KSÜ Tarım ve Doğa Derg 25 (4): 872-881, 2022
KSU J. Agric Nat 25 (4): 872-881, 2022
DOI: https://doi.org/10.18016/ksutarimdoga.vi.883333

Factors Influencing the Food Purchase Points of Syrian and Iraqi Refugees in Samsun Province, Turkey

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ABSTRACT

The aim of this study was to investigate the factors influencing the food purchase points of Syrian and Iraqi refugees in the urban districts of Samsun province of Turkey. The primary data of the study were collected through a questionnaire from 252 household representatives of Syrian and Iraqi refugees. Factor analysis (FA) technique, descriptive analysis, Person's correlation (r), t-test, and ANOVA tests were used to address the objective of the study. The result showed that the refugees chose the local markets for fresh vegetables and fruit, supermarkets for meat and dairy products, and markets for cereal products. The price of the product and hygiene conditions were influential factors in-store selection for the refugees. However, nationality, gender, marital status, age, and district among the socio-demographic variables, the number of workers and income level among the economic variable, and, payment method among the behavioral variables had influences on the store preferences of refugees for at least for two type food categories. Furthermore, the store choices of the refugees were also affected by store attributes, consumer characteristics, and food categories.

Agricultural Economics

Research Article

Article History
Received : 19.02.2021
Accepted : 20.08.2021

Keywords
Refugees
Consumer Preferences
Food Categories
Store Choice
Samsun

Türkiye'nin Samsun Ilindeki Suriyeli ve Iraklı Sığınmacıların Gıda Satın Alma Noktalarını Etkileyen Faktörler

ÖZET

Bu çalışmanın amacı, Türkiye'nin Samsun ilinin kentsel ilçelerindeki Suriyeli ve Iraklı mültecilerin gıda alım noktalarını etkileyen faktörlerin araştırılmasıdır. Çalışmanın birincil verileri, 252 Suriyeli ve Iraklı mülteci hane halkı temsilcisinden anket yoluyla toplanmıştır. Araştırmanın amacına yönelik olarak faktör analizi (FA) tekniği, betimsel analiz, Kişi korelasyonu (r), t-testi ve ANOVA testleri kullanılmıştır. Araştırma sonuçları, mültecilerin taze sebze ve meyve için yerel pazarları, et ve süt ürünleri için süpermarketleri ve tahıl ürünleri için bakkalları tercih ettiğini göstermektedir. Mültecilerin mağaza seçiminde ürünün fiyatı ve hijyen koşulları kriterlerinin etkisi bulunmaktadır. Ancak; sosyo-demografik değişkenlerden uyruk, cinsiyet, medeni durum, yaş ve semt, ekonomik değişkenden çalışan sayısı ve gelir düzeyi ile davranış değişkenlerinden ödeme yöntemi mültecilerin az iki yiyecek kategorisindeki mağaza tercihlerini etkilemektedir. Bununla birlikte, mültecilerin mağaza tercihlerini mağaza ve tüketici özellikleri ile gıda kategorilerinden de etkilenmiştir.

Tarım Ekonomisi

Araştırma Makalesi

Makale Tarihçesi
Geliş Tarihi : 19.02.2021
Kabul Tarihi : 20.08.2021

Anahtar Kelimeler
Sığınmacılar
Tüketici Tercihleri
Gıda Kategorileri
Mağaza Seçimi
Samsun

To Cite: Ghazal AM, Bozoğlu M 2022. Factors Influencing the Food Purchase Points of Syrian and Iraqi Refugees in Samsun Province, Turkey. KSU J. Agric Nat 25 (4): 872-881. https://doi.org/10.18016/ksutarimdoga.vi.883333

Atıf İçin: Ghazal AM, Bozoğlu M 2022. Türkiye'nin Samsun Ilindeki Suriyeli ve Iraklı Sığınmacıların Gıda Satın Alma Noktalarını Etkileyen Faktörler. KSÜ Tarım ve Doğa Derg 25 (4): 872-881 https://doi.org/10.18016/ksutarimdoga.vi.883333

INTRODUCTION

Retail store networks are quickly growing in many industrial and agricultural nations. Likewise, food store chain has been expanding in past few years. Food retailing incorporates business that sells food

items. Store, market, bakkal (customary little staple shops), and pazar (road produce markets) are the primary food retail network in Turkey. The Turkish food retail sector has developed and progressed through the last decade from 72 to 109 billion USD (Figure 1).

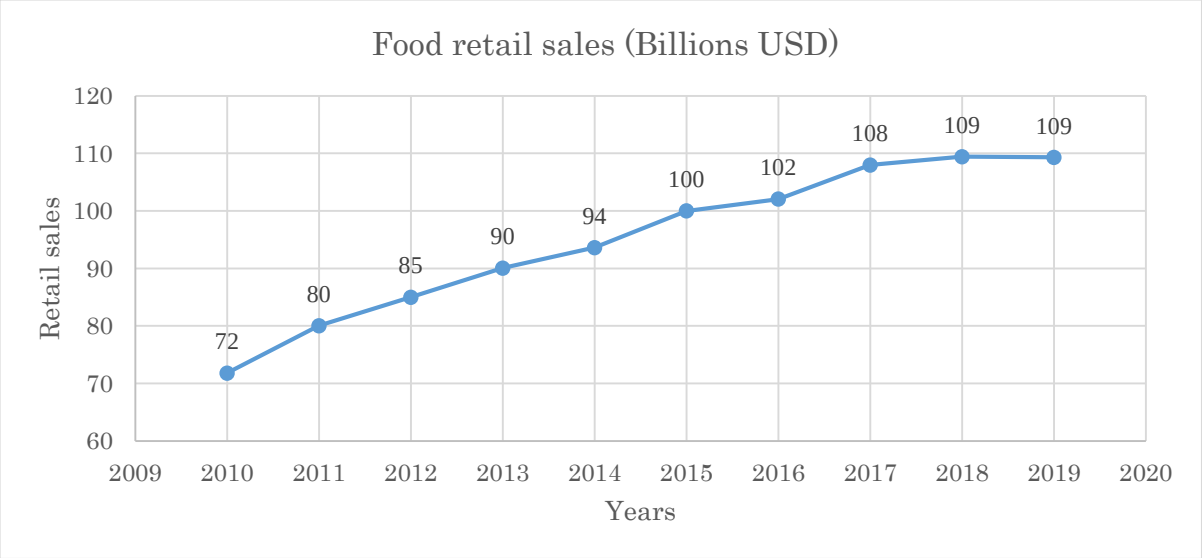

Figure 1. Developments in food retail sales in Turkey (Anonymous, 2020)
*Şekil 1. Türkiye'de gıda perakende satışlarındaki gelişmeler (*Anonymous*, 2020)*

Turkey has 3.9 million refugees and immigrants in the country and it is reported as the largest refugee population of any country in the world (Anonymous, 2019). A deep insight into refugees' purchasing behaviors is beneficial for marketing companies to develop their marketing and pricing strategies and improve their services, products, and distribution channels (Louviere et al., 2000). The changes in consumer behavior and utility levels such as interest, values, motives, and opinions gave away growth in retail market formats and points of sale in the area (Prasad and Reddy, 2007; Kumar, 2012). Martinue (1958) classified consumer behavior factors into functional and psychological forms. Store choice was tested in terms of food categories and store attributes. Becker et al. (2000) determined that the origin of the country and the market location influence the quality selection for beef meat in Germany. Hoek et al. (2015) found that price and quality of products were significant elements in the shift of store choice. Chamburi and Batt (2013) segmented consumers into modern and traditional markets (meat) and modern, traditional, and transient markets (fruit and vegetables). Fox et al. (2004) found that formats of retail stores in Malaysia explained the varieties of services provided to fresh fruit consumers. Hygiene and clean picking of fruit products are considered to be the most effective attributes for the selection of fresh vegetables and fruits in Turkey (Dal and Kizilaslan, 2018). Durmaz et al. (2011) revealed that price, choice of selection, and freshness of products were essential attributes for the selection of supermarkets. Store location, convenience for the customers, and promotion are significant factors for store satisfaction (Wel et al., 2012; Jere et al., 2014).

Store selection for the food basket is influenced by consumer characteristics. In many studies (Chamhuri and Batt, 2013; Terano et al., 2015), the age factor got leveraged in-store selection for fresh meat products. Whereas, the income level of the customers was found a significant influencing factor on store choice for fruit and vegetables (Ohen et al., 2014). Carpenter and Moore (2006) found that a low level of income and education is a serious abstraction of people in the supercenter format. Gehrt and Yan (2004) found that only income was related to retail attribute importance. Socio-economic factors such as education, income, and family size shaped the perceptions of consumers' selection towards store choice (Baltas and Argouslidis, 2007; Prasad and Reddy, 2007). Akpinar et al. (2009) showed that consumers with a high level of income, education, and age groups below 35 years preferred super-hypermarkets for vegetables and fruit products. Carpenter and Moore (2006) reported that households with large family sizes and female groups prefer supercenter formats.

The statement of the problem arises from various actions. The research problem of this study was organized from different literature on consumer behaviors, immigrants' behaviors, and point of purchase choices. In light of the problems addressed above, this study aimed (i) to determine the factors influencing the refugees' purchase point choices of food products, (ii) to investigate the preferences of refugees across various points of food sale, and (iii) to understand the differences among the refugees during choosing point of purchase.

MATERIAL and METHODS

Materials

The site selection was purposive, Samsun province. The current study targeted all Syrian and Iraqi immigrants, who are residents in Samsun province. The sample household size from the refugee population was determined as 252 families using a random sampling design given in Formula 1 (Tejada and Punzalan, 2012):

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Where

n: sample size, N: 680

Z: 1.96 for the confidence level of 95%

e: 0.05 acceptance level of sampling error

$$n = \frac{680}{1+680(0.05)^2} \approx 252$$

The primary data were obtained from face-to-face interviews with the responsible members of selected sample families from food purchases during October 2019-February 2020 for measuring attitudes of consumers towards a point of purchasing according to consumer attitudes and store attitudes, the five-point Likert scale ranging from strongly disagree (1) to strongly agree (5) was used to measure the weight of responses.

Four main purchase points would be used in the current study to accomplish the objectives of the study, five food categories (vegetables, fruits, meat products, dairy products, and cereals), four retail formats (1. Supermarket, 2. Market, 3. Grocery, and 4. Local market or Pazar) and some other variables as well.

Methods

Different descriptive measures such as frequency distributions, mean, minimum, and maximum values of respondents were applied in this study for the analysis. The normality test was evaluated by using the Shapiro-Wilk test. According to the result of the Shapiro-Wilk test, the variables were normally distributed. Therefore, an Independent simple t-test technique, ANOVA technique, and Correlation analysis (Pearson's r) were applied to measure the association among numeric variables. The factor analysis (FA) technique was applied in this study to reduce the number of variables. In the case of a minimum of 100 observations and larger, FA is used (Hair et al, 2014). Factor rotation or factor loadings explain the correlation between each variable and the factor. This test is conducted to measure the degree of correspondence between the variables and the factors. Since factor loading in our sample of 252 respondents equals 0.35 and above, they are significant (Hair *et al.,* 2014). The Kaiser-Meyer-Olkin test (KMO) was used to check whether the sample used in this study is adequate or not. The KMO value is greater than 0.6 and the factorability of the correlation matrix can be assumed (Hair *et al.,* 2010). Factor analysis is applied to 28 items. The purpose of this procedure is to minimize 28 variables to a smaller group. The refugees were asked to express the importance of these factors during the food purchasing process.

RESULTS and DISCUSSIONS

Description of respondents' characteristics

Descriptive statistics for respondents' socio-demographic, economic, and behavioral variables were given in Table 1. The results showed that (44.8%) and (55.2%) were Syrian and Iraqi, respectively and the share of male respondents was (62.3%), females were (37.7%), While (51.2%) of the respondents were married, (47.2%), and 1.6% were single and divorced, respectively. The average age of the respondents was 30 years with the average family size per household being five. Relative to the educational level, the majority of respondents (47.2%) were university graduates, (21.8%) and (14.3%) of the respondents completed high school education degrees and postgraduate, respectively and only 5.2 percent had no formal education, and 5.2 percent had formal education level among the selected respondents. The majority of the respondents (61.1%) were residents of Ilkadim district, (20.6%), and (18.3%) in Atakum and Canik districts, respectively.

Considering the economic characteristics of the respondents, about 38% were employed, 35.7% and 25.8% were students and unemployed, while 51.2% of refugee households were unemployed, 32.9% had one worker, and 13.5% had two workers and 2.4% had three workers respectively. About 36% of refugee households reported that their monthly income level was between TL 2000 and 3000, 18% of them had in between TL 1500 and 2000 and, 16% reported that their monthly income was below TL 1500. The majority of respondents in the study area (84.9%) did not benefit from cash assistance, while only 15.1% of them were at receiving end of this facility.

Relative to behavioral variables, the majority of families (75.8 %) reported that the father or mother was the decision-maker for family activities like food purchases, and shopping together. About (8%) of food shopping, is done by other members of a family. Relative to the number of meals per day by a family, about (50%) had three meals daily and (43.7%) of them had excess to two meals in a day for the family. The majority of respondents (77.9%) paid direct cash for their needs while the rest of the (22.1%) used credit card facilities.

Table 1. Descriptive statistics for socio-demographic, economic, and behavioral variables
Çizelge 1. Sosyo-demografik, ekonomik ve davranışsal değişkenler için tanımlayıcı istatistikler

Variables *Değişkenler*			No. of Respondents *Denek sayısı*	Percent (%) *Oran (%)*
Socio-demographic	Nationality	Syrian	113	44.8
		Iraqi	139	55.2
	Gender	Male	157	62.3
		Female	95	37.7
	Marital status	Married	129	51.2
		Single	119	47.2
		Divorced	4	1.6
	Age group	18 – 25 years	100	39.8
		26 – 35 years	79	31.5
		36 – 45 years	44	17.5
		More than 45	29	11.2
	Household size	Less than 3	29	11.5
		From 3 to 4	64	25.4
		From 5 to 6	95	37.7
		More than 6	64	25.4
	Level of education	Illiterate	13	5.2
		Primary	13	5.2
		Secondary	16	6.3
		High school	55	21.8
		University	119	47.2
		Postgraduate	36	14.3
	District of residence	Canik	46	18.3
		Ilkadim	154	61.1
		Atakum	52	20.6
Economic	Job status of family members	Unemployed	65	25.8
		Employed	97	38.5
		Student	90	35.7
	Number of workers in household	None	129	51.2
		1 worker	83	32.9
		2 workers	34	13.5
		3 workers	6	2.4
	Monthly household income	Less than 1500 TL	41	16.3
		1500 -2000 TL	47	18.7
		2000-3000 TL	73	29.0
		More than 3000 TL	91	36.1
	Benefit from cash assistance	Yes	38	15.1
		No	214	84.9
Behavioral	Who makes a purchase?	Father or mother	182	75.8
		Father and mother	19	7.9
		Children	39	16.3
	Number of meals eaten	Two meals	110	43.7
		Three meals	125	49.6
		Four meals	17	6.7
	Payment type in food shopping	Cash	183	77.9
		ATM card	52	22.1

Point of purchase attributes: factor analysis results

Table 2 showed that the value of Kaiser-Meyer-Olkin (KMO) (0.836) was greater than 0.6, the value of Bartlett's test of sphericity (x^2= 5052.846, df = 378, p= 0.000) was less than 0.05 and this indicated that the data is fit for factor analysis. The results of factor loadings or rotation are shown in table 2. Out of 28 variables, seven factors had eigenvalues greater than one and their cumulative value equals (75.15%) indicating that seven factors explain 75.15% of the total variance. The reliability or Cronbach's Alpha of the factors influencing point of sale choice ranged from 0.797 to 0.901. They have an acceptable reliability level because their values were greater than 0.60 (Hair et al., 2014). The loading value must be greater than 0.35 to be significant.

The first factor was named (healthy condition), with an Eigenvalue of 9.38, Cronbach's alpha of 0.898, and included six variables. The second factor of place or facilities of sale point, with an Eigenvalue of 2.86, and Cronbach's alpha of 0.900, had six variables. The third factor was labeled as culture and habits, with Eigenvalue 2.61, and Cronbach's alpha of 0.901. The fourth factor represents the product factor with Eigenvalue 1.93, and Cronbach's alpha of 0.886. The fifth factor represents characteristics of staff in the sale points, with Eigenvalue 1.79, and Cronbach's alpha of 0.797. The sixth factor was named a price, with Eigenvalue 1.36, and Cronbach's alpha of 0.837. The seventh factor is related to store ownership, with Eigenvalue 1.08. The refugees were asked to express the importance of these factors during the food purchasing process. The results indicated that the price factor (4.07) had the highest average score, this was followed by the product characteristics factors (4.02), the third-factor healthy conditions (3.87), the fourth-factor characteristics of staff (3.77), the fifth-factor culture and habits (3.69) and the final factor was social relations with the store owner (3.60).

Table 2. Factor analysis results and reliability
Çizelge 2. Faktör analizi sonuçları ve güvenilirlik

Factors *Faktörler*	Mean Score	Factor 1	Factor 2	Factor3	Factor 4	Factor 5	Factor 6	Factor 7
Healthy conditions	3.87							
Pesticide residue	3.78	.889						
Food safety	4.02	.818						
Hygiene of the store	3.90	.816						
Organic product	3.82	.798						
GMO or hormone product	3.72	.766						
Product nutritional value	3.94	.741						
Place and facilities	3.74							
Transportation service	3.65		.934					
Bulk shopping	3.68		.839					
Availability of products in all seasons	3.79		.826					
Parking facilities	3.59		.822					
Easy access to stores	3.85		.800					
Distance	3.89		.609					
Culture and habits	3.69							
Homeland products	3.73			.901				
Turkish products	3.68			.884				
Family effects	3.72			.872				
Friends' effects	3.60			.781				
Product origin	3.71			.767				
Product characteristics	4.02							
Product taste	4.11				.953			
Availability of various products	4.02				.871			
Product quality	4.07				.829			
Product appearance	3.89				.762			
Characteristics of staff	3.77							
Respect and kindness	3.85					.885		
Employee behavior	3.73					.827		
Their languages	3.73					.687		
Price	4.07							
Price suitability	4.14						.941	
Promotion	4.18						.787	
Gifts	3.89						.774	
Social relation	3.60							
store ownership	3.60							.705
Eigenvalue		9.38	2.86	2.61	1.93	1.79	1.36	1.08
Total variance		33.50	43.80	53.13	60.04	66.44	71.29	75.15
Cronbach's Alpha		0.898	0.900	0.901	0.886	0.797	0.837	
Bartlett's Test of Sphericity	Chi-square (χ^2) = 5052.846, df = 378, p<0.01							
KMO	0.836							

Pearson's r results are shown in Table 3. The findings indicated that despite the importance of these seven factors for consumers, they had no associations with store choice through purchasing vegetables, fruit, dairy, and cereals products. As excepted, healthy conditions ($p<0.10$) and place of the store had a significant positive correlation ($p<0.05$) for the meat products category. Relative to store ownership had a positive correlation for vegetables and cereals products ($p<0.10$), respectively.

Table 3. Pearson's r results by food categories
Çizelge 3. Gıda kategorilerine göre Pearson'ın r sonuçları

Store attributes *Mağaza özelliği*	Vegetables *Sebze*	Fruit *Meyve*	Dairy products *Süt ürünleri*	Meat products *Et ürünleri*	Cereals *Hububat*
Healthy conditions	0.57	0.14	0.46	0.09*	0.9
Place and facilities	0.85	0.57	0.12	0.03**	0.52
Culture and habits	0.89	0.80	0.23	0.47	0.9
Product characteristics	0.64	0.15	0.17	0.95	0.63
Staff characteristics	0.9	0.39	0.60	0.34	0.50
Price	0.49	0.34	0.72	0.17	0.40
Store ownership	0.06*	0.39	0.32	0.55	0.07*

*, **, and ***indicate statistically significant at 10%, 5%, and 1% levels, respectively

Two stages of analysis were conducted in this study to address the objective of the study in a meaningful way. In the first stage, identification of the store attributes influencing store choice selection for food categories, and secondly, identify the differences among refugees through the purchasing process mechanism. The current study confirmed that the price dimension is determined as the most influential factor and it is followed by product characteristics. Due to the poor economic conditions that refugees were facing in the selected study area, made their preferences for the selection of stores according to price level and products suitable for health. The findings were in line with Chamhuri and Batt (2013) and Hoek et al., (2015). Also, Theodoridis and Chatzipanagiotou (2006) revealed that personnel, pricing, products, and in-store convenience were statistically significant driver attributes towards format choice. In contrast, Carpenter and Moore (2006) confirmed that cleanliness was the most important attribute. Dal and Kizilaslan (2018) also confirmed that Turkish consumers paid the most attention to cleanliness. In the meat case, the consumer was influenced by two factors, hygienic conditions and facilities available for the meat products. Fresh meat products posed a higher level of risk to consumers and social relations with retailers influence refugees to select markets, especially for cereal products and household items. The findings indicated that the impacts of store attributes were significant to consumers but insignificant through the selected store for food categories. The findings were consistent with those (Uusitalo, 2001).

Consumers' preferences on the points of food sale

Table 4 showed that the results of consumers' preferences on the points of food purchases. The results showed that the majority of refugee householders preferred to buy fresh vegetables (82.9%) and fruit (79.0%) from local markets (Pazar), while the majority of refugee householders preferred to buy dairy products (61.1%) and meat products (61.5%) from supermarkets. Whereas 40.5% of refugee households preferred to buy cereals products from markets. However, greengrocery was not generally preferred by refugee respondents for cereals, dairy, and meat products.

Table 4. Consumers' preferences on the points of food purchases (%)
Çizelge 4. Tüketicilerin gıda satın alma noktalarına ilişkin tercihleri (%)

Food category *Gıda kategorisi*	Point of sale (%) (*Satış noktası (%)*)			
	Supermarket Süpermarket	Market *Market*	Greengrocery *Manav*	Local market *Mahalle pazarı*
Vegetables	8.7	0.4	7.9	82.9
Fruit	9.5	1.6	9.9	79.0
Dairy products	61.1	17.5	0.8	20.6
Meat products	61.5	27.4	1.2	9.9
Cereals	33.7	40.5	1.2	24.6

With respect to consumers' preferences, several studies reported that the preference of stores differs according to food categories (Chamhuri and Batt, 2013; Dal and Kizilaslan, 2018). The findings in Table 4 showed that the supermarket is the best point to purchase meat and dairy products, traditional

markets, or (local markets) are preferred for fresh food products in fruit and vegetables and the market was preferred by refugee households for cereal products because of being homeland products and their ownerships were Arab people. Chamhuri and Batt (2013) pointed out three clusters for fresh fruit and vegetables (modern retail shoppers, transient shoppers, and traditional market shoppers) and two clusters for meat whereas the respondents were more selective through buying. As shown above, ownership of a store influences consumer decisions. The findings indicated that local markets or neighborhood markets in Turkey have a competitive price advantage in line with (Wel et al., 2012; Dal and Kizilaslan, 2018).

Factors Influencing Consumers' Food Purchase Points

Table 5 showed the differences in refugee households' food store preferences based on socio-demographic variables and food categories. The findings indicated that there had been statistically significant differences in nationality through buying vegetables ($p<0.05$), fruit ($p<0.10$), dairy products ($p<0,01$), and meat products ($p<0.05$), whereas there had been statistically significant differences for gender through buying dairy ($p<0.10$), meat ($p<0.10$) and cereals ($p<0.01$). There had been statistically significant differences in marital status through buying vegetables ($p<0.05$) and dairy products ($p<0.10$).

Table 5. The differences in refugee households' food store preferences concerning socio-demographic variables
Çizelge 5. Sığınmacı hanehalklarının sosyo-demografik değişkenlerine göre gıda satın alma tercihlerindeki farklılıklar

Socio-demographic Variables *Sosyo-demografik değişkenler*	Mean Score of Food Categories *Gıda kategorisinin ortalama skoru*				
	Vegetables *Sebze*	Fruit *Meyve*	Dairy products *Süt ürünleri*	Meat products *Et ürünleri*	Cereals *Hububat*
Nationality					
Syrian	3.53	3.47	2.16	1.75	2.26
Iraqi	3.75	3.67	1.53	1.47	2.09
p-value	0.05**	0.08*	0.00***	0.02**	0.26
Gender					
Male	3.62	3.56	1.92	1.68	2.31
Female	3.71	3.62	1.63	1.46	1.94
p-value	0.44	0.61	0.06*	0.08*	0.01***
Marital status					
Married	3.76	3.67	1.98	1.67	2.24
Single	3.50	3.48	1.62	1.52	2.11
Divorced	4.00	3.75	2.00	1.25	1.50
p-value	0.04**	0.23	0.06*	0.33	0.34
Age					
18–25 years	3.52	3.51	1.49	1.43	2.00
26–35 years	3.71	3.61	2.19	1.67	2.43
36–45 years	3.73	3.64	2.00	1.93	2.18
More than 45 years	3.82	3.71	1.61	1.46	2.00
p-value	0.26	0.71	0.00***	0.02**	0.08*
Household size					
Less than 3	3.41	3.41	1.83	1.48	2.28
From 3 to 4	3.75	3.66	1.94	1.70	2.25
From 5 to 6	3.68	3.54	1.85	1.59	2.26
More than 6	3.61	3.50	1.61	1.55	1.89
p-value	0.36	0.52	0.46	0.69	0.17
Education level					
Illiterate	3.46	3.69	1.54	1.54	1.77
Primary	4.00	4.00	2.00	1.62	2.08
Secondary	3.44	3.00	1.56	1.63	1.81
High	3.60	3.62	1.56	1.45	2.04
Bachelor	3.71	3.65	1.56	1.66	2.24
Master	3.56	3.39	1.91	1.58	2.44
p-value	0.43	0.04**	0.33	0.85	0.26
District					
Canik	3.91	3.83	2.35	1.83	2.28
Atakum	3.56	3.49	1.64	1.53	2.08
Ilkadim	3.63	3.36	1.83	1.60	2.31
p-value	0.07*	0.09*	0.00***	0.16	0.36

*, **, and ***indicate statistically significant at 10%, 5%, and 1% levels, respectively

However, there had been statistically significant differences in age factor through buying dairy products ($p<0.01$), meat products ($p<0.05$), and cereals ($p<0.10$). There had been statistically significant differences for the education factor through buying only fruit ($p<0.05$). The results also revealed that the district had significant differences in buying vegetables ($p<0.10$), fruit ($p<0.10$), dairy, and meat products ($p<0.01$). Finally, the length of stay and household size had no statistically significant differences through buying food categories ($p>0.10$).

To identify the significant differences among refugees, t and ANOVA tests were used. The results confirmed that socio-demographic variables such as nationality, gender, marital status, age, education level, and district had an influence on point of purchase choice at least for one food category. The results suggested that household size had no significant differences in store choice and these findings were inconsistent with Carpenter and Moore (2006), and Prassad and Reddy (2007). These findings confirmed that family size had a significant influence on the type of food and grocery retail outlets.

Table 6 showed the differences in refugee households' food store preferences based on economic variables and food categories. Job-status had no significant differences through buying food categories ($p>0.10$), whereas the number of workers had significant differences through buying dairy products ($p<0.05$) and cereal products ($p<0.05$). Household income had significant differences through buying vegetables ($p<0.05$) and dairy products ($p<0.01$). Finally, cash assistance had no statistically significant impact on store choice through buying all food categories ($p>0.10$).

Table 6. The difference in refugee households' food store preferences concerning economic variables
Çizelge 6. Ekonomik değişkenlerle ilgili olarak sığınmacı hanehalklarının gıda satın alma tercihlerindeki farklılıklar

Economic Variables *Ekonomik değişkenler*	Mean score of food categories *Gıda kategorisinin ortalama skoru*				
	Vegetables *Sebze*	Fruit *Meyve*	Dairy products *Süt ürünleri*	Meat products *Et ürünleri*	Cereals *Hububat*
Job-status					
Unemployed	3.69	3.66	1.55	1.46	2.11
Employed	3.73	3.63	1.90	1.62	2.15
Student	3.53	3.48	1.90	1.67	2.22
p-value	0.27	0.39	0.13	0.38	0.82
Number of workers					
No person	3.70	3.67	2.03	1.70	2.36
One person	3.63	3.49	1.63	1.55	1.99
Two persons	3.56	3.44	1.50	1.38	1.91
Three persons	3.5	3.83	1.33	1.17	1.83
p-value	0.80	0.38	0.02**	0.19	0.04**
Income level					
Less than 1500 TL	3.73	3.68	1.56	1.63	2.17
1500 -2000 TL	3.91	3.83	2.04	1.74	2.34
2000-3000 TL	3.45	3.45	2.15	1.68	2.21
More than 3000 TL	3.64	3.52	1.53	1.43	2.04
p-value	0.04**	0.12	0.00***	0.18	0.53
Cash assistance					
Yes	3.76	3.76	1.87	1.50	2.08
No	3.63	3.55	1.90	1.61	2.18
p-value	0.39	0.19	0.74	0.49	0.61

*, **, and ***indicate statistically significant at 10%, 5%, and 1% levels, respectively

Economic variables such as the number of workers in the household and household income level had influences on the point of purchase choice at least for one food category. The results were in line with (Prassad and Reddy, 2007). These findings confirmed the importance of occupation in-store choice. Whereas the job status had no significant influence on store choice and there were differences in the price of food products, especially for fruit and vegetables in Turkey. Therefore, the level of income played an important role in-store choice.

Table 7 showed the differences in refugee households' food store preferences based on behavioral variables. The factor of food buyers had significant differences

through buying dairy products ($p<0.05$) and the factor of the number of daily meals had no significant differences through buying food categories ($p>0.10$). Finally, the payment method factor had significant differences between buying vegetables ($p<0.10$) and fruit ($p<0.01$).

Finally, behavioral variables such as buyer and payment method had an influence on point of purchase choice at least for one food category and the credit or debit cards could be used to buy fruits and vegetables from supermarkets, there was no option for consumers to pay shopping bills with credit or debit cards in local markets for the selected study area.

Table 7. The difference in refugee households' food store preferences concerning behavioral variables
Çizgi 7. Davranışsal değişkenlerle ilgili olarak sığınmacı hanehalklarının gıda satın alma tercihlerindeki farklılıklar

Behavioural Variables *Davranışsal değişkenler*	Mean score of food categories *Gıda kategorisinin ortalama skoru*				
	Vegetables *Sebze*	Fruit *Meyve*	Dairy products *Süt ürünleri*	Meat products *Et ürünleri*	Cereals *Hububat*
Buyer					
Father or Mother	3.70	3.63	1.90	1.57	2.23
Father and mother	3.79	3.68	1.16	1.42	1.84
Children	3.51	3.56	1.85	1.77	2.21
p-value	0.39	0.88	0.04**	0.34	0.39
N. of Meals					
Two	3.69	3.59	1.88	1.59	2.20
Three	3.60	3.57	1.70	1.63	2.17
Four	3.76	3.65	2.18	1.35	1.94
p-value	0.63	0.94	0.21	0.51	0.69
Payment method					
Cash	3.72	3.69	1.82	1.55	2.17
ATM	3.46	3.33	1.87	1.62	2.33
p-value	0.06*	0.01***	0.81	0.66	0.39

*, **, and ***indicate statistically significant at 10%, 5%, and 1% levels, respectively

CONCLUSIONS

This study investigated the different factors influencing refugee households' preferences on the points of food retail purchases in Samsun province of Turkey. The results reported that price and product were the most important attributes and the consumers' preferences on the points of food purchases pertain also to food categories purchased. Local markets (pazar) seemed to be the most preferred choice for fresh vegetables and fruit, whereas the supermarket was the most preferred choice for meat and dairy products. Markets were the best choice of cereals products. It is concluded from the research that each point of food sale was preferred for specific food categories by refugee households.

Results of store choice and consumer characteristics, the results found that socio-demographic (nationality, gender, marital status, age, education level, district), economic (number of workers and income level), and behavioral (buyer, payment method) factors had significant impacts on the store choice. Whereas, the factors of job status, length of stay, cash assistance, and the number of meals eaten had no statistically significant impacts on store choice through buying food products.

In conclusion, refugee households' shopping behavior is still an important issue as a result of the increasing refugee population in the world. Overall, the findings had implications for food retailers and refugees. The retail sector management in Turkey should take account into refugees' preferences to fulfill their desires and needs and the points of purchase should motivate buying health and safety products. These retailers should increase consumers' perceptions of health and safety products. Moreover, refugees should focus on the healthy attributes of food more than the price attribute.

Acknowledgments

The authors would like to thank all refugees who joined and responded to this study.

Authorship contribution statement

The authors declare that they have contributed equally to the article.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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