ATTITUDES OF MALE AND FEMALE TOWARDS ORGANIC FOOD PRODUCTS IN INDIA

Dasari.Pandurangarao*   Prof.D.Suryachandra Rao**   Dr.K.Chiranjeevi***

*Ph.D Scholar (part-time),Department management studies,Krishna University,Machilpatnam, Krishna District, A.P, India.
**Registrar, Krishna University,Machilpatnam, Krishna District, A.P, India.
***Head, MBA Programme,SVKP & Dr.K.S.Raju Arts & Science College,Penugonda – West Godavari Dist., A.P, India.

Abstract
The tudy is attempted to gain knowledge about male and female attitude towards organic food products. With the sample of 500 respondents consist of consumers from Hyderabad and Secunderabad   (Telengana State, India). The data obtained from the survey analyzed with chi-square analysis, reliability test and discriminant analysis. The literature analysis suggested that in India organic food consumption is increasing because of concerns over environmental and health issues associated with food production and metropolitan cities are major areas of organic food products consumption. India is a country with most producers is in the world. The finding of research indicated that friends, spouse and advertisement are key influence of organic food products for both male and female. Differences are found in income level with male and femlae. Interest to know about organic food products, believe in the organic food advertising, believe in the organic food advertising and organic foods are fresher are discriminate between male and female.

Key words: Attitude, Consumer, Male and female and organic food products.

Introduction
The increasing importance to people of what they eat, where they shop and how they live is reflected in the present abundance of studies measuring consumer attitudes towards green products such as organic foods (D'Souza et.al, 2006). When consumer decided whether to buy organic food products or not, it clearly involved a complex set of factors that cannot easily be interpreted (Musdiana Mohamad Salleh, 2010). Knowledge and awareness about organic products can affect attitudes and perceptions about the product and, ultimately, buying decisions of the consumers (Kamal P. Aryal et.al, 2009). The consensus of international research provides a veryclear picture of the reasons why people buy organic food. The main reasonsare: personal health; product 'quality'; and concern aboutdegradation of the natural environment (David Pearson et.al, 2010).According to S.V.Ramesh and M.Divya, 2015, study on consumers' awareness attitude and satisfaction towards select organic foodproducts with reference to Coimbatore, in India organic food consumption is increasing because of concerns over environmental and health issuesassociated with food production.

Organic Production of India
According to FiBL-IFOAM (Research Institute of Organic Agriculture, Switzerland and International Federation of Organic Agriculture Movements) survey there were 43.1 million hectors of organic agricultural land in the world in 2013 across 170 countries. Asia is the 4th largest one in organic agricultural area with 3.4 million hectors, 8 per cent of world organic agricultural land. The leading countries by area were china (2.1 million hectors) and India (0.5 million hectors, 0.3 per cent of world share).The survey stated that there were 2 million producers in 2013 and Asia is largest organic producer occupying 36 per cent of world organic producers. The country with most producers is India (650000). According to Food and Agricultural Organization of United States, India is producing cereals include triticale, rye, rice, maize, barley, oats, wheat and others (97.1 million hectors), citrus fruit including tangerine, pomelos/grapefruit, lemons and limes, oranges and others (0.75 million), temperate fruits(peaches/nectarines, cherries, plums, pears, apricots, apples and others), tropical and subtropical fruit(pineapples, dates, kiwis, figs, mangos, Avocados, bananas and others), oil seeds(linseed, sesame, rape and turnip rape, peanuts, sunflower, soybeans and others), protein crops (26 million hectors), and vegetables(FiBL and IFOAM, 2015).

Literature Review
Consumer awareness on food safety, health and environment concern has made organic food more popular in developed countries over the past ten years (Miguel Llorens et.al, 2011). The intention to purchase organic products were heavily influenced by the perception on organic product worth of purchase and the belief on the safety and health aspect of the product(Siti Nor Bayaah Ahmad and Nurita Juhdi,2010). The attitude toward the organic food and subjective norm significantly affect the formation of the intention to buy organic food. Thus, consumers of organic food are not only formed under the influence of other people, but also by the attitude of the consumer (Ihsan Effendi et.al, 2015). Respondents have a high positive attitude regarding green products and are ready to buy green products more often, but as per as the product price and quality are concerned, green products must perform competitively just like the traditional products (Afzaal Ali and Israr Ahmad, 2012).

The study on Market opportunities and challenges for Indian organic products classified that they were presented with a selection of three customer types: Upper class, Upper-middle class and Lower-middle class. 90% of the respondents believed upper class consumers to be interested in buying organic products. In contrast, only 10% and 0% of them indicated that upper-middle class and lower-middle class consumers respectively might be interested in buying organic products, in some areas in India for health conscious middle class families do buy organic food. The main products that Indian consumers would be interested in buying are vegetables and fruits (Salvador V. Garibay and Katke Jyoti, 2003) and (Dasari.Panduranarao et.al, 2011). The main reasons for not to consume the organic products by the consumers are not availability of organic products regularly, no choices are given in the organic products, advertisement of organic products is very low and price as expensive for organic products (Dr .H.M. Chandrashekar, 2014) as well as perceived value of organic products significantly influenced the purchase intention of organic food products (Sonia Attanasio et.al, 2013).

Consumer buying behavior towards organically produced food products in Bangalore city, India revealed that majority of consumer are willing to buy organic food products daily and weekly, willing to pay up to premium price up to five percent, source of influence is advertisement, familiar through Friend/relative/associate/newspaper/in store, place of purchase is organic food stores and Super market, and recognition of organic product as a healthy food by labeling and marketing(Bharathi b et.al,2014). According to research of Lockie et al., (2002) people buy organic products because they perceive them by not carrying any pesticide residues and to better for their health. As well as organic farming can prevent the contamination and pollution of soil, air, water and food supply and organic food products are chemical free (Chiew Shi WeeMohdShoki Bin Md. Ariff, 2014) and demand growing for organic food because free from pesticides and chemical residues(Parichard Sangkumchaliang and Wen-Chi Huang, 2012). Finally consumers are willing to pay price premium which can be viewed as the cost of investment in human health and, ultimately, buying decisions of the consumers (Kamal P. Aryal et.al, 2009). The study on shopping behavior of consumers towards organic food products in Hyderabad and Secunderabad revealed that friends and spouse are key buying influence of organic food products as well while shopping customers normally go with friends only. About 69.50 per cent of customers buying value of organic food products is between rupees 500 to 2000 and majority are using cash payment method (Dr.K.Chiranjeevi et al, 2015)

Methodology
The consumers have been selected by adopting simple random sampling technique, this type of sampling is also known as chance sampling or probability sampling where each and every item in the population has an equal chance of inclusion in the sample and each one of the possible samples (C.R.Kotari, 2004), and the method used for the data collection was a face-to-face interview, using a structured questionnaire, with closed ended questions. The data were collected during June and July 2015 from sample of 500 consumers in Hyderabad and Secunderabad cities (Telengana State, India).
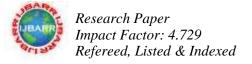
The aim of study is find difference in male and female attitude towards organic food products in Hyderabad and Sceunderabad cities, India.

The two hypotheses, based on aim of the research, were formulated:
Hypothesis H1: Male and female *has no difference in socio-economic factors.*
Hypothesis H2: Male and female *has no difference in attitude towards organic food products.*

Chi-square test was employed to analyze socio-economic factors of respondents. The chi-square test is often used to judge the significance of population variance (C.R.Kotari, 2004), it can be used to determine if categorical data shows dependency or the two classifications are independent. It can also be used to make comparisons between theoretical populations and actual data when categories are used (Neil R. Ullman). Discriminant analysis was carried out to study male and female attitude towards organic food products. Discriminant analysis is appropriate when the researcher has a single dependent variable that cannot be measured, but can be classified into two or more groups on the basis of some attribute. The object of this analysis happens to be to predict an entity's possibility of belonging to a particular group based on several predictor variables (C.R.Kotari, 2004). Reliability analysis was applied to test the reliability of data.

Results and Discussion
Table 1 demonstrates the summary of sample socio economics. Five hundred consumers were participated in the survey, majority were aged between 20-35 years in both male and female. About 60.60 per cent of female consumers are PG as educational qualification followed by graduation (23.90 per cent). PG is highest qualification about 50.70 per cent of male consumers and graduates percentage is more compare to female. 30000-35000 and rupees is highest income range for majority of consumer in both genders but female consumers' ratio is high compared to male. About 16.20 per cent of male consumers in income group above 60000 rupees but female about 6.50 per cent only. Shopping frequency is monthly and

Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

occasionally for majority of respondents in both male and female but it discriminates. Friends and advertisements are key buying influence for buying organic food products; the ratio is 58.00 per cent in female and only 51.50 per cent in male. Majority of private employees are consumers of organic food products in both male and female, male consumers are high in percentage. Marital status is unmarried for most of consumer in male and female. *There was significant relationship in the age (2=19.165, p=0.008) income level (2=25.65, p=0.002) and shopping frequency (2=10.67, p=0.030) between the interviewed females and males. In remaining factors Hypothesis H1 (*Male and female *have no difference in socio-economic factors.) is rejected which indicate that* male and female *differences in socio economic factors have impact on* male and female *attitude towards organic food products.*

Table 1. Socio economic factors of consumers

Age			2 Value	Your Shopping Frequency			2 Value
	Male (N=345)	Female (N=155)			Male (N=345)	Female (N=155)	
15 – 20 years	6.40	3.90	19.16 (.008)	Daily	17.40	9.00	10.67 (.030)
21 – 25 years	40.60	45.80		Weekly	20.90	21.30	
26 – 30 years	24.90	34.20		Fortnightly	2.90	3.90	
31 – 35 years	16.80	13.50		Monthly	29.60	41.30	
36 – 40 years	5.80	1.30		Occasionally	29.30	24.50	
41 – 45 years	4.30	0.00		**Indicate Your Buying Influence**			
46 – 50 years	0.60	1.30		Spouse	23.20	23.20	11.30 (.079)
56 – 60 years	0.60	0.00		Children	11.60	14.20	
Educational Qualification				Friends	33.90	33.50	
Up to Secondary	5.20	6.50	7.913 (.161)	Advertisement	18.60	24.50	
Higher Secondary	5.80	5.20		Co-buyer	7.50	1.30	
Diploma	1.70	2.60		Sales Promotions	5.20	3.20	
Graduation	32.50	23.90		**Occupation**			
Post Graduation(PG)	50.70	60.60		Business	11.90	14.80	10.49 (.062)
Professionals	4.10	1.30		Government	3.50	5.20	
Total Family Income(Rupees)				Private	36.50	23.20	
Less than Rs.20,000	13.90	16.80	25.65 (.002)	MNCs	10.40	9.00	
Rs.20,001 – Rs.25,000	2.30	7.70		Retired	2.30	3.90	
Rs.25,001 – Rs.30,000	5.80	3.90		Others	35.40	43.90	
Rs.30,001 – Rs.35,000	17.40	24.50		**Marital Status**			
Rs.35,001 – Rs.40,000	2.30	3.20		Married	39.10	42.60	0.530 (.467)
Rs.40,001 – Rs.45,000	7.80	7.70		Unmarried	60.90	57.40	
Rs.45,001 – Rs.50,000	11.60	7.70					
Rs.50,001 – Rs.55,000	11.30	15.50					
Rs.55,001 – Rs.60,000	11.30	6.50					
Above Rs.60,001	16.20	6.50					

Source: Primary and computed data
Note: Values in the parenthesis indicate p value.
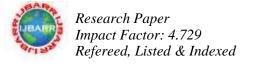
Reliability Analysis
Reliability, using Cronbach's alpha was conducted to ensure the consistency or stability of items. Reliability of less than 0.6 are generally considered as poor, those in a range of 0.7 are acceptable and those over 0.8 are good (Sekaran, 2007). The results for reliability analysis for this study showed that the Cronbach alpha for Attitude towards organic food products is 0.734. It indicates the variable attitude towards organic food products is considered acceptable.

Discriminant Analysis
In order to discriminate male and female difference in attitude towards organic food products, the discriminant analysis has been employed, male and female are taken as grouping variable and the results are hereunder discussed.

Group statistics
Mean and standard deviations were obtained for the interval-scaled independent and dependent variables.The results are presented in the Table 1 below.The mean of male ranged from 1.65 to 2.65 and standard deviation ranges from 1.194 to

Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

0.850.The variable with highest mean is I pay attention to advertising, while the variable with the lowest mean is I like the idea organic food products. The mean of female ranged from 1.59 to 2.59, meanwhile the standard deviation for female ranges from 0.736 to 1.262. The variable with the highest mean is I think organic foods are fresher and variable with the lowest mean is I like the idea organic food products.

Table 2.Group statistics

Attitude towards organic food products	Male		Female	
	Mean	**S. D**	**Mean**	**S. D**
I like the idea	1.65	.850	1.59	.736
I am favorable	2.36	.866	2.30	1.001
I am interested to know	2.26	.939	2.15	.927
I realize the importance	2.35	.992	2.27	.935
I have good image	2.62	1.107	2.51	1.077
I believe in the information	2.64	1.059	2.53	1.065
I pay attention to advertising	2.65	1.116	2.46	1.052
I believe in the organic food advertising	2.63	1.194	2.43	1.051
I believe organic to protect myself from consuming pesticides	2.14	1.010	2.03	1.041
I believe organic foods have better quality	1.92	.899	1.71	.837
I feel healthy when I eat organic foods	2.17	.851	2.10	.828
I think organic foods are fresher	2.50	1.087	2.59	1.262
I live longer if I consume organic foods	2.13	1.059	2.06	1.141

`*Source: Primary & Computed Data*

Selection of Discriminating Variables
In order to determine the attitude towards organic food products which significantly contribute to the differentiation of male and female F test is used for Wilks' Lambda. The ANOVA results are presented in Table 3.

Table 3.Tests of Equality of Group Means

Attitude towards organic food products	Wilks' Lambda	F	df1	df2	Sig.
I like the idea	.999	.498	1	498	.481
I am favorable	.999	.555	1	498	.457
I am interested to know	.998	1.228	1	498	.268
I realize the importance	.999	.665	1	498	.415
I have good image	.998	1.086	1	498	.298
I believe in the information	.998	1.122	1	498	.290
I pay attention to advertising	.994	3.035	1	498	.082
I believe in the organic food advertising	.994	3.214	1	498	.074
I believe organic to protect myself from consuming pesticides	.997	1.306	1	498	.254
I believe organic foods have better quality	.988	6.042	1	498	.014
I feel healthy when I eat organic foods	.998	.828	1	498	.363
I think organic foods are fresher	.999	.738	1	498	.391
I live longer if I consume organic foods	.999	.515	1	498	.473

Source: Primary & Computed Data

I believe organic foods have better quality is only not found significant difference between male (F=6.042, P<0.05), remaining variable of attitude shown significant difference between male and female.

Estimation of Discriminant Function: In this study, the discriminant analysis is carried out for male and female and it results one discriminant function and consequently one Eigen value and the results are presented in Table 4.
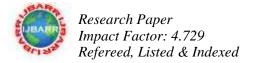
Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

Table 4. Eigen values

Function	Eigen value	% of Variance	Cumulative %	Canonical Correlation
1	.028[a]	100.0	100.0	.164
a. First 1 canonical discriminant functions were used in the analysis.				

The eigen value of 0.028 corresponds to the discriminant function, which shows that it has the less power of discrimination of gender. The canonical correlation coefficient, measuring the relation between discriminant factorial coordinates and the grouping variable shows that 2.689 i.e., $(0.164)^2$ of the total variance accounts for the differences between the male and female through the discriminant function

Standardized Canonical Discriminant Function Coefficients:
The standardized coefficients for the discriminant function are calculated and the results are presented in Table the discriminant function coefficients are used for calculating the discriminant score for each case in particular.

The discriminant function is:
$Z = -0.189Z_1 + 0.098Z_2 + 0.261 Z_3 + 0.111 Z_4 + 0.165Z_5 + 0.068 Z_6 + +0.188 Z_7 + 0.374 Z_8 - 0.017 Z_9 + 0.686 Z_{10} + 0.072 Z_{11} - 0.529 Z_{12} - 0.063 Z_{13}$
The Z_1 to Z_{13} are standardized X_1 to X_{13} variables.

Table 5.Standardized Canonical Discriminant Function Coefficients

Attitude towards organic food products	Function 1
I like the idea	-.189
I am favorable	.098
I am interested to know	.261
I realize the importance	.111
I have good image	.165
I believe in the information	.068
I pay attention to advertising	.188
I believe in the organic food advertising	.374
I believe organic to protect myself from consuming pesticides	-.017
I believe organic foods have better quality	.686
I feel healthy when I eat organic foods	.072
I think organic foods are fresher	-.529
I live longer if I consume organic foods	-.063

Source: Primary & Computed Data

The size of the coefficients indicates I believe organic foods have better quality, I think organic foods are fresher, I believe in the organic food advertising and I am interested to know about organic food products discriminate best between male and female. Rest of items shown less discrimination.

Structure Matrix
The structure matrix coefficients are presented in Table. From the table, the results indicate the correlation between each predictor measures and the discriminant function.

Table 6.Structure Matrix

Attitude towards organic food products	Function1
I believe organic foods have better quality	.663
I believe in the organic food advertising	.484
I pay attention to advertising	.470
I believe organic to protect myself from consuming pesticides	.309
I am interested to know	.299
I believe in the information	.286
I have good image	.281
I feel healthy when I eat organic foods	.246
I think organic foods are fresher	-.232

Research Paper
Impact Factor: 4.729
Refereed, Listed & Indexed

IJBARR
E- ISSN -2347-856X
ISSN -2348-0653

I realize the importance	.220
I am favourable	.201
I live longer if I consume organic foods	.194
I like the idea	.191
Pooled within-groups correlations between discriminating variables and standardized canonical discriminant functions Variables ordered by absolute size of correlation within function.	

Source: Primary & Computed Data

For the discriminant function, it can be seen that correlation coefficients have high values for I believe organic foods have better quality, I believe in the organic food advertising, I pay attention to advertising and I believe organic to protect myself from consuming pesticides which means that these measures are most strongly correlated with the discriminant function. ***Hence, the Hypothesis H2*** male and female *has no difference in attitude towards organic food products is rejected.*

Efficiency of Discriminant Function
The efficiency of discriminate function is presented in Table 7. Based on the discriminant function, 59.40 per cent of the measures have been correctly classified.

Table 7. Efficiency of Discriminant Function

Classification Results[a]					
		Gender	Predicted Group Membership		Total
			Male	Female	
Original	Count	Male	204	141	345
		Female	62	93	155
	%	Male	59.1	40.9	100.0
		Female	40.0	60.0	100.0
a. 59.4% of original grouped cases correctly classified.					

Source: Primary & Computed Data

Conclusion and Recomentations
The organic products marketing of India is still in emergent phase. Only metropolitan cities Hyderabad, Bangalore and Mumbai many customers are started using. Most of organic products are exported to US and Europe (Nina Osswald and Manoj K. Menon, 2013). The foregoing analysis made clear idea regarding attitude of male and female towards organic food products. Discrimination is identified in shopping frequency between male and female. Majority of female are interested to by monthly organic food products. The findings indicated that friends, spouse and advertisement are key influence of organic food products for both male and female. Among different variable of attitude indicates I believe organic foods have better quality, I think organic foods are fresher, I believe in the organic food advertising and I am interested to know about organic food products are discriminated in male and female. Finally results made conclusion that male and female having different attitude towards organic food products according to these variance sellers have to find best marketing practices for each gender. Income of male and female is another key factor that always affecting purchasing decisions.

References
1. Afzaal Ali and Israr Ahmad. (2012). Environment Friendly Products: Factors that Influence the Green Purchase Intentions of Pakistani Consumers.Pak. j. eng. technol. sci., 2 (1), 84-117.
2. Bharathi b et.al. (2014). Buying behavior of urban residents towards organically produced food products. IMPACT: International Journal of Research in Applied, Natural and Social Sciences, 2 (2),32-38
3. Chiew Shi WeeMohdShoki Bin Md. Ariff. (2014). Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products. Review of Integrative Business and Economics, 3(2), 378-395.
4. C.R.Kotari. (2004). Research Methodology: Methods and techniques (2nd ed.).New Delhi. New Age International (P) Limited, Publishers.
5. Dasari.Panduranarao et.al. (2011). Consumer's perception and purchase intentions towards green products. International journal of research in commerce, it & management, 1(1), 63-66.
6. David Pearson et.al. (2010). Organic food: What we know (and do notknow) about consumers.Renewable Agriculture and Food Systems, 1-7.

7. Dr.H.M. Chandrashekar. (2014).Consumers Perception towards Organic Products - A Study in Mysore City.International Journal of Research in Business Studies and Management, 1 (1), 52-65.
8. Dr.K.Chiranjeevi et.al. (2015). Shopping Behavior of Consumers towards Organic Food Products. Journal of Marketing and Consumer Research, 14, 47-51.
9. D'Souza, C., Taghian, M., Lamb, P. (2006). An empirical study on the influence of environmental labels on consumers. Corporate Communications,11 (2),162-173
10. Ihsan Effendi et.al. (2015).Analysis of Consumer Behavior of Organic Food in North Sumatra Province, Indonesia.Journal of Business and Management,4(1), 44-58
11. Kamal P. Aryal et.al. (2009).Consumers' willingness to pay for organic products: a case from Kathmandu valley. The Journal of Agriculture and Environment,10(1),12-20
12. Lockie, S., Lyons, K., Lawrence, G. and Mummery, K. (2002). Eating green: motivations behind organic food consumption in Australia. Sociologia Ruralis, 42 (1), 23-40.
13. Miguel Llorens et.al. (2011).Consumer behavior and brand preferences in organic groceryproducts. Store brands vs. manufacturer brands. Innovative Marketing, 7 (3), 109-115.
14. MusdianaMohamadSalleh et.al. (2010). Consumer's perception and purchase intentions towards organic food products: exploring attitude among academician. Canadian Social Science, 6(6),119-129
15. Neil R. Ullman, Elementary Statistics—an Applied Approach, p. 234.
16. Nina Osswald and Manoj K. Menon.(2013). Organic Food Marketing in Urban Centres of India. Country: publishers.
17. Parichard Sangkumchaliang and Wen-Chi Huang. (2012). Consumers' Perceptions and Attitudes of Organic Food Products in Northern Thailand. International Food and Agribusiness Management Review, 15(1), 87-98.
18. Sekaran, U. (2007). Research methods for business: A skill building approach. New Delhi: John Wiley.
19. Siti Nor Bayaah Ahmad and Nurita Juhdi. (2010). Organic Food: A Study on Demographic Characteristics and FactorsInfluencing Purchase Intentions among Consumers in Klang Valley, Malaysia. International journal of Business management. 5(2),105-112.
20. S.V.Ramesh and M.Divya. (2015).A study on consumers' awareness attitude and satisfaction towards select organic foodproducts with reference to Coimbatore.International Journal of Interdisciplinary and Multidisciplinary Studies (IJIMS). 2(4), 81-84.
21. Sonia Attanasio et.al. (2013). Organic food: A study on demographic characteristics and factors influencing purchase intentions among consumers in pontina province. International Journal of Latest Research in Science and Technology, 2(6), 128-132.
22. Salvador V. Garibay and KatkeJyoti. (2003).Market Opportunities and Challenges for Indian Organic Products. Research Institute of Organic Agriculture (FIBL) and ACNielsen ORG-MARG
23. The world of organic food culture: statistics and emerging trends, 2015. FiBL-IFOAM. PP: 31-115.