

An Analysis Of The Factors Influencing Consumer Buying Decisions With Regard To Purchase Of Green Agro Food Products In India-A Study Of J&K.

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Abstract

There has been a continuous drift in the attitude of consumers towards a more sustainable and healthy life. The main objective of the paper is to understand the factors that influence the consumer behavior and positive purchase intention of ecological consumers with regard to organic food. The methodology used for data collection was by getting closed-ended questionnaire filled face-to-face. In total 394 respondents participated and data was analyzed by using chi-square test for hypothesis testing and regression analysis for confirmation. The study has found environmental consciousness, awareness of product among consumers, availability or ease of access to organic food and health consciousness among important drivers for positive behavior towards organic food, however the study does not explain the actual buying behavior of organic food. Demographic factors such as higher income, age and higher education also have been found to have a positive impact on buying behavior. The study suggests marketers to create broader supply chain for excessive availability of organic food and also to formulate marketing campaigns that enhance product knowledge and add to the association of organic food to good health.

Keywords: Organic Food, Ecofriendly Agriculture, Sustainability, Health Consciousness, Ecological Consciousness, India

1. Introduction

Utilization of synthetic concoctions and manures has ruined the earth and individual wellbeing. There has been a paradigm shift in the outreach of knowledge and understanding. With the outflow of information technology across the globe in the last few decades, there has been a shift towards organic food consumption with all its positive impacts on individual health and global sustainability. Although traditionally, farmers unaware of the modern and scientific food production techniques grew pesticide-free food for self-consumption as part of an ethical value system (Groslik, 2016). With the growth of enhanced human economic activity the environmental degradation and depletion of energy resources have been on a constant rise (Tuna and Ozkocak, 2012). All this has increased the incidences of diseases and deteriorated health conditions, reduced immunity, which has led consumers to realize the importance of organic and natural food (Roberfroid, 2002). On the other front, to address these grave issues of persistent environmental degradation resulting in global warming many firms have been developing strategies to improve their environmental performance (Fraj, Martinez and Matute, 2011). Organic food has thus been taking precedence and gaining acceptance not only in the developed but also in many developing countries (Patel et al., 2007). Among developing nations, Indian agriculture industry is most significant in terms of human resource and total farming area, organic farming is the most natural methods for growing crops, using organic fertilizers and manures like cow dung and vermicompost. In the past couple of years, the organic farming sector in India is entering a transformation stage,

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due to an increase in new ventures. These ventures have begun to disrupt the market with their one-of-a-kind offering. India currently holds a prominent position among 172 countries that actively practice organic agriculture globally. The organic farming industry in India holds immense potential to grow in future (Entrepreneur India, 2017). Marketers of organic food are therefore keen to understand the food consumption patterns and major influences which would enable them to segment their market scientifically. Although consumers concerned about their healthy lifestyle and environment must be willing to pay more for buying green (Mintu-wimsatt and Bradford, 1995). Eco-friendly agricultural practices combine traditional knowledge of farming practices involving organic fertilizers, biological pest control, localized seeds, etc.(Adamtey et al., 2016). Such practices have led marketers to promote their products as being healthy (Bublitz and Peracchio, 2015). However, not just health benefits but many other factors influence positive consumer behaviour towards organic food (Paul, Rana,2012). Evidences are that consumers consider food characteristics such as taste, smell etc as important in making choice of food (Wandel and Bugge, 1997).However, many other factors such as food being pesticide, preservative and additive free (Wilkins and Hillers, 1994), having greater nutritional value (Torjussen et al, 2001). Consumers often perceive organic food as being healthy and having more nutritional value than synthetic foods (Grankivist and Biel, 2001).Several studies conducted in the field of understanding influences on consumer buying decisions concerning green and eco-friendly food.While some studies have considered asking consumers directly about their reasons for purchase, others have sought to understand the type of belief and attitudes underlying such purchase intention and behaviour. Accessing and indentifying the target consumers of eco-friendly and organic products marketers need to understand their buying behaviour and the factors that positively affect their buying behaviour. Therefore, on this basis proper and adequate decisions are taken in choosing a marketing mix (Bojkovska et al., 2013). Besides marketing mix, availability, supply chain and other factors are of considerable importance in creating a need for organic products (Rana, Paul, 2017). Through a variety of direct retail outlets, consumers most traditionally purchase the products of their need. For agricultural products, farmers market, roadside or on-farm markets, and agro-tourism events are considered as the general forms of outlets. Some of the related new market outlets are home delivery, internet homepages, online auctions, mail orders and virtual grocery stores (King et al, 2000). Purchase behaviour of consumers towards eco-friendly food is positively driven by the positive attitude towards environment (Zepeda, 2009). Demographically consumers differ on being green such as consumers having more age, female consumers, married consumers and higher educated consumers exhibit more green purchase behaviour (Aytekin & Buyukahraz,2014). Consumers with diverse product purchase needs and concerns generate more innovative opportunities in marketing. One of the best ways to educate consumers is through food product labeling, but such educational procedures are expensive and time consuming for some small scale producers. Therefore, to meet the requirements of the consumers, who are time and price-conscious would demand better creative marketing approaches in the future (King et al, 2000).Although as excerpted from above there may be numerous factors influencing positive consumer behaviour but for the purpose of this study of influences on consumer buying behaviour of organic food products, we have chosen factors such as demographic, availability, awareness and environmental consciousness. Objectives for this study would thus be **i)** to analyse the influence of demographic factors on buying decision of organic food.**ii)** to analyse the influence of environmental consciousness on buying decisions of organic food products.**iii)** to analyse the influence of consumer awareness level on buying decisions of organic food **iv)** to analyse the influence of health consciousness on buying decisions of organic food**v)** to analyse the influence of easy availability on consumer buying decisions of organic food.

1.1 Environmental consciousness.

Pro-environmental behaviour has been gaining pace post prominent and widespread environmental deteriorations which are now taking a serious toll on the flora and fauna across the planet.

Ecologically conscious consumers are taking more interest in purchasing eco-friendly products including organic food (Chekima et al, 2019). Ecologically conscious consumers have a more positive attitude and perception towards the consumption of organic food (Lin and Chang, 2012). Studies have also shown that in purchasing organic food products consumers manifest a pro-environmental behaviour (Hamm and Gronefeld, 2004). Consumers often give due considerations to environmental protection while making food purchase decisions with the intention of promoting the pro-environmental policies and initiatives of green companies indicating a high level of environmental consciousness (Prentice et al, 2019). In many developed nations ecological motive acts as a prime factor for the willingness of consumers to pay extra price for green and organic food (D'Amico et al, 2016). Most logically, more the consumers think in favour of the environment, more will they form a positive attitude and behaviour towards activities that reduce the harm and abuse on environment and subsequently they have a positive behaviour towards purchase of eco-friendly food products (Wang et al, 2020).

1.2 Consumer awareness of Organic food.

Knowledge that enables consumers to differentiate between methods followed in growing, preserving and distributing food products along with an understanding of grave environmental degradation that has come up as a direct consequence of human economic activities may be termed as ecological awareness (David & Ardiansyah, 2017). Knowledgeable consumers are more conscious about their decisions of purchase (Gracia & Magistris, 2013). Environmental consciousness based on awareness behaves as a prime motive of pro-environmental behaviour (Demirtas, 2018). On the other hand a direct experience of consuming organic eco-friendly products increases the knowledge of distinctiveness of such products and increases the repeat purchase and attitude towards them (Du et al, 2017). Study has shown that development in the field of education, information technology and urbanization along with media and social networking platforms leads to a positive growth towards ecological awareness and subsequent environmental consciousness (Yilmaz & Ilter, 2017).

Education and expertise in any particular field helps in controlling the perceived behaviour of people. Thus when knowledge and awareness becomes widespread it creates a positive behaviour towards pro-environmental activities including consumption of organic food (Chakrabati, 2010; Hoppe et al, 2013).

1.3 Eco-friendly Agricultural practices and organic food.

Environmental degradation, biodiversity loss, excessive ozone depletion due to enhanced emission of green house gases, excessive use of fresh water due to intensive agricultural practices has put humanity on an alarm. (West et al, 2014). Response measures in this regard have started coming on all fronts across nations, collaborating global efforts to ensure sustainability and decrease of environmental harm in food production (Rockstrom, 2017). Mitigation techniques to restore the ecological balance include development of agricultural practices which ensure sufficient food along with sustainability (Routledge & Abingdon, 2015). Organic food besides being produced in an environmental friendly manner, it also is usually perceived by consumers as more nutritious and healthier than the synthetically produced food (Seufert et al, 2017).

1.4 Health Benefits of Organic food.

Studies in the field have highlighted health concerns as a significant factor driving the consumption of organic food (Jolley et al., 1989). Personal well being is considered as an important value in the minds of consumers opting for organic food. The level of chemical pesticide residues are much lower in organic foods than those produced with use of chemical fertilizers and pesticides (Baranski et al, 2014). Also research has shown organic foods have possible positive impacts on human health (Kummeling et al, 2008). Studies have proved that nutritional value such as level of vitamin C, Beta-carotene; other immunity boosting ingredients along with anti-oxidant activity are higher in organic foods than in conventional foods (Huber et al, 2011). Consumption of organic food has also been associated with better body mass index and less allergic conditions of its consumers (Alfven et

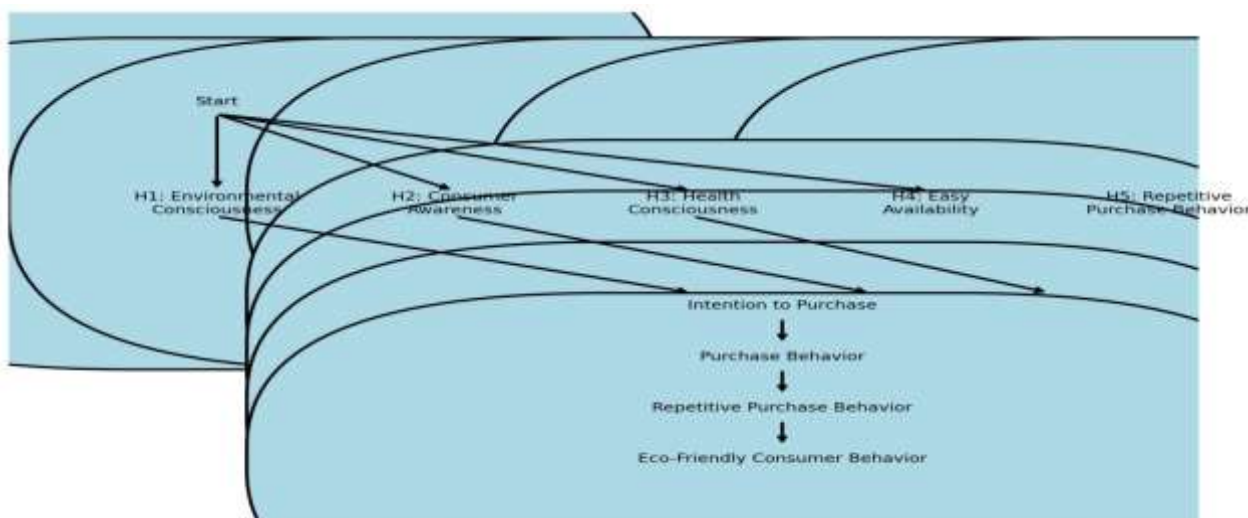
al, 2006). Consumers of organic food significantly assess their health status better than those of non-organic consumers (Rembialkowska, 2008).

1.5 Availability of Organic food.

In marketing any product its reach to the end consumer is the most crucial step. Supply chain delivers the product to the final consumer and is considered as a broader steps towards the development of sustainability (linton et al, 2007). Along with marketing which includes promotional strategies for green products and educating consumers about social and moral obligation for use of green products, marketers have to be focused on the variety and enhanced availability of such products in the market (Spielmann,2020).In the developed countries conventional retail chains, supermarkets, convenience stores along with small and big restaurants are offering organic food (Pinnard, 2014).Retailers on the other hand are also willing to place organic foods on their shelves as a part of social responsibility (Aertsens et al, 2009).Conventional grocery stores are credited with increasing popularity of organic foods and also play a significant role in repeat purchase behaviour of consumers (Gottschalk and Leistner, 2013).

2.Theoretical Framework.

The theoretical framework is based on theory of planned behaviour. Various factors are responsible for developing ecological awareness and purchase intention of consumers towards the buying of organic agro products. This study focuses on some of such factors as an attempt in understanding what drives them to choose organic food over conventional and easily available food. Ecological awareness, easy availability, and concern for health are usually found as the standout influences in this regard; however these influences affect only certain consumers based on their demographic characteristics. The proposed theoretical framework is demonstrated as per figure-1 below.



2. Influences of identified Factors and Development of hypothesis.

Amongst a realm of influencers of consumer purchase intention major influences included in this study deliberately chosen are Demographic factors, Ecological awareness, Easy Availability and health consciousness.

2.1.1 Demographic influences.

Influence of demographic variables varies along with socio-economic differences and may also vary across developed and developing nations (Mirjana et al, 2017). Males between 36-45 age, university graduates and married prefer organic food (Ozguven, 2012). Also higher income has been

significantly associated with positive behaviour towards organic food (Stolz et al, 2011). However other studies have found females and particularly females with young children and small household size opt for organic food (Loureiro et al, 2001). Since varying results have been found across communities, we aim to test the influence of demographic factors on buying decisions.

H1: Consumer preference for Organic food is different for various demographic factors.

2.1.2 Environmental consciousness.

Many studies have found environmental protection as a strong motivation for consumption of eco-friendly products (Seyfang, 2006). Also concern for ecology helps in shaping individual behaviour (Berkowitz, 1997). However some contradicting opinions such as social norms and ecological are less important while predicting individual behaviour (Kerbs & Miller, 1985). We propose to test environmental consciousness as a positively motivating factor for the consumption of organic food.

H2: Consumers prefer organic food as they are conscious about environment.

2.1.3 Consumer awareness.

Consumer awareness refers to recognition level of organic products among consumers which includes the understanding of eco-friendly production techniques, distinctiveness of natural ingredients, enhanced nutritional value and benefits to both individual health and the environment (Al-Taie, et al, 2015). It is assumed that more knowledge consumers possess more influence it will have on their positive attitude towards logical decision making behaviour (Fabrigar et al, 2006). Awareness about the products being natural and distinct positively motivates consumers towards the consumption of organic food (Bravo et al, 2013). Mexxner et al, 2014 for Russian consumers reports that ease of access and consumer awareness have no significant impact on purchase behaviour with regard to organic foods. We propose to test consumers awareness of products as a factor for positively motivating the purchase of organic food.

H3: Consumers prefer organic food as they are aware about organic food products.

2.1.4 Health consciousness.

Consumers pro-active and concerned for health take measures to ensure maintenance of well being, improved quality of life and also avoid taking risks that can cause harm to healthy life (Gould, 1998; Plank and Gould, 1990). Consumers of organic foods are usually conscious and aware that food has a profound impact on health which motivates them to consume organic food (Schifferstein and Oudeoephus, 1998). However, not all studies consistently support the link between health consciousness, positive attitude formation, and the consumption of organic food (Tarkiainen & Sundqvist, 2005). In the study we propose to test health consciousness as a factor for positive behaviour towards organic food.

H4: Consumers prefer organic food as they are conscious about their health.

2.1.5 Easy Availability.

Availability is also one of the important factors in driving the consumption of organic food (Davies et al, 1995). Besides availability being a crucial factor for consumption, range of product availability has also been found positively affecting the purchase behavior (Demitri, 2012). However availability as a factor has not been studied much in case of organic food and we therefore propose to test the Easy availability of organic food as a factor positively affecting purchase behaviour.

H5: Easy Availability is important for consumer preference of organic food.

3. Research Methodology

The research methodology to study above mentioned objectives is divided as follows:

3.1 Questionnaire development.

A well structured questionnaire was developed and data was collected based on the objectives of the paper, due weightage was given to measurement scales, type, number and relevance.

3.2 Population.

Target population for the survey is the existing consumers of organic food in the two cities of Jammu and Srinagar. The survey was conducted by getting the questionnaire filled in the top departmental stores having organic food section, special outlets and some other direct farm outlets of the two cities of Jammu and Srinagar.

3.3 Sample size and Extent.

The study was conducted in the state of Jammu and Kashmir, primarily in the two capital cities of Jammu and Srinagar. A total of 550 questionnaires were provided while only 394 consumers participated in the survey. Majority of respondents belong to urban areas 58 percent and others belonged to town and village areas.

3.4 Data description.

The questionnaire consisted of four sections, first among which consisted of demographic profile of organic food consumers. 43% of consumer's belonged to the age group of 30-45 years. 56% were male while 44% of consumers were females. 37% of the consumers belonged to the income group of 60,000 per month and above. 72% of respondents and 60% belonged to the educational group of having master's degree.

3.5 Data collection.

A well structured questionnaire with close ended questioned was given for filling to consumers at designated shops selling organic food both at Jammu and Srinagar. Convenience sampling method was used by approaching consumers who came to stores for purchasing organic food. Out of 550 consumers to whom questionnaire was provided only 394 questionnaires were completed and validated with a response rate of 71.6%.

3.6 Data Analysis.

The questionnaires after checking and editing were segregated. Data was entered in IBM Statistical package for social science version 26. Further various tool and techniques were applied to analyse the data such as reliability test, Chi-square test and regression analysis.

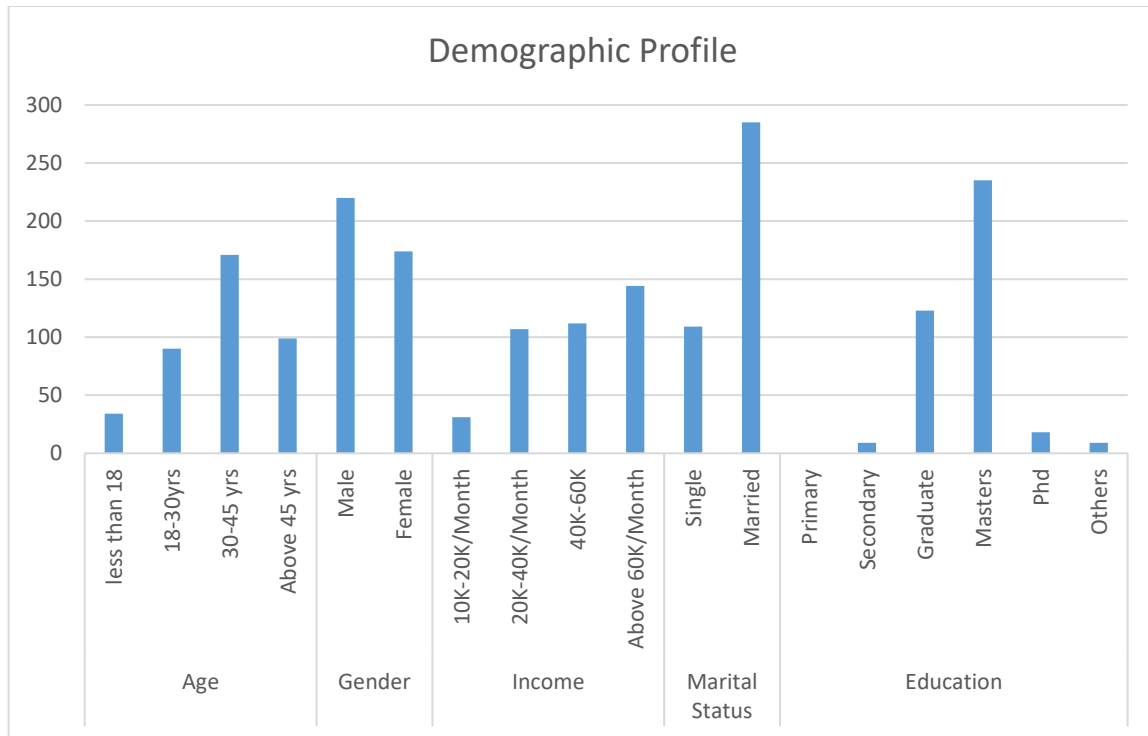
4. Results

The data obtained was tested for internal consistency and reliability by the Cronbach Alpha value.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.770	.769	22

The Cronbach Alpha value of .770 signifies that the data collected is internally consistent and the further analysis of the data can be carried forward to obtain further results. The demographic profile of consumers is shown below

Chart 1.



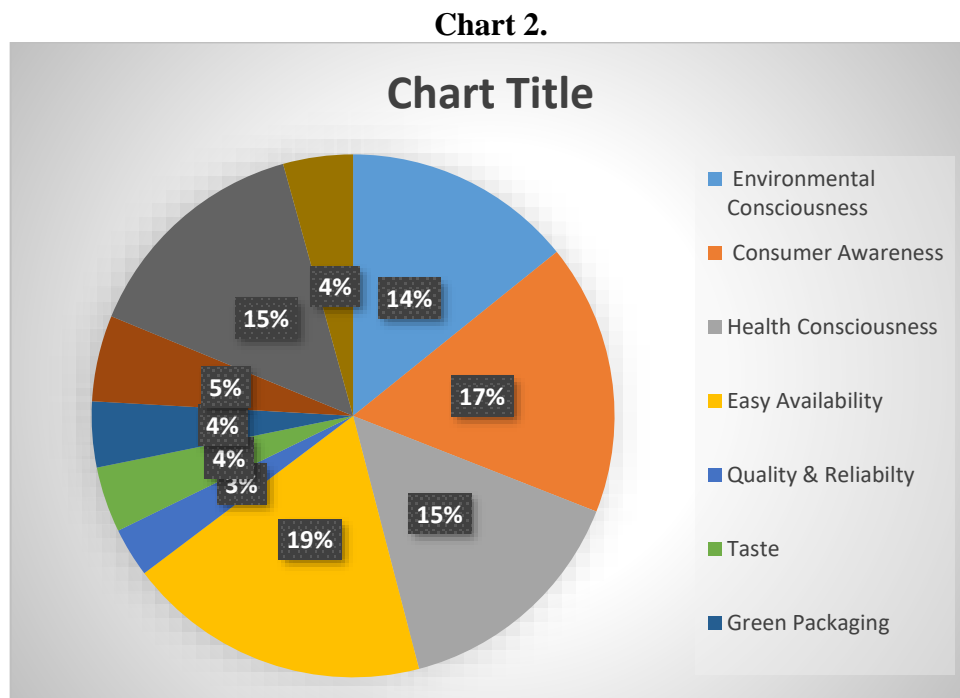
4.2 Demographic factors as drivers of buying decision.

Observations in the study indicated a clear impact of demographic variables on organic food preference of consumers. A Chi square test was conducted between demographic variables and frequency of organic food consumption. The chi square Goodness of fit test revealed a p value of 0.000 for income and education and age which is less than the level of significance (0.05). Therefore the (H1a) null hypothesis is rejected for these factors and it can be concluded that income, education level and age of consumers is positively associated with purchase of organic food.

Table 1.0 Chi-square test showing demographic factors influencing frequency of organic food purchase.

Factors	Asymp.Sig.(2-sided)
Income	0.000
Educational Background	0.000
Age	0.000
Gender	0.058
Marital Status	0.061

Reasons for buying organic food.



4.3 Environmental Consciousness as a factor for positive purchase behaviour towards organic food.

In order to test the hypothesis H2 , we conducted a chi- square test of factors of environmental consciousness with the frequency of purchase of organic food. The chi-square goodness of fit test revealed a P value of 0.000 which is below the level the significance of 0.05 and therefore (H2a) null hypothesis is rejected and it is found that the environmental consciousness has a positive impact on consumer behaviour.

Table 1.1 Chi-square test showing significance of environmental consciousness in frequency of purchase of organic food.

Factor	Value	df	Asymp.Sig.(2-sided)
Environmental Consciousness	60.912 ^a	16	0.000
Environmental Friendliness	138.685 ^a	16	0.000
Benefit for sustainability	43.462 ^a	16	0.000

4.4 Consumer Awareness as a factor for positive purchase behaviour towards organic food.

In order to test the hypothesis H3 , we conducted a chi- square test of factors of Consumer awareness with the frequency of purchase of organic food. The chi-square goodness of fit test revealed a P value of 0.364 for awareness of organic food, p value of 0.000 for awareness of production techniques of organic food, p value of 0.238 for awareness of the three concepts of reduce, reuse and recycle, p value of 0.028 for awareness of health benefits of organic food, 0.021

for awareness of environmental benefits of organic food and a p value of 0.209 for awareness of eco-labels which indicates that Awareness of production techniques, awareness of health benefits and awareness of environmental benefits have a positive impact on buying decisions of organic food consumers while other awareness factors are insignificant.

Table 1.1 Chi-square test showing significance of environmental consciousness in frequency of purchase of organic food.

Factor	Value	df	Asymp.Sig.(2-sided)
Awareness of Organic food	90.554 ^a	16	0.364
Awareness of Production techniques	107.615 ^a	16	0.000
Awareness of (reduce, reuse& recycle)	115.110 ^a	16	0.238
Awareness of health benefits	135.343 ^a	16	0.028
Awareness of Environmental Benefits	39.554 ^a	16	0.021
Awareness of Eco-lables	53.952 ^a	16	0.209

4.5 Health Consciousness as a factor for positive purchase behaviour towards organic food.

In order to test the hypothesis H4 , we conducted a chi- square test of factors of Health consciousness with the frequency of purchase of organic food. The chi-square goodness of fit test revealed a P value of 0.035 for Health benefits, p value of 0.000 for concern of family’s health and a p value of 0.028 for awareness of health benefits of organic food which in all cases is below the level the significance of 0.05 and therefore (H2a) null hypothesis is rejected and it is found that the environmental consciousness has a positive impact on consumer behaviour.

Table 1.2 Chi-square test showing significance of Health consciousness in frequency of purchase of organic food.

Factor	Value	df	Asymp.Sig.(2-sided)
Health Benefits	27.608 ^a	16	0.035
Concern for Family Health	50.538 ^a	16	0.000
Awareness of Health Benefits of organic food.	39.554 ^a	16	0.028

4.6 Availability/ Ease of Access as a factor for positive purchase behaviour towards organic food.

In order to test the hypothesis H5, we conducted a chi- square test of Availability with the frequency of purchase of organic food. The chi-square goodness of fit test revealed a P value of 0.035 for Health benefits, p value of 0.000 for concern of family’s health and a p value of 0.028 for awareness of health benefits of organic food which in all cases is below the level the significance of 0.05 and therefore (H2a) null hypothesis is rejected and it is found that the environmental consciousness has a positive impact on consumer behaviour.

Table 1.3(a) Chi-square test showing significance of proximity and availability to frequency of purchase of organic food..

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	77.763 ^a	16	.000
Likelihood Ratio	77.489	16	.000
Linear-by-Linear Association	12.414	1	.000
N of Valid Cases	394		

Table 1.3(b) Chi-square test showing significance of Quantity and Variety available on frequency of purchase of organic food.

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	45.860 ^a	16	.000
Likelihood Ratio	46.537	16	.000
Linear-by-Linear Association	8.024	1	.005
N of Valid Cases	394		

4.7 Regression Analysis

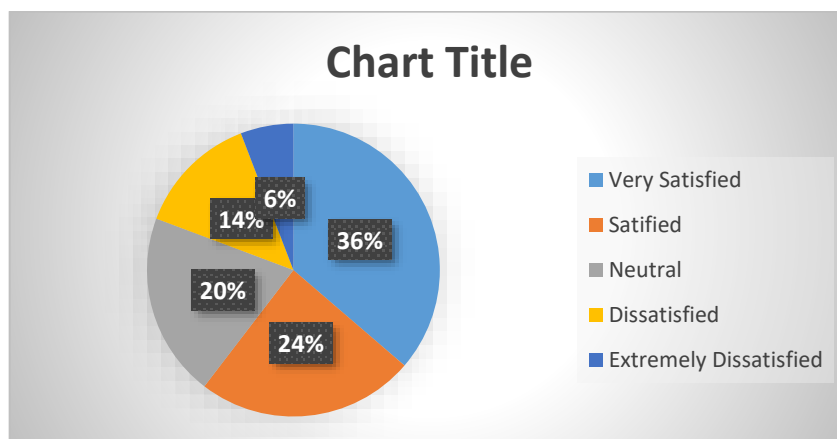
Further regression analysis was conducted as a confirmatory test for the above mentioned hypothesis.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.111	.417		9.861	.000
	Environmentally conscious customers are likely to purchase the eco-friendly products.	2.078	.069	0.057	1.137	.056
	Availability of shops and proximity	2.242	0.144	0.107	2.852	.095
	Health Benefits	0.068	0.062	0.057	1.111	.067
	Consumer awareness of organic food products	0.079	0.056	0.075	1.417	.057

a. Dependent Variable: Frequent purchase of the products

Regression analysis signified a p value of 0.056 for environmental consciousness, 0.095 for availability, 0.67 for health benefits and 0.057 for consumer awareness which confirm the above results as the p value was below 0.1 level of significance.

4.8 Overall Satisfaction of consumers with organic food.



Satisfaction level among the consumers of organic food was found good as more than 60% consumers were either satisfied or very satisfied with the products.

5. Discussion and Conclusion.

Customers have higher frequency of purchase of organic food on the basis of variety of reasons where availability comes first, only those organic food varieties were found in demand that were available to customers. Environmental consciousness, health consciousness and awareness are also very important factors for people of a 30-45 age group who have higher level of income and good educational background. Marketers need to segment their market carefully to convince more consumers belonging to the same segment focusing their marketing strategies on enhancing the association of organic products with environment friendliness.

6. Managerial Implications.

Although plethora of organic food products in the form of organic pulses, baby food, vegetables and fruits are present across the two cities of Jammu and Kashmir, but their presence is very limited to high end departmental stores and specified shops. Also customers belonging to towns gained access to organic products when they travelled to cities. Marketers need to increase focus on their supply chain to enhance the presence of organic food in the market. Also the advertisements and other marketing strategies need to be designed in a manner to project organic foods closer to environment and health besides making awareness campaigns to enhance consumer knowledge of environment friendly products.

7. Limitations of the study.

The study was limited to consumers of organic food at specialized shops and other stores and did not access the consumers who preferred to shop online. Also the study was limited to two capital cities of the union territory, the factors driving buying behaviour in other urban/ rural areas of the union territory could not be ascertained as the sample size was small and based on convenience sampling.

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