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Awareness and reactions of women regarding ban on polythene use in the State of Himachal Pradesh

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Abstract

Polythene once considered as a boon by the people and the shopkeepers is turning out to be a big nuisance and threatening the environment due to its non-biodegradable nature. In the state of Himachal Pradesh, the use of polythene bags was banned in June, 2004 .In the present study, views of rural and urban masses ,after the ban of polythene bags, were recorded in the district Kangra of Himachal Pradesh. Information was collected from different categories of users and scientists to know their views after a period of three years of ban. The tools applied for this purpose included interview schedule, observations and discussion with the users. It was noticed that most frequent use of polythene bags before its ban was in the form of shopping bags, dustbin/waste disposal bags, carry bags, tiffin packing material, storage material etc. and now it has been replaced by cloth, jute and paper bags. The urban people experienced its effect on their day-to-day activities and they took a long time to acclimatize to this ban. On the contrary, rural people were less affected and more careful about the use of polythene bags.

Key words: Polythene, impact, non-biodegradable

Introduction

Use of polythene has become a part of everyday life for the rural as well as urban masses. Market mechanism drives people to use polythene because it is cheap and easily available. But polythene once considered as a boon is turning out to be a nuisance due to its non- biodegradable nature. It has been realized that polythene cannot be destroyed and if burnt produce harmful toxins (www.jkspcb.org/ survival/ pages/ polythene_jam.html) which is threatening the environment. The real environment problem lies in what happens to the polythene bags after the consumer is through with them. Keeping this aspect in mind, the use of polythene bags was banned in the state of Himachal Pradesh on June 14th, 2004 because polythene bags clog waterways, lead to flooding, soil erosion and cause all sorts of havoc to wildlife too. Thus the present investigation was carried out with the objectives to study the views of rural and urban ladies regarding ban on polythene use in the state of Himachal Pradesh.

Material and Methods

The present investigation was conducted in Palampur city and two villages named Rajpur and Patti of district Kangra, Himachal Pradesh. Information was collected from 100 respondents comprising of fifty women each of rural and urban areas. To verify the impact of polythene on animals, discussion was held with veterinary doctors of CSKHPKV, Palampur. The data collection tools applied for this purpose included interview schedule, observations and discussion with the users.

Results and Discussion

The data summarized in Table 1 regarding personal profile of the respondents revealed that majority of the rural as well as urban women belonged to middle age group. As regards educational level of the rural respondents, 54.00 percent of them had their education up to matric level, whereas 90.00 per cent of the urban respondents were graduate and post graduate. Regarding occupation, majority of the rural respondents were housewives (72.00%), however, in urban areas almost an equal percentage of the respondents were either housewives (52.00%) or in service (48.00%).

The perusal of data in relation to awareness regarding different aspects of ban on polythene use (Table 2) indicated that all the urban respondents and nearly eighty per cent (82.00%) of the rural respondents knew that a law has been enacted banning use of polythene bag. Data in the study further revealed that

Table 1. Personal profile of the respondents n=100

Variables	Categories	Rural (n_1=50)		Urban (n_2=50)	
		f	%	f	%
Age	Young(26-37)	18	36.00	20	40.00
	Middle (38-49)	21	42.00	24	48.00
	Old (50-60)	11	22.00	6	12.00
Education	Illiterate	2	4.00	0	0.00
	Primary	8	16.00	1	2.00
	Matric	27	54.00	5	10.00
	Graduate	10	20.00	16	32.00
	Post graduate	3	6.00	29	58.00
Occupation	Housewife	36	72.00	26	52.00
	Service	14	28.00	24	48.00

Table 2. Awareness regarding different aspects of ban on polythene in the state of Himachal Pradesh

n=100

Aspects	Response	Rural (n_1=50)		Urban (n_2=50)	
		f	%	f	%
Enactment of ban	Yes	41	82.00	50	100.00
	No	9	18.00	0	0
Date of implement- tation of ban	Yes	6	12.00	40	80.00
	No	44	88.00	10	20.00
Fine to be charged for using polythene bag	Yes	36	72.00	42	84.00
	No	14	28.00	8	16.00

majority of the urban women were aware of the exact date of implementation of the ban in contrast to the rural women who were not aware of the date at all. A good percentage of respondents from both the sections i.e. 72.00 per cent from rural and 84.00 percent from urban had knowledge about the fine imposed on the defaulters i.e. users of polythene bags. Thus it can be interpreted that the awareness regarding ban and penalty for using polythene may be due to the wide publicity campaign by the government of Himachal Pradesh and strict vigilance.

Table 3 presents information regarding type of bag preferred by the respondents to keep or carry things. It was noticed that almost all the respondents both from rural and urban group reported use of polythene bag to carry the belongings.

Table 3. Type of bag preferred to keep/carry things before ban

Type of bag	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
Paper bag	3	6.00	0	0.00
Polythene bag	46	92.00	48	96.00
70 micron bag	0	0.00	2	4.00
Cloth bag	15	30.00	11	22.00

* Frequency denotes multiple responses

A meager percentage of them preferred to carry paper bags also. The various reasons cited by respondents for using polythene bags was easy to carry, water proof quality and easy availability (Table 4). According to a survey report of BAPA (a common forum of citizens), over 29 per cent of the respondents of Bangladesh said polybags are easier to carry and store (www.bapa.info/ activities/ban_polythene. html)

Table 4. Advantages of using polythene bags

Advantages	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
Easy to carry	41	82.00	47	94.00
Cheap	10	20.00	7	14.00
Water proof	29	85.00	25	50.00
Easy available	27	54.00	16	32.00

* Frequency denotes multiple responses

The data regarding the use of polythene bags before ban and its substitute after the ban have been incorporated in the Table 5. The figures in the table revealed that the most frequent use of polythene bags was in the form of shopping bags, lunch packing material, dustbin /waste disposal bags, storage and carry bags. It was further observed that after ban the public has switched over to various alternatives of polythene. For shopping purposes nearly 75.00 per cent rural and urban masses showed interest

Table 5. Purpose for which polythene bag was used before and its substitute after ban

	Purpose	Rural (n_1=50)				Urban (n_2=50)			
		Before ban		After ban		Before ban		After ban	
		f	%	f	%	f	%	f	%
A.	Shopping								
	-Polythene bag	49	98.00	-	-	47	94.00	-	-
	-Cloth bag	-	-	38	77.55	-	-	37	78.72
	-Paper bag	-	-	4	8.16	-	-	2	4.26
	-Jute bag	-	-	1	2.04	-	-	5	10.64
	-70 micron			6	12.24	-	-	3	6.38
B.	Packing lunch								
	-Polythene bag	15	30.00	-	-	32	64.00	-	-
	-Paper bag	-	-	5	16.67	-	-	4	12.50
	-Newspaper	-	-	8	26.67	-	-	9	28.13
	-Wrappers	-	-	2	6.67	-	-	19	59.38
C.	Dustbin/waste disposal								
	-Polythene bag	22	44.00	-	-	28	56.00	-	-
	-Dustbin	-	-	15	34.09	-	-	28	100.00
D.	Storage								
	-Polythene bag	26	52.00	-	-	17	34.00	-	-
	-Cloth bag	-	-	18	69.23	-	-	5	29.41
	-70 micron	-	-	8	30.77	-	-	12	70.59
E.	Carrying belongings								
	-Polythene bag								
	-Cloth bag	8	16.00	-	-	16	32.00	-	-
	-70 micron	-	-	5	62.50	-	-	5	31.25
		-	-	3	37.50	-	-	11	68.75

* Frequency denotes multiple responses

in cloth bags, followed by paper and jute bags. For packing lunch the ladies are using newspaper, paper bags and wrappers of maggi, chips etc. which were earlier discarded after consuming the product. It was noticed that the use of wrappers was more by the urban class as these people have more exposure to such items. There was a difference in the use of polythene bags for waste disposal by both categories of respondents as rural people collected the waste in polythene bags while urban ladies used it as a base layer to avoid spoilage of dustbin. Thus, about 68.00 percent of the rural ladies had to purchase new dustbins after the ban on polythene. As regards storage and carrying belongings, polythene has been replaced by cloth bags and 70 micron polythene bags.

As regards consumption pattern of polythene bags the figures in Table 6 revealed that majority of the rural (90.00%) as well as urban (78.00%) families used maximum up to two polybags per day which amounts to approximately 60 polythene bags per month per family. Kaushik (1998) in her article on polythene as an environmental disaster in Science Tribune stated that upto 15 polybags per week were used by 85.00 percent of the common people.

Table 6. Per day consumption pattern of polythene bags by the respondents n=100

Number of polythene bags	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
1-2	45	90.00	39	78.00
3 and above	5	10.00	11	22.00

While enquiring about the disposal of polythene bags after their use (Table 7) it was discouraging to note that the respondents of the present study either throw or burn the discarded polythene bags. Nearly 65.00 percent of the urban users reported that they throw the polythene bags in water bodies, bushes, fields and garbage pit while majority of the rural people i.e. 78.00 percent burn the polythene bags daily in their chullahs instead of throwing them. According to them throwing the polybags is not a healthy practice and burning destroys them. Thus it can be concluded that though rural women

seem to be aware of pollution/destruction of soil and water by polythene, on the other hand, they are ignorant of the fact that burning of the polythene produces hydrogen cyanide and other poisonous gases (www.bapa.info/activities/ban_ polythene.html) thus adding to air pollution.

Table 7. Method of disposal of discarded polythene bags

Method of disposal	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
Throw	29	58.00	32	64.00
-Water bodies	9	31.03	9	28.13
-Bushes	12	41.38	1	3.13
-Fields	5	17.24	9	28.13
-Garbage pit	3	10.34	9	28.13
- Burn	39	78.00	18	36.00

*Frequency denotes multiple response

It is necessary to mention here that the urban people also burn the polythene periodically along with the other garbage. By the time garbage is being burnt, some of the polythene disperse here and there thus out of control to dispose. As it is not safe to either throw or even burn the polythene, it is better/ suggested to give it to the junk dealer because he is an eco-friendly man who helps recycle most of our junk.

Table 8 presents the adverse effects of polythene use in day to day life. Under health aspect, the respondents stated that polythene choke animals if eaten by them (80.00% rural; 28.00 %urban). This fact is also supported by the veterinary doctors also. Other ill-effects reported by the respondents included: polybags dumped near households can lead to breeding mosquitoes which cause dengue fever, filariasis etc (18.00%rural;54.00% urban) and if thrown anywhere leads to unhygienic conditions (46.00% rural ;42.00% urban). None of the rural women was aware of the fact that polythene wrapped fish, meat get infected by anaerobic bacteria which cause skin diseases and cancer while 32.00 per cent urban ladies stated this statement. In this respect, Shahriar (2003) said that polythene wrapped fish and meat generate a kind of heat that creates radiation which ultimately make the food poisonous.

Table 8. Adverse-effects of polythene use perceived by respondents

Adverse-Effects	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
Health				
-Polythene can choke animals if eaten by them.	40	80.00	14	28.00
-Polythene bags dumped near household can lead to breeding mosquitoes which cause dengu .fever, filariasis.	9	18.00	27	54.00
-Polythene thrown anywhere leads to unhygienic conditions.	23	46.0	21	42.00
-Polythene wrapped fish, meat get infected by anaerobic bacteria which cause skin disease and cancer.	0	00.00	16	32.00
Soil fertility	18	36.00	21	42.00
-Polythene reduces soil fertility.				
Air				
-Burning of polythene produce hydrogen and other poisonous gases that pollute air.	8	16.00	17	34.00
Miscellaneous				
-It can cause blockage in the drains causing water logging and germination of water borne diseases.	15	30.00	37	74.00
-Coloured polythenes are harmful as they can cause allergies.	0	0	5	10.00

* Frequency denotes multiple responses

Exactly 42.00 per cent urban and 36.00 per cent rural ladies reported that polythene reduces soil fertility. International Rice Research Institute (IRRI) found that polybags by preventing sunlight exposure of the soil destroy the beneficial bacteria causing loss of soil fertility (www.bapa.info/ activities/ ban_ polythene.html).

Regarding impact of polythene use on air pollution, 34.00 per cent of the urban and 16.00 per cent of the rural respondents stated that burning causes air pollution but they were unaware of the fact that burning produces hydrogen cyanide and other poisonous gases that pollute air (www.jkspcb.org/ survival/ pages/ polythene_ jam.html).

Besides these ill effects, 74.00 and 30.00 per cent respondents from urban and rural area, respectively complained of blockage in drainage. A meager percentage of the urban respondents (10.00 %) reported coloured polythenes as more harmful leading to allergies which was supported by Pradhan (2000) in her article stating that coloured polythene contain harmful toxic metals like chromium and copper which cause allergies. Experiences of the respondents immediately after the ban on polythene use have been incorporated in table 9 where majority of the respondents reported difficulty to carry bag every time to the market as they were not habitual of it. They also complained that paper bag tears while carrying vegetables followed by those who reported of leakage from lunch box, mixing of grocery items, and difficulty in shopping if one forgets to carry bag from home.

Table 9. Experiences of respondents immediately after ban on polythene use

Experiences	Rural (n_1=50)		Urban (n_2=50)	
	f	%	f	%
-Oil from lunch box leaks out if wrapped in paper.	2	4.00	5	10.00
-All the grocery items mix up if paper bag tears.	2	4.00	10	20.00
-Paper bag tears if moist vegetables are carried.	3	9.00	9	18.00
-Shopping is impossible if one forgets to carry bag to market.	2	4.00	8	16.00
-Find it difficult to carry bag every time.	3	9.00	0	9.00

*Frequency denotes multiple responses

Conclusion

Thus, in nutshell it can be concluded that most frequent use of polythene bags by respondents was in the form of shopping bags, waste disposal bags, tiffin packing and storage material etc. which has been replaced by cloth or paper bag. On an average 60 polythene bags per month per family were consumed. Majority of the respondents were aware about the fact that polythene is not degradable, yet their attitude regarding disposal of polythene is very discouraging as they used to throw or burn them. In this respect it can be suggested that 3'R golden rule must be followed i.e. Reduce, Reuse and Recycle the polythene. It is further suggested that though use of polythene has been banned in the state, still there are many products which are poly-packed like milk and milk products, bread, biscuits etc., thus suitable measures should be taken in this direction also. Authors are also of the opinion that though ban on use of polythene has been imposed, still there is need to conduct social awareness camps on large scale regarding hazardous effects of polythene use on our environment. Like Himachal Pradesh the ban on polythene has been imposed in some other states also, but instead of working in piece meal, there is a need to have a policy at national level.

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