### **DEMOGRAPHIC EVALUATION OF FAMILIES BREAKFAST HABITS IN TURKEY**

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#### ÖZET

Türkiye'deki ailelerin kahvaltı alışkanlıklarını ve bu alışkanlıkların demografik özelliklere göre farklılık gösterip göstermediğinin belirlenebilmesi için, İzmit'in çeşitli mahallelerinden 252 kişiyle yüz yüze görüşme yapılmıştır. Araştırmada kullanılan görüşme cetveli, dokuz dereceli ölçeğe göre hazırlanmış yirmi beş sorudan oluşmaktadır. Yüz yüze görüşme sonucu elde edilen verilere, önce ailelerin kahvaltı alışkanlıklarının demografik özelliklere göre farklılık gösterip göstermediğinin belirlenebilmesi için "Oneway Anova" testi uygulanmıştır. Farklılık gösteren kahvaltılıklar daha sonra t-testine tabi tutularak, bu farklılıklar doğrulanmıştır. İki test sonucunda birçok kahvaltılığın demografik özelliklere göre farklılık gösterdiği belirlenmiştir. Ailelerin gelir düzeyi, babanın ve annenin eğitim durumu yükseldikçe, kahvaltılık tüketim miktarı artmakta, ailenin birey sayısı arttıkça, kahvaltılık tüketim miktarı azalmaktadır.

Anahtar Kelimeler: Kahvaltı alışkanlıkları, Kahvaltı çeşitliliği.

#### **ABSTRACT**

Face-to-face surveys have been carried out with 252 people from various quarters of Izmit to determine what the breakfast habits of Turkish families are and whether these habits differ according to demographic characteristics. The survey scale, which was utilized for the purpose of this study, consisted of twenty-five questions prepared according to the nine-grade scale. A "One-way Anova" test was applied to the data that we obtained from these face-to-face surveys so as to determine first of all whether the families' breakfast habits differ according to demographic characteristics. Thereafter, a ttest was applied to differing breakfast foods to verify the differences. The results of these two tests revealed that many breakfast foods differ according to demographic characteristics. Accordingly, the consumption amount of breakfast foods increases as the families' level of income and the parents' level of education gets higher, while an increase in the number of family members leads to a decrease in the consumption amount of breakfast foods.

**Keywords:** Breakfast habits, breakfast diversity.

### Introduction

Breakfast (kahvaltı in Turkish) is the day's first meal that is eaten before drinking the first coffee of the day. It is said that breakfast began to be referred to with expressions such as meal before tobacco (tütün altı), meal before pipe (çubuk altı), meal before coffee (kahve altı), or meal that is just enough to tide oneself over (safralık) after the 16<sup>th</sup> century when the consumption of tobacco and coffee became widespread. According to the "Kamus-ı Türki" vocabulary, which was written in the early period of the 20<sup>th</sup> century, breakfast is defined as follows: (1) Brief (short, small) meal that is eaten before coffee primarily with the aim not to drink coffee on an empty stomach. (2) Meal that is eaten out of dinner time and is brought not to the dining table, but is eaten on a tray; brief and ready-to-eat meal (Global Food Magazine, 2011).

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The characteristics of a Turkish-style breakfast lies in that white sheep cheese specific to our country and diverse types of olives form an inevitable part of the breakfast table. Besides, it also includes vegetables such as tomatoes, green pepper, and cucumber, various types of pastry such as Turkish bagels, filled pastry, pies, Turkish pancakes, cookies, and buns as well as fruits such as apples, piers, oranges, watermelons, and melons. Another characteristic of a Turkish-style breakfast is that tea is served after it is brewed in Turkish style (Denizer, 2011).

It is a known fact that the breakfast habits of consumers differ according to their respective demographic characteristics, as it is the case in all other aspects of life. This study has been carried out to determine the demographic characteristics of breakfast habits with the thought that stereotyped explanation of the society's breakfast habits is insufficient. These characteristics include the income level of families, the number of family members, the education level of the father, and the education level of the mother.

#### **Background Information**

Breakfast holds a very significant place in the traditional Turkish cuisine. Breakfast is our tradition that is considered as a main meal in certain regions, at which main foodstuffs are consumed. The table may be dished with even soup and rice; accompanied by cheese, eggs, butter, molasses, and tea, milk, or lime tea. Breakfast is closely associated with a region's general food and beverage culture as well as the economic, traditional, educational, and cultural status of families. The foods served for breakfast display huge diversity and richness, since it is obvious that a civil servant has to eat different foodstuffs than those people, who work in the fields (Erol, 2009).

In contrast to other meals, breakfast is a relatively light, but nourishing meal that we eat to recharge our batteries before we start the day. For a Turkish family, breakfast differs significantly from its peers around the world. For instance, the members of an American family have their breakfasts separately, whereas in a Turkish family it is a reason for punishment even to begin eating before the father does so. This and many other examples reveal the significance, which is attached to breakfast by the Turkish public. The whole family is together when starting the day. This is the core meaning of being a family: to be always together.

The Turks waged battles for many centuries; they are among the nations, which fought battles and founded states the most all around the world. As is known, most battles start at noon or in the small hours. So, a good breakfast is indispensible for soldiers to get energetic. This notion is the source, where our folk's dominant understanding of victuals derives its roots from. Before the battle, soldiers have to eat very nourishing foods. In fact, historical documents indicate that soldiers received special victuals before they started battling.

When the westernization process, which started in the reform era, concretized with the foundation of the republic, the habits of the Turkish public began to change as a natural result. Our people substituted the ottomans with chairs. The people's structure of clothing, living, and above all the frame of mind changed. At a time, where endeavors to imitate western culture reached its peak, western breakfast habits began to be adopted, too. Thus, soup as one of our folk's main foods vanished from our breakfast tables (Breakfast Habits ,2004).

According to one opinion, it is expressed that the proliferation of breakfast culture in our country coincides with the post-era of multi-party period (Breakfast Culture, 2008).

A person has to meet its daily energy and nutrient requirements in a sufficient and balanced manner at every meal. Breakfast is defined as the first and most important one of these meals. When starting the day, the amount and composition of breakfast plays a significant role in getting an eager start into the day and continuing the day efficiently. Our bodies continue to work even during sleep. A time of approximately 12 hours passes between dinner and breakfast. During said period, the body

exhausts all available nutrients and the brain cannot get sufficient energy if we don't have breakfast when we get up. As result, we face problems such as fatigue, headache, and attention deficit. Without breakfast, the body starts to use its own reserves and loses its resistance against diseases (Önay ,2011).

People that have breakfast regularly are exposed to a lower risk of diabetes or obesity. Mark Pereira et al., a scientist working at the Children's Hospital in Boston, analyzed 2 thousand 800 white and black people at the age of 25 to 37, for a period of 8 years. Pereira said that they observed the white and black people in separate groups, considering that they had different food habits. Pereira reported that 47% of white participants and 22% of black participants had breakfast regularly. He noted that the risk of developing resistance against insulin and becoming obese is to 35-50 % lower in people, who have daily breakfast, in contrast to those, who leave the house without eating anything (Importance of Breakfast ,2009)

The results of a study have shown that university students have not breakfast regularly and revealed the role played by having breakfast in sufficient nourishment. It was observed that people having breakfast had a higher nourishment quality than those, who do not have any breakfast; accompanied by better micro and macro nutrient intakes (Tuncay, 2008).

In a study, in which the food knowledge and habits of university students was evaluated, it was ascertained that students skip meals at a very high rate (90.3%), that lunch is the meal that is skipped most (65.8%), and that more than half of the students skip meals due to lack of time (51.3%). It was determined that 69.7% of the study group is trained in nourishment issues and that 78.9% of them do not believe that they nourish themselves healthily. It ascertained that the majority of students covered by the study preferred tea for breakfast (81.1%), that they consume protein-rich foods such as milk (5.1%) or eggs (22.9%) at a lower rate, that they mostly eat soup (83.4%), rice (58.3%), pasta (55.4%), and meat-free vegetables (34.9%) for lunch and dinner, and that they consume tea (65.7%) at snack time (Yılmaz and Özkan, 2007).

A study, which was carried out at the Erciyes University in five faculties and colleges, it was determined that only 34.4% of the students get the chance to have breakfast regularly (Mazicioğlu and Öztürk ,2003).

Another study revealed that 63.4% of women eat three main meals a day, while the rate of women, who skip a main meal always or occasionally, was found as 71.0%. The meal, which is skipped most, is breakfast with a rate of 61.0%. The primary reason for skipping meals was indicated as having breakfast at late morning hours (52.5%) (Yardımcı and Özçelik, 2006).

A study at the Gülveren High School showed that 4.3 % of male students in the senior class consumed 2 meals a day, while this rate reached up to 33.3% in female students. It was determined that 66.0% of male students and 54.8% of female students consume 3 meals a day. In the evaluation whether the students consume their meals regularly, it was ascertained that breakfast is the meal that is skipped most (10.7% in male students; 28.6% in female students). It was determined that 60.7% of the students have breakfast regularly. Similar to the number of daily consumed meals, a significant difference was observed between girls and boys in this respect, too. 76.6% of boys stated that they have breakfast regularly, while this rate was as low as 42.8% in girls (Önder, Kurdoğlu, Oğuz, Özben, Atilla, and Oral, 2000). A study, which was carried out by Sagun in 1985, revealed that the rate of female students having breakfast was 58.9%, while this rate reached up to 73.3% in male students (Sagun, 1987). The results of said study conform to the results of this study. While 10.7% of male students never have breakfast, the rate of female students, who have never breakfast, almost triples such rate (28.6%). Breakfast is the most important meal of the day. It has been scientifically proven that students coming to the school with an empty stomach are less successful than those, who come with a full stomach (Rosenberg, 1998). According to the results of a study that was carried out by the Harvard University, having breakfast regularly is a habit and helps to maintain one's health lifelong (Yücecan, 1989).

The survey "Breakfast Habit of Children" also delivered interesting results. Accordingly, 68.37% of the population stated that their children had breakfast every day, while the rate of those indicating that their children had never or occasionally breakfast amounted to 9.28% and 22.35%, respectively. The survey, which revealed that the children of full-time working parents and those of housewives had breakfast regularly at 73.58% and 55.74%, respectively, delivered the result that 53.39% of children preferred milk for breakfast, while 32.60% preferred tea.

It has been seen that the answer to the question whether children have or have not breakfast is associated with the education level of the children's parents. It has been determined that the rate of children having breakfast increased as the education level got higher. The rate of children having regularly breakfast was at 22.22% among parents, who had been dropped out from elementary education, while this rate was at 73.45% among graduate parents. The results of said survey revealed that the rate of children drinking tea at breakfast was at 77.78% among parents, who had completed elementary education, while the children drinking milk was at 57.52% among graduate parents (ANKA, 2006).

### Purpose and Hypotheses of the Study

The purpose of this study was to determine whether the breakfast habits of Turkish families differ according to demographic characteristics. For that purpose, we analyzed primarily the number of days, at which the foods served for breakfast are consumed according to demographic characteristics. Second, we determined whether these foods consumed for breakfast differ according to demographic characteristics.

The hypotheses of the study are as follows:

- 1. The breakfast habits of consumers differ according to their income status.
- 2. The breakfast habits of consumers differ according to the number of family members.
- 3. The breakfast habits of consumers differ according to the education level of the father.
- 4. The breakfast habits of consumers differ according to the education level of the mother.

## Method and Model of the Study

The most appropriate method that can be employed to determine whether the breakfast habits of consumers differ according to their demographic characteristics is the face-to-face survey method, because this method allows for communicating with consumers, minimizing the rate of non-responses, and ensuring that sincere answers are given to the questions.

The survey consisted of two parts. The first part included questions about twenty-five foodstuffs that can be found on the breakfast tables of consumers, whereas the second part included questions about the demographic characteristics of consumers. The demographic characteristics in question include the income level of families, the number of family members, the education level of the father, and the education level of the mother.

The questions of the survey were arranged according to the nine-grade scale. The answers given to the questions of this scale were defined as follows: (1) I do not have breakfast, (2) never, (3) once a week, (4) twice a week, (5) three days a week, (6) four days a week, (7) five days a week, (8) six days a week, (9) seven days a week (Chart 1).

Table 1: Survey Scale on Consumers' Breakfast Habits

1	White cheese
2	Cheese
3	Goat cheese
4	Black olives

	5		Green olives			
	6		Eggs			
	7		Fermented sa	nusage		
	8		Salami, sausa	ge etc.		
	9		Butter			
	10		Margarine			
	11		Honey			
	12		Jam			
	13		Clotted crean	n		
	14		Olive paste, t	omato paste eto	<u>.</u>	
	15		Tomatoes, cu	cumber etc.		
	16		Bread			
	17		Toast			
	18		Filled pastry,	pies, bagels, pas	stry etc.	
	19		Fruits			
	20		Yogurt			
	21		Soup			
	22		Fruit juice etc			
	23		Tea			
	24		Milk			
	25		Coffee			
	1000 TI and	Datwoon	Between	Dotwoon	Dotwoon	3001 TL and
	1000 TL and	Between 1001-1500		Between	Between	
Family income	less		1501-2000	2001-2500	2501-3000	higher
	( )	TL ( )	TL ( )	TL ( )	TL ( )	( )
Number of	( ) 1	( )	( ) 3	( ) 4	( ) 5	( ) 6 and more
family	( )	2				
•	( )	( )	( )	( )	( )	( )
members						
Father's	Uneducated	Primary	Secondary	High school	Graduate	Postgraduate
education		school	school			
level	( )	( )	( )	( )	( )	( )
Mother's education	Uneducated	Primary school	Secondary school	High school	Graduate	Postgraduate
level	( )	( )	( )	( )	( )	( )

The model of the study consisted of two stages. In the first stage, we determined the grade of each of the twenty-five foodstuffs that can be found on the breakfast tables of consumers, according to the nine-grade scale. In the second stage, we determined by means of a "One-way Anova" analysis whether these foodstuffs differ according to the families' income status. In the third stage, we retested the differences according to demographic characteristics by means of a t-test.

# **Main Target Group and Sample Group**

The main target group of this study consisted of consumers living in Izmit. We carried out face-to-face surveys with 252 family members coming from the city's diverse quarters.

## **Data Analysis**

To determine the breakfast habits of consumers and whether these breakfast habits differ according to demographic characteristics, we applied a "One-way Anova" test at first, followed by a retesting of differing habits by means of a "t-test". Each of the 25 consumer goods was ascertained separately according to demographic characteristics such as level of income, number of family members, education level of the father, and education level of the mother (Chart 2).

Table 2: Distribution of Working People that participating in this Study according to their demographic characteristics

Demographic Characteristics	Actual Frequencies	Relative Frequencies		
Income level of the family				
1. 1000 TL and less	45	17,9		
2. 1001-1500 TL	36	14,3		
3. 1501-2000 TL	57	22,6		
4. 2001-2500 TL	52	20,6		
5.2501-3000 TL	47	18,7		
6. 3001 TL and higher	15	6,0		
Number of family members				
1. One person	None	0,00		
2. Two persons	67	26,6		
3. Three persons	65	25,8		
4. Four persons	71	28,2		
5. Five persons	41	16,3		
6. Six persons	8	3,2		
Education level of the father				
1. Uneducated	None	0,00		
2. Primary school	34	13,5		
3. Secondary school	33	13,1		
4. High school	31	12,3		
5. Graduate	128	50,8		
6. Postgraduate	26	10,3		
Education level of the mother				
1. Uneducated	70	27,8		
2. Primary school	68	27,0		
3. Secondary school	19	7,5		
4. High school	51	20,2		
5. Graduate	44	17,5		
6. Postgraduate	None	0,00		

## "One-way Anova" Tests

At the stage of the "One-way Anova" test, the "Levene" reliability test was applied while trying to determine whether the breakfast habits of consumers differ according to their demographic

characteristics. In cases, where the Levene value was higher than 0.05, variances were considered as equal, followed by a Post Hoc Turkey test to determine differing demographic characteristics.

In cases, where the sig. value in the Levene reliability test was lower than 0.05, we obtained a Robuts chart by ticking off "Tamhane's T2" in the "Equality variance is not assumed" section of "Welch and Brown–Forsythe" tests and subsequent Post Hoc tests. In cases, where the "Welch and Brown – Forsythe" sig. value in said chart was lower than 0.05, we decided that consumers with different demographic characteristics had also different breakfast habits (Chart 3).

Table 3: "One-Way Anova" Test Results of Differences according to Demographic Characteristics

Robuts	Education level of the		
1	<u>mother</u>		
	ı F		
2	3,767		
0,000			
3	6,799		
0,000			
4	5,777		
0,051			
5     0,000 0,000     0,000 0,000     23,440 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     26,185 0,006 0,000 0,000     0,006 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,001 0,000 0,000     0,001 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000 0,000     0,000 0,000 0,000     0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000 0,000 0,000     0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000 0,000     0,000 0	1,978		
0,000			
6     0,002     0,003     3,636     0,001     0,000     6,173     0,008     0,011     3,326     0,204     0,133       7     0,000     0,000     9,388     0,021     0,012     3,277     0,000     0,000     7,593     0,092     0,12       0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,002     0,013       9     0,000     0,000     5,147     0,065     0,026     2,823     0,001     0,000     0,059     0,24       0,001     0,000     0,000     0,000     0,000     0,000     0,001     0,000     0,001     0,000     0,001       10     0,000     0,000     7,922     0,006     0,017     3,075     0,007     0,035     2,636     0,467     0,481       0,008     0,016     0,016     0,001     3,007     0,007     0,035     2,636     0,467     0,481       0,008     0,150     0,004     0,004 <t< td=""><td>3,904</td></t<>	3,904		
0,013     0,000     0,000     0,000     0,000     0,012     0,012     0,012     3,277     0,000     0,000     7,593     0,092     0,12       8     0,000     0,000     8,319     0,387     0,401     1,013     0,000     0,000     8,049     0,062     0,059       9     0,000     0,000     5,147     0,065     0,026     2,823     0,002     0,011     3,362     0,359     0,24       0,001     0,000     0,000     7,922     0,006     0,001     4,968     0,001     0,000     8,141     0,000     0,00       10     0,001     0,004     3,554     0,048     0,017     3,075     0,007     0,035     2,636     0,467     0,48       0,008     0,157     0,109     1,820     0,001     0,000     6,230     0,147     0,227     1,421     0,698     0,51       12     0,157     0,109     1,820     0,001     0,000     6,230     0,147     0,227     1,421			
7     0,000   0,000   0,000     9,388   0,021   0,010   0,000   0,000   0,000   0,000   0,137   0,137   0,000   0,000   0,000   0,137   0,137   0,000	1,795		
0,000     0,000     0,010     0,000     0,000     0,037     0,050     0,000     0,000     0,000     0,000     0,002     0,050     0,059     0,051     0,059     0,051     0,059     0,024     0,051     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000     0,000 <th< td=""><td></td></th<>			
8     0,000 0,000     8,319 0,390     0,401 0,000 0,000     1,013 0,000 0,000     0,000 0,005 0,059     0,055 0,055       9     0,000 0,001     0,000 0,000     5,147 0,065 0,016     0,026 0,016 0,002 0,002     0,011 0,002 0,281     0,24 0,281       10     0,000 0,000 0,000     0,000 0,000 0,000 0,000     7,922 0,006 0,000 0,000 0,000 0,000 0,000 0,001     4,968 0,001 0,000 0,000 0,001 0,001 0,001 0,001 0,001     0,000 0,000 0,001 0,001 0,001 0,000 0,001 0,001 0,000	1,840		
0,000     0,000     0,000     0,000     0,005     0,024       9     0,001     0,001     0,016     0,026     2,823     0,002     0,011     3,362     0,359     0,24       10     0,000     0,000     7,922     0,006     0,001     4,968     0,001     0,000     8,141     0,000     0,001       11     0,001     0,004     3,554     0,048     0,017     3,075     0,007     0,035     2,636     0,467     0,481       0,008     0,016     0,001     0,000     0,007     0,035     2,636     0,467     0,481       0,008     0,016     0,001     0,000     6,230     0,147     0,227     1,421     0,698     0,51       12     0,157     0,109     1,820     0,001     0,000     6,230     0,147     0,227     1,421     0,698     0,51       13     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567			
9     0,000 o,001     0,000 o,000     5,147 o,065 o,016     0,026 o,002 o,002 o,002     0,011 o,002 o,281 o,240 o,281       10     0,000 o,000	2,315		
0,001			
10     0,000     0,000     7,922     0,006     0,001     4,968     0,001     0,000     8,141     0,000     0,001       11     0,001     0,004     3,554     0,048     0,017     3,075     0,007     0,035     2,636     0,467     0,480       0,008     0,015     0,016     0,000     0,000     0,022     0,035     2,636     0,467     0,480       12     0,157     0,109     1,820     0,001     0,000     0,204     0,227     1,421     0,698     0,51       0,190     0,190     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,019     0,019     0,019     0,057     0,028     0,010     3,383     0,000     0,000       14     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       0,587     0,504     0,867	1,375		
0,000     0,000     0,000     0,000     0,001       11     0,001     0,004     3,554     0,048     0,017     3,075     0,007     0,035     2,636     0,467     0,480       0,008     0,016     0,016     0,001     0,000     0,022     0,022     1,421     0,698     0,51       12     0,157     0,109     1,820     0,001     0,000     0,204     0,227     1,421     0,698     0,51       0,190     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       14     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940			
11     0,001     0,004     3,554     0,048     0,017     3,075     0,007     0,035     2,636     0,467     0,488       12     0,157     0,109     1,820     0,001     0,000     6,230     0,147     0,227     1,421     0,698     0,51       0,190     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,074       17     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379 <td>4,126</td>	4,126		
0,008     0,016     0,002     0,506       12     0,157     0,109     1,820     0,001     0,000     0,204     0,227     1,421     0,698     0,51       0,190     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,019     0,018     1,552     0,028     0,010     3,383     0,000     0,000       14     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,074       17     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936 <td< td=""><td></td></td<>			
12     0,157     0,109     1,820     0,001     0,000     6,230     0,147     0,227     1,421     0,698     0,51       13     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,07       0,940     0,940     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379       18     0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,012	0,874		
0,190     0,000     0,204     0,583       13     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       0,491     0,000     0,019     0,019     0,057     0,020     0,034     2,856     0,567     0,80       14     0,000     0,000     0,188     1,552     0,028     0,010     3,383     0,000     0,000       0,001     0,001     0,178     0,014     0,000     0,020     0,014     0,940     0,020     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       0,587     0,002     0,008     0,439     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051       17     0,941     0,929     0,270     0,13			
13     0,420     0,421     0,995     0,031     0,011     3,330     0,037     0,034     2,856     0,567     0,80       14     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       0,587     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,07       0,196     0,940     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379       18     0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,012	0,824		
0,491     0,019     0,057     0,796       14     0,000     0,003     3,683     0,260     0,188     1,552     0,028     0,010     3,383     0,000     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       0,587     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,07       0,196     0,196     0,002     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,37       17     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,37       0,940     0,940     0,063     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,012			
14     0,000	0,405		
0,001     0,178     0,020     0,000       15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       0,587     0,000     0,000     0,439     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,074       0,196     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,374       0,940     0,940     0,063     0,063     0,419     0,23     0,155     1,679     0,034     0,01       18     0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,01			
15     0,715     0,504     0,867     0,014     0,000     5,322     0,493     0,441     0,940     0,125     0,08       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,074       0,196     0,094     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,374       0,940     0,094     0,063     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,012	5,473		
0,587     0,000     0,439     0,125       16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,070       0,196     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379       0,940     0,022     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,012			
16     0,457     0,122     1,757     0,058     0,005     3,784     0,334     0,150     1,704     0,051     0,070       0,196     0,196     0,002     0,163     0,163     0,144     0,936     0,114       17     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379       0,940     0,034     0,063     0,049     0,015     0,034     0,015       18     0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,015	2,091		
0,196     0,002     0,163     0,114       17     0,941     0,929     0,270     0,138     0,087     2,057     0,430     0,444     0,936     0,413     0,379       0,940     0,063     0,063     0,419     0,015     0,679     0,034     0,01       18     0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,01			
17 0,941 0,929 0,270 0,138 0,087 2,057 0,430 0,444 0,936 0,413 0,379   0,940 0,940 0,063 0,063 0,419 0,419 0,379   18 0,232 0,127 1,735 0,051 0,008 3,559 0,223 0,155 1,679 0,034 0,015	2,158		
0,940     0,063     0,419     0,379       18 0,232     0,127     1,735     0,051     0,008     3,559     0,223     0,155     1,679     0,034     0,019			
18 0,232 0,127 1,735 <b>0,051 0,008 3,559</b> 0,223 0,155 1,679 0,034 0,019	1,056		
	3,009		
19 0,565 0,508 0,862 0,199 0,140 1,748 0,577 0,614 0,669 0,909 0,85	0,332		
0,502 0,126 0,608 0,873			
20 0,365 0,333 1,1154 0,459 0,355 1,105 0,207 0,233 1,404 0,712 0,69	0,559		
0,361 0,337 0,194 0,698			
21 0,372 0,331 0,157 <b>0,039 0,018 3,047</b> 0,397 0,390 1,035 <b>0,029 0,02</b>	2,953		
0,348 0,019 0,377 0,034			
22 0,964 0,979 0,151 0,395 0,309 1,205 0,911 0,877 0,302 0,948 0,939	0,198		

	0,982			0,303			0,892			0,948		
23	0,333	0,218	1,418	0,037	0,010	3,398	0,327	0,408	1,000	0,184	0,131	1,790
	0,279			0,018			0,408			0,161		
24	0,711	0,600	0,732	0,142	0,056	2,336	0,556	0,633	0,643	0,235	0,186	1,559
	0,648			0,042			0,626			0,226		
25	0,076	0,051	2,239	0,087	0,059	2,307	0,045	0,029	2,752	0,326	0,462	0,905
	0,048			0,099			0,036			0,439		

In the evaluation of fifteen questions according to demographic characteristics in the chart above, figures in bold indicate differing variables.

#### t-tests

After the "One-way Anova" test, we applied an Independent Sample t test to differing breakfast habits. The Independent Sample t test was carried out in two stages. In the first stage, we examined whether the Levene sig. value was higher or lower than the significance level of 0.05 by looking at the results of the Levene test. If Levene sig. <0.05, we looked at the line "Equal Variance Not Assumed". If Sig. (2-tailed) value>0.05, we assumed that there is no significant difference between the groups' variances, while a significant difference in the groups' variances was assumed if sig. (2-tailed) value<0.05. In the second stage, we looked at the line "Equal Variance Assumed" if Levene sig.>0.05. If sig. (2-tailed)>0.05, we assumed that there is no significant difference between the groups' variances, while a significant difference in the groups' variances was assumed if sig. (2-tailed) value<0.05 (Chart 4).

Table 4: t-test results of variables according to demographic characteristics

13 11	la conse ef als e femilie.	Number of family	Education level of the	Education level of
Line #	Income of the family	members	father	the mother
1	No difference	No difference	No difference	No difference
2	1-3, 1-4, 1-5,1-6, 2-4, 2-5,	2-5, 3-5, 4-5	2-5, 2-6, 3-5,3-6, 4-5, 4-6	1-4, 1-5, 2-4, 2-5
	3-4			
3	1-3, 1-4, 1-5, 2-4,	2-3, 3-5	2-5, 2-6, 3-6, 4-6	2-4, 2-5
	2-5, 3-4, 3-5			
4	1-3	2-3, 2-4, 2-5, 2-6	2-5, 5-6	No difference
5	1-3, 1-4, 1-5, 1-6, 2-3, 2-4,	2-3, 3-4, 3-5, 4-5	2-5, 2-6, 3-5, 3-6, 4-5,	1-4
	2-5		4-6	
6	1-4	2-3, 2-4, 4-5	No difference	No difference
7	1-3, 1-4, 1-5, 2-4, 3-4	No difference	2-5, 2-6, 3-5, 3-6, 4-6	No difference
8	1-3, 1-4, 1-5, 2-4	No difference	2-5, 3-5	No difference
9	1-4, 1-5, 3-4	No difference	2-6, 3-6	No difference
10	1-2, 1-4, 1-5, 1-6	2-5, 3-5, 5-6	2-5, 2-6	1-5, 4-5
11	1-2, 1-4, 1-5	2-3	2-5, 2-6	No difference
12	No difference	2-3, 2-6	No difference	No difference
13	No difference	2-3	No difference	No difference
14	1-6, 2-6, 3-6, 4-6	No difference	No difference	1-3, 1-5, 2-3, 2-5, 4-5
15	No difference	2-3, 2-4, 2-5	No difference	No difference
16	No difference	2-3	No difference	No difference
17	No difference	No difference	No difference	No difference
18	No difference	2-4	No difference	No difference
19	No difference	No difference	No difference	No difference

20	No difference	No difference	No difference	No difference
21	No difference	No difference	No difference	No difference
22	No difference	No difference	No difference	No difference
23	No difference	No difference	No difference	No difference
24	No difference	No difference	No difference	No difference
25	No difference	No difference	No difference	No difference

#### **Differences According To The Income Status**

Breakfast habits that differ according to the family's income status are associated with cheese, goat cheese, black olives, green olives, eggs, fermented sausage, salami-sausages, butter, margarine, honey, and olive paste (Chart 4).

While those families with an income of 1000 TL and less eat cheese once-a-week, families with an income amounting to 1501-2000 TL eat cheese four days a week. Families with an income of 1501-2000 TL and those with an income of 2001-2500 TL eat cheese four and six days a week, respectively. Those with an income of 2501-3000 TL eat cheese six days a week.

While those families with an income of 1000 TL and less eat goat cheese once-a-week, families with an income of 1501-2000 TL, 2001-2500 TL, and 2501-3000 TL eat goat cheese two to three days a week, three days a week, and three days a week, respectively.

While those families with an income of 1000 TL and less eat black olives once-a-week, families with an income of 1501-2000 TL or more eat black olives five days a week.

While those families with an income of 1000 TL and less eat green olives once-a-week, families with an income of 2001-2500 TL or more eat green olives six days a week.

While those families with an income of 1000 TL and less eat eggs three days a week, families with an income of 2001-2500 TL eat eggs six days a week.

While those families with an income of 1000 TL and less eat fermented sausage once-a-week, families with an income of 1501-2000 TL and 2001-2500 TL or more eat fermented sausage two and three days a week, respectively.

While those families with an income of 1000 TL and less eat salami-sausage once-a-week, families with an income of 1501-2000 TL and 2001-2500 TL or more eat fermented sausage two and four to five days a week, respectively.

While those families with an income of 1000 TL and less consume butter once-a-week, families with an income of 1501-2000 TL and 2001-2500 TL or more consume butter three and four to five days a week, respectively.

While those families with an income of 1000 TL and less consume margarine 2-3 days a week, families with a higher income do not eat any margarine.

While those families with an income of 1000 TL and less eat honey 2-3 days a week, families with a higher income at honey four to five days a week.

While those families with an income of 1000 TL and less consume olive paste, tomato paste etc. three days a week, families with an income of 1001-1500 TL, 1501-2000 TL and 2001-2500 TL consume olive paste, tomato paste etc. two days a week. Families with an income of 3001 TL and more do not eat any olive paste, tomato paste etc.

#### **Differences According To The Number of Family Members**

Breakfast habits that differ according to number of family members are associated with cheese, goat cheese, black olives, green olives, eggs, margarine, and tomatoes-cucumbers (Chart 4).

Families with two members eat cheese four days a week, while families with three, four, and five members eat cheese five days a week, four days a week, and 2 days a week, respectively.

Families with two members eat goat cheese once-a-week, while families with three and five members eat goat cheese three days and one day a week, respectively.

Families with two members eat black olives twice a week, while families with three members eat black olives one day a week. Families with four, five, or six members do not eat black olives.

Families with two members eat green olives four days a week, while families with three, four, and five/six members eat green olives six days a week, 4 days a week, and 2 days a week, respectively.

Families with two members eat eggs two days a week, while families with three/four and five members eat eggs four and five days a week, respectively.

Families with two or three members consume margarine once-a-week, while families with five and six members consume margarine twice and once a week, respectively.

Families with two members eat tomatoes-cucumbers four days a week, while families with three, four, and five members eat tomatoes-cucumbers six days a week.

#### **Differences According To The Education Level Of The Father**

Breakfast habits that differ according to the education level of the father are associated with cheese, goat cheese, green olives, fermented sausage, salami-sausage, butter, margarine, and honey (Chart 4).

While a family, in which the father has completed primary school, eats cheese once-a-week, families, in which the father has completed secondary school, high school or is a graduate or postgraduate, eat cheese two days a week, three days a week, and seven days a week, respectively.

While a family, in which the father has completed primary or secondary school, eats goat cheese once-a-week, families, in which the father has completed high school or is a graduate or postgraduate, eat goat cheese two days a week and three days a week, respectively.

While a family, in which the father has completed primary school, eats green olives once-a-week, families, in which the father has completed secondary or high school or is a graduate or postgraduate, eat cheese three days and six days a week, respectively.

While a family, in which the father has completed primary, secondary, or high school, eats fermented sausage once-a-week, families, in which the father is a graduate or postgraduate, eat fermented sausage two days a week and three days a week, respectively.

While a family, in which the father has completed primary or secondary school, eats salamisausage once-a-week, families, in which the father is a graduate, eat salami-sausage three days a week.

While a family, in which the father has completed primary or secondary school, consumes butter once-a-week, families, in which the father is a graduate, consume butter three days a week.

While a family, in which the father has completed primary school, consumes margarine twice a week, families, in which the father is a graduate or postgraduate, consume margarine 1 day a week.

While a family, in which the father has completed primary school, eats honey three days a week, families, in which the father is a graduate or postgraduate, eat honey four and five days a week, respectively.

## **Differences According To The Education Level Of The Mother**

Breakfast habits that differ according to the education level of the mother are associated with cheese, goat cheese, margarine, and olive-tomato paste.

While a family, in which the mother is uneducated or has completed primary school, eats cheese three days a week, families, in which the mother has completed high school or is a graduate, eat cheese five days a week.

While a family, in which the mother has completed primary school, eats goat cheese one-a-week, families, in which the mother has completed high school or is a graduate, eat cheese 2 to 3 days a week.

While a family, in which the mother is uneducated, consumes margarine once or twice a week, families, in which the mother has completed high school, consume margarine two days a week. Families, in which the mother is a graduate, do not consume margarine.

While a family, in which the mother is uneducated or has completed primary school, eats olive-tomato paste two days a week, families, in which the mother has completed secondary or high school or is a graduate, eat olive-tomato paste once-a-week. Families, in which the mother is a graduate, do not eat olive-tomato paste.

The test results verified the study's hypotheses. Accordingly, the income level of consumers, the number of family members, and the education level of the father/mother lead to a difference in their breakfast habits.

#### Conslusion

According to the results of the study, the breakfast habits of families differ significantly depending on demographic characteristics.

Breakfast habits that differ significantly according to the family's income status are associated with cheese, goat cheese, black olives, green olives, eggs, fermented sausage, salami-sausages, butter, margarine, honey, and olive paste.

With respect to differences depending on the level of income, families with an income of 1000 TL or less consume cheese, goat cheese, black olives, green olives, fermented sausage, salami-sausage, and butter once a week, while families with a higher level of income eat said breakfast foods two to six days a week depending on their respective level of income. While breakfast foods such as margarine and olive-tomato paste are consumed twice a week by families with an income of 1000 TL or less, such foods are not consumed by families with a higher level of income.

Breakfast habits that differ significantly according to number of family members are associated with cheese, goat cheese, black olives, green olives, and tomatoes-cucumbers. While a family with two family members eats cheese, black olives, and green olives two to four days a week, said breakfast foods are less consumed as the number of family members gets higher. Besides, tomatoes-cucumbers are consumed more frequently as the number of family members gets higher.

Breakfast habits that differ significantly according to the education level of the father are associated with cheese, goat cheese, green olives, fermented sausage, salami-sausage, butter, and margarine. While a family, in which the father has completed primary school, eats cheese once-a-week and goat cheese, green olives, fermented sausage, salami-sausage, and butter once or twice a week, this frequency rises up to four to six days a week as the education level gets higher. As in all other demographic characteristics, the case in margarine is quite the opposite: the families eat less margarine as the education level gets higher.

Breakfast habits that differ significantly according to the education level of the mother are associated with cheese, goat cheese, margarine, and olive-tomato paste. The amount of cheese and goat cheese consumption increases as the education level of the mother gets higher, whereas the consumption of margarine and olive-tomato paste decreases as the education level of the mother gets higher. Said breakfast foods are not consumed by families with the highest education level.

The study verified that the consumption of expensive breakfast foods increases as the families' level of income as well as the education level of the father and/or mother gets higher, whereas an increase in the number of family members leads to a decrease in the consumption of said breakfast foods. When the results of the study are considered as a whole, it can be seen that the families'

education level leads to an increase of weekly consumed breakfast foods, because the education level of the father and/or mother helps to reach a higher level of income. An increase in the number of family members results in a decrease in the consumption of breakfast foods.

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