Consumer perception on organic food products: a study on Visakhapatnam city

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Abstract

Background/Objectives: The increased consciousness of health has influenced the quest for the quality food products like organic food products. Majority of the consumers believes that organic food was healthier but more expensive. A study on consumer perception on organic food may add insight into emerging organic food products in Visakhapatnam. This study focused on the opinions and preferences of organic food products in the city.

Methods: The study was done mainly through Field Survey through questionnaire by random selection of the respondents. It is an empirical study by gathering of information. The Field Survey data is collected from various parts which are nearer to Raitu bazaars (farmers market) in Visakhapatnam, India from both male and female respondents separately. The data was collected through specified questionnaire which can give right information for analysis and consumer perception regarding organic food products. The secondary data is collected through various literatures, articles, internet sources, journals etc. The collected data is calculated and analyzed through Chi-square formula to understand the significance between the variables.

Findings: The analysis of the data depicts that the perceptional factors relating to consumers have their significant impact on the purchase attitude of the consumers towards organic food products. The data indicates that the health benefits of organic food have not been spread among the general public to the desired extent especially against the backdrop of growing incidence of risks of heart attacks and other chronic diseases on account of consumption of pesticides content non-organic food products. The demand and awareness of the organic products increases gradually due to information sharing through friends and relatives as per the study. **Recommendations**: The information spread regarding the health benefits of organic food is more important and must be promoted by government as well as non-governmental agencies by making special provisions in the agricultural policies.

Keywords: Organic food market, organic food products, consumer perception, consumer preferences.

1. Introduction

Organic farming has become a buzzword today drawing the attention of entire world. Organic sector in India portraits our traditional and competitive strength in facilitating sustainable agriculture. Organic farming was a normal way of farming in India which endows with nutrition, freshness, taste and quality. The industry against heavy odds has been at the forefront of organic movement promoting organic farming, processing as well as promoting organic food and fiber in the domestic and international markets. Today India is a global leader in a few segments like organic tea, Basmati Rice and cotton. India produces around 1.24 million MT of certified organic products which includes all varieties of food products.

The Indian organic sector is primarily driven by exports comprising about ₹2,100 crores and an organized sector domestic certified market estimated between ₹250 to ₹300 crores. As per the latest survey, India accounts 5.2 million hectares of organic land and 6,50,000 organic producers. India has the largest number of organic producers in the world. Organic food means a product obtained from an organic farming system which avoids the use of synthetic fertilizers and pesticides.

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This change in the direction of organic production is being supported by the consumers who are now aware of health hazards; therefore, the demand for the organic food is increasing. Organic food product consumption is also on the rise among consumers all over the world. This pattern is due to the consumer awareness regarding health and environment concerns.

2. Objective of the study

The following objective is selected for the study

To understand the marketing of organic food products in India and to analyze the perception of the consumers towards organic food products.

1. Research design

The study was done mainly through Field Survey. The Field Survey is collected through questionnaire by random selection of the respondents. It is an empirical study by gathering of information. The Field Survey data is collected from various parts which are nearer to Raitu bazaars (farmers market) Visakhapatnam from both male and female respondents separately. The data was collected through specified questionnaire which can give right information for analysis and consumer perception regarding organic food products. The secondary data is collected through various literatures, articles, internet sources, journals etc. The collected data is calculated and analyzed through Chi-square formula to understand the significance between the variables. Calculation formula:

$$X^{2} = \sum_{i=1}^{T} \sum_{j=1}^{c} \frac{(o_{i,j} - E_{i,j})^{2}}{E_{i,j}}$$

2. Sample design

The total population of Visakhapatnam city is very large and hence 'Convenience sampling' was adopted. This sample includes the consumers of Visakhapatnam city only. Organic food products are taken as the sample unit in Visakhapatnam city and the sample size is 150 respondents for the convenience of the researcher.

3. Hypothesis

H o1: The concentration of organic food consumers is not significant in Visakhapatnam city.

H o2: The opinion of the consumers has no influence on their perception towards organic food products.

4. Limitations of the study

The present study includes every consumer who buys organic food products consciously and who has an affirmative attitude towards the value of organic foods. The strength of the study depends entirely on the reliability of the responses given by the consumers. The responses are pertaining to consumer attitude and their perception towards organic food products. It cannot be universally applicable to all products in the market. The data is collected from Visakhapatnam city only in Andhra Pradesh state.

3. Literature survey

The review of the literature is the contribution of various past studies and contributions made by researcher; this will enable to identify the research gap to continue the study. In [1] explained the consumer perceptions towards organic food and found that food safety, human health and environmental concern along with sensory attributes such as nutritive value, taste, freshness and appearance influence organic food consumer preferences. Premium price continues to suppress organic food consumption. Understanding the grounds of increasing level of organic food consumption such as motivation are most critical in understanding the potential of the organic food to become a genuinely mainstream market. In [2] revealed that consumers are very much aware that organic food are good for health, these products are free from chemical which resulting in no side effects and do not cause harm to the consumers.

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The consumers living in urban areas are more aware about organic food products. Consumer believes that consuming of organic food helps to reduce stress level and maintain an energetic lifestyle. Another factor this study found that respondents are willing to pay even higher prices because of it is beneficial for health. In [3] observed that consumers prefer to buy organic food products because of their perception that the organic food products are healthy and safe, nutritious and environment friendly. In [4] revealed the ten factors such as labels,

that the factors of influence over the consumers depend on gender and age.

The organic food is mostly appreciated for its taste and quality. Women are also influenced by price and by the trendy fact of being organic. Major differences have been noticed between people with different age regarding promotions, recommendations from acquaintances and advertising. Youngsters are more influenced by advertising than any other group of age while adult people are influenced by promotions. In [6-7] identified the main reasons for organic food consumption among consumers. The main reasons are: concerns about health and nutrition, superior taste, care for the environment, food safety, lack of trust in conventional food, care for

animal welfare, support the local economy, freshness, curiosity or because they are considered trendy.

health, concern, environment concern, brand advertising, safety, accessibility, affordability, freshness and store location as influencing factors to buy organic food. Out of this health, environment and safety are key factors that are found primary influencers. According to [5], observed the people consume this type of food from different reasons but most of them are related to animal welfare and environmental friendly. Results indicate

4. Data analysis and interpretation

The collected data is analyzed to know the preference of consumers and their willingness to purchase organic products. The following tables reveal the Visakhapatnam city consumer's opinion on the consumption aspects of organic products. Thus, an attempt has been made in this study to draw various inferences by analyzing the varied responses of organic food consumers.

Table 1. Knowledge of sources of organic products

Source of Knowledge	No. of respondents		Total
	Male	Female	
TV& Radio	10	08	18
	(7.0)	(5.0)	(12.0)
Print Media	25	07	32
	(17.0)	(5.0)	(21.0)
Friends &Relatives	42	22	64
	(28.0)	(15.0)	(43.0)
Awareness Programs	21	15	36
	(14.0)	(10.0)	(24.0)
Total	98	52	150
	(65.0)	(35.0)	(100.0)
The chi-square statistic is 3.85. The p-value is 0.27. The result is not significant at $p < .05$. df=3			

Source: Field survey

The Table 1 shows the knowledge and information sources of the organic products. The source of information plays a vital role in the purchase of any organic product. It depends on important factors like influence of friends, print media, TV and Radio programs, awareness programs conducted by organizations and markets, etc. When the respondents were asked to give the source of their knowledge of organic food products, maximum respondents i.e., (64)43.0 expressed that they are influenced by friends and relatives and (36)24.0% by awareness programs, (32)21.0% followed by print media and (18)12.0% by Radio and Television. These are evident from the Table 1. This clearly shows that the knowledge of organic food products is getting spread among the people by word of mouth through friends and relatives circle. This is a very good indication of organic market. Promotion of awareness programs by various authorities and organizations is enlightening the consumers. Therefore, it may be concluded that in male category most of the respondents, 42(28.0)% said that the knowledge of organic products is influenced by friends and relatives and also female fraternity 22(15.0). The calculated chi-square value is 3.85, degree of freedom is equal to 3 and the p value is 0.27 which is not significant at 5% level. This shows that there is a less awareness about organic food products. In comparison male respondents have more awareness about organic products.

Table 2. Regularity in purchase of organic food products

Response for regularity of purchase	No. of respondents		Total percentage
	Male	Female	
Yes	68	48	116
	(45.0)	(32.0)	(77.0)
No	22	12	34
	(15.0)	(8.0)	(23.0)
Total	90	60	150
	(60.0)	(40.0)	(100.0)
The chi-square statistic is 0.40. The p-value is 0.52. The result is not significant at $p < .05$. df=1			

Source: Field Survey

Table 2 indicates the regularity and frequency of organic food products purchase in their day to day life. Most of the respondents (116)77.0 claimed that they are regular purchasers of organic food products and remaining (34)23.0% not regular purchasers of organic food products. But they can be considered as non-regular buyers of organic food products.

This evidently shows that the interest and willingness to purchase organic food products is in more number in male as well as female respondents. Therefore, it may be concluded that male respondents 68(45.0) and female category respondents 48 (32.0) regularly purchase organic food products. The calculated chi-square value is 0.40, degree of freedom is equal to 1 and the p value is 0.52, which is not significant at 5% level. While comparing male and female respondents, male respondents have more awareness about organic products as shown in Table 3.

Table 3. Opinion on chemical pesticides in organic food products

	No. of re	spondents	Total percentage
	Male	Female	
Strongly Agree	44	34	78
	(29.0)	(23.0)	(52.0)
Agree	38	30	68
	(25.0)	(20.0)	(45.0)
Neutral	02	02	04
	(1.0)	(1.0)	(3.0)
Disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Strongly disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Total	84	66	150
	(56.0)	(44.0)	(100.0)

Source: Field survey

Therefore, it may be concluded that in male category most of the respondents 44(29.0) believe that organic food products free from chemical pesticides and female category also accept the same 34(23.0). The calculated chi-square value is 0.06, degree of freedom is equal to 4 and the p value is 0.96, which is not significant at 5% level. The Table 4 explains that the respondents when asked whether they were ready to pay a higher price for the organic products, 71(47.0) % of them stated that they agree, 39(26.0)% remained neutral, 26(18.0) % respondents strongly agree, 11(7.0)% respondents disagree, only 3(2.0)% of them strongly disagreed. This shows that majority of consumers are ready to pay a premium price for buying the organic food products. This indicates the importance that the consumers have attached for organic food products. When consumers are ready to pay premium price for the products, producers and sellers should find the ways to provide the products at competitive prices with best services, so that the purchase intention is widened to other potential consumers also. Therefore, it may be concluded that in male category most of the respondents 45(30.0) are ready to pay high price to purchase organic food products and female category also accept the same 26(17.0). The calculated chi-square value is 0.46, degree of freedom is equal to 4 and the p value is 0.97, which is not significant at 5% level. The respondents were asked to give their opinion about organic food in the market at their convenience.

Table 4. Opinion on paying a premium price for organic food products

	No. of respondents		Total percentage	
	Male	Female		
Strongly Agree	16	10	26	
	(11.0)	(7.0)	(18.0)	
Agree	45	26	71	
	(30.0)	(17.0)	(47.0)	
Neutral	23	16	39	
	(15.0)	(11.0)	(26.0)	
Disagree	6	5	11	
	(4.0)	(3.0)	(7.0)	
Strongly disagree	2	1	3	
	(1.0)	(1.0)	(2.0)	
Total	92	58	150	
	(61.0)	(39.0)	(100.0)	
The chi-square statistic is 0.46. The <i>p</i> -value is 0 .97. The result is <i>not</i> significant at <i>p</i> < .05. df=4				

Source: Field survey

Table 5 represents that 60(40.0)% of respondents are neutral about it, 47(31.0)% of them disagree, 28(19.0)% strongly agree and 15(10.0)% strongly disagree. This clearly shows that the market for organic food products has a high potential which is not fully tapped by the food market. The market has to think about this seriously, since the supply of organic food is not in accordance with the demand. Consumers are unable to find the organic foods availability at their disposal. This situation should change to easy pick market for organic food as their diet.

Table 5. Convenience in availability of organic foods

	No. of respondents		Total percentage
	Male	Female	
Strongly Agree	0	0	0
	(0.0)	(0.0)	(0.0)
Agree	16	12	28
	(11.0)	(8.0)	(19.0)
Neutral	32	28	60
	(21.0)	(19.0)	(40.0)
Disagree	28	19	47
	(19.0)	(13.0)	(31.0)
Strongly disagree	9	6	15
	(6.0)	(4.0)	(10.0)
Total	85	65	150
	(57.0)	(43.0)	(100.0)
The chi-square stati	stic is 0.50. The <i>p</i> -value i	s 0.91. The result is <i>not</i> signifi	icant at <i>p<</i> .05. df=4

Source: Field survey

Table 6. Decrease in risk of chronic diseases

	No. of respondents		Total percentage
	Male	Female	
Strongly Agree	16	9	25
	(11.0)	(6.0)	(17.0)
Agree	56	42	98
	(37.0)	(28.0)	(65.0)
Neutral	16	9	25
	(11.0)	(6.0)	(17.0)
Disagree	1	1	2
	(1.0)	(1.0)	(1.0)
Strongly disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Total	90	60	150
	(60.0)	(40.0)	(100.0)
The chi-square st	atistic is 0.71. The <i>p</i> -value	s 0 .86. The result is <i>not</i> signific	cant at p< .05. df=4

Source: Field survey

More and more producers and sellers can enter the organic food market to tap the potentiality which will increase the employment opportunity also. The data is depicted in Figure 5. Therefore, it may be concluded that in male category most of the respondents 32(21.0) as neutral about convenience and female category also expressed the same about convenience of food products i.e.28 (19.0) percent. The calculated chi-square value is 0.50, degree of freedom is equal to 4 and the p value is 0.91, which is not significant at 5% level.

The Table6 reveals that when the consumers are asked whether organic food reduced the risk of chronic diseases, 98(65.0) % respondents agree, 25(17.0) % strongly agree, neutral are also same 25(17) % and 2 (1.0) respondents disagree and none of them reveal that strongly disagree. The data analysis concludes that consumers are not fully aware of the benefits of organic food products in reducing the chronic deceases like cholesterol, blood pressure, cancer, etc. None of the respondents has strongly disagreed with that as it reduces the risk of diseases. This shows that the respondents are conversant with regard to organic food products.

Therefore, it may be inferred that in male category most of the respondents believe 56(37.0) and agree that chronic diseases risk decrease by using organic food products and female respondents also agree 42(28.0). The calculated chi-square value is 0.71, degree of freedom is equal to 4 and the p value is 0.86 which is not significant at 5% level.

Table 7. Presence of low calories and fat in organic food products

	No. of respondents		Total percentage
	Male	Female	
Strongly Agree	28	21	49
	(19.0)	(14.0)	(33.0)
Agree	53	35	88
	(35.0)	(23.0)	(59.0)
Neutral	8	5	13
	(5.0)	(3.0)	(8.0)
Disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Strongly disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Total	89	61	150
	(59.0)	(41.0)	(100.0)
The chi-square	e statistic is 0.15. The <i>p</i> -va	lue is 0 .92. The result is not	significant at p< .05. df=4

Source: Field survey

It is observed that from Table 7 that 88(59.0) % of the respondents express that organic food products have very low calories and fat contents followed by 49(33.0) % strongly agree and 13(8.0) % of them neutral. None of them disagree and strongly disagree.

The responses denote that the consumers have the health consciousness. They are confident about the fact that organic food products have low calorie and fat. This positive opinion has to be used by the marketers meticulously.

Table 8. Good value for money

	Tubic	o. Good value for money	
	No. of respondents		Total percentage
	Male	Female	
Strongly Agree	64	40	104
	(43.0)	(27.0)	(69.0)
Agree	22	17	39
	(15.0)	(11.0)	(26.0)
Neutral	4	3	7
	(3.0)	(2.0)	(5.0)
Disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Strongly disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Total	90	60.0	150
	(60.0)	(40.0)	(100.0)
The chi-squa	re statistic is 0.33. The p	-value is 0 .84. The result is <i>not</i> s	ignificant at p< .05. df=4

Source: Field survey

Therefore, it may be concluded that in male category most of the respondents 53(35.0) believe that organic food products have less calories and female respondents also agreed 35(23.0) %. The calculated chi-square value is 0.15, degree of freedom is equal to 4 and the p value is 0.92 which is not significant at 5% level. A product has to be easily sold in the market means it should offer good value for money spent on its purchase. Table 8 clearly indicates that out of total respondents, majority of them 104(69.0) percent strongly agree, 39(26.0) % agree and only 7(5.0) % of them remained neutral about this; interestingly there is no negative opinion on the excess money spent on the organic food.

This opinion confirms that consumers are assured of the good value for money spent on them. They do not mind paying a premium price for organic food product. Therefore, it may be concluded that most of the respondents of male category 64(43.0) believe that purchase of organic products is money worth and female category also accepted the same 40(27.0). The calculated chi-square value is 0.33, degree of freedom is equal to 4 and the p value is 0.84 which is not significant at 5% level.

Table 9. Safety and freshness in organic food products

	No. of respondents		Total percentage	
	Male	Female		
Strongly Agree	46	33	79	
	(31.0)	(22.0)	(53.0)	
Agree	34	21	55	
	(23.0)	(14.0)	(37.0)	
Neutral	8	3	11	
	(5.0)	(2.0)	(7.0)	
Disagree	3	2	5	
	(2.0)	(1.0)	(3.0)	
Strongly disagree	0	0	0	
	(0.0)	(0.0)	(0.0)	
Total	91	59	150	
	(61.0)	(39.0)	(100.0)	
The chi-square sta	atistic is 0.89. The p-valu	e is 0 .82. The result is <i>not</i> signif	icant at p< .05. df=4	

Source: Field Survey

Table 9 exhibits that 79(53.0) % of the respondents strongly agree that organic food products are safe and fresh; followed by 55(37.0) % agree, 11(7.0) % being neutral, 5(3.0)% disagree and none of them strongly disagree. This infer that majority of the respondents are positive about the safety and freshness of the organic food. Therefore, it may be concluded that in male category most of the respondents 46(31.0) believe that organic products safe and fresh and female category also 33(22.0) believe the same. The calculated chi-square value is 0.89, degree of freedom is equal to 4 and the p value is 0.82 which is not significant at 5% level.

As per the Table 10 when respondents are asked whether the taste of organic food is good or not, 100(67.0)% of them strongly agree and their reason for purchase of organic food products is its taste. It is followed by 44(29.0) % agree, 4(3.0) % neutral, 2(1) % disagree none of them opted strongly disagree. The table unequivocally denotes that majority of the respondents are positive to the taste of the organic food products and that it is the strong reason for their purchase. (67.0+29.0=96%). This is enough to make the organic food products more popular. Marketers have to make use of this strong positive opinion and help it convert into purchase action. Therefore, it may be concluded that in male category most of the respondents strongly agree 64(43.0)% that taste of organic food is good and female category also express the same 36(24.0). The calculated chi-square value is 0.71, degree of freedom is equal to 4 and the p value is 0.86 which is not significant at 5% level.

5. Findings

In a fast developing economy like India consumer is ready to pay a premium price for the organic food products even with a lower income because of the influencing factors like health consciousness and environmental safety, global warming, etc. The study emphasizes on various findings and suggestions for assessing the consumer perception on organic products.

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The various findings that have emerged out through the course of study have been presented as follows. The knowledge about the respondents on awareness on organic food is positive and most of them claim that the friends and family members are major source of information and other awareness programs conducted by various authorities and organizations, electronic and print media like television, radios, newspapers and magazines have contributed a lot in creating awareness about health aspects of organic food. The respondents also disclose the information about the taste and purchasing patterns of organic food products.

Table 10. Taste of organic food

	No. o	of respondents	Total percentage
	Male	Female	
Strongly Agree	64	36	100
	(43.0)	(24.0)	(67.0)
Agree	26	18	44
	(17.0)	(12.0)	(29.0)
Neutral	3	1	4
	(2.0)	(1.0)	(3.0)
Disagree	1	1	2
	(1.0)	(1.0)	(1.0)
Strongly disagree	0	0	0
	(0.0)	(0.0)	(0.0)
Total	94	56	150
	(63.0)	(37.0)	(100.0)
The chi-square statistic is 0.71. The p -value is 0.86. The result is not significant at p <.05. df=4			

Source: Field Survey

6. Suggestions

- 1. Organic food products should be made available at all retail stores. Extensive organic food stores should be established to cater to the needs of the consumers. Government should think of selling organic products through the ration shops to all types of consumers.
- 2. Lower income and lower middle income group consumers should also be encouraged to buy more and more organic products. This is possible when more awareness programs are arranged and prices of the products are set to the reach the income level of these groups.
- 3. Purchase of organic food depends on the consumer's confidence over the seller. This may be a strong constraint for marketing organic food. Confidence should be established by certification from recognized authorities, well established supermarkets and malls for organic foods.
- 4. Organic farming should be encouraged further. The government should take steps to popularize organic farming. Organic farmers should be provided with agricultural appliances at subsidized rates and more educative programs should be conducted to enlighten the farmers in this regard.
- 5. The marketers should try to increase the shelf life of the organic food products. Soft chemicals and organic preservatives could be used to extend the shelf life to increase the sales of organic food products.
- 6. The benefits of organic food in respect of health and chronic diseases should be made known to the consumers through the proper print and visual media. This will increase their confidence. This could be taken up as a campaign throughout the nation.

7. Conclusions

The analysis of the data depicts that the perceptional factors relating to consumers have their significant impact on the purchase attitude of the consumers towards organic food products. The data indicates that the health benefits of organic food have not been spread among the general public to the desired extent especially against the backdrop of growing incidence of risks of heart attacks and other chronic diseases on account of consumption of pesticides content non-organic food products. The information spread is more important and must be promoted by government as well as non-governmental agencies by making special provisions in the agricultural policies.

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