience	43	21.5	21.5	67.5
Bruneian functions	26	13.0	13.0	80.5
Markets	31	15.5	15.5	96.0
Garbage disposal	8	4.0	4.0	100.0
Total	200	100.0	100.0	

For the statement were you think most plastic bags is used the majority of the students (46%) answered supermarket while (4%) answer garbage disposal. Of the 39 2nd year students majority 15 students answered supermarket and few 6 students answered markets. Of the 48 3rd years majority 19 students answered supermarket and few 6 students answered Bruneian functions. Of 52 4th year students majority 30 students answered supermarket and few 6 students answered market. Of the 53 interns majority 28students answered supermarket and few 5 answered Bruneian functions. Hence statistical significance was observed (p-0.030)

	Frequency	Percent	Valid percent	Cumulative percent
Less than 5	69	34.5	34.5	34.5
6-10	38	19.0	19.0	53.0
1-2	93	46.5	46.5	100.0
Total	200	100.0	100.0	

For the statement in a week how many plastic bags do you use or obtain majority of students (46%) answered 1-2 while (19%) answered 6-10. Of the 39 2nd year students, majority 22students answered 1-2while few 7 students answered 6-10. Of the 49 3rdyear student’s majority 22 students answered 1-2 while few 9 students answered 6-10. Of 59 4th year student’s majority of 21 students answered less than 5. While 5 answered 6-10. Of the 53 intern’s majority of 20 students answered less than 5 while few 16 students answered 1-2. Hence statistical significance was observed (p-0.026).

#### 4. Discussion

Survey was carried out among 200individuals of the total people surveyed, 80% female, 20% males. Among them 84%of people have an idea about the environmental impact of plastic bag waste and very few have no idea .77% of people obtain their plastic bags from shopping at shops .46%are using most plastic bags in super markets. most people 34.5% use less than 5 plastic bags. 27.5% never use their own cloth bags during shopping. 38.5% people reuse plastic bags like storing and carrying things. But least people like 6%are burn the plastic bags after their use and least 2%are kept being recycled later. According to this study most of the people have no idea about grades of plastic and which grades of plastic is safe or harmful to health.65%of people use cloth bags for shopping and 35%use plastic bag this is depends on people's attitude.

Most of them also don't know about low density polyethylene, high density polyethylene and about Tupperware plastic. But Tupperware plastic is a best seller at present .88%of them support to use biodegradable plastic bags according to my survey. Trend of utilization of plastic bags increasing presently.

people also unaware of bisphenol A, Dioxins like chemicals. Every individual are responsible to ban the plastic or decrease the usage of plastic not only municipality, NGOs, Government, environmental agencies are not responsible. Plastic pollution is not only on land even oceans and seas.

To avoid plastic pollution all are advised to use paper bags, cloth bags, natural origin should use. Replace the plastic material with some other.

#### 5. Conclusion

The survey shows that awareness given through education is not enough to equip students to take deterrent actions that favour the conservation of the environment instead of favouring one’s comfort and convenience. Stringent control measures should be taken by governing bodies in the form of fine, penalty, or ban in order to control the excessive usage of plastic materials.

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