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A study on consumer buying behavior of respondents towards organic products in Varanasi district of Uttar Pradesh

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Abstract

Organic food products are grown under a system of agriculture without the use of harmful chemical fertilizers and pesticides with an environmentally and socially responsible approach. This is a method of farming that works at grass root level preserving the reproductive and regenerative capacity of the soil, good plant nutrition, and sound soil management, produces nutritious food rich in vitality which has resistance to diseases. In this method growing plants take time to grow naturally and always good for health. In this study respondents were asked 14 question which were mention in the questionnaire, respondents using 5-point Likert scales responded. A total of 332 questionnaires were thoroughly filled in the study period. The collected data were analyzed using Exploratory Factor Analysis (EFA) method and principal component analysis (PCA) was conducted with the aim to determine the factors which influences the consumer's buying behaviour for organic products.

Keywords: Consumer buying behaviour, organic products, Likert scale, exploratory factor analysis (EFA), principal component analysis (PCA)

1. Introduction

An organic product is made from materials produced by organic agriculture. Most well-known organic products are organic food items, however clothing and personal care items can also be made with organic agriculture. Many countries have strict consumer safety regulations to protect consumers from consuming harmful products. These agencies often certify cultivated products as organic. The United States uses USDA certification through the National Organic Program to define products as organic. According to USDA, in order for a product to be considered organic, several standards must be met. The National List of Allowed and Prohibited Substances details synthetic and non-synthetic substances that can be used in the process of producing organic products. Operations involving these organic products must be "protecting natural resources, conserving biodiversity, and using only approved substances. (Mishra *et al.* 2023) ^[7-10]".

1.1 Organic Food Products

Organic food products are grown under a system of agriculture without the use of harmful chemical fertilizers and pesticides with an environmentally and socially responsible approach. This is a method of farming that works at grass root level preserving the reproductive and regenerative capacity of the soil, good plant nutrition, and sound soil management, produces nutritious food rich in vitality which has resistance to diseases. In this method growing plants take time to grow naturally and always good for health. Most of the country has its own organic products cultivation regulation monitor organic products. (Mishra and Stephen 2023) ^[7, 8, 9, 10] USA use USDA certification, India uses India Organic certification NPOP (National Program for Organic Production). There are many benefits involving organic food products. Organic foods contain fewer pesticides. This means that things such as insecticide that is used in most agricultural practices are eliminated. People are concerned with these chemicals that are used to preserve foods are then being consumed by the people who purchase them. Farming without pesticides is also better for the environment. Fewer chemicals are being placed on the ground,

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entering the soil and water supply. Organic meats can also contain a lot more nutrients. Nutrients like omega fatty acids were up to 50 percent higher in organic meats and milk than in conventionally raised products.

One of the main reasons that deter people from organic products is costs. In 2015, on average, organic products were 47 percent more expensive. Organic products can vary a lot in price. According to a study performed by consumerreports.org, organic products compared to non-organic products ranged anywhere from 13 percent cheaper to 303 percent more expensive. The reason why organic products cost so much more on average is the production process. Many factors contribute to this cost. First, the demand for an organic product is larger than the number of organic products available. Without synthetic pesticides, quantities of foods will be smaller. This smaller production of organic food means an increased cost. Also, the amount of labour per unit of food is larger compared to the mass production of non-organic products (Mishra *et al.* 2023) [7-10].

1.2 Organic Clothing Products

Clothing products made with such raw materials which have been produced by using organic methods are referred to as organic clothing. Organic cotton T-shirts are T-shirts which are made from organic cotton that has been grown using organic fertilizers and other supplements instead of inorganic insecticides and pesticides. By definition, organic clothing products are such products whose raw material have been produced using organic methods and the product has been produced using eco-friendly method including the machinery and equipment. Popular clothing brands like Patagonia, are labelled as organic by using 100 percent organic cotton for many of its styles. Even big brands like Nike, Adidas, and Levi's are moving towards a more organic brand. These are 3 of 13 clothing companies that have committed to the 2025 Sustainable Cotton Challenge. Brands who participate in this challenge are committed to using 100 percent sustainable cotton by 2025. (Mishra *et al.* 2023) [7-10]

1.3 Organic Personal Care Products

Unlike food products, the USDA does not regulate the term "organic" as it applies to personal care products. A personal care product can be deemed organic if it contains agricultural ingredients and can meet the USDA organic production standards. Once certified by the USDA it can fall into one of four categories: "100 percent organic", "organic", "made with organic ingredients", or "made with less than 70 percent organic ingredients." A personal care product can only claim they are USDA-certified organic if they meet the qualifications of the USDA.

Consumers are concerned with exactly what they put in and on their bodies. Just like people are concerned with putting more organic foods in their bodies, they are also concerned about using more organic personal care products. Personal care products can fall under a wide variety of products such as deodorant, makeup, tampons, lotion, shampoo, etc. Chemicals in these personal care products can be associated with a wide variety of concerns including things like hormone disruption, allergies, and infertility. Companies are hearing the concerns of these chemicals from consumers and trying to diversify. Many big makeup companies such as Avon and Revlon are removing phthalates from their products. Johnson & Johnson removed many chemicals from their products including parabens, formaldehyde, and certain fragrance chemicals. (Mishra *et al.* 2023) [7-10].

Cosmetic brands such as Laurel and Rose Mira are both 100 percent organic and have a wide array of skin care products. Similar to organic food, organic personal care products also have a higher price tag. While organic personal care products may lack many of the harmful chemicals that consumers like to stay clear of, this cleaner alternative comes with the cost of a higher price.

Research Methodology

Table 1: Values of Cronbach Alpha KMO and Bartlett's

Cronbach's Alpha		.849
Kaiser-Meyer-Olkin Measures of Sampling Adequacy		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	1374.305
	Df	91
	Sig.	0.000

In this study respondents were asked 14 question which were mention in the questionnaire, respondents using 5-point Likert scales responded where 1 was for Strongly Disagree, and 5 was for Strongly Agree. A total of 332 questionnaires were thoroughly filled in the study period. The collected data were analyzed using Exploratory Factor Analysis (EFA) method and principal component analysis (PCA) was conducted with the aim to determine the factors which influences the consumer's buying behaviour for organic products. In order to ensure the internal validity of the items mentioned, a reliability analysis was conducted for each of the items. For this study, the overall Cronbach's alpha value for all the items was found to be 0.849 which was shown in Table 1 which shows an excellent consistency in the measurement and indicating good reliability.

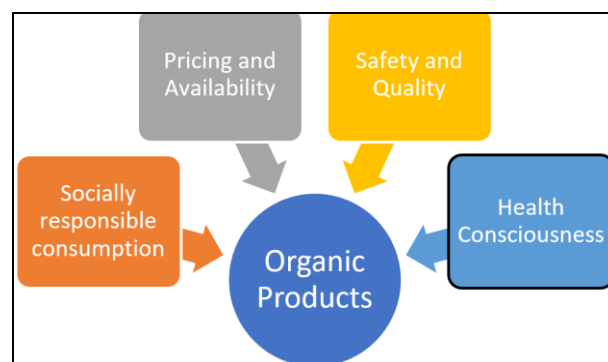


Fig 1: Theoretical framework for study

The Kaiser Meyer-Olkin (KMO) was used to measure the sampling adequacy and to assess the factor ability of the items of variables. This is based on the correlation and partial correlation index ranging from 0 to 1. A minimum index of 0.60 is suggested for good factor analysis. The result revealed that KMO's value was .812 indicating an excellent inter-correlation between the factors. Bartlett's test of sphericity $X^2(91) = 1374.305, p < .05$ considered appropriate and significant for factor analysis to be performed. The result reveals that it is statistically significant at a p-value less than 0.05, indicating that the correlation between items was sufficiently large for principal component analysis. An initial analysis was conducted to obtain eigenvalue for each component in the data. Four components had eigenvalues over Kaiser's criterion of one and are considered significant which in combination explained a cumulative of 70.497% of the variance, 14 items or variables were extractable from the analysis along with their initial eigenvalues, the percentage of variance attributed to each factor and the

cumulative of the factors.

Four factors were identified from the 14 items as well as their factor loadings, eigenvalues and variances. The factor loadings of the un-eliminated standardized items in this study were in the

range of .731 to .948

Result and Discussion

Table 2: Preference given by respondents for socially responsible factor

S. No.	Socially Responsible Consumption Factor	SA	A	N	D	SD	$\chi^2 = 11.224$ Dof = 12 P = 0.50
1.	I think, by consuming organic product I can contribute something better to the world.	69	66	70	61	66	
2.	Organic products are more environment-friendly than conventional products.	58	65	62	75	72	
3.	It is morally right thing to consume organic product.	70	64	54	74	70	
4.	Purchasing an organic product is good for the environment.	71	73	61	51	76	

Source: Based on data collected by researcher in study Area

Note: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

Table 3: Socially Responsible Factor and sub factors

S. No.	Socially Responsible Consumption Factor	Factor	Eigen value = 2.799 % of variance = 20.73 Cumulative % of Variance = 20.73 Cronbach's alpha = 0.867
1.	I think, by consuming organic product I can contribute something better to the world.	.929	
2.	Organic products are more environment-friendly than conventional products.	.883	
3.	It is morally right thing to consume organic product.	.867	
4.	Purchasing an organic product is good for the environment.	.793	

Table 2 and Table 3 mentioned “socially responsible consumption” factor, the Eigen value was found to be 2.799, the percent of variance was 20.73 and cumulative percent of variance was also 20.73 the Cronbach alpha was calculated as 0.867 which was above 0.6 which validate the result. There were four factor in “socially responsible consumption” the highest factor loading was 0.929 for the statement “I think, by consuming organic product I can contribute something better to the world” which was followed by “Organic products are more

environment-friendly than conventional products” with factor loading of .883. The statement “It is morally right thing to consume organic product” had factor loading of 0.867 whereas the least factor loading i.e. 0.793 in “socially responsible consumption” was “Purchasing an organic product is good for the environment”. So the primary reason for purchasing of organic product was derived from the environmental and moral thinking of the respondents

Table 4: Preference given by respondents for price and availability factor and sub factors

S. No.	Pricing and Availability Factor	SA	A	N	D	SD	$\chi^2 = 15.298$ Dof = 12 P = 0.225
1.	The high price is a hindrance in buying organic products.	70	69	64	61	68	
2.	An organic product is not easily available.	64	60	80	55	73	
3.	Usually prices of organic products are high than conventional product.	74	85	58	56	59	
4.	Very few options are available for organic products.	62	70	68	73	59	

Source: Based on data collected by researcher in study Area

Note: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

Table 5: Price and Availability factor and Sub factors

S. No.	Pricing and Availability Factor	Factor	Eigen value = 2.689 % of variance = 19.785 Cumulative % of Variance = 39.698 Cronbach's alpha = 0.840
1.	The high price is a hindrance in buying organic products.	.948	
2.	An organic product is not easily available.	.902	
3.	Usually prices of organic products are high than conventional product.	.884	
4.	Very few options are available for organic products.	.813	

Table 4 and Table 5 mentioned about the “price and availability” factor the eigen valued was 2.689 the percentage of variance was 19.785 whereas cumulative percent of variance was found at 39.698 the overall Cronbach alpha was found to be 0.840 which was above the minimum standard which validate the result. There were four sub factor it was observed that highest factor loading was 0.948 for the statement “The high price is a hindrance in buying organic products” which was followed by

the statement “An organic product is not easily available” with a factor loading of 0.902 the statement “Usually prices of organic products are high than conventional product” had factor loading of 0.884 whereas least factor loading of 0.813 was for the statement “Very few options are available for organic products”. So it was concluded that limited availability of the organic product as well as High price of the organic product were hindrance in purchasing of organic products.

Table 6: Preference given by respondents for Safety and Quality Characteristics and Sub factors

S. No.	Safety and Quality Characteristics	SA	A	N	D	SD	$\chi^2 = 10.187$ Dof = 8 P = 0.252
1.	Organic products taste better than conventional products.	74	77	57	68	56	
2.	Organic products are good for health.	70	66	60	65	71	
3.	Organic products are chemical and pesticides free.	55	70	79	67	61	

Source: Based on data collected by researcher in study Area

Note: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

Table 7: Safety and Quality characteristics and sub factors

S. No.	Safety and Quality Characteristics	Factor	
1.	Organic products taste better than conventional products.	.849	Eigen value = 2.395 % of variance = 17.656 Cumulative % of Variance = 57.566 Cronbach's alpha = .890
2.	Organic products are good for health.	.843	
3.	Organic products are chemical and pesticides free.	.731	

Table 6 and Table 7 mentioned about the “Safety and Quality Characteristics” the overall Cronbach alpha was found to be 0.890 which was above the minimum standard of 0.6 the percentage of variance was found to be 17.656 whereas the cumulative percent of variance was found to be 57.566. There were three sub factor the range of factor loading was between 0.849-0.731. The highest factor loading was for the statement

“Organic products taste better than conventional products” with 0.849 value the second factor was “Organic products are good for health” get 0.843 factor loading. However, 0.731 factor loading was given to the statement “Organic products are chemical and pesticides free”. Quality like taste and variety where additional factor which customers consider while purchasing organic products.

Table 8: Preference given by respondents for health consciousness and sub factor

S. No.	Health Consciousness	SA	A	N	D	SD	$\chi^2 = 16.258$ Dof = 8 P = 0.038
1.	I chose food carefully to ensure the good health.	75	69	61	70	57	
2.	I consider myself health conscious.	59	65	68	62	78	
3.	I often think about health-related issues.	53	61	92	58	68	

Source: Based on data collected by researcher in study Area

Note: SA= Strongly Agree, A= Agree, N= Neutral, D= Disagree, SD= Strongly Disagree

Table 9: Health Consciousness and sub factor

S. No.	Health Consciousness	Factor	
1.	I chose food carefully to ensure the good health.	.872	Eigen value = 2.129 % of variance = 15.299 Cumulative % of Variance = 73.479 Cronbach's alpha = 0.795
2.	I consider myself health conscious.	.870	
3.	I often think about health-related issues.	.788	

Table 8 and Table 9 stated that about the last factor which was “Health Consciousness” under which three sub factor was analyzed the overall Cronbach alpha was 0.795 for the sample which was above minimum standard of 0.6 the percent of variance was found to be 15.299 and the Cumulative percent of variance was 73.479 the Eigen value was 2.129 in this factor. 0.872 factor loading was given to the statement “I chose food carefully to ensure the good health” however 0.870 value was given to the statement “I consider myself health conscious” the least value was 0.788 belong to the statement “I often think about health-related issues.” So it was inferred that health consciousness was major factor which influence the purchase decision of the consumer for purchasing organic products.

Summary and Conclusion

Agreeing to the American Marketing Association, green marketing is the marketing of products that are assumed to be environmentally safe. In this way green marketing consolidates a wide extend of exercises, counting product alteration, changes to the production process, bundling changes, as well as adjusting advertising. Environmental Marketing and Biological Marketing are the synonymous terms utilized in connection to Green Marketing. In this way “Green Marketing” alludes to all-encompassing promoting concept wherein the generation, showcasing utilization and transfer of products and services happen in a way that's less detrimental to the environment with developing mindfulness approximately the suggestions of worldwide warming, non-biodegradable strong waste, destructive affect of pollutants etc., both marketers and consumers are getting to be progressively delicate to the need for switch in to green products and services. In Socially Responsible Consumption the highest preference was given to the statement that consuming organic product contribute something better to world followed by consuming organic

product were morally right thing, organic products are more environmentally friendly than conventional products, and purchasing an organic product is good for environment. In Pricing and Availability factor highest preference were given to higher price hindrance in buying product followed by not easily availability of the product, organic products were high in price and few option available. In terms of Safety and Quality highest preference were given to statement that organic products taste better than the conventional products followed by good for health and chemical and pesticide free products. In health consciousness maximum were health conscious, health related issues and carefully choose food to ensure good health were the major factor.

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