



## **Estimation of Different Factors Considered by the Consumers during Purchase of Green Products**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Author BBP designed interview schedule, conducted the survey, involved in data collection, analysis, tabulation and writing the research paper. Author SH is the chairman of the advisory committee involved in planning, constant monitoring throughout the study, analyzing and interpreting the results. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

Environmental pollution is one of the most serious problems experienced by humanity and other life-forms on the earth today. Going green means leading lifestyle that's not just more beneficial for people who do it, but for their surroundings as well. The study The study aimed at determining the green products purchased and the factors considered while purchasing green products. The exploratory research design was adopted to conduct the study. The data was collected from 300 educated consumers from the urban areas of Dharwad and Belagavi district. The data was analyzed by using frequency, percentage and Garrett raking technique. The results revealed that majority of the consumers (43.00%) belonged to 22-29 years age group, more than half of the selected consumers (57.67%) were graduates, more than one third of the consumers were students (32.67%), and had medium family income of 7,380-51,780 per month. Majority of the urban consumers (76.33%) purchased food products from the retail shops. The consumers perceived health, quality and taste as the major factors influencing them to purchase green products in urban locality. The study concluded that Young consumers seem to have high level of health and environmental consciousness. They are even ready to buy green products if available easily. At the same time, they are concerned about product price and are ready to pay premium for the green

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product only when there is an additional benefit associated with it. Government can also play key role in this aspect by encouraging consumers and promoting firms to go green. Green marketing should not be considered as a new strategy to make better profits for the marketing firms, it has to be pursued with much greater vigor, since it has a social and environmental dimension to it.

*Keywords: Green products; green marketing; consumers; socio economic status; health and environment.*

## 1. INTRODUCTION

Environmental pollution is one of the most serious problems experienced by humanity and other life-forms on the earth today. Going green means leading lifestyle that's not just more beneficial for people who do it, but for their surroundings as well [1]. All the green products that we use provide benefit for the people not just economically, but also socially and environmentally, which means that the green products preserve the public health in general [2]. The more people decide to use green products the better it is for everyone around them. When we use products that are natural, it is much better for our well being [3].

The rapid economic growth in the past years have witnessed increasing consumers' consumption worldwide causing environmental deterioration through over-consumption and utilization of natural resources [4]. With technological development, there has been an increase in industrial activities that have directly and indirectly affected the environment. The environment has been extensively exploited, resulting in climate change, global warming, pollution, environmental exploitation, ozone layer depletion etc [5]. Such problems have raised concerns about protecting our climate, which has led to the idea of going green. Government has adopted policies to save the world from further deterioration, so businesses have chosen the environment friendly practices. Creation of goods that are environmentally friendly is one of the first initiatives taken to resolve this environmental problem [6].

A consumer's concern towards a safe environment has been frequently increasing. Nowadays, the market contains a wide variety of products that are environmentally safe. The purchase behavior of the consumers depends on the beliefs and the consciousness of the consumers towards their health and environmental concern [7]. The decision to purchase these products depends on the behavior which the consumers adopt towards green products [8]. Consumers who are

concerned with the environment and are knowledgeable about the environmental issues when shopping try to purchase only eco-friendly products [9]. Increasing-environmental concerns and awareness of eco-friendly products among consumers have resulted in their green buying behavior.

One can only hope that change is the only thing that is constant, once we decide protecting our nature thereby ensuring our own safe future and then the rest of it follows. Let's start using eco-friendly products for a start now and turn the vision of a lovely environment in the future a reality [10]. The consumers are becoming more environmental conscious and health conscious now a days where there is a need to purchase and use the products which are not causing harmful effect on the wellbeing of the human as well as on the surrounding environment. Thus, there are numerous factors which influence the green purchasing behaviour of the consumers [11].

This paper aims at identifying the different products purchased, place of purchase and important factors influencing the consumers to purchase the green products.

## 2. METHODOLOGY

The study was conducted during 2018-20, the data was collected using structured interview questionnaire. Based on the review of literature, 10 factors which tend to influence the consumers while purchasing green products were selected for the study. A total 300 consumers from the urban areas of Dharwad and Belagavi were selected for the study. Frequency and percentage were used to interpret the results of demographic variable and the products purchased by the consumers. To determine the most significant factor influencing green purchase decision of the consumer, Garrett ranking technique was adopted.

### 2.1 Garrett Ranking Technique

Respondents were asked to rank the factors according to its degree of importance such that

the most important factor will be ranked first. To find out the most significant factor influencing the respondents, the outcome of the rankings was converted into percent position by using the following formula:

$$\text{Percent position} = 100 (R_{ij} - 0.5) / N_j$$

Where,

$R_{ij}$  = Rank given for the  $i$ th variable by  $j$ th respondents

$N_j$  = Number of variables ranked by  $j$ th respondents

The percent position estimated was converted into scores with the help of Garrett's Table. The scores of each individual rank corresponding to that particular factor were added and the mean value of score was calculated. The factors having highest mean value has to be considered to be the most important factor.

### 3. RESULTS AND DISCUSSION

The age of the respondents was grouped into three categories. The majority of the consumers (43.00%) belonged to 22-29 years age group, followed by more than 29 years (30.00%) and less than 22 years (27.00%). More than half of the selected consumers (57.67%) were graduates followed by 39.00 per cent were studied upto 12<sup>th</sup> standard and only 3.33 per cent were post graduates. More than one third of the urban consumers were students (32.67%), followed by unemployed (21.66%), self employed (21.00%), employed in private sector (13.33%) and government employees (11.33%). The

monthly family income from all the sources was collected and categorized into three categories as low, medium and high based on the average income of the selected respondents depicted that majority of the consumers (83.00%) had medium family income of ₹ 7,380-51,780 and only 17.00 per cent of them have high income of more than ₹ 51,780 as presented in the Table 1.

The distribution of the consumers according to their socio economic status categories as per the Aggarwal [12] scale is represented in the Table 2. It is clear from the data that 64.00 per cent of the urban consumers belonged to upper middle socio economic category, followed by lower middle (28.66%) socio economic category and only 7.33 per cent of the urban consumers belonged to high socio economic category.

Fig. 1 shows the various categories of products available in the selected shops in both urban and rural area. Organic food products and herbal care products are available in two third per cent of the shops in urban area. In half of the selected shops general green products are available, followed by energy efficient appliances (40%) and clothes (20%). Results are similar with Young et al. [13].

Data inferred in the Table 3 indicates the types of green products purchased and place of purchase of the products by the consumers. Majority of the urban consumers (76.33%) purchased food products, followed by cosmetics (61.33%), clothes (46.00%), and other products (44.67%). Nearly one third of the consumers (34.67%) purchase energy efficient appliances.

**Table 1. Distribution of respondents based on their socio-personal characteristics**

Variables	Classification	Frequency	Percentage
Age (yrs)	<22	81	(27.00)
	22-29	129	(43.00)
	>29	90	(30.00)
Education	Upto 12 <sup>th</sup> std	117	(39.00)
	Graduate	173	(57.67)
	Post Graduate	10	(3.33)
Occupation	Student	98	(32.67)
	Unemployed	65	(21.66)
	Self employed	63	(21.00)
	Private sector	40	(13.33)
	Government sector	34	(11.33)
Monthly Family Income ( ₹ )	Low (<7380 )	-	
	Medium (7380-51780)	249	(83.00)
	High (>51780)	51	(17.00)

**Table 2. Socio economic status of selected consumers**

Classification	Frequency	Percentage
Upper High >76	0	0
High 61-75	22	7.33
Upper middle 46-60	192	64.00
Lower middle 31-45	86	28.66
Poor 16-30	0	0
Very poor < 15	0	0

With regard to place of purchase of the green products, most of the selected consumers purchased products from the retail shops (74.67%) followed by specialized shops (54.00%), departmental store (53.33%), malls (47.33 %), local market (45.00%), others (42.33%) and online market (8.33%) as represented in the Table 3.

### 3.1 Factors Considered by Consumers While Purchasing Green Products

Majority of the consumers had given first rank for the health concern is the major factor influencing

them to purchase the green products, second rank was given to the factor quality and taste, third rank was given to the price of the products, recyclability was ranked fourth. Majority of the consumers reported fifth and sixth rank to the energy saving aspect of the products. The recyclability was ranked seventh and biodegradability was ranked eighth by the consumers. Ecolabels and appearance were least influenced the consumers to purchase the green products as depicted in the Table 4.

Similarly as per the garette value and ranking the factors considered by consumers while purchasing green products was depicted in the Table 5. Preferential order of the factors considered while purchasing green products was obtained based on the Garrett's mean score. The rankings provided by urban consumers indicated that as the consumers were educated and concerned about the health and environment they consider the health as the first factor to purchase green products. The quality and taste of the green products was ranked II, pollution free ranked III, recyclability (IV rank),

**Table 3. Green products purchased and place of purchase of green products**

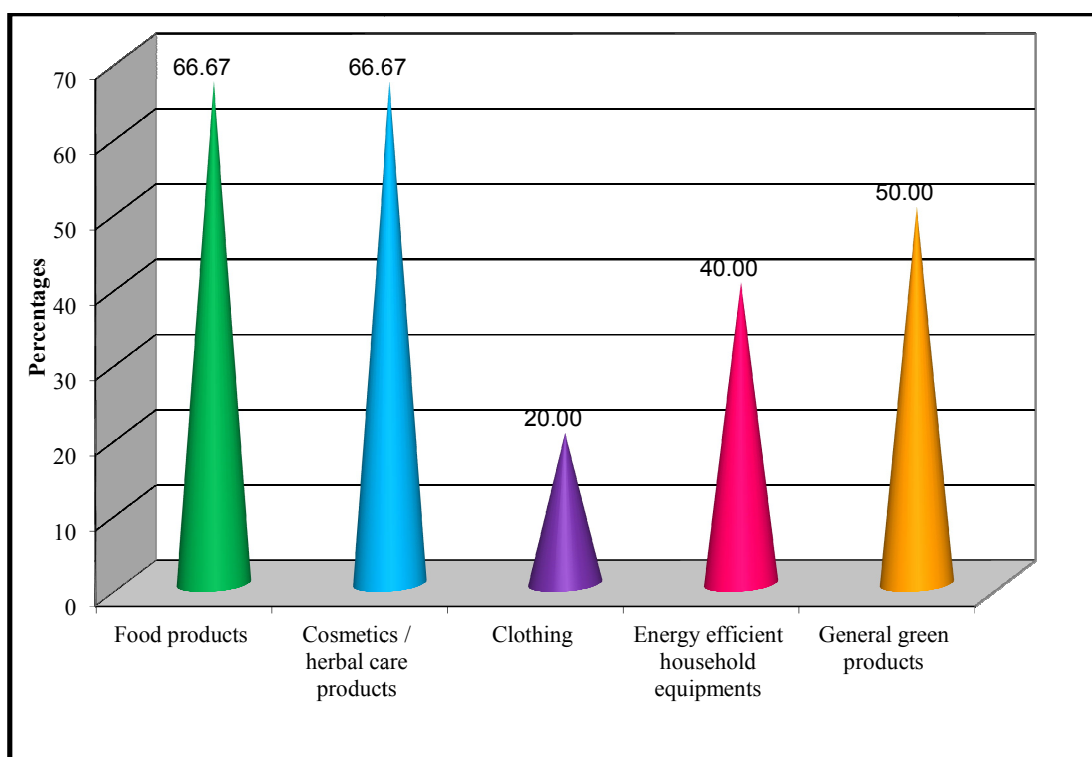
I. Green products purchased	Frequency	Percentage
Food products	229	76.33
Cosmetics	184	61.33
Clothes	138	46.00
Energy efficient appliances	104	34.67
Other products	134	44.67
II. Place of purchase		
Retail shop	224	74.67
Mall	142	47.33
Departmental store	160	53.33
Online market	25	8.33
Specialized shop/units	162	54.00
Local market	135	45.00
Others (exhibitions, on streets, from hawkers)	127	42.33

**Table 4. Ranking of the factors as perceived by the consumers**

Factors	I	II	III	IV	V	VI	VII	VIII	IX	X
Price	26	52	45	20	41	23	20	19	7	47
Quality & taste	49	78	41	25	25	24	26	17	9	6
Appearance	10	15	15	46	20	19	41	38	65	31
Eco-label	15	14	35	26	25	40	30	34	54	27
Biodegradability	13	9	25	21	13	29	27	56	48	59
Recyclability	9	12	32	66	26	26	45	28	34	22
Energy saving	25	12	24	28	57	64	21	33	26	10
Pollution free	23	52	31	40	21	54	35	18	20	6
Reusability	18	11	13	22	44	19	52	48	23	50
Health concern	110	43	38	9	28	7	3	4	21	37

**Table 5. Garette score and ranking given by the consumers for the factors considered while purchasing green products n=300**

<b>Factors</b>	<b>I</b>	<b>II</b>	<b>III</b>	<b>IV</b>	<b>V</b>	<b>VI</b>	<b>VII</b>	<b>VIII</b>	<b>IX</b>	<b>X</b>	<b>Total</b>	<b>Average</b>	<b>Rank</b>
Price	2132	3640	2835	1160	2132	1104	840	684	203	846	15576	44.45	VIII
Quality & taste	4018	5460	2583	1450	1300	1152	1092	612	261	108	18036	55.34	II
Appearance	820	1050	945	2668	1040	912	1722	1368	1885	558	12968	42.14	X
Eco-label	1230	980	2205	1508	1300	1920	1260	1224	1566	486	13679	49.57	V
Biodegradability	1066	630	1575	1218	676	1392	1134	2016	1392	1062	12161	44.15	IX
Recyclability	738	840	2016	3828	1352	1248	1890	1008	986	396	14302	52.12	IV
Energy saving	2050	840	1512	1624	2964	3072	882	1188	754	180	15066	46.55	VI
Pollution free	1886	3640	1953	2320	1092	2592	1470	648	580	108	16289	55.11	III
Reusability	1476	770	819	1276	2288	912	2184	1728	667	900	13020	46.37	VII
Health concern	9020	3010	2394	522	1456	336	126	144	609	666	18283	63.14	I



**Fig. 1. Categories of products available in the shop**

eco label (V rank), energy saving (VI rank), reusability (VII rank), price (VIII rank), biodegradability (IX rank) and appearance of the products was least considered by the consumers which is ranked X by the selected consumers.

#### **4. CONCLUSION AND RECOMMENDATIONS**

Young consumers seem to have high level of health and environmental consciousness. They are even ready to buy green products if available easily. At the same time, they are concerned about product price and are ready to pay premium for the green product only when there is an additional benefit associated with it. As perceived by the consumers, health, quality and taste are the important factor influencing them to purchase green products. Marketers needs put vigorous effort on making consumer more aware about the merits of their green products and the issues that their product attempts to address [3]. Government can also play key role in this aspect by encouraging consumers and promoting firms to go green. Green marketing should not be considered as a new strategy to make better profits for the marketing firms, it has to be pursued with much greater vigor, since it has a

social and environmental dimension to it. The awareness, knowledge and promotion of green concept should start from school level itself.

#### **CONSENT**

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

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#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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