Antecedents of Organic Food Consumption among the Indian Customers

Shiney Chib, Kanchan Dewal, Kanchan Artani, Sneha Turkar

Abstract: Organic food products refers to food raised, grown and stored and/or processed without the use of synthetically produced chemicals or fertilizers, herbicides, pesticides, fungicides, growth hormones and regulators or generic modification. Generally people are aware about the benefits of these products. But still the products have not achieved the market share in India, as expected. This people is an effort to identify the factors, which influences the purchase of organic food products. For this the researchers have developed a questionnaire and administered on the respondents. Both online and off line data collection was done, to cover the major areas, so that data can be collected from distinct places. The paper explored the awareness level about organic food products, influence of demographic variables on organic food consumption and factors affecting organic food purchase intention.

Key words: Customer perception, consumption, purchase behavior, purchase intention.

I. INTRODUCTION

The term Organic food products was first derived in 1940s, and refers to food raised, grown and stored and/or processed without the use of synthetically produced chemicals or fertilizers, herbicides, pesticides, fungicides, growth hormones and regulators or generic modification. Organic Farming may be a certifiable farm management system with controls and traceability that is harmonical with the native atmosphere victimisation land farming techniques like soil-conservation measures, crop rotation and also the application of agronomical, biological and manual strategies rather than artificial inputs. This is different from Traditional Farming, which is often subsistence oriented using few or no purchase inputs.

II. LITERATURE REVIEW

Mehra S., Ratna P.A., (2014), cleanliness, freshness of food products, price, quality, variety, packaging, and all season availability encouraged the customers to purchase it. **Mukherjee D, (2012),** concluded that, product attributes has an impact on new food product adoption among Indian consumers.

Dr. Shiney Chib*, Director , Datta Meghe Institute of Management Studies, Nagpur.shinychib@gmail.com.

Dr.Kanchan Dewal, Assistant Professor, Datta Meghe Institute of Management Studies, Nagpur. dewal.kanchan@gmail.com

Kanchan Artani, Assistant Professor, G H Raisoni chool of Management, Madhav Nagari, Nagpur. kanchan.artani@gmail.com.

Sneha Turkar, Associate Executive, HCL Technologies, Nagpur. snehaturkar@gmail.com

Expected value, perceived value, and purchase intentions influences purchase intentions.

Oroian C. E., (2017), studied the purchase pattern of innovators, early adopters and non-innovators. Income was taken as the main variable to distinguish between each category.

Bordeanu B. M. (2017), discuss antecedents to new food product purchasing behaviour among innovator groups in India. **Chandrashekar H.M., (2014)** elaborated on the factors affecting purchase decisions for major categories of food products in India, perception of quality about various categories of food products and whether there is a change in the food consumption habit when people move to different regions. Value for money, overall quality, taste, variety of products availability at same place, seasonality, flavor, good display of products, nearby availability and good ambience were some other parameters, which were rated highly by respondents. Parameters like promotional offer and products produced in other country were not considered as very important by respondents. **Ahmed R., Rahman K. (2015),** studied role of consumer Innovativeness and Personal Influence Related Constructs, investigate purchase behaviour in the light of such variables as consumer innovativeness, related perceived risk and the personal influence, demographic factors and time of adoption. **Baladhandapani K.,Sivalingam N (2017),** said per capita income, urbanization and globalization are changing the consumption pattern in developing countries.

III. GAPS IN LITERATURE

Literature on food consumption in India is scarce with very little research work done on organic food. Studies on organic food in India are found in reports by organizations like IFAD, NABARD etc. which have an orientation towards the upliftment of the poor or export promotion.

IV. OBJECTIVE OF THE STUDY

The main objective of this study is to find the impact of behaviour on organic food consumption. The objectives of the study are as follows:
1. To study the awareness level with respect to organic food among the people in Nagpur.
2. To check whether demographic variable have an influence on organic food consumption.
3. To identify the factor effecting the purchase behavior of organic food.

V. DATA COLLECTION

The study has used both primary and secondary data.

A. Primary Data :

A self-prepared questionnaire having 55 questions used to collect the primary data.

B. Development of Instrument:

The questionnaire included questions/variable extracted from the literature review. Total 55 questions were there and was divided into four parts as below:

Number of demographic questions	11
Number of questions related to awareness of organic food products	6
Number of questions related to intention of purchase organic food products	3
Number of topic related questions	35

Case Processing Summary

		N	%
Cases	Valid	350	100.0
	Excluded[a]	0	.0
	Total	350	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability test was conducted thereafter. Cronbach's alpha was .982, representing a high level of reliability. Value should be above .7.

Reliability Statistics

Cronbach's Alpha	N of Items
.982	35

VI. DEMOGRAPHIC ANALYSIS

Below table demonstrates the demographic profiling of the respondents. Demographic variables included gender, age, qualification, religion, occupation, monthly house hold income, martial status and number of children.

Table : 4 : Demographic characteristics of the Respondents		
Variables and categories	N=350	%
Age		
18-25 yrs	126	36
26-33 yrs	117	33.4
34-41 yrs	28	8
42-49 yrs	35	10
50 – 57 yrs	29	8.3
58-65 yrs	9	2.6
Above 65	6	1.7
Gender		
Male	190	54
Female	160	46
Qualification		
Under Graduate	41	11.7
Graduate	176	50.3
Post Graduate	96	27.4
Doctorate	37	10.6
Occupation		
Private service	129	36.9
Public service	60	17.1
Self employed	24	6.9
Business	81	23.1
Others	56	16
Monthly Income		
Less than 30000	75	21.4
300001-40000	72	20.6
40001- 50000	62	17.7
50001-60000	39	11.1
60001-70000	32	9.1
70001-80000	17	4.9
Above 80000	53	15.1
Martial Status		
Single	205	58.6
Married	145	41.4
Number of children		
No child	169	48.3
1 child	58	16.6
2 children	93	26.6
More than 2 children	30	8.6

Objective 1 : To study the awareness level with respect to organic food

Null Hypothesis	People are not aware of organic food products.
Alternate hypothesis	People are aware of organic food products.

GENDER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	190	54.3	54.3	54.3
	Female	160	45.7	45.7	100.0
	Total	350	100.0	100.0	

Out of 350 respondents, 190 were male and 160 were female. Percentage Male respondent was 54.3% and female percentage was 45.7 %.

GENDER * Awareness_level Crosstabulation

Count

		Awareness_level		Total
		1.00	2.00	
GENDER	Yes	179	11	190
	No	152	8	160
Total		331	19	350

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.105[a]	1	.745		
Continuity Correction[b]	.008	1	.930		
Likelihood Ratio	.106	1	.745		
Fisher's Exact Test				.816	.468
Linear-by-Linear Association	.105	1	.746		
N of Valid Cases	350				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.69.

Retrieval Number: L37231081219/2019©BEIESP
DOI:10.35940/ijitee.L3723.1081219
Journal Website: www.ijitee.org

5812

Published By:
Blue Eyes Intelligence Engineering &
Sciences Publication

b. Computed only for a 2x2 table

Cross tabulation is done to analyze the awareness level about the organic food products among the respondents.

Out of 190 male respondents, 179 were aware of organic food products and 11 were not aware. So the awareness percentage among the male respondents was 94.21 %. Out of 160 female respondents, 152 were aware of and 8 were not aware of. Awareness percentage among female was 95 %. This shows that female are more aware than the male respondents. This may be due to the high level of health consciousness level among the females. Out of 350 respondents, 331 were aware of organic food products. Percentage of awareness about the organic food products

among the respondent was 95 %. Hence this study says that **'There is high level of awareness about the consumer food products among the people'.**

Objective 2 : To check whether demographic variable have an influence on organic food consumption.

Null Hypothesis	Demographic variable has no influence on the organic food consumption.
Alternate hypothesis	Demographic variable has an influence on the organic food consumption.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Gender	Equal variances assumed	4.34	.03	.38	167	.70	.08	.22	-.36	.53
	Equal variances not assumed			.35	4.20	.74	.08	.24	-.58	.76
Age	Equal variances assumed	2.51	.11	1.45	167	.14	.86	.59	-.31	2.04
	Equal variances not assumed			3.84	6.43	.00	.86	.22	.32	1.40
Qualification	Equal variances assumed	.648	.42	-.29	167	.77	-.11	.38	-.87	.64
	Equal variances not assumed			-.21	4.13	.83	-.11	.51	-1.52	1.29
Religion	Equal variances assumed	3.67	.05	.87	167	.38	.37	.42	-.46	1.21
	Equal variances not assumed			5.02	163.00	.00	.37	.07	.22	.51
Occupation	Equal variances assumed	2.46	.11	-1.31	167	.18	-.93	.70	-2.3	.46
	Equal variances not assumed			-1.35	4.26	.24	-.93	.68	-2.80	.93
Monthly income	Equal variances assumed	2.46	.11	-1.45	167	.14	-1.58	1.08	-3.72	.55
	Equal variances not assumed			-1.04	4.12	.35	-1.58	1.51	-5.73	2.57

The above table shows that, demographic variable is not having any influence on intention of the customer to buy the organic food products. The significance value obtained is more than 0.05 in all the cases, which says that 'There is sufficient evidence to accept Null Hypothesis.' Hence the study proves: **Demographic variable has no influence on the organic food consumption.**

Objective 3 : To identify the factor effecting the purchase behavior of organic food.

VII. RESULTS

Factor analysis was conducted in order to identify the factors that affect organic food products consumption. Factors were identified using the Eigen value criteria that suggests extracting factors with Eigen value greater than 1.0 Principal Component Analysis and Varimax Rotation were considered for obtaining a component matrix. For confirming the adequacy and sphericity of the data set, Kaiser-Meyer-Olkin(KMO) and Bartlett's Test values were also obtained.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.951
Bartlett's Test of Sphericity	Approx. Chi-Square	15779.109
	df	630
	Sig.	.000

KMO score is 0.951. It is above the recommended value of 0.5. Further Bartlett's Test of Sphericity exhibits significance value of less than 0.05 (.000). Thereby ensuring the appropriateness of factor analysis.

Communalities

	Initial	Extraction
VAR001	1.000	.778
VAR002	1.000	.862
VAR003	1.000	.797
VAR004	1.000	.798
VAR005	1.000	.730
VAR006	1.000	.677
VAR007	1.000	.697
VAR008	1.000	.733
VAR009	1.000	.693
VAR010	1.000	.548
VAR011	1.000	.603
VAR012	1.000	.649
VAR013	1.000	.771
VAR014	1.000	.763
VAR015	1.000	.827
VAR016	1.000	.703
VAR017	1.000	.833
VAR018	1.000	.756
VAR019	1.000	.750
VAR020	1.000	.832
VAR021	1.000	.780
VAR022	1.000	.728
VAR023	1.000	.737
VAR024	1.000	.748
VAR025	1.000	.771
VAR026	1.000	.795
VAR027	1.000	.753
VAR028	1.000	.811
VAR029	1.000	.699
VAR030	1.000	.798
VAR031	1.000	.721
VAR032	1.000	.787
VAR033	1.000	.844
VAR034	1.000	.797
VAR035	1.000	.671

Extraction Method: Principal Component Analysis.

Rotated Component Matrixᵃ

	Component			
	1	2	3	4
VAR001	.792			
VAR015	.725			
VAR012	.685			
VAR022	.660			
VAR002	.656			
VAR005	.645			
VAR025	.620			
VAR006	.611			
VAR023	.604			
VAR032		.787		
VAR034		.767		
VAR031		.753		
VAR003		.679		
VAR030		.621		
VAR008		.596		
VAR018		.595		
VAR036		.584		
VAR007		.541		
VAR019		.515		
VAR029				
VAR014			.777	
VAR021			.713	
VAR011			.684	
VAR004			.663	
VAR024			.641	
VAR009			.616	
VAR017			.595	
VAR035			.548	
VAR026			.522	
VAR013				.702
VAR027				.690
VAR010				.654
VAR020				.583
VAR028				.559
VAR033				.539
VAR016				.525

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 10 iterations.

FACTOR -1		
Q1	Organic food products are rich in nutrient value.	.792
Q15	Organic food products are potentially healthy	.725
Q12	Organic foods have more vitamins	.685
Q22	Organic foods are free from artificial ingredients	.660
Q2	Organic food products is good for health than non-organic food products	.656
Q5	Organic food products are tastier than non-organic food products	.645
Q25	Organic food products are unadulterated	.620
Q6	Organic food products smells goods as compared to non-organic food products	.611
Q23	Organic food products helps in controlling diseases like diabetics, hyper tension etc.	.604

Retrieval Number: L37231081219/2019©BEIESP
DOI:10.35940/ijitee.L3723.1081219
Journal Website: www.ijitee.org

5814

Published By:
Blue Eyes Intelligence Engineering &
Sciences Publication

FACTOR -2

Q32	Organic food has very less varieties	.787
Q34	There are very less outlets for organic foods	.767
Q31	Organic food has less market penetration due to its high cost	.753
Q3	Organic food are not easily available	.679
Q30	Organic food are not available every where	.621
Q8	Common people are not aware of the benefits of organic food.	.596
Q18	Groceries generally don't stock organic food products.	.595
Q36	Consumption of organic food is more in metros	.584
Q7	Organic food products are having comparably same shelf life as non-organic food products	.541
Q19	Organic food products are not conveniently available	.515

FACTOR -3

Q14	I do not believe that all Organic food products labelled as "organic " are really organic	.777
Q21	A variety of organic food products are available	.713
Q11	Organic food products are free from contamination	.684
Q4	Organic food products do not have additives and preservatives	.663

Q24	Organic food products do not contain any food additives	.641
Q9	Organic food products are very costly as compared to non-organic food products	.616
Q17	Organic food products are nutrient-rich	.595
Q35	People are confused about organic foods	.548

FACTOR -4

Q26	I rely on natural products.	.516
Q13	Due to health consciousness I prefer organic food.	.702
Q27	Organic food is not easily available	.690
Q10	Organic food products are same in nutrition as compared to any non-organic food products	.654
Q20	A growing concern for the environment makes me purchase organic food products.	.583
Q28	People consider consumption of organic food as style symbol	.559
Q33	People have less awareness about organic food	.539
Q16	Organic food products are safe for consumption	.525

Variance Explained

Compon ent	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulat ive %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	22.18	61.61	61.61	22.18	61.61	61.61	7.48	20.77	20.77
2	1.84	5.13	66.74	1.84	5.14	66.74	7.32	20.33	41.11
3	1.77	4.92	71.66	1.77	4.92	71.66	6.29	17.47	58.58
4	1.21	3.37	75.04	1.21	3.37	75.04	5.92	16.45	75.04
5	.99	2.77	77.81						
6	.86	2.41	80.22						
7	.66	1.85	82.08						
8	.61	1.71	83.79						
9	.52	1.44	85.23						
10	.46	1.30	86.53						
11	.42	1.18	87.72						
12	.42	1.18	88.90						
13	.36	1.01	89.91						
14	.35	.98	90.90						
15	.33	.93	91.83						
16	.29	.80	92.64						
17	.25	.70	93.34						
18	.23	.64	93.98						
19	.22	.62	94.61						
20	.19	.55	95.16						

21	.19	.53	95.70
22	.17	.48	96.18
23	.17	.47	96.66
24	.14	.41	97.07
25	.13	.37	97.45
26	.12	.35	97.81
27	.12	.34	98.16
28	.10	.29	98.45
29	.08	.22	98.94
30	.07	.21	99.16
31	.07	.20	99.36
32	.06	.19	99.56
33	.05	.16	99.72
34	.05	.15	99.87
35	.04	.12	100.00

In total 35 items were considered for study and the items were converged into 4 factors. Researcher have the autonomy to give names to the variables looking to the way the questions have been asked. Below table exhibits the same.

Factor No.	No. of Items	Factor Name
Factor 1	9	Nutrient Value
Factor 2	10	Availability
Factor 3	8	Customer Perception
Factor 4	8	Customer Ideology

Component Transformation Matrix

Component	1	2	3	4
1	.533	.525	.473	.466
2	-.661	.537	.435	-.292
3	.254	-.496	.702	-.444
4	-.463	-.435	.308	.708

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Correlations

		Intention	Nutrient Value	Availability	Customer Perception	Customer Ideology
Intention	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	350				
Nutrient Value	Pearson Correlation	.197[**]	1			
	Sig. (2-tailed)	.000				
	N	350	350			
Availability	Pearson Correlation	.278[**]	.769[**]	1		
	Sig. (2-tailed)	.000	.000			
	N	350	350	350		
Customer Perception	Pearson Correlation	.227[**]	.774[**]	.818[**]	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	350	350	350	350	
Customer Ideology	Pearson Correlation	.192[**]	.840[**]	.834[**]	.801[**]	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	350	350	350	350	350

**. Correlation is significant at the 0.01 level (2-tailed).

The four factors namely nutrient value, Availability, customer perception and customer ideology has a positive correlation on the customer purchase intension of Organic Food Products. From this research, the researcher want to propose the below model for Organic Food Product Consumption. Companies dealing in organic food products need to pay attention to the following factors to promote the organic food consumption.
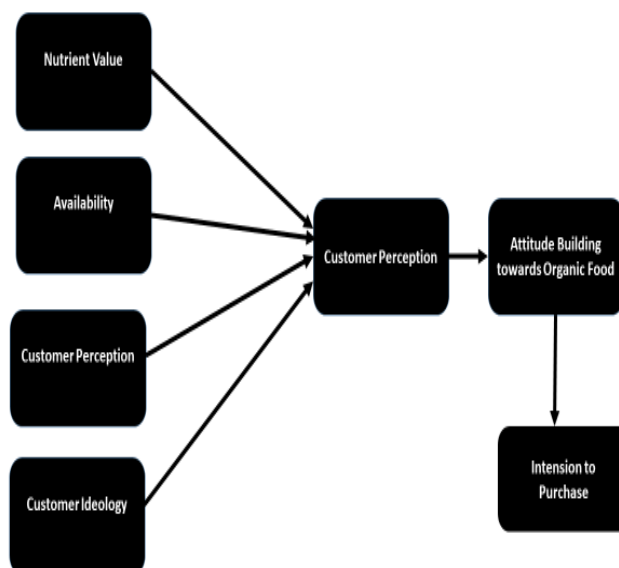
Findings: The study reveals various facts by respondents while purchasing the organic products in the markets.
- Demographic variable has no influence on the organic food consumption.
- ▪
- ▪
- ▪
- ▪

There is high level of awareness about the consumer food products among the people.Influencing factors for consumer consumption of organic food are their belief on the following factors

• **Nutrient Value**
• **Availability**
• **Customer Perception**
• **Customer Ideology**

VIII. CONCLUSION

Marketers of organic foods need to be innovative and dynamic in order to compete with the changing purchase behavior of the customers. Study showed that even though awareness level is very high, among the respondents, the consumption rate is not grown as expected. So the companies dealing in organic food products, need to formulate promotional strategies which are realistic and moral. Consumers are willing to pay price premium for organic products which could be viewed as the cost of investment in human health. Special drives to create awareness about organic products will create a positive perceptions about the product and, ultimately, influence the buying decisions of the consumers.

REFERENCES

1. Ahmed R., Rahman K. (2015), Understand the consumer behaviour toward organic food, a study of Bangladesh market, (IOSR-JBM) Vol.17,Issue.4, Pg.49-64.
2. Baladhandapani K.,Sivalingam N (2017), Consumer Buying Behaviour towards organic food products in Tamil Nadu, Agricultural Economic Research Review, Vol. 30. No.1,Pg 133-138.
3. Chandrashekar H.M., Nov. (2014), Consumers Perception towards Organic Products - A Study in Mysore City, Sryahwa Publications, Volume : 1, Issue : 1
4. Attitude and behaviour of consumers towards organic food: An exploratory study in India, Research Gate, International Journal of Business Excellence, Volume : 7, Issue : 6
5. Forman J., Silverstein J., Committee on Nutrition and Council On Environmental Health, Nov. (2012), official journal of the American Academy of Pediatrics originally published online, Volume : 130, Number : 5
6. Mukherjee D, Nov. (2012), Impact of Consumer Behaviour on Organic Food Consumption in Select Cities in Maharashtra, Padmashree Dr. D. Y. Patil University, Department of Business Management
7. Mie A., Wivstad M., (2015), Organic Food – food quality and potential health effects, SLU, EPOK – Centre for Organic Food & Farming,
8. Nekov M, MEP, Rio D.D., Onofre J., Mie A, Kahl J., Watzl B., Apostolov S., Rembiałkowska E, Grandjean P., Nov. (2015), The impact of organic food on human health, STOA, Room ASP 5E-2, European Parliament Brussels.
9. Oroian C. E., Safirescu C. O., Harun R, Chiciudean G. O., Arion F. H., Muresan I. C. and Bordeanu B. M. (2017), Consumers' Attitudes towards Organic Products and Sustainable Development: A Case Study of Romania, Sustainability, MDPI
10. Rembialkowska E, Tober D. S., (2014), Organic food quality and impact on human health, Research Gate, Agronomy Research **7**(Special issue II)
11. Sathyendra Kumar AD et.al (2015), International Journal of Management Research & Review,Vol. 5, Issue 11, Pg. 1082-1091.
12. Tarkiainen A., Sundqvist S., Department of Business Administration, Lappeenranta University of Technology, Lappeenranta, Finland, (2012), Subjective norms, attitudes and intentions of Finnish consumers in buying organic food, British Food Journal Emerald Article, Volume : 107, Issue : 11

AUTHORS PROFILE

Dr.Shiney Chib is working as Director & Research Head with DMIMS. She has 15 years of Academic and 11 years of industrial experience. DoneB.Tech, M.B.A , M.I.R.P.M, M.A.(Pub.Adm.), M.C.M, L.L.B, PhD, MPhil(IT), M.A.(Psy.), PGDAC, M.B.A . She has published 6 books, presented 40 papers in conferences and 36 papers in journals.

Dr. Kanchan Dewal is working as Assistant Professor in DMIMS. Having 7 yrs of teaching experience. Done BTech,MBA,PhD.

Kanchan S Artani, is working as an Assistant Professor with G H Raisoni School of Business Management. Doneare B.Com., MBA. Has 2.5 yrs of teaching experience..

Process Executive for Procure to Pay (P2P) with Tata Consultancy Services (TCS). Done MBA (Finance & Marketing).