

Incidence Regarding Use of Plastic Bags in Food Shopping

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ABSTRACT

The interest and the novelty of research converge here concern use of plastic bags in food shopping. The generic thoughts that drive this research are at what incidence adolescent girls use plastic bags. The data presented on the use of these bags indicate that 50 % of the participants always use plastic bags for food shopping. The results also presented that 40 % of girls were using it always as well as sometimes as it is convenient for shopping. It was found to be 40 % using plastic bags always and 20 % were using it sometimes as they are not aware of environmental pollution and protection. The ranking result showed that handy to use as Ist rank followed by without knowing the impact of storing food (IInd rank) and forget to take own bags (IIIrd rank), usually recyclable (IVth rank) and cheap or free of cost (Vth rank) as the main reason behind using plastic bags for shopping.

Key words: Plastic bags, Food shopping, Adolescent girls.

INTRODUCTION

Adolescent girls residing in hostels always depend on others for food in order to survive. They make many food choices every day due to the busy schedule. These food choice decisions are influenced by a number of interrelating factors. One of these factors may be an availability of carrying bags for food purchasing. Plastics are widely used to store foods because these are lightweight, unbreakable and inexpensive. Individuals are reusing plastic bags for shopping after initial usage⁷. A variety of chemicals used in the manufacture of plastics is toxic. Using these for cooking and food storage can carry health

risks when disrupting chemicals from some plastics leach into foods. It is evident that most of the adolescents are using plastic bags that bring many health impacts and offer future challenges. Chemicals that are used in plastic manufacture have also been correlated with adverse effects on the reproductive abnormalities. However, enlargement and the leaching of chemicals from plastic bags transfer to humans as well as environment. Plastic bag packing for hot edible items causes migration of harmful chemicals to food items. These chemical include Styrene, Phthalates and Bisphenol A causes diabetes and diseases of the heart and liver⁹.

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This practice can cause serious health problems since some carcinogenic agents could be generated during the chemical reactions that take place in plastic materials and the food items due to temperature variations⁶. Gerba *et al.*, mentioned that re-use of plastic bags can cause cross-contamination of foods by microorganisms³. Some of the basic reasons could be poor waste management and perhaps lack of awareness about the negative impacts of plastic bags⁸. Thus, the aim of the study was to gain the incidence, thoughts, and reasons related to use of plastic bags.

MATERIAL AND METHODS

The study was conducted in hostels near SUM hospital of Bhubaneswar city in Odisha. The sampling procedure selected for this study followed random sampling method comprising of 110 adolescent girls (18-25 years). Samples were purposively selected as they were residing in hostels and using plastic bags for

food shopping and as containers. Participants were interviewed with the help of self-developed scientific schedule along with observation for data collection. Some shopkeepers, street vendors, canteen managers, and hostel wardens were also interviewed for cross-checking. The data were collected under three major areas like frequency of usage of plastic bags for food shopping, its conveniences, and environmental protection.

RESULTS

Socioeconomic status of adolescent girls

The socio-economic data in Table 1 showed 54.55 % adolescent girls between the ages of 18-21. As per educational status, 72.73 % of participants were pursuing graduation. Most of the participants belonged to OBC caste (37.27%) and denoted the student having no jobs (54.55%). There were 45.45 % girls having the monthly income of family stuck between Rs. 30,000-39,000.

Table 1: Socio-economic profile of respondents

Socio-economic status	Frequency	Percentage
Age (years)		
18-21 (years)	60	54.55
22-25 (years)	50	45.45
Educational status		
Graduate	80	72.73
Post graduate	30	27.27
Caste		
General	40	36.36
OBC	41	37.27
SC/ST	29	26.37
Employment status		
Job holders	50	45.45
Student	60	54.55
Monthly income of family (Rs.)		
20,000-29,000	40	36.36
30,000-39,000	50	45.45
40,000- above	20	18.19

Occurrence regarding usages of plastic bags

The data in Table 2 confirmed that these girls played a significant role in determining the incidence of use of plastic bags. As per the result of the present study, about 50 % of the participants always use plastic bags for food shopping. It was also observed that 30 % were

using it 'sometimes' for food shopping while 40 % of them were using it 'always' as well as 'sometimes' as it is convenient for shopping. Almost 40 % were using plastic bags 'always' and 20 % were using it 'sometimes' as they are not aware of environmental pollution and protection.

Table 2: Frequency of usage of plastic bags

Usage of plastic bags for food shopping	Never	Sometimes	Always
Food shopping	(30) 27.27	(30) 27.27	(50) 45.46
Convenient	(30) 27.28	(40) 36.36	(40) 36.36
Environmental protection	(50) 45.45	(20) 18.18	(40) 36.36

Rank order for reasons regarding occurrence of plastic bags uses for food shopping

Table 3 gives rank order about reasons for using plastic bags for food shopping. The reasons rated at Ist rank may be that the adolescent girls use plastic bags without knowing the impact of storing food. Preference of plastic bags for food purchasing ranked IInd and it is a normal thing to buy in plastic bags ranked IIIrd may be due to cultural practices. Further, it was seen that comfortable with the hot food putting in a plastic bags got the IVth rank in adolescent's priority of food shopping.

The possible rankings for the use of plastic bags for convenient shopping showed handy to use as Ist rank followed by forgetting to take own bags as IInd rank. Further, the data showed that cheap or free of cost, too much

harass to always have own bags, strong or less likely to break, easier to unpack, provided by vendors/shopkeepers and just provided at the need as IIIrd, IVth, Vth, VIth, VIIth and VIIIth rank respectively.

The data regarding environmental protection revealed that adolescents were using plastic bags as these bags are usually recyclable (Ist rank), to conserve natural resources (IInd rank), to store leftovers (IIIrd rank), to prevent litter (IVth rank) and as it is bad for the environment (Vth rank).

While considering all the possible reasons for using plastic bags, the result showed that handy to use as Ist rank followed by without knowing the impact of storing food (IInd rank) and forget to take own bags (IIIrd rank), usually recyclable (IVth rank) and cheap or free of cost (Vth rank) as the main reason behind this.

Table 3: Reasons for using plastic bags for food shopping

Usage of plastic bags for food shopping	Score	Rank	Overall Rank
Food shopping			
Prefer plastic bags for food purchasing	2.36	II	VI
Using plastic bags without knowing the impact of storing food	2.59	I	II
Comfortable with the hot food putting in plastic bags	1.69	IV	XIII
A normal thing to buy foods in plastic bags	2.27	III	VII
Convenient			
Handy to use	2.73	I	I
Easier to unpack	1.73	VI	XII
Strong or less likely to break	1.91	V	IX
Cheap or free of cost	2.45	III	V
Forget to take own bags	2.57	II	III
Just provided at the need	1.36	VIII	XVI
Too much harass to always have own bags	2.09	IV	VIII
Provided by vendors/shopkeepers	1.66	VII	XIV
Environmental protection			
It is bad for environment	1.27	V	XVII
Useful to have plastic bags in the house to store leftovers	1.75	III	XI
To conserve natural resources	1.82	II	X
To prevent litter	1.64	IV	XV
It is usually recyclable	2.55	I	IV

DISCUSSION

Majority of adolescent girls (50%) in this study were regularly using plastic bags for food shopping. This result is in line with the findings of other studies that the largest proportion of respondents (76.52%) used plastic bags in high frequency². Haider *et al.*, also depicted the related results that 85.10% of the respondents use plastic bags for carrying shopping materials⁴. In this study, most participants (40%) were using as it is convenient for shopping. It was also observed that more than 50% were still using plastic bags for shopping. This was similar to the findings of the study done in Delhi where convenience for shopping was the commonest reason stated by most participants¹. The reason behind it, explained by them were handy to use, easier to unpack, free of cost, won't carry own bags, provided by vendors. Nitin *et al.*, found that 20% of participants were reusing plastic bags after usage⁷. Another study has also originated that 97% of shoppers have been reusing plastic bags¹⁰. Adane and Muleta indicated that widespread usage reported by respondents were due to low price (69.13%), easy availability (66.08%) and lightweight (41.30%)². A study from Verghese *et al.*, consistent with these findings that lightweight, cheap price, excellent fitness for use and resource efficiency as main reasons for widespread utilization of plastic bags by billions of customers throughout the world¹¹. According to Hopewell *et al.*, the large proportion of people does not value environmental aspects⁵. Adane and Muleta also observed many shopkeepers and retailers distributing plastic bags free of charge to their customers for carrying other sold items². After interviewing shopkeepers, street vendors, canteen managers and hostel wardens the fact came out that they follow the wrong ways of storing foods in polythene bags and are also unaware of the impact of storing hot foods (chips, pakora, vada, tea, dosa, idli, lunch, and dinner etc.) in polythene bags. They also expressed that none of the respondents even being educated had complained about this system. Further, the hostel wardens were not

interested to provide the aluminum and steel tiffin carriers and the respondents were never asked to bring foods in these carriers.

CONCLUSION

It may be concluded from the results that adolescent girls had higher uses of plastic bags for food shopping. The reasons found behind that were due to cultural practices, handy to use, without knowing the impact of storing food, forget to take own bags, usually recyclable and cheap or free of cost. Preference of plastic bags was given by adolescent's girls for food purchasing as a normal thing to buy. Further, it was seen that adolescents were comfortable with the hot food putting in plastic bags. Thus, awareness must be created to stop the use of plastic bags. Grocery stores and food plaza, street food stalls, etc., experiment some solution like mandatory deposits, purchasing fees, etc.

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