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**Latha P**  
Associate Professor,  
Department of OBG,  
Narayana College of Nursing,  
Nellore, Andhra Pradesh,  
India

**Dr. Indira Arumugam**  
Professor and Principal,  
Department of MSN,  
Narayana college of Nursing,  
Nellore, Andhra Pradesh,  
India

## A study to assess the level of polythene utilization among adults in N.T.R Nagar Nellore

**Latha P and Dr. Indira Arumugam**

### Abstract

**Background:** Polythene is the most common plastic. The annual global production is around 80 million tones. It's primary use is in packaging plastic bags, plastic films, geomembrances, containers including bottles etc. Many kinds at Polythene are known with most having the chemical formulas (C<sub>2</sub>H<sub>4</sub>) n Polythene usually a mixture at similar polymers at ethylene with various values.

**Aim:** The aim of the study was to assess the level of Polythene utilization in NTR Nagar among adults.

**Objectives:** 1. To assess the Polythene utilization in NTR Nagar among adults. 2. To find out the association between the levels of polythene utilization with selected socio demographic variables with selected socio demographic variables.

**Methodology:** 100 adults from NTR Nagar, Nellore were selected by using non probability convenient sampling technique.

**Results:** Regarding the level of polythene utilization, 79(79%) of them using polythene in moderate level and 21(21%) of them using polythene in excessive level.

**Keywords:** Polythene utilization, adults

### Introduction

Polythene is the most common plastic. The annual global production is around 80 million tones. It's primary use is in packaging plastic bags, plastic films, geomembrances, containers including bottles etc. Many kinds at Polythene are known with most having the chemical formulas (C<sub>2</sub>H<sub>4</sub>) n Polythene usually a mixture at similar polymers at ethylene with various values <sup>[1]</sup>.

Polythene was first synthesized by the German chemist Hans von Pechmann, who prepared it by accident in 1898 while investigating diazomethane. When his colleagues Eugen Bamberger and Friedrich characterized the white, Waxy substance that he had created, they recognized that it contained long CH<sub>2</sub> chains and termed it Polyethylene. The properties of Polythene can be divided into mechanical, chemical, electrical, optical and thermal properties <sup>[2]</sup>.

There are various environmental, social and health problems related to Polythene utilization in India. Poly bags are non-biodegradable, which means that they do not dissolved or disintegrated into the soil. Beside, they are non-porous and do not allow the free flow of water and air there by choking plants. In India, when open dumping grounds are filled, they are leveled out and converted into parks. Since the soil was full of non-biodegradable material, predominally plastic bags, the trees could not anchor themselves firmly into the grounds <sup>[3]</sup>.

Use of polythene is increasing day by day now it can be seen that polythene is being used in almost every activity of life. It has been estimated that India's polythene demand is expected to increase by 129% by 2023 <sup>[4]</sup>.

The day started with the morning milk that comes in trendy plastic sachet, bread in multi colored polythene covers and rice in transparent covers from fruits and vegetables to cloths and pens, all come in polythene wrappers. The polythene bags have become so common that we hardly notice their persons <sup>[5]</sup>.

Polythene bag on agent of environmental pollution. Cancer and skin disease has made clean cities into garbage dumps. Even village are not free from it. Polythene is both indigestible and indestructible. It causes environmental degradation. Polythene bags, when burnt, emit poisonous gas, which can cause cancer and skin disease. Every day they are thrown after use into ditches and they block the drainage system.

### Correspondence

**Latha P**  
Associate Professor,  
Department of OBG,  
Narayana College of Nursing,  
Nellore, Andhra Pradesh,  
India

Filthy water thus accumulated fills the city streets generating disease and posing a serious threat to traffic too [6].

**Need for the Study**

According to Rachel Cemansky (2016) global usage of polythene was 500million to 1trillion worldwide every day. New Delhi in the year 2016 India generates 5.6million metric tons of plastic waste annually with Delhi generating the most of at municipality at 68.95metric tone every day. According to NGO in Andhra Pradesh 40 microns of polythene was absolutely hazardous to health and environment [7].

According to plaster art agency, (2009) global demands for polythene resins will rise 4% pa (Pascal) to 99.6 minutes metric tons in 2018. The global Polythene demand is forecast to rise by approximately 3.7% pa between 2013 and 2018, at a slightly higher level that its growth during the 2003 to 2013 period, says a report from global data. This higher than-historic increase will occur in the USA and Europe primary in Russia [8].

According to the report of central pollution control board (CPCB) (2010) annually the Polythene production was 8.5 million and its usage was 3.27 million tones [9].

According to American plastic association (2016) percentage distribution of high density polythene 17.4% linear low density Polythene 12% and low density Polythene is 8.2 % respectively in term of sales and use in the year of 2016 in the United State [10].

According to Bnaghi, Seema (2016) conducted a study to assess the use of Polythene bags along with affecting ecologically oriented behavior with samples of 200 housewives was drawn from various part of NCR (New Delhi). 100 students were chosen from MCD schools, colleges and institutes. For lower income group category, sample of 100 was drawn from rickshaw puller, rag pickers and auto drivers. The result for this study 76.4% of individuals considered use of Polythene carry bag are a major threat to environment. 69.3% are aware of the fact that plastic carry bags are non-biodegradable. 83.3% disagree that plastic bags are harmful for plants and animals whereas 16.6% are not aware of such consequences. Though the resource factors such as reuse of plastic bag, disposal places and consequences do not reveal very clear motives, 54.4% think that the use of plastic bag is an environmental hazards [10].

Use of plastic bags and Polythene bags are banned in some state in India Bangalore (2016), Maharashtra, Rajasthan, Goa, West Bengal and Delhi [10].

**Problem Statement**

A study to assess the polythene utilization among adults in N.T.R Nagar, Nellore.

**Objectives**

1. To assess the Polythene utilization in NTR Nagar among adults.
2. To find out the association between the level of polythene utilization with their selected socio demographic variables.

**Delimitations**

The study is delimited to;

- People residing in NTR Nagar, Nellore.
- 100 sample size only
- two week data collection period only

**Methodology**

**Research Approach**

A quantitative approach was adopted to determine the research study.

**Research Design**

The present study was conducted by using descriptive research design.

**Setting**

The study was conducted at NTR, Nagar Nellore.

**Population**

**Target population:** The target population of the present study includes all adults.

- **Accessible population:** The accessible population of the study is adults living in NTR Nagar, Nellore.

**Sample Size:** The sample size of the present study was 100 adults in NTR Nagar, Nellore.

**Sample Technique:** Sample for the study was selected by non-probability convenient sampling technique.

**Criteria for Sampling Selection**

**Inclusive criteria**

- Adults living in NTR Nagar, Nellore.
- Adults willing to participate in the study.

**Exclusive criteria**

- People living in other villages.

**Description of the Tool**

**Part-I:** Deals with demographic data.

**Part-II:** Deals with observational check list to assess the level of polythene utilization.

Scoring Key The check list consist of 24 questions.

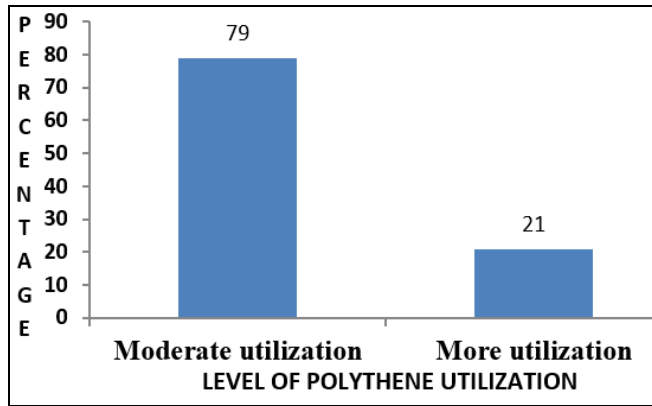
Level of polythene utilization	Score
Mild utilization	1-8
Moderate utilization	9-16
More utilization	17-24

**Data Analysis & Discussion**

**Table 1:** Frequency and percentage distribution of level of polythene utilization. (n=100)

S. No	Level of polythene utilization	Frequency (f)	Percentage (%)
1.	Moderate utilization	79	79
2.	More utilization	21	21
	Total	100	100

Table no- 2: shows that with regard to level of polythene utilization, 79(79%) of them using polythene in moderate level and 21(21%) of them using polythene in excessive level.



**Fig 1:** Percentage distribution of level of polythene utilization among adults.

**Table 2:** Mean and standard deviation of level of polythene utilization.

Criteria	Mean	Standard deviation
Level of polythene utilization	15.2	1.8

Table no-3: shows that the mean score of polythene utilization was 15.2 and standard deviation was 1.8 among adults.

**Table 3:** Association between level of polythene utilization and socio demographic variables. (n=100)

S. No	Demographic variables	Moderate		More		Chi square (x <sup>2</sup> )
		F	P	F	P	
1.	<b>Number of persons at home</b>					C=8.7 T=7.82 df=3 P<0.05 S*
	a. <4 members	29	29	6	6	
	b. 5-6 members	32	32	7	7	
	c. 7-8 members	16	16	4	4	
	d. >9 years	2	2	4	4	
2.	<b>Family income in Rupees</b>					C=9.5 T=5.49 df=4 P<0.05 S*
	a. <5000/-	19	19	6	6	
	b. 5001-7000/-	34	34	8	8	
	c. 7001-9000/-	21	21	3	3	
	d. 9001-11000/-	5	5	3	3	
	e. >11000/-	-	-	1	1	

**Major findings of the study**

- Regarding the level of polythene utilization, 79(79%) of them using polythene in moderate level and 21(21%) of them using polythene in excessive level.
- The mean score of polythene utilization was 15.2 and standard deviation was 1.8 among adults.
- Regarding association between level of knowledge and demographic variables, number of persons at home and family income had significant association with level of polythene utilization at P<0.05 level.

**Conclusion**

The study concluded that, majority of adults, 79(79%) are using polythene in moderate level and 21(21%) of them using polythene in excessive level in their house. Hence, the education and awareness has to be given to all adults in order to avoid the health hazards related to polythene utilization.

**References**

1. Barabara L Kennedy. Indian Journal of Community

Medicine. 2004; 6:45-47.  
 2. Bhuvaneswari. International Journal of Environmental Health Research. 2007; 14:109-119.  
 3. Chandra T. American journal of public health. 2003; 6:213-215.  
 4. Danstrickman. Parasites & Vectors: Indian Journal of Community. 2014; 74:76-79.  
 5. Health action “journal in health” vol.17, June (2009) Nursing Research vol. 577, November, December, 2008, 70-75.  
 6. Latha P. Knowledge and practice of health promotional activities among older adults in Narayana Medical College Hospital, Nellore, A.P, International Journal of Multidisciplinary Education and Research. 2017; 2(4):26-28.  
 7. Lippincott William and Wilkin American Journal of Health. 2008; 5:110-113.  
 8. Park K. The text book of Preventive & Social medicine Nineteenth edition. Bhanot Publishers, 2007, 626-628.  
 9. Robert B Wallace, The text book of Public Health & Preventive Medicine,1999, Fifteenth Publishers, page No-(266)