

## ASSESSMENT OF GREEN CONSUMER BEHAVIOR AND WASTE DISPOSAL PATTERN

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### ABSTRACT

The present study was conducted to assess the green consumer behavior of respondents, their waste disposal pattern and factors that influence their green behavior. Descriptive research design was selected for the present study. Random sampling method was used to select respondents for conducting this study. Total 300 respondents were selected through simple random sampling method; who are residing in campus of Sardarkrushinagar Dantiwada Agricultural University. A teacher made test was developed to assess green consumer behavior of the respondents. Interview schedule was developed to know the basic information of the respondents, their waste disposal pattern and factors affecting their green consumer behavior. Data were analyzed by using suitable descriptive statistics. Majority of the respondents belonged to medium category of green consumer behavior. Waste disposal pattern was not proper. Several factors affected green consumer behaviour of respondents such as their education, income, family size, motives, barriers of purchasing green products and environmental concern.

**KEY WORDS :** Green consumer behavior, Disposal pattern

### INTRODUCTION

The term “green” is typically used interchangeably with “pro-environmental” or “eco-friendly”. However, because of difference in definitions of the environment, the term is necessarily imprecise. The term green is simply used to indicate concern with the physical environment (air, water, land). The term consumer behaviour is defined as the behaviour that consumers display for purchasing, using, evaluating and disposing of products and services that they utilize.

Milcheud and Llerena (2010) stated that green products have the same basic functions as conventional products but their impact on the environment over their life cycle is mitigated. They can be considered as private goods affiliated with public (environmental) characteristics in the sense that they provide both a private benefit to the consumer and a public environmental benefit. Kotchen (2005) defines these products as ‘impure public goods’. The underlying idea is that, by

purchasing a green product, individuals not only satisfy a private need, but also contribute voluntarily to a public good (i.e. the natural environment).

Hence, for this study the green consumer is considered as anyone whose behaviour is influenced by environmental concerns and the environmental concern that consumers display for purchasing, using and disposing of products is considered as “Green Consumer Behaviour”.

- i. To assess the green consumer behavior of respondents
- ii. To find out waste disposal pattern of respondents
- iii. To identify the factors that influence their green behavior

### RESEARCH METHODOLOGY

Descriptive research design was selected for the present study. Random sampling method was used to select respondents for conducting this study. Total 300 respondents were selected through simple

random sampling method; who are residing in campus of Sardarkrushinagar Dantiwada Agricultural University. A teacher made test was developed to assess green consumer behavior of the respondents. Interview schedule was developed to know the basic information of the respondents, their waste disposal pattern and factors affecting their green consumer behavior. Data were analyzed by using suitable descriptive statistics.

## RESULTS AND DISCUSSION

**Table 1.** Distribution of respondents according to their age (n=300)

Age (In yrs)	<i>f</i>	%
0-35	118	39.4
35-50	91	30.3
≥ 50	91	30.3
Total	300	100.0

Almost forty per cent respondents belonged to young group and rest of the respondents were equally distributed into middle age group and old age group.

**Table 2.** Distribution of respondents according to their education (n=300)

Education	<i>f</i>	%
Illiterate	08	2.7
Primary	25	8.3
HSC	16	5.3
SSC	35	11.7
Graduation	56	18.7
Post Graduation	76	25.3
PhD	84	28.0
Total	300	100.0

Maximum twenty eight per cent respondents had doctorate degree followed by post graduation (25.3 %) and graduation (18.7 %). However, almost three per cent were illiterate and eight per cent had only primary education. Hence, the sample represents respondents of low as well high educational level.

The income distribution of respondents shows that twenty three per cent respondents were earning less than one lakh income annually. Though, maximum (31.0 %) respondents were earning 1-5 lakh income annually followed by 5-10 lakh (23.7 %) income annually. A small proportion of respondents, i.e. four per cent were earning more than 20 lakh income annually.

Maximum (44.7 %) respondents had four - six

**Table 3.** Distribution of Respondents according to their income (n=300)

Income	<i>f</i>	%
≤ 1 lakh	69	23.0
1-5 lakh	93	31.0
5-10 lakh	71	23.7
10-15 lakh	39	13.0
15-20 lakh	16	05.3
≥ 20 lakh	12	04.0
Total	300	100.0

**Table 4.** Distribution of Respondents according to their family size (n=300)

Family Size	<i>f</i>	%
< 4	108	36.0
4-6	134	44.7
6-8	54	18.0
> 8	04	01.3
Total	300	100.0

family members followed by thirty six per cent respondents who had less than four family members. Eighteen per cent respondents had six-eight family members and negligible proportion had more than eight family members. Hence, it can be said that majority of respondents had small or medium family size.

**Table 5.** Distribution of Respondents according to their caste

Caste	<i>f</i>	%
SC	44	14.7
ST	19	06.3
OBC	94	31.3
General	143	47.7
Total	300	100.0

Less than half of the respondents belonged to general caste followed by Other Backward Classes (31.3 %). Six per cent respondents belonged to schedule tribe and rest almost fifteen per cent belonged to schedule caste.

**Table 6.** Distribution of respondents according to their awareness about green products (n=300)

Awareness about green products	<i>f</i>	%
Yes	49	16.4
Somewhat	175	58.3
No	76	25.3
Total	300	100.0

**Table 7.** Distribution of respondents according to their concern about environment (n=300)

Environment concern	<i>f</i>	%
No	40	13.3
Sometimes	113	37.7
Yes	147	49.0
Total	300	100.0

One fourth of the respondents were not aware about green products while about fifty eight per cent were somewhat aware about green products while about sixteen per cent were aware about green products.

The data in Table 7 shows that almost half of the respondents reported that they were concerned about the environment. Thirteen per cent respondents stated that they did not think or consider about the environment. It can be inferred that respondents show their concern about environment.

Respondents were interrogated about different barriers which were involved for not purchasing green products. Many barriers were cited by respondents; amongst them main factors were non availability and not specifically mentioned about green products. Thirteen per cent respondents also stated that due to high price they don't purchase green products. It can be inferred from the data that it should be specifically mentioned on labels that it

is a green product.

More than half of the respondents stated that the motive behind purchasing green products is environmental concern while almost twenty six per cent reported that they purchased green products due to good quality. Some of other reasons were also cited by respondents such as easily available and brand image of a particular company while only five per cent respondents did not mention any reason.

**Table 10.** Distribution of respondents according to their level of green consumer behaviour

Green consumer behaviour	<i>f</i>	%
Low	43	14.3
Medium	214	71.4
High	43	14.3
Total	300	100.0

The green consumer behaviour of respondents was measured using teacher made test and it was observed from the Table 10 that maximum respondents (71.4 %) were adopting medium green consumer behaviour while fourteen per cent respondents fell into the category of low green consumer behaviour and same proportion of respondents showed high green consumer behaviour.

Green consumer behaviour of the respondents

**Table 8.** Barriers for purchasing green products

(n=300)

Barriers	<i>f</i>	%
No reason	12	04.0
Don't have trust that these are green products	19	06.3
Not specifically mentioned	84	28.0
Not specifically mentioned and high price	2	00.7
Not available	92	30.7
Not aware	42	14.0
High price	39	13.0
High price and not available	10	03.3
Total	300	100.0

**Table 9.** Motives for purchasing green products

(n=300)

Motives for purchasing green products	<i>f</i>	%
Environment concern	160	53.3
Good quality product	79	26.3
Brand image	4	01.3
Available easily	29	09.7
Good quality product and Environment concern	13	04.4
Did not mention	15	05.0
Total	300	100.0

**Table 11.** Mean score of green consumer behaviour

(n=300)

S.N.	Statements	Mean score
	<b>Purchasing intention and behaviour</b>	
1.	When there is a choice, I always choose the product which contributes to the least amount of pollution.	3.90
2.	I make every effort to buy paper products made from recycled paper.	3.60
3.	When I have a choice between 2 equal products, I always purchase the one which is less harmful to the environment.	4.11
4.	I try only to buy products that can be recycled.	3.32
5.	I recycle some of my household trash.	<b>2.65</b>
6.	I have convinced members of my family or friends not to buy some products which are harmful to the environment.	3.45
7.	I pay extra for purchasing environment friendly products.	3.02
8.	I collect information about environment friendly and energy saving products before purchasing.	3.53
	<b>Energy saving</b>	
9.	I purchase energy efficient electronic products.	4.16
10.	I try to use renewable energy like solar energy equipment for different purposes.	2.99
11.	I try to save energy by switching off unnecessary lights and other equipment.	<b>4.47</b>
12.	Mostly, I see eco label on products I purchase.	3.55
	<b>Environment consideration during purchase, use and dispose</b>	
13.	I inquire about any possible harmful effects of products on environment before purchasing.	3.14
14.	I prefer organic products due environment friendly approach.	3.62
15.	I am always concerned and aware about environmental conservation.	3.72
16.	I feel that improper waste disposal is a serious environmental concern.	4.01
17.	I prefer to buy products which are packaged in biodegradable material.	3.52
	<b>Knowledge and experience</b>	
18.	I prefer green products as these are more effective.	3.80
19.	I am aware that green products are more appropriate and less harmful.	3.86
20.	I am interested to get more information about green products.	<b>4.29</b>

was assessed on four aspects having twenty statements. It was found that highest score was given to the switching off unnecessary lights and equipment followed by interest to attain more information about green products. Lowest score was given to the recycling of waste. It can be inferred from the data that respondents made efforts in saving energy but they did not put efforts in recycling the trash or using renewable energy.

ANOVA test was applied to study the difference between different aspects of green consumer behaviour. The highest rank was given to

environmental consideration during purchase, use and dispose aspect followed by knowledge and experience, energy saving and purchasing intention and behaviour. Respondents are concerned about environment and they are interested to gain more knowledge about green products. But they are not purchasing green products. There was found significant difference between environment concern, knowledge and experience, energy saving and purchasing intention and behaviour of SDAU employees.

Majority of the respondents were fully and

**Table 12.** Comparison of various aspects of green consumer behaviour

Different aspects	Treatment of 'Score'	Rank of Treatment
Purchasing intention and behaviour	68.93 <sup>d</sup>	4
Energy saving	75.88 <sup>c</sup>	3
Environmental concern	90.10 <sup>a</sup>	1
Knowledge and experience	79.69 <sup>b</sup>	2
General Mean	78.65	
CV(%)	25.81	
SE(d)	1.657	
CD at 5%	3.2512	

**Table 13.** Distribution of respondents according to their awareness about types of waste and waste disposal techniques (n=300)

Response	Recycling		Reuse		Bio decomposed		Non Bio decomposed		E Waste		Solid Waste	
	f	%	f	%	f	%	f	%	f	%	f	%
Not Aware	39	13.0	40	13.3	66	22.0	83	27.6	79	26.3	77	25.6
Heard but don't know	4	01.3	4	01.3	3	01.0	3	01.0	18	06.0	14	04.7
Partially	76	25.3	46	15.4	77	25.7	80	26.7	66	22.0	74	24.7
Fully	181	60.4	210	70.0	154	51.3	134	44.6	137	45.7	135	45.0
Total	300	100.0	300	100.0	300	100.0	300	100.0	300	100.0	300	100.0

partially aware about recycling, reuse, bio decomposed, non bio decomposed, E-waste and solid waste. Maximum about twenty eight per cent respondents were not aware about non bio decomposed waste followed by E waste (26.3 %) and solid waste (25.6 %).

Ali *et al.* (2022) emphasized on changing consumption behavior and purchasing intention for better sustainable environment.

Respondents were asked whether they segregate their waste before disposing or not. Almost fifty three per cent respondents do not segregate their waste before disposing while almost forty seven per cent segregate waste before disposing. The segregation is done only between dry and wet waste while no segregation was done on the basis biodegradability, non bio degradability, solid and e-waste.

Majority of the respondents do not dispose waste in open area while only sixteen per cent respondents admitted that they used to dispose waste in open area.

Twenty nine per cent respondents recycle their waste while rest of the respondents denied for recycling their waste. Almost one fourth of the total respondents stated that they prepared some products out of waste materials and almost sixty five per cent respondents reported that they reused few products such as glass jars, plastic jars, even plastic bags etc.

Further, respondents were interrogated about their awareness to convert kitchen waste into compost. Results are pointer to the fact that majority (76.7 %) of the respondents were aware about it but only thirty three per cent respondents converted their kitchen waste into compost. Almost twenty per cent respondents practiced to bury their waste and twenty nine per cent respondents admitted that they incinerate their waste. These waste disposal patterns are harmful for the environment and thereby health of people.

The waste disposal site was located nearby the residences of sixty two per cent respondents while seventeen per cent stated that the disposal site was

**Table 14.** Distribution of respondents according to their waste disposal pattern (n=300)

Segregation of waste	f	%
Yes	140	46.7
No	160	53.3
Total	300	100.0
Disposal of waste in open area	f	%
Yes	49	16.3
No	251	83.7
Total	300	100.0
Recycling of waste	f	%
Yes	88	29.3
No	212	70.7
Total	300	100.0
Products preparation out of waste	f	%
Yes	77	25.7
No	223	74.3
Total	300	100.0
Reuse of waste	f	%
Yes	196	65.3
No	104	34.7
Total	300	100.0
Aware about modifying kitchen waste into compost	f	%
Yes	230	76.7
No	70	23.3
Total	300	100.0
Made compost out of kitchen waste	f	%
Yes	100	33.3
No	200	66.7
Total	300	100.0
Bury waste	f	%
Yes	61	20.3
No	239	79.7
Total	300	100.0
Incinerate waste	f	%
Yes	87	29.0
No	213	71.0
Total	300	100.0

**Table 15.** Distribution of respondents according to distance of waste disposal site (n=300)

Distance of waste disposal site	<i>f</i>	%
Nearby	186	62.0
Not so far	52	17.3
Far	62	20.7
Total	300	100.0

not so far from their residences. Only twenty per cent respondents said that the waste disposal site was far from their residence.

**Table 16.** Distribution of respondents according to e-waste generation in their house (n=300)

Type of E-Waste generation	<i>f</i>	%*
Refrigerator	96	32.0
Desktop	24	8.0
Mobile	259	86.3
Tablet	30	10.0
Washing Machine	32	10.7
TV	135	45.0
Others (Battery, Charger, Electric toys)	40	13.3
No e waste	11	3.7

\*Multiple responses

Several types of e waste were generated from households of respondents. Mobile (86.3 %) was the top most generated e waste followed by TV (45 %) and refrigerator (32 %). A few small e waste such as battery, charger, electronic toys etc were also generated from the houses.

No proper e-waste disposal method was reported by respondents. Thirty seven per cent respondents sold off their e waste while almost twenty per cent respondents had given the generated e waste to other person free of cost and almost one fourth of respondents had not disposed their e- waste. This is one of the major issues regarding waste management in current scenario. E waste generation

is very high but no proper e waste disposal pattern is available.

**Table 18.** Awareness about harmful effect of improper waste disposal pattern (Bury, incineration, throwing in open site) (n=300)

Aware	<i>f</i>	%
No	63	21.0
Can't do much	16	5.3
Don't think so	22	7.3
Yes	199	66.4
Total	300	100.0

About sixty six per cent respondents were aware about the harmful effect of improper waste disposal pattern while twenty one per cent respondents were not aware about it. Rest of the respondents either did not think about it (7.3 %) or they did not care about it because they felt that they could not do much regarding it (5.3%).

Association ship of green consumer behaviour of respondents and various independent variables was measured. A highly significant positive correlation was found between education, occupation, income, caste, awareness about green products, environment consideration, purchase of green products and green consumer behaviour of respondents. It is evident from Table 19 that the respondents who were more educated, belonged to higher occupational class and more considerate about environment, they were behaving more as green consumer. Family size and barriers of purchasing green products were found significantly negatively correlated with green consumer behaviour of the respondents. Motives for purchasing green products were positively significantly correlated with green consumer behaviour. In nutshell, there are many personal, social and economic factors affect the Green Consumer Behaviour. More awareness about

**Table 17.** Distribution of respondents according to method of e-waste disposal (n=300)

Method of E-Waste disposal	<i>f</i>	%
Sale off	112	37.3
Throw off	21	7.0
Given free of cost to needy person	59	19.7
Still didn't dispose	74	24.6
Given free of cost to needy person + Sale off	4	1.3
Throw off+ Still didn't dispose+ sale off	5	1.7
Still didn't dispose + Given Free of Cost	11	3.7
Throw off + Given free of cost	3	1.0
No E-waste generation	11	3.7
Total	300	100.0

**Table 19.** Correlation of Green purchase behaviour with independent variables

Independent variables	Purchasing Intention and Behaviour	Energy Saving	Environment consideration during purchase, use and dispose	Knowledge and Experience	Overall Green Consumer Behaviour
Age	-.040	.052	-.059	.044	.015
Education	.408**	.406**	.496**	.384**	.481**
Occupation	.412**	.342**	.397**	.389**	.440**
Income	.393**	.349**	.434**	.404**	.447**
Family Size	-.066	-.135*	-.170**	-.147*	-.136*
Caste	.373**	.397**	.456**	.464**	.467**
Awareness about green products	.430**	.366**	.354**	.455**	.452**
Environment consideration	.310**	.387**	.289**	.284**	.353**
Barriers	-0.162**	-0.87	-0.140*	-.180**	-0.163**
Motives	0.444**	0.450**	0.539**	0.543**	0.550**

purchase of green products should be created amongst people so that they can show environmentally responsible behaviour.

### CONCLUSION

Majority of the respondents were below fifty years of age group and half of them were postgraduate or doctorate. More than half of the respondents were earning less than five lakhs per annum. Maximum respondents were having small family size. Almost half of the respondents belonged to general category of social system. It can be concluded that majority of respondents belonged to medium category of green consumer behavior. Waste disposal pattern was not proper. Several factors affected green consumer behaviour of respondents such as their education, income, family size, motives, barriers of purchasing green products and environmental concern.

### Implication of the study

- Awareness should be created amongst

respondents to consider environment whenever they purchase, use or dispose any product or service.

- Proper waste disposal mechanism is needed such as distant waste disposal site from residential areas, segregation and recycling of waste at household level as well as centrally to make a clean and green campus.

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