

## Consumer Behaviour and Purchase Intention for Organic Food

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### ABSTRACT

It is a sad fact that applications made to increase productivity in food products have negative effects on the environment and human health. In addition, consumers' choice of food more consciously leads to an increase in demand for organic foods. In this study, the buying behavior and loyalty of organic food customers are examined with 400 participants in Bursa. While 85% of the respondents consume organic products, 15% of them do not consume organic products. According to the results of the survey, most of the people who consume organic products are university graduates. Organic product markets are preferred for the supply of organic products by the consumers. Product appearance is effective for buying by 54% of individuals who consume organic products. Most consumed organic products are milk and dairy products. In this study, an attempt was made to measure the knowledge and awareness levels of people living in Bursa about organic food. The research is thought to provide beneficial contributions to organic food sector marketing activities and national agriculture.

**Keywords:** Organic products, Organic farming, Consumer trends, Bursa, Turkey

### INTRODUCTION

Some techniques and practices preferred in the past satisfied the food requirements of people on the one hand, but on the other hand, led to various health problems. These negative effects initiated the search for alternative farming techniques from the 1910s onwards in many countries, especially in Great Britain. It can be said that the idea of organic farming occurred as a result of this conjuncture (Fidan, 2017). Due to consumers' response to food safety issues, the interest in organic food has increased significantly. Therefore, who the organic food consumers are, the factors that cause organic food consumption and the future situation of the organic food market are among the subjects that need to be investigated. It is necessary to identify consumers' decisions about purchasing, perceptions of organic foods and their subjective experiences (Raletic Jotanovic et.al. 2019) Regional studies will shed light on these questions (Gürbüz and Macabangin 2019). In McIver's (2004) study, among the reasons why consumers prefer organic products are worries about health and the environment along with the fact that these products do not contain agricultural pesticides or chemical waste (McIver 2004) In 2006, Bonti-Ankomah and Yiridoe concluded that household income, product price and prices of other products were effective in the decision to purchase organic food (Bonti-Ankomah and Yridoe 2006). Magnusson, Arvola, Hursti and Aberg (2003) conducted a questionnaire sent by mail in Sweden (Magnusson et. all 2003). According to the results of the survey, consuming organic food is mostly associated with the benefit to human health. The display of behavior showing the importance given to the environment is a sign of the frequency of purchasing. In Turkey, economic factors (especially premium price and guaranteed market) seem to be the most influential factors motivating the switch to organic production (Demiryürek 2001; Kenanoğlu and Miran 2002, Erdoğan and Turhan 2019). For this reason, it is important for Turkish people to have knowledge about organic agricultural products and to determine the demand that will arise as a result of this. In this study, an attempt was made to determine consumers' awareness about organic products and their frequency of consumption. In addition, the types and characteristics of the products they consume were investigated.

### MATERIALS AND METHODS

In this study, a questionnaire was applied to collect data. Field work was carried out between March and June 2019. Consumer behaviors towards organic agriculture and food products have been examined in a number of studies (Schifferstein 1998; Torjusen et al. 2001; Magnusson et al. 2003; Saba and Messina 2003; Sanjuan et al. 2003). Some questions were formed by the researchers considering the purpose of the research, the content of the subject and the characteristics of the population to which the questionnaire would be applied (Salali and Atis 2018;

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Collins 1986). The primary data of the study are the data obtained from the survey conducted in the form of face-to-face interviews with 400 people. In the study, a simple random probability sampling method was used to determine the sample size of the population (Meral and Şahin 2013; McHugh 2013). The formula used to determine the sampling size is:

$$(t)^2 [1+(0.02)(b-1)] P.Q$$

$$n = \frac{(E)^2}{(P)(Q)}$$

t= t table value, 95% statistical significance level (1.96)

b= Sampling phase (single stage b=1) P= Probability of the event happening (50%)

Q= Probability of event not happening (50%) E= Accepted margin of error in sampling (5%)

$$n = (1.96)^2 \cdot (0.5) \cdot (0.5) / (0.05)^2 = 384$$

The number of questionnaires to be conducted according to the simple random sampling method was found to be 384, but the sample was increased by 10% against possible errors and 400 questionnaires were evaluated. The data obtained from the survey were evaluated with the help of the SPSS 23.0 software program. The questionnaires consist of multiple choice and Likert-type questions. The data obtained from the survey were first evaluated with descriptive statistics. Then, cross tables were created and chi-square and t-test were performed. Likert-type questions were interpreted by taking the average of the results.

The chi-square test is used to analyze qualitative data. It based on whether the difference between observed and expected frequencies is significant (Winter 2013). The t-test is the most widely used test among hypothesis tests. It is defined as an approach that statistically tries to determine whether there is a significant difference between the means of the two groups of data (Çelikkanat 2008)

## RESULTS

In this study, an attempt was made to define consumers' attitudes towards organic products and to emphasize the importance of revealing the relevant thoughts. For this purpose, 400 consumers were interviewed by mutual interview. The normality test (W test) showed that the data were distributed normally. According to the results of the survey, 46% of the participants who participated in the research are men and 54% of the participants are women. 53.25% of the participants have university education and 18.5% are high school graduates. 38.50% of the respondents are between 18-29 years old and 24.5% are between 30-39 years old. When the marital status of the participants is examined, it is seen that 53% are married and 47% are single. It can be said that 53% of consumers live in households of 3-4 people. 37.25% of the participants have incomes between 2000-4000 TL (Turkish Lira) and 26% of them have incomes between 1000-2000 TL (Table 1).

**Table 1.** Demographic characteristics of surveyed consumers.

Demographic Characteristics	Frequency	%	Demographic characteristics	Frequency	%
<b>Gender</b>					
Male	184	46.00	Married	212	53.0
Female	216	54.00	Single	188	47.0
<b>Educational Attainment</b>					
Primary school	33	8.25	1	59	14.75
Secondary school	20	5.00	2	84	21
High school	74	18.50	3	102	25.5
Junior College	28	7.00	4	109	27.25
University	213	53.25	5	31	7.75
Postgraduate	32	8.00	6 and above	15	3.75
<b>Age</b>					
Under 18	4	1.00	0-1000 TL	97	24.25
18-29	154	38.50	1000-2000 TL	104	26.00

30-39	98	24.50	2000-4000 TL	149	37.25
40-49	81	20.25	4000-6000 TL	33	8.25
50-59	39	9.75	6000 and above	17	4.25
60 and above	24	6.00			

The respondents were asked whether they had heard of the concept of organic food before. 98% of the people said that they had information, while 1.5% had no information and 0.5% had never heard of it. To determine the relationship between educational background and organic food knowledge, t- and chi-square tests were performed. As a result of the t-test, ( $P<0.005$ ), it was concluded that there is a significant relationship between educational status and knowledge of organic products. However, in the chi-test, the probability value of  $P$  was found to be 0.85 and therefore, no statistical significance was found (Table 2).

**Table 2.** Organic food knowledge according to educational background.

Education	Organic food knowledge			Total	%
	I have information	I have no information	I have never heard of it		
Primary school	31	2	0	33	8.25
Secondary school	20	0	0	20	5
High school	71	2	1	74	18.5
Junior College	28	0	0	28	7
University	211	2	0	213	53.25
Postgraduate	33	0	0	33	8.25
Total	394	6	1	400	100
<i>t-test and P</i>	<b>59.4</b>	<b>0.000</b>			

Respondents said they had heard of organic food before. The majority of these people are undergraduates, graduates and high school graduates, respectively. Out of the respondents stated that they consume organic food at least once. 40 of the rest stated that they had never consumed organic food before and 20 of them did not know whether they had ever consumed organic food or not. About 65% of consumers consuming organic products consume 1-25% of organic food in total food consumption. In order to determine the relationship between organic food consumption and educational level, t-test was performed. Since the t statistic is  $0.00 < 0.05$ , it is concluded that education level affects organic food consumption status (Table 3).

**Table 3.** Comparison of organic food consumption and educational status.

Education	Organic food consumption			Total
	I consume it	I have not consumed it	I am not aware	
Primary school	25	5	3	33
Secondary school	15	2	3	20
High school	57	14	3	74
Junior College	25	3	0	28
University	184	17	12	213
Postgraduate	28	4	0	32
Total	334	45	21	400
<i>t-test and P</i>	<b>59.44</b>	<b>0.000</b>		

When the participants consuming organic products were asked from which point of sale they bought products, 39% said that they bought from markets. This is followed by supermarkets, specialist shops, and internet, respectively (Table 4).

**Table 4.** Selection of organic product point of sale.

Point of sale	Frequency	%
Market	164	39.71
Supermarket	102	24.70
Specialist shop	61	14.77
Internet	18	4.36
Other	68	16.46

Consumers were asked which properties most affected them when buying organic food. 54% of the participants were satisfied with the appearance of the product, 49% were very satisfied with the taste of organic 119 products, 55.5% were satisfied with the food safety, while 29% were less satisfied with the prices of organic 120 products (Table 5).

**Table 5.** Factors affecting consumers when buying organic products (%)

Factors	1	2	3	4	5
Surface	17.4	54.6	19.8	6.6	1.6
Flavor	49.3	44.5	5.4	0.3	0.5
Food safety	29	55.5	11.6	2.7	1.2
Price	8.4	18.2	21.8	29.2	22.4

The t-test was used to compare the effects of the 5-point Likert-type scale results of the effective properties of organic products with gender. As the result of the t-test was  $0.00 < 0.05$ , it was concluded that the effective properties of organic products vary according to gender. When the t-test was performed between the effective properties of organic products and age, P probability value was found to be  $0.00 < 0.05$ . This indicates that the effective properties of organic products vary according to age. When asked about the frequency of organic product consumption, the most common organic product consumed by the surveyed organic product consumers is milk and dairy products (2.27). This is followed, respectively, by fruit and vegetables (2.35), vegetable oil and products (2.75), flour and bakery products (2.86), meat and meat products (2.93), aquaculture (3.10), sugar industry products (3.61), sugar and cocoa products (3.68) and other products (4.37) (Table 6).

**Table 6.** Time frequency of organic product consumption.

Products	Frequency of consumption (average)
Meat and meat products	2.93
Milk and milk products	2.27
Seafood	3.10
Flour and bakery products	2.86
Fruit and vegetables	2.35
Vegetable oil and products	2.75
Sugar industry	3.61
Sugar and cocoa products	3.68
Other	4.37

When comparing the reasons for purchasing organic food according to income level, most of the answers are in the income group of 2001-4000 TL. Consumers whose income level is 2001-4000 TL buy organic products because they are healthier, more nutritious, more delicious, and beneficial to the environment (Table 7).

**Table 7.** Comparison of the reasons for purchasing organic food according to income level.

Income level	Healthier	More nutritious	More delicious	Useful for the environment
0-1000 TL	69	43	46	33
1001-2000TL	70	43	43	22
2001-4000TL	122	77	79	52
4001-6000TL	29	13	19	16
6001TL and over	16	11	12	9

When the chi-square test was performed to determine the relationship between gender and reasons for purchasing organic food,  $0.02 < 0.05$  was obtained according to the 5% significance level in the chi-square test. When we look at the cross table, it can be said that women find organic foods healthier. Pearson's value was found as 0.0165. This shows that the relationship between the two variables is positive. In terms of gender and environment, when the chi-Square test was performed, it  $0.04 < 0.05$  was obtained according to the 5% significance level. There is a positive relationship between chi-square and gender regarding organic food being beneficial for the environment. Pearson's r value is 0.112. There is a positive relationship in the regional variable. The comparison of the reasons of the individuals who do not buy organic products according to income groups is given in Table .When the reasons of the individuals who did not buy organic products were compared according to income groups, most of the individuals in the income groups of 0-1000TL, 1001-2000TL and 2001-4000TL said that organic products were expensive (Table 8).

**Table 8.** Comparison of the reasons of the individuals who do not buy organic products according to income groups.

Income level	I am not interested	It is not sold where I shop.	I really do not believe it's organic	Expensive	I do not believe it makes you healthier	I do not like the taste	I do not like the way it looks	I have no information
0-1000TL	5	15	11	24	2	1	1	9
1001-2000TL	7	6	8	24	1	1	2	12
2001-4000TL	8	16	20	23	3	1	0	5
4001-6000TL	2	2	1	2	1	0	0	0
6001TL and above	0	1	2	3	0	0	0	1

When the consumers who consume organic products were asked for their reasons for buying organic products, these were, respectively, it is healthier (1.51), there is controlled and certified production (1.58), the nutritional value is high (1.68), the taste is good (1.72), the price is high (1.79), it is environmentally friendly (1.84), and it has a low shelf life (2.16) (Table 9).

**Table 9.** Reasons why consumers buy organic products.

Causes	Average
High nutritional value	1.68
Low shelf life	2.16
Taste is good	1.72
Price is high	1.79
Environmentally friendly	1.84
Healthy	1.51
Controlled and certified production	1.56

When the chi-square test was performed to determine the relationship between high nutritional value and gender, there was a significant relationship between the two variables, the chi-square value being  $0.013 < 0.05$ .

Pearson's r value was -1.96. This result shows that there is a negative relationship between the two variables. Men are more likely to agree with this question.

## DISCUSSION

According to the survey results, most of the participants were women (54%), married (53%) and university graduates (53.25%). The majority (37.25%) had an income between 2000-4000TL. 98% of the participants stated that they were knowledgeable about the concept of organic food. No correlation was found between organic product knowledge and education level. While 85% of the participants reported that they had consumed organic food before, 65% of them stated that they consumed 1-25% organic food in total food consumption. According to the t-test results, education level affects organic food consumption.

According to the studies, people with high education have a positive attitude towards organic products and need more information about the production process and methods. People with a high level of education have the confidence to compare different discourses and opinions about organic foods. In this study, it was found out that education level affected organic food consumption. In addition, food safety emerged as the most important factor affecting consumption. It is understood that health is the most important factor in the choice of organic products. Sensitivity to environmental issues and innovative searches are personal factors affecting consumption. According to the 5-point Likert-type scale, the factors affecting the consumption of organic products vary according to gender and age.

When comparing the reasons for receiving organic food according to income level, most of the answers were in the income group of 2001-4000 TL. Consumers whose income level is 2001-4000TL buy organic products because they are healthier, more nutritious, more delicious, and beneficial to the environment. When the reasons of the individuals who did not buy organic products were compared according to income groups, most of the individuals in the income group of 0-1000TL, 1001-2000TL and 2001-4000TL said that organic products were expensive.

With regard to increasing the consumption of organic food, it is of great importance for the Turkish consumer to have the chance to consume fewer chemicals and healthier products, and for the producer to maintain soil fertility and sustainability in production on agricultural land, as well as for economic reasons. It is thought that the study will contribute to the development of the sector by determining the consumer profile and some factors related to consumption in the domestic market and will benefit future studies on this subject. In addition, it is thought that the study will help to achieve sustainability and sustainable consumption targets, which are among the most important concepts nowadays.

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