

# The factors related to organic food consumption and healthy lifestyles: a study of Turkish consumers

## Abstract

*Citing some of the concerns that have arisen in modern food production and the increasing interest in healthy living, and the impact these have had on demand for organic foods, this research article attempts to measure the relationship between healthy lifestyles and the consumption of organic food. Based on a questionnaire survey of 395 respondents from the Turkish province of Eskisehir, the research study statistically explores the hypotheses that the consumption of organic food would be positively associated with nutrition habits and with health care practices, and would vary between consumers according to their demographics. The study finds a statistically meaningful relationship between eating habits, health care practice and the consumption of organic food, and that female respondents were more concerned about organic food than men. The study concludes by examining some of the strategic implications of these conclusions, as well as with the issues that might concern future research into the subject.*

**Keywords:** *organic farming, food production scandals, healthy living factors, nutrition habits, healthcare practices, consumer behaviour, factor and variance analysis, marketing mix, customer segmentation.*

## Introduction

Various scandals that have happened in the food industry, as well as illnesses and the environmental pollution caused by the chemical additives and hormones used during agricultural production, have caused consumers to be more sensitive about food products. The organic farming that has emerged at this point is a method of agricultural production that does not upset the balance of nature, does not cause pollution and does not have harmful effects on humans and other living creatures and which aims to produce clean and certified products whose production process is controlled from the beginning up to the point of consumption (Nardali *et al.* 2007). The result is that interest in the production and consumption of organic produce has recently increased among both consumers and academics. In accordance with this interest, the organic produce industry is expected to develop heavily in the coming years.

The demand for organic foods is increasing at a rate of 20% globally (Ramdan, 2005) and the retail sales value of organic products in 2007 was estimated to be \$40bn. Turkey exported \$150m-worth of organic products in 2007 and the consumption of these products in the domestic market was around \$5m. Domestic consumption of organic products in Turkey is very limited and production is aimed predomi-

nantly towards exports in accordance with customer demand and world trends (<http://www.haberler.com/organik>).

When the literature on the buying and consumption of organic foods is examined, various factors can be seen to play a role in the increase in popularity of these products. The most important of these factors are health concerns, sensitivity about the environment and the decrease in trust felt towards the traditional food industry. Other reasons for buying organic products are concerns over the use of chemical hormones and pesticides in traditional farming, nutritional concerns and, lastly, increased taste and flavour (Lisa *et al.* 2001).

This study attempts in particular to measure the relationship between the healthy lifestyles of consumers and the consumption of organic foods.

### Literature review

The consumption of organic products in Turkey is fairly new. Organic farming, which had begun in the 1970s elsewhere in the world, had its start in Turkey in 1984 after European companies demanded organic products from Turkish companies (Cinar, 2003). Even though the consumption of organic products in the Turkish domestic market is at a limited level, a certain trend of increase can be observed. However, due to reasons like inadequate consumer consciousness about organic products, a limited product range and high prices, this increase has not reached the desired level. An increase in consumer demand towards organic products has been observed after the opening of stores in the domestic market specifically aimed at selling natural and organic products, as well as the sale of these products in big supermarkets. Consumers who buy organic products generally have a high level of earnings, have passed middle age and are educated and sensitive to health risks. However, despite these developments, the Turkish domestic market for organic products is still very small (Demiryurek, 2004: 68).

It is important to approach the issue of the consumption of organic products from the perspective of marketing. Accordingly, it is important to know why consumers consume organic products and the reasons behind the consumption and purchase of organic products (Vindigni *et al.* 2002: 628).

Two reasons usually emerge from the research done in the area of the consumption of organic products. These are the attitudes of consumers towards health and the environment (Ophuis *et al.* 1992; Davies *et al.* 1995; Wandel and Bugge, 1997). Another important reason is the characteristics of organic products. These characteristics can be called the essential benefit that consumers will gain as a result of consuming organic products. Aspects emerging related to the consumption of organic products are the essential benefit of organic products, general attitudes and views towards the environment, curiosity and a healthy lifestyle.

### Core benefits

The purchasing choices of modern consumers are undergoing changes. Many factors affect consumers during the purchasing process. Thus, product safety has today come to the forefront as an important problem, while demand for organic products emerges in accordance with the worries of consumers (Roitner *et al.* 2007).

Among the reasons for buying organic products are the chemicals carried by conventional products, worries over the use of pesticides and the nutritional value of

foods, and taste and flavour (Squires *et al.* 2001: 393). Another reason for choosing organic products is that they taste better than traditional products (Ramdan, 2005).

Studies about the purchase and consumption of organic products in terms of consumer behaviour are carried out frequently. These studies are based on factors related to the taste of and preferences for food. Developments in the demand for high quality food, carrying high safety standards, are due to high levels of earnings power as well as an increase in awareness of the importance of a healthy lifestyle. Thus, lifestyle factors also emerge as an element affecting the consumption of organic products (Vindigni *et al.* 2002: 628). Organic products are perceived as valuable by consumers (Hill and Lynchehaun, 2002: 531-532).

In a study carried out in the US (*Healthy Living Report* prepared by The Hartman Group in 2001), the reasons behind consumers choosing organic products was explored and the distribution of preferences examined percentage-wise. According to this report, 66% of consumers prefer organic products because they are healthy and more nutritious, 38% prefer them because they think they taste better and 30% prefer them because they deliver food safety (no pesticide residue, hormone-free products) (Kaya, 2007).

#### Environmental sensitivity

It has been found that consumers who are sensitive about the environment purchase organic products more frequently. These kinds of consumers are called green consumers (Fotopoulos and Krystallis, 2002: 235). Many studies have shown that worries over the environment affect the purchase of organic products (Squires *et al.* 2001: 393). Most of the studies carried out in the area of organic products stress that purchasing and consumption activity as a result of environmental worries does indeed take place (Vindigni *et al.* 2002: 628; Davies *et al.* 1995).

In the US *Healthy Living Report*, it was found that 26% of participants prefer organic products because of their positive effects on the environment (Kaya, 2007). Similarly, in a study carried out by Verdurme *et al.* (2002), it was found that consumers believe organic products to be safer and less harmful to the environment. In a study carried out in Italy by Chinnici, D'Amico and Pecorini (2002), one of the factors which motivated consumers to prefer organic products was found to be to help the environment.

#### Popularity and concern

Lately, the frequent appearance of organic products in the media has positioned the consumption of organic products as a fad (Hill and Lynchehaun, 2002). This excessive appearance of organic products in the media has caused some people to be curious about consuming organic products and to perceive it as a new trend.

#### Healthy lifestyle

An understanding of health requires an approach that protects, maintains and develops the health of the individual, family and society. This understanding is built upon the individual acquiring behaviours that will protect, maintain and develop his/her health and making sure that he/she makes the right decisions about his/her health. Healthy lifestyle behaviours do not aim to prevent a certain illness or disease but to improve further the general health and wellness of the individual (Aslan and Deniz, 2007: 212).

The healthy lifestyle variation index is used extensively to define health behaviours. In this study, health behaviours are examined in two parts: daily practices and health practices. In terms of daily practices, the consumption of fruit, vegetables and meat has been taken into consideration while, in terms of health practices, variables such as having regular check-ups and maintaining an orderly and stress-free life have been taken into consideration (Schuster *et al.* 2004: 360).

The increase in health consciousness is one of the most important factors that affect the consumption of organic products. Recent scandals about product safety have played an important role in the purchase of organic products (Fotopoulos and Krystalis, 2002; Magnusson *et al.* 2001; Hammitt, 1990; Ophuis *et al.* 1992; Winter and Davis, 2006). The attitudes and behaviours that are held about having a healthy lifestyle play an important role in the shaping of consumer behaviour. The desire to live a healthy lifestyle affects the consumption of organic products. People who are conscious about the issue of health take this issue into consideration when making decisions in their daily lives. A study carried out by Kristensen and Grunert (1991) has shown that attitudes carried about nutrition and health is important when predicting the consumption of organic products. It is possible to say that, as the worries of people about health increase, they tend to prefer healthier products. Other research has shown that worries about health issues are among the most important reasons for purchasing and consuming organic products (Hammitt, 1990; Ophuis *et al.* 1992).

### Research objectives and hypotheses

Most of the studies carried out on the consumption and purchase of organic foods have tried to determine the factors affecting consumers. In the extensive studies which have been carried out in the area of the consumption of organic foods, the attitudes of consumers towards health and their attitudes towards the environment have been examined (Davies *et al.* 1995; Wandel and Bugge, 1997). Consumers of organic foods see themselves as responsible for their health and believe that what they eat will affect their health (Schifferstein and Ophuis, 1998). The purpose of this study is to put forward the reasons behind the purchase of organic foods by consumers and the relationship between attitude factors towards healthy living, and to determine the factors leading consumers to purchase organic foods, in order to put forward the effect of these factors on health and lifestyle. Thus, the following purposes are intended for the study:

1. to identify factors affecting the consumption patterns of Turkish consumers towards organic foods
2. to identify factors about the health-related lifestyles of consumers
3. to investigate the relationship between factors in the consumption of organic foods, nutrition habits and healthcare practices.

### Statement of hypotheses

Based on the project implementation plan, the literature review and other discussions, several hypotheses were developed for the empirical investigation of the factors in the consumption of organic foods on nutrition habits and healthcare practices.

One of the findings motivating the purchase of organic foods is the perception of these foods as being healthy. Most of the studies carried out previously have emphasised this issue (e.g. Davies *et al.* 1995; Squires *et al.* 2001; Chinnici *et al.* 2002;

Tarkiainen *et al.* 2005). The results put forward by these studies can be considered as showing that consumers who have a consciousness as regards healthy living are more motivated to consume organic foods. The consumption of organic foods can be considered in relation to lifestyle. Owing to this basic justification, the following hypotheses have been developed from the idea that a relationship between healthy living factors and factors in the consumption of organic food might exist:

**H1:** The factors related to organic food consumption are positively associated with the nutrition habits of consumers

**H2:** The factors related to organic food consumption are positively associated with the healthcare practices of consumers

From the review of the literature, it follows that the attitudes and opinions of consumers towards the consumption of organic food can vary depending on their demographic characteristics (gender, education, age and income) at the local level. Research findings in this area have shown that women more than men (Davies *et al.* 1995; Wandel and Bugge, 1997; Squires *et al.* 2001; Lea *et al.* 2005; Roitner *et al.* 2007), consumers with higher earning power more than those that earn less (Davies *et al.* 1995) and higher educated consumers more than lower educated ones (Roddy *et al.* 1996) have higher rates of positive attitudes. Also, different results have been found concerning the relationship between age and the consumption of organic foods (Davies *et al.* 1995; Roddy *et al.* 1996; Tarakcioglu *et al.* 2005). Based on this assumption, the hypothesis developed for Turkish consumers is as follows:

**H3:** The factors related to the consumption of organic food vary according to the demographic characteristics of Turkish consumers

## **Method**

### Research and questionnaire design

#### *Survey form*

The survey form developed for the study consisted of three parts. The first part consists of eleven statements that put forward characteristics affecting the purchase and consumption of organic foods. The statements in this part of the survey were developed from research and practices carried out in the area of organic food consumption. This part included statements about the core characteristics of organic foods (Verdurme *et al.* 2002; Soler and Gil, 2002), sensitivity towards the environment (Verdurme *et al.* 2002; Hill and Lynchehaun, 2002; Soler and Gil, 2002) and trends and curiosity (Soler and Gil, 2002; Verdurme *et al.* 2002; Hill and Lynchehaun, 2002). The statements were evaluated by survey participants according to a five-point Likert scale ('5' strongly agree, '1' strongly disagree).

The second part of the survey explored the attitudes of participants to healthy living. In this part, seven statements about healthy living were evaluated by the participants according to the same five-point Likert scale ('5' strongly agree, '1' strongly disagree). These statements were adapted from a study on healthy living practices carried out by Schuster *et al.* (2004).

The third and final part of the study consisted of questions about demographics and organic food purchase characteristics.

*Sample*

Eskisehir province in Turkey forms the universe for this study. The survey was given to the customers of two supermarkets that sell organic foods and one shop that sells organic foods exclusively in Eskisehir. Data was collected by two university student surveyors. The surveys were distributed to people volunteering to take part in the survey and were obtained using a self-administered technique after the participants were made aware of the purpose of the survey. In the self-administered technique, surveyors distribute survey forms to the sample group and the people in the group read the questions one-by-one and respond to them. A pilot study was carried out with twenty people to test the clarity of the statements used in the survey, and its final shape was given after the necessary corrections.

It took participants an average of 9-14 minutes to fill out the survey. 500 survey forms were distributed for the study. Twenty five forms were not taken into consideration because they were either incomplete or statistically unsuitable for minimum input; 395 of the distributed forms were returned as suitable for statistical analysis. The return rate in terms of the survey forms distributed was 79%.

The non-probability sampling method of convenience sampling was used in the study. Making use of shops that sell organic foods can be considered as the most effective way of reaching people who consume organic foods or who are interested in these foods. In this sense, the convenience sampling method can be considered as appropriate for the research subject and for reaching the sample group.

**Findings and results**

Characteristics of sample

Of the sample’s 395 survey participants, 49.1% were male and 50.9% were female. 39.3% were 26-37 years old while 31% were 38-49 years old. A big majority (47.4%) of the participants earned Lira 500 or less. In terms of their level of education, 43.8% of the participants had a middle school education and 42% were university graduates. When their occupations are evaluated, 27.5% were students, 17% labourers and 16.8% civil servants. In terms of their marital status, 48.1% were married and 43.2% single. Looking at the frequency of purchasing and consuming organic foods, 60.3% of the participants said ‘regularly’, 21.3% ‘occasionally’ and 18.1% ‘never’ (Table 1).

**Table 1 – Characteristics of the sample**

		Frequency	Per cent
Gender	Male	194	49.1
	Female	201	50.9
Age	18-25	119	31.0
	26-37	151	39.3
	38-49	84	21.9
	50 and over	30	7.8

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		Frequency	Per cent
Income (average monthly)	Up to \$379	170	47.4
	\$380 - \$758	118	32.9
	\$759 - \$1 137	50	13.9
	\$1 138 and over	21	5.8
Education	Primary school	36	9.2
	Secondary school	172	43.8
	University	165	42.0
	Postgraduate	20	5.1
Occupation	Worker/labourer	67	17.0
	Public official	66	16.8
	Retired	33	8.4
	Student	108	27.5
	Unemployed	27	6.9
	Tradesman	31	7.9
	Self-employed	24	6.1
	Unemployed housewife	37	9.4
Marital status	Married	187	48.1
	Single	168	43.2
	Other	34	8.7
Frequency of organic food consumption	Regularly	210	60.3
	Sometimes	74	21.3
	Never	63	18.4

*Factors in the consumption of organic foods*

There is a total of eleven items which may influence or determine the factors related to the reasons for the consumption of organic food; thus, principal component factor analysis was used to sort out and classify these variables, as well as to convert them into main factors. In parallel to Kaiser's (1974) criteria, only those factors with eigenvalues greater than 1 were retained; and only items with factor loadings and communalities greater than 0.50 were included in the final factor structure. Cronbach's alpha values for each dimension were computed to confirm the factor's internal consistency.

To apply factor analysis on the items underlying attitudes towards organic food consumption, it is necessary to test the Kaiser-Meyer Olkin (KMO) measure of sampling adequacy (Zhang *et al.* 2003). For the attitude variables, Kaiser-Meyer Olkin (KMO) was 0.876, indicating that the sample was adequate for factor analysis (Kaiser, 1974). The Bartlett Test for Sphericity (BTS) was 1838.169 ( $p < .000$ ), indicating that the hypothesis variance and covariance matrix of variables as an identity matrix were rejected; therefore, factor analysis was appropriate.

According to principal axis analysis, three factors had an eigenvalue equal to or greater than 1.0, explaining a total of 66.72 per cent of the variance. These factors were termed: ‘core benefit’, ‘environmental sensitivity’ and ‘popularity and concern’. In factor analysis, the percentage of the variance explained by each factor indicates the relative significance of the factors.

Accordingly, the first factor, labelled core benefit, explained a large part (32.46%) of the total variance, having a greater significance than the other two factors. This core benefit factor contained five items relating to the core benefits of organic food consumption. This showed high loadings for the individual items. The second factor, labelled environmental sensitivity, explained 22.11% of the variance. This factor contained four items, all relating to the environmental dimensions of organic consumption. Lastly, the third factor, labelled popularity and concern, explained 12.16% of the variance. This consisted of two items related to mode, and concern or interest, about the consumption of organic foods. All three constructs met the criterion that factor loading should be equal to or greater than 0.50. The Cronbach alphas were greater than 0.46 and the total of scale reliability was 0.83. The last factor, mode and concern, had a relatively low coefficient score (0.46), but the other two factors (core benefit (0.90) and environmental sensitivity (0.77)) and the total scale (eleven items) all had higher scores than the recommended level of 0.70 (Kim, 2003; Nunnally, 1978) (see Table 2).

**Table 2 – Factors and items on organic food consumption**

Factors	Factor Loadings ( $\beta$ )	Mean	S.D.	Eigenvalues (% of variance)	Alpha ( $\alpha$ )
<b>Factor 1: Core benefit</b> (5 items)					
Organic foods are useful for your health	.860	4.07	0.89	4.594 (32.459)	.90
Organic foods taste better	.859	4.08	0.89		
Organic foods have higher quality	.849	4.23	0.86		
Organic foods have no harmful effects	.792	3.92	0.90		
Organic foods are more nutritious	.750	3.91	0.94		
<b>Factor 2: Environmental sensitivity</b> (4 items)					
I consume recyclable foods	.791	3.35	0.92	1.685 (22.106)	.77
Organic foods reduce damage to the environment	.789	3.47	0.94		
Organic food consumption protects the environment	.681	3.52	0.93		
Organic foods contribute to the forming of a sustainable environment	.666	3.47	0.91		



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Factors	Factor Loadings ( $\beta$ )	Mean	S.D.	Eigenvalues (% of variance)	Alpha ( $\alpha$ )
<b>Factor 3: Popularity and concern</b> (2 items) Organic foods are trendy I consume organic foods because of curiosity	.825 .751	2.96 2.98	1.18 1.16	1.061 (12.160)	.46
Cumulative % of variance Internal consistency of the scale (11 items) S.D. Standard Deviation; 1= Strongly Disagree 5= Strongly Agree.				66.726	.83

The Pearson correlation coefficients between the variables are presented in Table 3. The bi-variate relationships indicated that all of the factors significantly correlated (ranging between 0.229-0.484). Aspect-based scales were generated by summing the relevant items. By running descriptive statistics, means and standard deviations were found for each factor. According to descriptive statistics, the core benefit factor had a higher score (mean 4.04) than the other factors. Descriptive statistics (means and standard deviations) of the factors relating to the consumption of organic foods are shown in Table 3.

**Table 3 – Correlation matrix and descriptive statistics (mean, std. deviation)**

Factors	1	2	3	Mean	S.D.
Core benefit	1.000			4.04	0.75
Environmental sensitivity	.484**	1.000		3.45	0.71
Popularity and concern	.229**	.415**	1.000	3.10	0.80
* p < 0.05; ** p < 0.01; (S.D.): Standard Deviation 1= Strongly Disagree 5= Strongly Agree.					

### Factors in a healthy lifestyle

The second scale (seven items) may influence or determine the factors related to healthy lifestyles; thus, principal component factor analysis was used to sort out and classify these variables as well as to convert them into main factors. To apply factor analysis on the items underlying attitudes towards a healthy lifestyle, it is necessary to test the Kaiser-Meyer Olkin (KMO) measure of sampling adequacy. For the attitude variables, Kaiser-Meyer Olkin (KMO) was 0.803, indicating that the sample was adequate for factor analysis. The Bartlett Test for Sphericity (BTS) was 596.590 ( $p < .000$ ), indicating that the hypothesis variance and covariance matrix of variables as an identity matrix were rejected; therefore, factor analysis was appropriate.

Two factors had an eigenvalue equal to or greater than 1.0, explaining a total of 60.67 per cent of the variance. These factors were termed: 'nutrition habits' and 'healthcare practices'. Accordingly, the first factor, nutrition habits, explained a large part (43.14%) of the total variance, having a greater significance than the other factor.

This core benefit factor contained three items relating to feeding habits. Lastly, the second factor, labelled healthcare practices, explained 17.53% of the variance. The factor of healthcare practices consisted of four items related to health applications. These two factors met the criterion that a factor loading should be equal to or greater than 0.40. The Cronbach alphas were greater than 0.70 and the total scale reliability was 0.78. These scale reliabilities had higher scores than the recommended level of 0.70 (Kim, 2003; Nunnally, 1978) (see Table 4).

**Table 4 – Factors and items in a healthy lifestyle**

Factors	Factor Loadings ( $\beta$ )	Mean	S.D.	Eigenvalues (% of variance)	Alpha ( $\alpha$ )
<b>Factor 1: Nutrition habits</b> (3 items) I consume lots of fruit I mostly eat vegetables I consume an average level of meat	.828 .777 .702	3.64 3.44 3.45	1.07 1.05 1.08	3.020 (43.138)	.71
<b>Factor 2: Healthcare practices</b> (4 items) I have regular check-ups I have an orderly life I live a stress-free life I exercise regularly	.838 .765 .689 .441	3.19 3.36 3.16 3.18	1.04 1.12 1.10 1.16	1.227 (17.527)	.72
Cumulative % of variance Internal consistency of the scale (7 items) S.D. Standard Deviation; 1= Strongly Disagree 5= Strongly Agree.				60.666	.78

Relationships between organic food consumption and healthy lifestyle

To identify the relationship between the three factors of organic food consumption, nutrition habits and healthcare practices, multiple regression analysis was utilised. The enter variable selection method involving all three factors of organic food consumption was conducted. Tolerance levels indicated that there was no presence of multicollinearity problems concerning each of the predictor (organic food consumption factors) variables.

The results of the regression model shown in Table 5 indicated that the model was statistically significant ( $F = 17.209$ ;  $p < 0.01$ ), with about 13% of overall nutrition habits being explained by the three factors of organic food consumption. The regression coefficients indicated that the aspects of core benefit ( $\beta = 0.287$ ;  $p < 0.01$ ) and environmental sensitivity ( $\beta = 0.216$ ;  $p < 0.01$ ) exerted the strongest influence on overall nutrition habits, followed by the factor of popularity and concern. In Table 5, the factors of core benefit, environmental sensitivity and popularity and concern indicated a respectively statistically significant relationship with feeding habits.

**Table 5 – Regression results regarding nutrition habits**

Factors	Dependent variable					
	Nutrition habit					
	Std. $\beta$	t	p	R <sup>2</sup>	Ad-justed R <sup>2</sup>	F
Core benefit	.287	5.665	.000**	0.133	0.125	17.209**
Environmental sensitivity	.216	4.256	.000**			
Popularity and concern	.061	1.193	.000**			
Constant		81.723	.234			
* p < 0.05 ; ** p < 0.01						

The second regression model was about the effects of organic food consumption on healthcare practices. This regression model considered healthcare practices related to organic foods as the outcome variable and the three factors of organic food consumption as predictor variables. The regression model was found to be statistically significant ( $F = 43.225$ ;  $p < 0.01$ ), with 27% of overall healthcare practices explained by the three organic food consumption factors. The results of regression analysis indicated that the factors of environmental sensitivity ( $\beta = 0.331$ ;  $p < 0.01$ ), popularity and concern ( $\beta = 0.326$ ;  $p < 0.01$ ) and core benefit ( $\beta = 0.249$ ;  $p < 0.05$ ) indicated statistically significant relationships with the overall healthcare practices. The factors of environmental sensitivity, popularity and concern and core benefit indicated a statistically significant relationship with the healthcare practices of people in the sample (Table 6).

**Table 6 – Regression results on healthcare practices**

Factors	Dependent variable					
	Health care practices					
	Std. $\beta$	t	p	R <sup>2</sup>	Ad-justed R <sup>2</sup>	F
Core benefit	.249	5.376	.000	0.278	0.271	43.225**
Environmental sensitivity	.331	7.146	.000			
Popularity and concern	.326	7.050	.000			
Constant		88.006	.000			
* p < 0.05 ; ** p < 0.01						

#### Differentiations of organic food consumption factors

ANOVA and t-tests were applied to assess the demographic differentiations of the factors of consumption related to organic foods (Table 7). As regards gender, core benefit and environmental sensitivity were found to be significantly different compared to the other variable. According to the t-test results for these two factor variables, female respondent values were assessed as higher than those of male respondents. As for income level, these were not found to be significantly different. Neither

were the factors of organic food consumption statistically different according to the age groups of consumers. Lastly, all factors but popularity and concern were found to be significantly different concerning education level. For the core benefit and environmental sensitivity factors, the mean scores of respondents with a higher education level were found to be higher than those of respondents with a lower education level.

**Table 7 – Aspect differentiations according to demographics**

Factors	Gender		Age		Income		Education	
	t	p	F	p	F	p	F	p
Core benefit	-2.638	.009**	1.452	.227	2.378	.052	4.615	.003**
Environmental sensitivity	-2.230	.026*	0.521	.668	2.104	.080	5.021	.002**
Popularity and concern	-0.050	.960	1.543	.203	0.530	.714	0.758	.518

\* p < 0.05 ; \*\* p < 0.01

## Conclusions

Consumers face many problems regarding present day food consumption. To overcome these problems, they turn to the consumption of safer foods and thus try to secure their health. A result of the scandals that have occurred in traditional food products and the endangerment of life has been that consumers have turned towards organic foods that are produced with safer methods. Thus, what is needed is to ensure the wider consumption of organic foods in Turkey, which are being consumed only by a limited amount of people at the moment. An important point related to this is that the factors affecting the purchase of organic foods by consumers need to be determined, and marketing efforts to this end need to be undertaken.

This study developed a survey instrument of eleven and seven items respectively to evaluate factors related to the consumption of organic food and a healthy lifestyle in Turkey. The results showed that factors about the consumption of organic food could be conceptualised and measured as a three-dimensional construct comprising core benefit, environmental sensitivity, and popularity and concern.

One of the most important issues affecting the purchase of organic foods is the idea of healthy living. Thus, the attitudes and behaviours borne by consumers towards healthy living is an important subject. In this study, consumer attitudes towards healthy living has been developed. The results indicated that factors in a healthy lifestyle could be conceptualised and measured as a two-dimensional construct containing nutrition habits and healthcare practices. The two-item scale exhibited ideal internal consistency and met rigorous conceptual and empirical criteria for validity.

The conclusions of this study revealed that core benefit is the most important dimension of organic food consumption, followed by environmental sensitivity and then popularity and concern as regards organic foods. According to healthy lifestyle constructs, the results revealed that nutrition habits are an important factor, followed by healthcare practices.

It can be presumed that consumers who are careful about healthy living make their choices in accordance with that approach when consuming food. A similar finding was achieved in this study. A statistically meaningful relationship was found between

eating habits and health practices and factors in the purchase of organic food. The results of multiple regression analysis indicated that the core benefit factor seemed to exert the strongest influence on overall nutrition habits in comparison to other factors. The factor of environmental sensitivity, which refers to environmentalist thinking (i.e. recycling and the protection of natural life), was identified as the second influential aspect on nutrition habits. The results also revealed that popularity and concern for the environment or natural life exerted the third level of influence overall on nutrition habits. The second multiple regression model indicated that the factors of environmental sensitivity, popularity and concern, and core benefit were significantly correlated with healthcare practices.

Based on the findings regarding nutrition habits and healthcare practices, it can be suggested that managers in the related industries should pay more attention to the consumption of organic foods. Findings such as these may allow managers to have a better understanding of the factors that affect perceptions of the consumption of organic foods and which influence customer consumption behaviour, purchasing style and the production of special organic foods based on core benefits.

Factors in the consumption of organic foods were found to vary significantly according to the demographic features of Turkish consumers. In particular, female respondents seem to be more concerned and involved with different factors of organic foods consumption compared to male respondents. In addition, the core benefits of organic foods and environmental or natural life sensitivity were also heightened as regards respondents with higher education. Such findings may be considered to have strategic implications for retailers wishing to reassess their promotional activities during the process of the sale of organic food.

In brief, the results of the current study are of interest both to marketers and to practitioners. The study further provides some useful insights in the managerial context. Firstly, marketers can apply their marketing mix decisions according to these findings. Secondly, advertisers can use suitable messages and a tailored promotional mix according to healthy lifestyle and the patterns of consumption of organic food. Thirdly, managers involved with the development of special and new foods reflecting a healthy lifestyle and the consumption of organic food can employ the scales of organic foods consumption and a healthy lifestyle to identify distinct customer segments with varying perceptions of organic foods. Segment profiles can also provide valuable information concerning how to approach each segment regarding the consumption of organic foods.

### **Limitations and future research**

Given the constraints of this study, there are a number of substantive areas that should be addressed by future research. This study was carried out in the province of Eskisehir, Turkey. A bigger sample, or one that is able to represent Turkey as a whole, would enable the research to reach clearer and more generalisable results. Price sensitivity was not taken into consideration in this study. In addition, in terms of organic food consumption, it was mostly food-related products that were taken as a basis; other foods were not included in the scope of the study. Multicultural studies may reveal different attitudes and factors between different cultures related to the consumption of organic food. In this sense, future studies comprising more countries and cultures would obviously yield even more meaningful results.

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