A Study on Household Knowledge on Usage of Plastic Bags in Virudhunagar Municipality

Dr.P.Bharathi*

*Assistant Professor Department of Economics, V.H.N.S.N College (Autonomous), Virudhunagar, India

*Corresponding Author Email Id: bharathitharuna@gmail.com

Abstract

Plastic bags are difficult and costly to recyle and most end up on landfill sites where they take around 300 yuears to degrade. They are light weight, handy and easily discarded. The effects of plastic bags on the environment are really quite devastating. Whil there are many objections to the banning of plastic bnags based solely on their convenience, the damage to the envoronment needs to be controlled. In this paper an attempt has been made to study the households knowledge on usage of plastic bags in virudhunagar municipality.

Introduction

Plastic bags are difficult and costly to recyle and most end up on landfill sites where they take around 300 yuears to degrade. They break down into tiny toxic particles that contaminate the soil and waterways and enter the food chain when animals accidentally ingest them. But the problems surrounding waste plastic bags starts long before they photodegrade. Our planet is becoming increasingly contaminated by our unnecessary use of plastic bags.

They are light weight, handy and easily discarded. While dtahey were rarely found during the 60s and 70s, their usage has increased at an alarming rate since they became popular during the 80s. Plastic bags can be seen hanging from the branches of trees, flying in the air on windy days, settled amongst bushes and floating on rivers. They clog up gutters and drains causing water and sewage to overflow and become the breeding grounds of germs and bacteira that cause diseases.

The effects of plastic bags on the environment are really quite devastating. While there are many objections to the banning of plastic bags based solely on their convenience, the damage to the environment needs to be controlled. In this paper an attempt has been made to study the households perception in usage of plastic bags in virudhunagar municipality.

Objectives of the study

(i) To study the socio economic background of the respendents

(ii) To analyse the respondents knowledge on usage and banning of plastic bags.

(iii) To anlyse the factors determing the knowldege on plastic bag usage.

Nature of the study

This study is based on cross-sectional data collected through the survey method with the help of a pre-tested interview schedule specially designed for collecting comprehensive information.

Data base

Relevant and required data pertaining to the present study have been collected from primary sources. For collection of information from the households a pre-tested and structured interview schedule has been used. Information collected through direct field enquires from the respondents. The completed schedules were checked and the omissions were rectified on the spot.

Sampling Technique

Total population of the study area is 73,003 out of this 200 sample respondents have been selected by using systematic random sampling method.

Tools of techniques

For the analysis purpose simple percentage anlaysis and Binary regression analysis has been used.

Socio Economic Background of the Sample Respondents

It portrays the age composition, gender classification, educational status, occupational status of the sample respondents.

TABLE 1
GENDER-WISE DISTRIBUTION OF RESPONDENTS

S.No	Gender	No. of Respondents	Percentage
1	Male	131	65.5
2	Female	069	34.5
	Total	**200**	**100.0**

Source: Compiled from Primary Data

The above table indicates that majority of the respondents (65.5 per cent) are male and the remaining 34.5 per cent of them are female.

TABLE 2
AGE WISE CLASSIFICATION OF RESPONDENTS

S.No	Age	No. of Respondents	Percentage
1	Below20	51	25.5
2	20-29	78	39.0
3	30-39	37	18.5
4	Above40	34	17.0
	Total	**200**	**100.0**

Source: Compiled from Primary Data

The analyses indicates that, out of the total respondents, 39 Per cent of them are in the age group of 20-29, followed by this 25.5 per cent of them are below 20 years of age and 18.5 Per cent of them are in middle age group and remaining 17 Per cent of them are above 40 years of age group.

TABLE 3

EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

S.NO	Educational Qualification	No. of Respondents	Percentage
1	Illiterate	36	18.0
2	Primary Education	46	23.0
3	Higher Secondary	41	20.5
4	Higher Education	77	38.5
	Total	**200**	**100.0**

Source: Compiled from Primary Data

Out of the total sample respondent's majority (38.5 Per cent) of them are educated up to graduation. 23.3 Per cent of them are educated up to primary education, 20.5 Per cent of them are educated at higher secondary. More than half of the respondents (18 Per cent) are illiterate.

TABLE 4

OCCUPATIONAL STATUS OF THE RESPONDENTS

S.No	Occupational Level	No. of Respondents	Percentage
1	Student	76	38.0
2	Govt.Employee	20	10.0
3	Private Employee	37	18.5
4	Business Man	29	14.5
5	Housewife	28	14.0
6	Unemployed	10	05.0
	Total	**200**	**100.0**

Source: Compiled from primary data

The table indicates that, 38 per cent of the sample respondents are students, followed by this 18.5 Per cent of them are private employee working in various industries as well as in shop, 14.5 Per cent of them are business man and house wife, and remaining 5 Per cent of them are unemployed.

TABLE 5

KNOWLEDGE ON IMPACT OF PLASTIC BAG WASTE DISPOSAL ON ENVIRONMENT

S.No	Impact On Environment	No. of Respondents	Percentage
1	Yes	84	42.0
2	No	62	31.0
3	No Idea	54	27.0
	Total	**200**	**100.0**

Source: Compiled from primary data

The anbove explains the respondent's opinion on the impact of plastic bag waste disposal on environment. 42 Per cent of the respondents know the impact of plastic bag wastes on environment. 31 Per cent of the respondents don't know the impact of plastic bags wastes on the environment and the remaining 27 Per cent of the respondents don't have any idea of the impact of the plastic bag waste disposal on the environment.

TABLE 6

SOURCES OF INFORMATION ON PROBLEMS OF PLASTIC USAGE AND WASTE

S.No	Sources Of Information	No. of Respondents	Percentage
1	TV/radio	36	18.0
2	School	16	08.0
3	From Professionals	10	05.0
4	Published materials	16	08.0
5	Friends	06	03.5
	Total	**84**	**42.0**

Source: Compiled from primary data

The above table reveals the sources of information on problem of plastic waste and usage. Majority of the sample respondents' (18 Per cent) came to know about the various environmental problems of using of plastic products thro TV /radio. Through published materials

and education from school 8 Per cent obtained information. And the remaining 6 Per cent and 5 Per cent gained awareness from friends and their professionals.

TABLE 7

KNOWLDEGE ON ALTERNATIVE MATERIALS FOR PLASTIC BAGS

S.No	Alternative Materials	No. of Respondents	Percentage
1	Paper Bags	56	28.0
2	Fiber Bags	29	14.5
3	Jute Bags	27	13.5
4	Cloth Bags	88	44.0
	Total	**200**	**100.0**

Source: Compiled from primary data

The analyses indicates that, majority of the respondents (44 Per cent) prefer using of cloth bags are the best alternatives and 28 Per cent of the respondents suggest paper bags instead of plastic bags is the best alternative to prevent pollution. Followed by this 14.5 Per cent of them suggested fiber bags can used as a substitute for plastic bags and the remaining 13.5 Per cent of them suggested the jute bags also served as best alternative for plastic bags.

TABLE 8

KNOWLEDGE ON REUSABLE PLASTIC

S.No	Knowledge	No. of Respondents	Percentage
1	Yes	95	47.5
2	No	105	52.5
	Total	**200**	**100.0**

Source: Compiled from primary data

Out of the total sample respondents, majority (52.5 Per cent) of the sample respondents had no knowldege on plastics products which can be reusable. Whereas the remaining (47.5 Pser cent) of them known the plastic products which can be reusable.

TABLE 9

RESPONDENTS OPINION ON BANNING OF PLASTICS BAGS

S.No	Opinion On Banning	No. of Respondents	Percentage
1	Should Be Banned	90	45.0
2	Should not Banned	110	55.0
	Total	**200**	**100.0**

Source: Compiled from primary data

Out of the total sample respondents, majority 55 per cent of them felt that the usage of plastic bags should be banned because of degradation of quality of the environment where as remaining 45 per cent of them that felt it should not banned because of limited alternatives for plastic bags.

TABLE 10

RESPONSIBILITY OF BANNING THE USAGE OF PLASTIC BAGS

S.No	Banning of Usage	No. of Respondents	Percentage
1	Municipality	23	11.5
2	Non-government Organisation	19	09.5
3	Governments	19	09.5
4	Environment Agencies	15	07.5
5	The Community Itself	14	07.0
	Total	**90**	**45.0**

Source: Compiled from primary data

Out of the total sample respondents, majority of them (11.5 Per cent) had the opinion that the responsibilities of banning usage of plastics are in the hand of municipality. Remaining respondents felt that banning has been done only through administers like (NGO, government, environment agencies).

TABLE 11

RESPONDENTS OPINION ON CHARGING ON USAGE OF PLASTIC BAGS

S.No	Opinion Of Charging	No. of Respondents	Percentage
1	Yes	87	43.5
2	No	54	27.0
3	I Don't Know	59	29.5
	Total	**200**	**100.0**

Source: Compiled from primary data

Out of the total sample respondents, 43.5 per cent of the total sample respondents felt that charging for using of plastic bags is somewhat good to reduce the usage. Whereas, 27 per cent of them said no for charging and the remaining 29.5 per cent of them not having any idea on that.

Determinants on Knowledge of Recycling of Plastics

The factors determining the knowledge on usage of plastics has been estimated by using Logistic regression. Logistic regression is a type of predictive model that can be used when the target variable is a categorical variable with two categories.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4$$

Knowledge on usage of plastic = f (age, sex, educational qualification, occupational pattern)

Knowledge on usage of plastic = 1 for Yes, 2 for No.

Age (X_1) = Age of respondents in years.

1 Below 20

2 20-29

3 30-39

4 Above 40

Sex (X_2) = 1 for Male and 2 for Female.

Literary level (X_3) = Educational qualification of the respondents.

1 for illiterate,

2 for primary education,

3 for higher secondary,

4 for higher education

Occupational Pattern(X_4) = Occupational status of the respondents.

Social characters (y) were regressed with the respondents' knowledge on recycling of plastics. The independent variables were Age (x_1), Sex (x_2), and Educational Qualification (x_3), and Occupational status (x_4). The results were presented in the below table.

TABLE 12

REGRESSION ANALYSIS RESULT

Variables	B	S.E	WALD	D. F	SIG	EXP(B)
X_1 SEX	-.579	.338	2.940	1	.086*	.560
X_2 AGE	.053	.171	.098	1	.754	1.055
X_3 EDUCATIONAL QUALIFICATION	-.148	.140	1.123	1	.289	.862
X_4 OCCUPATION	-.106	.112	.896	1	.344	.900
CONSTANT	.699	.764	.837	1	.360	2.012
-2 log likelihood 252.568 R^2 value .55						

*Significant at 5 percent level

The above table shows the combined effects of Sex (x_1), Age (x_2), Educational Qualification (x_3) and Occupation (x_4). To determine on knowledge the Recycling, from the above analysis it can be inferred that type of Age is the most (X_2) factor in influencing knowledge on recycling of plastics. When it has been increased by 1 Per cent the chances of getting more knowledge on Recycling of Plastics will be increased by 1.055 Per cent. Where as the Occupational Pattern is also an anthor important factor in influencing knowledge on recycling of plastics. When it has been increased by 1 Per cent the chances of getting more knowledge on recycling of plastics will be increased by .900 Per cent.

Regarding the educational qualification when it has been increased by 1 Per cent the chances of getting more knowledge on recycling of plastics will be increased by .862 Per cent.

The R^2 value of the model is .55. Since the value is more than.55, the model reflect a good fit. That is 55 Per cent of the knowledge on recycling of plastics can be explained by their independent variables, namely age, sex, educational qualification and occupational status.

Conclusion

The result reveals that in the study area people are having lack of knowldege on impact of plastic bag usage as well on knowldege on reusable bag. Majority of them are aginst for banning of usage of plastic bags without realising the seroiusness of harmful hazards of plastic bags. There are many alternatives to plastic bags. Governemnt should take effort to create the awareness on these alternatives among the people which can help to reduce the usage of plastic bags.

References

http://www.helathguidance.org/entry/14901/The - Effects -of-Plastic-Bags-on-Environment

http://www.googobits.com/articles/p4-1604-plastic-bag-pollution.html.

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