

URBAN CONSUMERS' ATTITUDE TOWARDS ORGANIC FOOD IN SRI LANKA

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Abstract: *This research investigation aims to examine the urban consumers' attitude towards organic food, and the factors affecting for their attitude. A consumer survey consisting of a sample of 600 consumers was conducted, using a pre-tested questionnaire, in major cities of six main districts of Sri Lanka during November 2016 - May 2018. Data were analyzed using descriptive statistics, factor analysis, and multiple linear regression analysis. Results revealed that majority of the consumers were married females. Most of them were of 18-40 years of age category and were educated up to the GCE advanced level. The sample's monthly income ranged from Sri Lankan Rupees 58000 – 85000. Although the majority of the consumers (75.2%) were aware of organic food, only 11.5% possessed a good knowledge about them. As per the mean analysis, the consumers had a positive attitude towards most aspects of organic food. According to factor analysis, four factors (environmental factors, quality factors, health factors, and marketing factors) were extracted as they are influenced to the consumer attitude for purchasing of organic foods. Results of multiple linear regression analysis revealed a positive relationship between consumers' attitude and the extracted four factors which were based on the consumers' attitude on purchasing of organic foods. Main problems faced by consumers in buying organic food were the high price, unavailability of organic food, lack of trust, and lack of market information on organic food. It can be concluded that by providing the necessary conditions such as arranging better marketing facilities with useful market information, a continuous supply of organic foods with reasonable price levels, and enhancing consumer knowledge, will motivate the consumers to purchase more organic food. As relatively low is known about consumers' purchasing pattern of organic foods in Sri Lanka, findings of this study would be beneficial to the traders and policy makers to formulate effective strategies designed to marketing of organic foods in the country.*

Keywords: *Organic food, urban consumers, attitude, regression analysis, Sri Lanka*
(JEL Classification: Q13)

INTRODUCTION

Organic products can be best explained as “any product that is made or cultivated organically,” and organic production can be defined as “an ecological production management system that promotes and enhances biodiversity, soil biological activity and biological cycles. Also, it is based on the minimal use of off-farm inputs and management practices that restore, maintain, and enhance ecological harmony (Winter and Davis, 2006). Organic foods do not contain pesticides or synthetic fertilizers. In conventional food, almost all products can have pesticide residues at lower or higher levels. Present-day consumers are highly

concerned about agrochemicals, hormones, and medicine in animal products and genetically modified organisms (GMO), and artificial additives in fruits and vegetables (Naspetti and Zanolli, 2006; Dayasena et al., 2015). Organic fruits and vegetables have more biochemical energy to synthesize beneficial secondary plant metabolites, due to absence of pesticides and fertilizers with them (Winter and Davis, 2006).

Currently, consumption and production of organic food have gained global attention. The movement towards organic foods has increased due to the positive perception of sustainable methods of agriculture, awareness on them, conservation of the environment, and health hazards

associated with agrochemicals and consumers' preference for safer food (Singh, 2003). Attention on organic food has grown remarkably as consumers and marketers react to popular media about health and environmental effects of pesticides and food safety. The rising popularity of organic food, which is a multi-billion-dollar global industry with accelerating growth, raises important questions of interest to governments, growers, distributors, retailers, industry planners, and marketers. Growing environmental awareness, in combination with concerns about safer foods, has led people to motivate organic agricultural practices. These cause to increase demand for organic produce, which is perceived as less damaging to the environment and human health than conventionally-grown foods (Schifferstein and Ophuis, 1998; Williams and Hammit, 2001; Wijesinghe et al., 2019). Moreover, many countries have recorded a significant increase in consumption of organic food, which has become a trend in present society. Most people tend to purchase organic food than conventional food items due to health and environmental benefits (Hapuarachchi, 2016). Organic products are considered to be higher in quality compared to conventionally-produced products.

The consumer attitude plays a significant role in the buying and consumption of organic food. Chisnall (1995) defined attitude as "a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which is related." Grankvist, et al., (2004), pointed out that the relationship between environmentalism and consumer attitude has a strong correlation, while health consciousness also plays a vital role to shape consumer attitude and behavior (Magnusson et al., 2003). Consumers now move towards a healthy lifestyle as they realize the quality of food intake directly affects their health, and consuming organic food is a good option available to them (Pandey et al., 2019). More information about organic food market increases consumers' knowledge and positively influences consumer attitudes (Gil and Soler, 2006; Aryal et al., 2009; Briz and Ward, 2009). Organic food is often related to a specific lifestyle that includes healthy eating, vegetarianism, and alternative medicine, religious, or societal considerations (Kulikovski and Agolli, 2010; Wijesinghe et al., 2015). According to Stolz et al., (2011), positive assessments of organic production refers to 'better taste,' 'healthier,' 'no artificial additives,' 'no chemical synthetic pesticides,' 'limited use of antibiotics,' and 'no GMOs.' Increase in education level and monthly income of consumers are the other sources of motivation that positively affect the attitude towards organic food. Moreover, consumers of higher age groups increase the positive attitudes towards organic food. It notices that the consumption of organic food is seen in some consumer groups as a symbol of fashion and social status and such groups show a positive attitude towards the consumption of organic foods. It provides necessary evidences that the living area has a considerable impact on consumption of organic foods. A good evidence is that the urban dwellers have come

forward for the higher level of consumption of organic foods (Agovino et al., 2017; Devid and Ardiansyah, 2017; Du et al., 2017; Joshi and Rahman, 2017; Lian, 2017; Asif et al., 2018; Hansen et al, 2018).

Kruse (2015) revealed that unsafe food could lead to various health problems, with continually emerging new threats to food safety, and food that contains harmful chemical substances is responsible for more than 200 diseases. According to Suprpto and Wijaya in 2012, healthy lifestyle is a good predictor for the attitude toward organic food, while the attitude toward organic food directly influences the purchase intention of them. Most people in the present society tend to purchase organic food due to health and environmental benefits (Wijesinghe et al., 2015; Hapuarachchi, 2016). Today, consumers tend to control food production processes more tightly and question the reliability and health impacts of conventionally produced foods. The production processes of organic foods, such as certification, labeling and inspection are noticed by consumers. As they have adequate information about organic foods, it creates a positive attitude in consumer minds towards them. Therefore, we can speak of a positive correlation between purchasing intention and existing knowledge on organic food with the consumers. The general assessments were highlighted about the effect of purchase intention of organic foods. Therefore, those who are willing to act according to social norms, cause to direct their norms according to the social sensitivity towards organic products. Similarly, having adequate knowledge on organic food has improved the ability to control the perceived behavior of consumers (Devid and Ardiansyah, 2017; Du et al., 2017; Joshi and Rahman, 2017; Kumar et al., 2017; Oroian et al., 2017; Asif et al., 2018).

Investigating consumer attitude helps in many aspects. There is a continuous change in the living standards, fashions, technology, and food habits of the consumers. Therefore, consumer attitude towards purchasing of products from the market was different from person to person (Kumar et al., 2004). According to the literature, a person's attitude has a significant effect on purchase intension. Attitude measurement is necessary to identify how marketing strategies and advertisements influence consumer behavior. New products emerging in the market or existing product's future demand can be predicted by measuring consumer attitude (Blackwell et al., 2006).

Sri Lankan context provides evidence for a few studies related to consumer attitude towards organic food. Wijesinghe et al. (2015) reveal that health concerned and environmentally conscious consumers show positive price premium for organic fruits. Jayasuriya (2016) highlights a higher demand in society for a healthy meal. Consumers of all age categories in Sri Lanka, prefer to buy healthy meals. However, its unavailability keeps them away from these choices. Consumers buy healthy meals despite their taste if they have the option to select between a healthy and unhealthy meal. Hapuarachchi (2016) stated that organically processed food had increased attraction and interest of customers within Sri Lanka. This study further

concluded that, health consciousness and environmental concern are influential factors in generating a positive attitude toward organic foods by consumers. According to Weerasiri and Koththagoda (2017), consumer attitudes affect the consumption of organic products and factors such as health concern, consumer knowledge, and product quality have significant positive relationships with an attitude leading to positive purchase intentions of the organic food. Kodithuwakku (2018) also revealed that the perception of consumers is crucial in the purchase decision of organic food consumption as it determines their consumption and intention to buy organic food products.

Consumers who are conscious of health and food safety are more driven towards buying organic food products from the organic food markets in Sri Lanka. However, the demand for organic foods has not fulfilled the supply quantity of them. Atapattu and Wijesinghe (2018) indicated that, organic food users have positive attitude towards organic food compared with non-users; yet, despite the significant level of health hazards and environmental issues with the use of agrochemicals. Compare to developed countries, still the consumption of organic food is at a lower level in the country (Malkanathi et al. 2019). However, all these researches are micro-level research, based on one or two districts or covering few divisional secretariat divisions within a district with small samples. It is difficult to find literature of research covering the populous regions with larger samples of consumers.

Therefore, the primary research objective of this study was to assess the urban consumers' knowledge and attitude on organic food. The specific objectives were to find out the socio-economic factors of urban consumers, evaluating consumers' knowledge about organic food, study the present pattern of buying organic food, identify the factors affecting consumers' attitude towards organic food, determine the relationship between those factors and consumers' attitude towards organic food, and identify the problems related to buying organic food by the consumers.

RESEARCH METHOD

This study was conducted in the capital cities of six districts (Rathnapura, Colombo, Gampaha, Kandy, Kurunegala, and Galle) in Sri Lanka. Capital cities of these districts were purposively selected for the study, as there is a potential for the presence of organic food markets and organic consumers. Four super markets were randomly selected from each city, and the target group was obtained by contacting customers who came out of the market, after buying goods. Questions were asked from customers who were willing to answer the questionnaire. The data were collected at 24 super markets as 4 markets from each city and 25 consumers from each market. So that, 600 customers were randomly selected as the sample of the study, having 100 from each city. Data were collected in two stages: Firstly, data were collected using an online survey for the pilot study (Study One) using ten consumers in September 2016. And also, necessary corrections were made

before the market survey. Subsequently, a market survey was conducted using the pre-tested questionnaire (Study Two) in those six cities during November 2016 - May 2017. In the questionnaire, questions were there to gather information related to socio-economic characteristics and knowledge about organic food, their attitude towards organic food and issues and challenges in buying organic food. According to the literature, Chen & Lubo (2012) have conducted study about the consumer attitudes towards organic foods in urban china. They have reported that, product related, regulatory related and lifestyle related factors are directly or indirectly influence to the consumer attitudes or buying behavior towards organic foods. Content of the above three factors are approximately equal to the content of environmental, quality, health and marketing factors used in this study. Data analysis was conducted using four statistical techniques. Descriptive statistics (frequency analysis, percentages) were used to evaluate the socio economic factors of the consumers. Mean analysis was applied to assess the consumers' attitude towards organic food using sixteen attitudinal statements with 5-point Likert scale. The total score and mean score for each statement were subsequently calculated using the following equations:

$$\text{Total score} = 5xSA+4xA+3xU+2xDA+1xSDA$$

$$\text{Mean score} = 5xSA+4xA+3xU+2xDA+1xSDA \div 600$$

Where,

SA= Respondents expressing their attitude 'Strongly Agree' for the statements

A= Respondents expressing their attitude 'Agree' for the statements

U= Respondents expressing their attitude 'Undecided' for the statements

DA= Respondents expressing their attitude 'Disagree' for the statements

SDA= Respondents expressing their attitude 'Strongly Disagree' for the statements

The overall attitude of all consumers for each statement was obtained based on the cut-off values. This method is similar to the analysis method used by Ruedas (2012) to measure the attitude towards organic food. The factor analysis was also used to extract the factors affecting consumers' attitudes on organic food. Finally, the impact of environmental, quality, health and marketing factors for the consumer attitude was analyzed by multiple linear regression. Data analysis utilized the SPSS-21 Statistical Package.

RESULTS AND DISCUSSION

Socio economic characteristics of consumers

Important socio economic characteristics of the consumers, i.e., gender, age, marital status, education level, and the total monthly income of them were identified and studied within the real situations. Table 1 presents the relevant results.

Table 1. Socio economic characteristics of consumers (n=600)

Factor	Category	Frequency	Percentage
Gender	Male	282	47.0
	Female	318	53.0
Age	18-40 Years	295	49.2
	41-60 Years	272	45.3
	> 60 Years	33	05.5
Marital status	Married	471	79.0
	Unmarried	122	21.0
	Other	07	01.2
Educational level	Primary Education (up to grade 5)	10	01.7
	GCE O/L (up to grade 10)	45	07.5
	GCE A/L (up to grade 13)	237	39.5
	Diploma	59	09.8
	Graduate	212	35.3
	Postgraduate	37	06.2
	Less than 23000	15	02.5
	23000-40000	135	22.5
Monthly total income (LKR)	40001-58000	102	17.0
	58001-85000	176	29.3
	85001-162000	136	22.7
	more than 162000	36	06.0

Source: Consumer Survey, 2016-2018

As per Table 1, majority of the consumers was females (53.3%), primarily within the age category of 18-40 years (49.2%). Also, most of them were married (79.0%) and have received education up to GCE Advance level or 13 years of education (39.5%). Monthly income of the majority was in between Sri Lankan Rupees 58000-85000 (approximately US dollars 323 – 473). It is clear that they were young to middle aged people with comparatively better level of education and also in the category of a higher level of monthly income. In Sri Lankan households, women do shopping and household purchases than men. Wijesinghe et al. (2019) reported a similar socio economic profile in their study on constructing a household profile with the likelihood of purchasing organically grown produces. Vukasovic (2016) reported that, organic buyers tend to be younger and higher educated people than those who do not buy them. Similarly, below 40 years age group consumers have higher trend to purchase organic foods in Sri Lanka. And also, findings of this study noticed that consumers having lower educational level (Primary Education or education up to grade 5 and GCE Ordinary level or education up to grade 10, tend to lower consumption of organic foods.

Consumers' knowledge on organic food

In order to assess the level of knowledge on organic food, consumers were asked to mark their responses under four options as “I don't know about organic food”, “I have little knowledge about organic food”, “I have certain knowledge about organic food” and “I have good knowledge of organic food”. Table 2 presents their responses.

Table 2. Consumers' level of knowledge on organic foods (n=600)

Level of knowledge	Frequency	Percentage
I don't know about organic food	12	02.0
I have little knowledge about organic food	19	03.2
I have certain knowledge about organic food	451	75.2
I have good knowledge about organic food	118	19.6

Source: Consumer Survey, 2016-2018

According to Table 2, a majority of the consumers (75.2%) possessed a certain level of knowledge on organic food. However, about one-fifth of the consumers (19.6%) had good knowledge. As consumers have a sufficient level of education, they can obtain knowledge on organic food in different ways. They receive that knowledge mainly from market information, internet, and newspapers. According to the study findings of the Muhammad et al., 2016, knowledge about organic food is create a considerable impact with selected socio demographic factors such as gender, nationality, and education as well as income, occupation and age.

Purchasing pattern of organic food by the consumers

Purchasing pattern of consumers was investigated using a few questions. Table 3 provides these questions and relevant answers.

Table 3. Purchasing pattern of organic food by consumers (n=600)

Question	Frequency	Percentage
Have you ever purchased organic foods?		
Yes	534	89.0
No	42	07.0
Not responded	24	04.0
For how long have you been purchasing?		
For a few months	56	10.5
Less than a year	96	18.0
Less than 2 years	126	23.5
2-3 years	135	25.3
More than 3 years	121	22.7
Do you purchase continuously or rarely?		
Continuously	126	21.0
Rarely	408	68.0
Do you like to purchase organic food in the future?		
Yes	554	92.7
No	030	05.0
Not responded	014	02.3

Source: Consumer Survey, 2016-2018

According to Table 3, a majority (89%) has purchased organic food and also 25.3% of them have been purchasing organic food since 2-3 years. However, many (68%) have been purchasing organic food rarely due to some existing constraints. Furthermore, discussions with the consumers indicated that, most of them prefer to buy organic food in the future, when they are available often and at a lesser price.

CONSUMERS' ATTITUDE TOWARDS ORGANIC FOODS

Here, 16 attitudinal statements which were developed using literature and the existing information were tested against 5-point Likert scale, in order to analyze the consumers' attitude towards organic food. The total score and mean score for each statement were calculated. Finally, overall attitude of all consumers, for each statement was obtained based on the

of organic food. According to the results, consumers agreed with the statements regarding quality factors (statements 01, 02, 03, and 04) of organic food. Also, most consumers agreed with the three statements (statement 05, 06, and 07) relating to health factors. Therefore, health-related factors and quality factors of organic food have significant impacts on consumers' attitude. Consumers also perceived organic food as good for the environment (statements 08 and 09), thereby agreeing with the findings of Kodithuwakku (2018), which stated that consumers severely consider organic food is for healthier consumption, and safety is a significant factor that influences consumer attitude. Findings also denote consumers' willingness to buy organic food, because of environment friendliness. Karunadasa and Weerasiri (2017) indicated that health consciousness, environmental consciousness, consumer knowledge, and personal norms positively affect the consumer attitude towards organic food.

Table 4. Consumers' attitude towards organic food (n=600)

No.	Statement	SA	A	U	DA	SDA	Total score	Mean score	Overall Attitude**
01	Organic food has high nutrition	342	216	26	10	6	2678	4.46	A
02	Organic food has good taste	269	257	62	10	2	2581	4.30	A
03	Organic food has good smell	219	248	116	12	5	2464	4.11	A
04	Organic food has high quality	341	207	39	7	6	2670	4.45	A
05	Organic food have no harmful effects	236	232	105	18	9	2468	4.11	A
06	Organic food are good for health	338	232	22	04	04	2696	4.49	A
07	Organic food has no pesticide residues	203	242	115	21	18	2388	3.99	A
08	Organic food protect the environment	119	274	138	46	23	2220	3.70	A
09	Organic food are good for environment	323	237	29	6	41	2583	4.45	A
10	I trust organic labels	56	195	189	117	43	1904	3.17	U
11	I consider organic brand name/s	71	188	177	121	43	1923	3.21	U
12	Organic labels mean high-quality food	63	188	215	98	36	1944	3.24	U
13	I buy only the organic food which have certifications	143	151	72	129	105	1898	3.16	U
14	I buy organic food whenever possible	290	242	42	17	43	2388	4.31	A
15	Organic food need to be easily accessible	243	256	71	22	8	2504	4.20	A
16	I buy organic food whenever I feel, I like it	128	232	140	83	17	2171	3.20	U

*cutoff values for different attitudinal levels;

1.00-1.49 = strongly disagree; 1.50-2.49 = disagree; 2.50 - 3.49 = undecided; 3.50 - 4.49 = agree and 4.50 - 5.00 = strongly agree

Source: Consumer Survey, 2016-2018

cut-off values mentioned at the end of the Table 4.

As per Table 4, out of the 16 statements, consumers agreed with 11 statements and were neutral for 05 statements. These 11 statements were identified as the factors which are highly influenced the consumers attitude when purchasing of organic foods. It is evident that consumers have a clear idea

Apart from these factors, the availability of organic food in the market (statements 14 and 15) positively affects consumer attitude towards organic food. However, dearth of market information (availability, price, trustworthiness, continuity of organic food) and lack of organic food certification procedures, lead consumers to face difficulties in getting decisions about buying

those products. Furthermore, they have less trust on organic certifications (statement 13) and some organic labels (statements 10, 11, and 12) in the market at present. As per Piyasiri and Ariyawardhana (2002), consumers who were willing to buy organic products from markets consider certifications to assure the quality of products. Therefore, producers and marketers need to pay attention on correct certification and labeling of their organic products. Statement number 16 showed that, even though the consumers have a better feeling to buy organic foods, some limitations such as, higher price compare to non-organic foods, poor labeling and certification etc are negatively affect for it.

Factors influencing consumers' attitudes on organic food

Factor analysis was conducted to identify the factors influencing consumers' attitude towards organic food. Before the study, KMO and Bartlett's test was conducted to check the suitability of the data for factor analysis. Table 5 presents the result of the KMO and Bartlett's test.

Table 5. KMO and Bartlett's test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.798
Approx. Chi-Square	5872.706
Bartlett's Test of Sphericity	Df
	120
	Sig.
	.000

According to the KMO and Bartlett's test, the KMO value is 0.798. This value is suitable for preceding the factor analysis (Table 5). Furthermore, the p-value is less than 0.05 in this Bartlett's test, and hence, signifies the suitability of data for factor analysis. Therefore, factor analysis was conducted, and Table 6 presents the results.

Table 6. Total variance explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.681	29.253	29.253	4.681	29.253	29.253
2	2.365	14.779	44.032	2.365	14.779	44.032
3	1.753	10.958	54.990	1.753	10.958	54.990
4	1.010	6.315	61.306	1.010	6.315	61.306
5	.882	5.513	66.819			
6	.868	5.426	72.244			
7	.727	4.541	76.785			
8	.645	4.033	80.818			
9	.616	3.849	84.667			
10	.583	3.644	88.311			
11	.465	2.906	91.216			
12	.401	2.507	93.723			
13	.376	2.348	96.071			
14	.353	2.209	98.280			
15	.272	1.702	99.982			
16	.003	.018	100.000			

According to the total variance explained, it only considered the extracted sums of squared loading (Table 6). Here, the factor accounted for 29.253% of the variance, the second 14.779%, the third 10.958%, and the fourth 6.315% of the variance. All remaining factors are not significant.

Table 7. Component matrix

	Rotated Component Matrix ^a			
	1	2	3	4
Good for environment	.901	.133	.208	
Protect the environment	.899	.131	.209	
Buy organic food when easily accessible	.675			
Organic food has no pesticides residuals	.522		.459	
Organic food are more tasty	.166	.869		
Organic food have good smell		.785	.198	.249
Organic food are highly nutritious	.151	.761	.301	
Organic food have high quality	.146	.622	.428	
Organic food have no harmful effects		.130	.783	.165
Organic food are good for health	.227	.420	.594	
I buy organic food whenever available	.218	.254	.564	.109
I Buy organic food whenever I feel I like it		.221	.433	.231
I trust organic food labels	.117			.810
Organic labels indicate high-quality food	-.234	.129	.149	.800
I consider organic food brand name/s	.435	.105	-.131	.645
I buy organic food which only have certifications	-.157		.174	.480

Extraction Method: Principal Component Analysis

Rotation Method: Varimax with Kaiser Normalization

Four factors were extracted according to the rotated component matrix as shown in Table 7. The first factor was named as environmental factors, and it describes 29.253% of the total variance. The second factor was named as quality factors, which describes 14.779% of the total variance. The third was the health factors that described 10.958 % of the total variance, while the fourth factor was named as marketing factors, and it explained about 6.315 % of the total variance. Rizaïmy et al. (2010) used a similar method in their study to identify factors affecting consumers to purchase organic food. Results indicated that consumers buy organic food products considering health consciousness and perceived value.

Determination of the relationship between the extracted factors and urban consumers' attitude towards organic food

Influence of the extracted factors on the consumers' attitude towards organic food was measured using multiple linear regression analysis. The resultant factor scores (independent variable) were regressed against the dependent variable which are denoted as consumer attitude for purchasing of organic foods (means of attitude).

Hypotheses used in the study were as follows:

H₀1: There is no relationship between environmental factors and consumers' attitude towards organic food

H₀2: There is no relationship between quality factors and consumers' attitude towards organic food

H₀3: There is no relationship between health factors and consumers' attitude towards organic food

H₀4: There is no relationship between marketing factors and consumers' attitude towards organic food

Table 8. Results of multiple linear regression analysis (n=600)

	Beta coef- ficient	t	Sig.	Hypothesis H0
Environmental factors	.229	103.052	.000	Reject *
Quality factors	.245	110.014	.000	Reject *
Health factors	.248	111.489	.000	Reject *
Marketing factors	.232	104.273	.000	Reject *

*adjusted R² = 0.987, standard error=0.05440, significant at 95% confidence level

Table 8 presents the multiple linear regression model summary and over fit statistics. The results of multiple linear regression analysis provided supportive evidence to prove the factors affecting consumers' attitude towards organic food. The adjusted R square value was 0.987, and p values of all variables were lower than 0.05 at 95% confidence level (significant), which meant that the null hypotheses were rejected. Therefore, environmental factors, quality factors, health factors, and marketing factors were significantly associated with consumers' attitude towards organic foods. The results indicated positive relationships between consumers' attitude and the above four factors. It further revealed that,

- For every unit increase in environmental factors, attitude is predicted to be 0.229 units higher.
- For every unit increase in quality factors, attitude is predicted to be 0.245 units higher.
- For every unit increase in health factors, attitude is predicted to be 0.248 units higher.
- For every unit increase in marketing factors, attitude is predicted to be 0.232 units higher.

Various other researchers have reported more or less similar findings. For instance, Bashaa et al. (2015) discovered that motivations behind consumers for buying organic food products are health and environment concerns, lifestyle, food

product quality, and their subjective norms. Ramesh and Divya (2015) also reported that health, taste, and packaging are the factors influencing consumers to buy organic food products.

Constraints for buying organic food by the consumers

Finding of the constraints associated with buying organic food by the consumers is a timely requirement. Thus, constraints affecting the organic food purchasing by the consumers were studied in detail and presented in Table 9.

Table 9. Constraints in buying organic food (n=600)

Constraint	Frequency	Percentage*
Organic foods are expensive	516	86%
Unavailability of organic foods in the market	492	82%
Discontinuous supply in the market	474	79%
Lack of trust about organic foods	438	73%
Lack of certification for organic foods	414	69%
Unavailability of market information about organic foods	384	64%

Source: Consumer Survey 2016-2018

*This is a multiple response question; one respondent can have more than one option. Therefore, the cumulative percentage could be higher than 100%.

According to Table 9, the primary constraint in buying organic food was the high price of them. Unavailability of them and discontinuous supply were also serious problems. Unavailability of organic food in the market leads to irregular purchasing and consumption patterns. The absence of a clear and direct market flow from farmers to market places results in a discontinuous supply of organic food. The results indicated that consumers' have less trustworthiness about organic food.

Vukasovic, 2016 mentioned that lack of consumers' trust, higher price levels and lack of market information were the major constraints of buying organic foods. Furthermore, in 2017, Asli et al. reported similar problems in their study on factors limiting the potential impacts of organic agriculture on rural development in China. These constraints make limited consumer preference for buying organic food. Therefore, the transparency of information about the marketing of organic food is needed for the long-term retention of loyal consumers. Hence, the establishment of proper certification methods for organic food is highly important.

CONCLUSIONS

Many conclusions can be drawn based on the study findings. As per the socio economic factors of consumers', more than half of the consumers are females and the majority of the consumers

are in the young to middle-aged categories and with families. While most consumers have a significant level of education, majority of them have a comparatively higher monthly income (the average household income per month was Rs. 62,237 in 2016 in Sri Lanka). At present, most middle- and high-income receiving people in the country, principally do their shopping in supermarkets. Based on the information gathered in discussion with consumers, especially educated women are more conscious about the food given to their children and family as they are important to avoid health problems.

Most of the consumers have a significant level of knowledge of organic food, while about one-fifth of them have good knowledge. As these consumers have a good education level, they are exposed to various sources of information such as the internet, newspapers, and television and receive the latest news on currently important information.

Gradual development in purchasing of organic food can be seen as per the purchasing pattern of organic food is concerned. The expansion of supermarket channels in main cities in the country during the last 3-4 years have provided access for organic food for the consumers, and at present, the demand exists for organic food by the educated, high-income earning category of the consumers.

Consumers have a positive attitude towards beneficial aspects of organic food such as food quality (taste, smell, quality, and nutrition) and the health-enhancing and environment protecting ability. However, they are not satisfied with the marketing aspects of organic products. Therefore, these areas need improvement to attract more consumers towards organic food.

As per the factor analysis, four factors, i.e., environmental factors, quality factors, health factors, and marketing factors of organic food are important directly and also indirectly for purchasing of organic foods. According to multiple linear regression analysis, those four factors are positively associated with consumers' attitude towards organic foods.

In focusing the problems associated with purchasing of organic food by the consumers, high price, unavailability of goods, and lack of continuous supply are the main ones. Issues related to the trust of organic products, certification systems, and lack of sufficient market information are also critical and need remedies.

RECOMMENDATIONS

This research study can make some recommendations to attract more consumers towards organic food in order to improve the marketing of organic food in the country.

Even though certain arrangements have been made regarding the selling of organic food in some markets, these facilities need to be formalized by maintaining a continuous supply of organic food at various quantities, considering the demands of different types of consumers, in an attractive manner. It will be beneficial to mention useful information such as the nutrition composition, health benefits, and the method of preparation on the packet to facilitate consumers, and selling organic food at reasonable prices without charging higher rates.

Since the consumers have a positive attitude on organic food, demand for organic food will be increased in future. Organic food producers should produce them properly, harvest them at the correct time without destroying the nutritional value and freshness, and certify the food items using accurate certification systems and labeling. These foods should be transported to the relevant markets in regular time duration at reasonable prices.

The government should arrange many promotional programs such as exhibitions, advertising, and poster displays, highlighting the benefits of organic food products such as health and eco-friendly qualities to further encourage consumers towards purchasing organic food products. Programs for school children and their food based on organic food could be a better way to maintain the good health of the younger generation.

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