

Olive oil consumption, preferences and usage areas: the case of Hatay and Aydın provinces

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Abstract

Olive and olive oil are essential food sources for their health benefits and flavour. It is crucial in regions such as Aydın and Hatay, where olives are intensively grown. This research was conducted through focus group discussions, in-depth interviews, and a questionnaire survey to understand how olive oil is preferred in cooking and its different uses in health, carpentry, skincare, hair care, massage oil, and aromatherapy. The study's findings show that the versatile use of olive oil is widespread in Aydın and Hatay provinces. The results of this research can be used for olive oil producers and marketers to develop sales and marketing strategies and better understand the potential uses of olive oil. Local production and price were the determinants of consumers' olive oil preferences. The results of this study reveal the diversity of olive and olive oil use in Aydın and Hatay provinces and how consumers prefer the product in different areas. Within the scope of the research, a questionnaire survey was conducted in two regions, and a scale of 1-5 points was used to help the respondents give more precise answers to the statements in the form. The findings were analysed using ordinal ranking and one-factor multiple variance analysis MANOVA. The results of this research were used to develop sales and marketing strategies for olive oil producers, marketers and consumers and to understand the potential uses of olive oil better.

Keywords: Olive oil, Areas of use, Consumer preferences, Olive Oil Quality, Price

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INTRODUCTION

Olive oil is a highly pure, clear and healthy source of vegetable oil with a greenish-yellow colour and a distinctive odour, extracted by different methods from the nuts of the *Olea Europa* plant (Wikipedia, 2024). Olive oil, which is the only oil that physical methods can produce, has always had a higher economic value compared to other vegetable oils because it requires much manual labour in the collection phase of its raw material (olives) and requires significant technology compared to other seed oils in the stage of obtaining from the grain, mainly because it is a beneficial food source in the field of health.

Archaeological studies and research have shown that olive oil was used in ancient times to prevent foot injuries during long journeys, to soften the body in physical sports, in oil lamp lighting by taking advantage of the flammable properties of the oil, in medicine making, nutrition and cosmetic purposes (Kaplan and Arıhan, 2012, p. 8). Olive cultivation and consumption are important in Turkey, especially in the Aegean and Mediterranean regions (Sakar and Ünver, 2011, pp. 19-25). Hatay and Aydın provinces are among the prominent regions in this field. The privileged climate and soil structure of Hatay and the fertile soils of Aydın enable the cultivation of quality olives and the production of delicious olive oils. When the consumption of olive oil is analysed, it has increased in the last decade, and its importance in the global sector has also increased (Özkan Z., 2021, pp. 4).

According to the data obtained from the Provincial Directorates of Aydın Ministry of Agriculture and Forestry, Memecik, Domat, Gemlik, Manzanilla, Donkey Olive, Yamalak Yellow, Arbequina (Spanish origin, early fruiting

dwarf olive) are the most common olive varieties in Aydın province (Zeytin Kitabı, 2019:13). In Hatay province, Halhali olive, Saurani (Sinonimi Savrani), Attun (Black olive), Köstüklü (Kilyeli green olive), Sarı Habeşi, Gemlik olive, Har olive, Büyük Topak Ulak, Kilis Oil and Nizip oil are the various types of olives grown in this region due to the neighbouring lands (Konuskan and Canbaş, 2008, pp. 58). The crops from the trees growing in both regions and the oil obtained from the crop are divided into different varieties; each oil has different uses. Especially in the in-depth interviews conducted with the qualitative research method used in this study, it was determined that olive oil obtained from the trees is widely used by the region's people, especially in cooking, skin, hair, cleaning, cosmetics and especially in the health field.

Hatay olives and olive oil have a more intense and fruity flavour, while Aydın olives and olive oil have a milder and more balanced aroma. Aydın olive oil is mainly preferred for salads and cold dishes, while Hatay olive oil is used for hot and meaty dishes. For example, Aydın Olive Oil is used in Artichokes, Zucchini with Olive Oil, Beans with Olive Oil, Shepherd's Salad and Olive leaf wraps, while Hatay olive oil is preferred in dishes such as Ali Nazik, Vicious, Tray Kebab, İçli köfte, Frying and Simit Kebab. Halhali and Saurani olives stand out in Hatay and Memecik olives stand out in Aydın (Oğuzhan M. U, 2022). The differences in the areas of use of the two regions are due to the variability of the climate, soil and production methods used in the regions where olives and olive oil are grown. Due to these differences, Hatay olive oil contains more spicy and intense flavors, while Aydın olive oil contains a lighter and fruity taste, and olive oil used in the same recipes may have different results. Both provinces have olive and olive oil cultures, contributing significantly to culinary habits and local economies.

MATERIALS AND METHODS

This research was designed as an applied study and carried out with a descriptive approach. The main problem of the research is to determine the areas of use of olive oil and its varieties in two important olive growing centers and determining the level of participation in the statements developed about olive oil. Data were obtained using a questionnaire.

Before starting the survey, focus groups and in-depth interviews were conducted using the qualitative method. This method was preferred to understand better olive and olive oil consumption and usage, as well as consumers' experiences, preferences, habits, and emotions. The research was conducted on consumers residing in Aydın and Hatay provinces who are ordinary product users. The study was conducted on olive oil users in these two provinces. The central mass of the research consists of olive oil consumers in these two provinces. In the focus group and in-depth interviews, data were obtained by reaching people who know the subject well by considering the snowball method in the olive and olive oil fields. This study conducted face-to-face interviews with 40 experts, and a focus group study was conducted once with eight people. The questionnaires created were based on the findings obtained from these interviews, which were conducted face-to-face and online. The data obtained through questionnaires were collected in the SPSS 27 program, and Single Factor Multiple Analysis of Variance (MANOVA) was applied. MANOVA (Multivariate Analysis of Variance) is a statistical technique used to analyze the effects of multiple dependent variables together with one or more independent variables. MANOVA allows to evaluate the relationships between dependent variables and group differences Decently at the same time. MANOVA Analysis was used to measure whether there is a difference between the answers given to the statements regarding consumer preferences and usage areas in both provinces (Çakmak, A. Ç., (2012).

PREPARATION OF THE QUESTIONNAIRE

The scale used in this study is based on the findings obtained from focus groups and in-depth interviews conducted using qualitative methods. In addition, a questionnaire form was created by taking into account previous studies (Cömert et al., 2012; Çelik et al., 2016; Güdek et al., 2016; Yaylacı, 2022). In this context, scale development is frequently encountered in studies on the purchasing behaviour of consumers in the literature. However, there is no scale study on the use of crops and oil in different areas. For this reason, the questionnaire was enriched with data obtained through qualitative methods (focus groups and in-depth interviews). The first part of the questionnaire included questions on demographic characteristics. In contrast, the next part included statements from literature studies and questions determining the shopping information, attitudes, behaviours and usage areas of Olive and Olive Oil users. In addition, the respondents' sources of information about olive oil were also asked in the survey.

In the questionnaire form, statements aiming to determine the participants' views are asked using a 5-point Likert scale. The Likert scale offers a five-point evaluation system including "Strongly Disagree" (1), "Disagree" (2), "Neutral" (3), "Agree" (4) and "Strongly Agree" (5) and "Never Use" (1), "Never Use" (2), "Neutral" (3), "Use" (4) and "Always Use" (5). The 1-5 point scale has been used in some studies to measure items developed to question recreation barriers in the village (Ardahan and Öz, 2019, p. 144). This type of scale offers a transparent scoring system to the survey participants, and this scale will allow many averages to be taken and various comments to be made on this study. Moreover, simultaneously, participants can score more objectively than the Likert scale (Çakmak, 2012, pp. 202-203). In addition, data were collected by including open-ended sections in both demographic statements and other question statements.

LITERATURE REVIEW

In a study examining olive oil consumption and behaviours, it was concluded that the widespread production of olives, income, living standards and, most importantly, local food culture, habits and similar factors impact olive oil consumption (Ağır et al., 2018).

A study examining the reasons for olive oil consumers' preference concluded that factors such as quality perception arising from product diversity, price realities, reliability in the production process, taste and flavour, and oil appearance affect purchasing behaviours (Yaylacı, 2022).

In a study examining the areas of use of olive oil, it was concluded that olive oil has many benefits in diseases such as cardiovascular diseases, hypertension, diabetes, hyperlipidemia and cancer and that olive oil has an area of use in the field of health (Armutcu et al., 2013).

A study examining olive oil consumer purchasing behaviours concluded that, after all evaluation studies, efficiency values, and the location of olive pressing facilities are related, as are environmental and quality criteria that affect purchasing behaviours (Kır, 2023).

In a study examining olive oil consumer shopping preferences, a survey was conducted in four critical countries, and the type of olive oil was ranked as the most essential product feature. Moreover, a comparative study determined that olive oil price was the second most important criterion among consumers. It was concluded that country of origin, packaging design, label and brand criteria were among the less important factors influencing purchasing behaviour (Chrysochou et al., 2022).

In a study examining the shopping preferences of consumers for olive oil, it was observed that high-income consumers consider the brand as well-known and reliable. At the same time, they are willing to pay more money and prefer glass bottles in olive oil packaging. At the same time, it was concluded that consumers prioritise health in oil selection, they provide price stability by purchasing more olive oil, the preferred places for olive oil purchase are generally producers or self-production places, not markets, and these factors affect shopping centre preferences (Erbaş & Artukoğlu, 2016).

In a study examining the uses of olives and olive oil, various scientific studies supported the health benefits of olive leaf, including antioxidant, antihypertensive, anti-inflammatory, antithrombotic, and cardioprotective effects. It was concluded that more research is needed on these effects, interactions of these substances with other nutrients, optimal dose determination and safety, but the olive leaf has obtained very positive results in the field of cancer, and its use in the field of health may be widespread (Gürbüz and Öğüt (2017).

In a research study on the use of olive and olive oil, it was concluded that olive leaves have immune system strengthening effects and are very rich in phenolic compounds, have many therapeutic effects thanks to the phytochemicals in their composition and have potential for use in food applications (Salık and Çakmakçı (2021).

In a study examining the field of use of olive oil, By emphasising the importance of the Mediterranean diet, it was concluded that olive oil consumption, olive oil consumption, which naturally contains foods rich in fatty acids and is suitable for nutritional recommendations regarding micro and macronutrient composition, among others, antioxidant, immunomodulatory and inflammatory response regulator results in beneficial effects in many different pathologies (Luna et al. (2022).

When the general studies on olive oil consumption are examined, demographic characteristics and factors affecting purchasing behaviours are examined. However, there are limited studies on different uses of olive oil. In this study, various uses of olive oil in two provinces and consumer preferences according to demographic characteristics were examined in detail.

RESEARCH HYPOTHESES

H1: There is a significant difference between consumers in Hatay and Aydın regarding their agreement with the statement that olive oil prices are affordable.

H2: There is a significant difference between consumers in Hatay and Aydın in terms of the level of agreement with the statement that olive oil deserves the money paid.

H3: There is a significant difference between consumers in Hatay and Aydın in terms of level of agreement with the statement that expensive olive oil is of better quality.

H4: There is a significant difference between consumers in Hatay and Aydın in terms of their agreement with the statement that perfect olive oil will burn the throat when drunk.

H5: There is a significant difference between consumers in Hatay and Aydın in terms of their agreement with the statement that packaging is essential when buying olive oil.

H6: There is a significant difference between consumers in Hatay and Aydın in terms of their agreement with the statement that extra virgin olive oil has the highest nutritional value.

H7: There is a significant difference between consumers in Hatay and Aydın in terms of the level of agreement with the statement of trusting branded olive oil more.

H8: There is a significant difference between consumers in Hatay and Aydın regarding their agreement with the statement that buying quality products from familiar producers is necessary.

H9: There is a significant difference between consumers in Hatay and Aydın in terms of level of agreement with the statement that olive oil nourishes the skin, strengthens the nails and nourishes the hair.

H10: There is a significant difference between consumers in Hatay and Aydın in terms of their agreement with the statement that mosquitoes will not bite the skin smeared with olive oil.

H11: There is a significant difference between consumers in Hatay and Aydın in terms of their level of agreement with the statement that olive oil is good for chronic constipation and has a stomach-protective effect.

H12: There is a significant difference between consumers in Hatay and Aydın in terms of level of agreement with the statement that olive oil regenerates cells and protects against cancer.

H13: There is a significant difference between the consumers in Hatay and Aydın regarding the level of participation in the statement that meals made with olive oil are more delicious than those made with other oils.

AN APPLICATION IN HATAY AND AYDIN PROVINCES

Subject of The Research

The research focuses on analysing and determining the areas where olive and olive oil consumers in two provinces use this crop. Olive and olive oil consumers living in Aydın and Hatay, the favourite provinces for olive and olive oil consumption, are included in the subject of this study.

Purpose and Importance of The Research

Olives and olive oil have not only economic but also cultural value. Widely used in Turkish cuisine and traditional medicine (Kaplan & Arıhan, 2012), olives and olive oil are the product of knowledge and experience passed down through many generations. Therefore, an in-depth study of olive and olive oil culture and its adaptation to progressive practices offers essential research and development opportunities for academic and industrial applications. Aydın province, one of Turkey's major olive and olive oil-producing provinces, had 22.662.164 million fruit-bearing olive trees in 2022-2023, yielding an average of 61.609 tons of olive oil (National Olive Report, 2019). Hatay province, on the other hand, according to this report, had 14.130.053 million fruit-bearing trees and 145.000 tons of olives in 2022-2023, with an average olive oil production of 27.000 tons (National Olive Report, 2019). These data show how important the two provinces are in production and consumption. This study aims to understand these regions' olive oil consumption patterns by examining olive oil consumption and preferences in two provinces that are essential production centres of olives and olive oil. The findings and inferences from the different uses of olives and olive oil provide critical perspectives to the stakeholders in the olive oil market and the industry. The central mass of the research consists of olive oil consumers in Hatay and Aydın provinces. This study aims to provide valuable information to stakeholders in the industry and market by measuring producer and consumer consumption and uses of olive oil.

Table 1. Official Data of the Ministry of Agriculture and Forestry

HATAY REKOLTE FORECAST								
YEAR	Number of trees		Olive grain per tree (Kg)	Olives to be obtained (Ton)	Olives to be divided into dishes (Ton)	Olives to be divided into oil (Tons)	Olive oil to be obtained (Ton)	Olive grains for 1 kg of olive oil (Kg)
	Bearing Fruit	Not Bearing Fruit						
2012-2013	11.002.427	3.535.584	9,1	99.682	29.905	69.777	17.444	4,0
2013-2014	11.888.323	2.651.688	8	95.107	23.892	71.215	17.804	4,0
2014-2015	12.418.660	2.121.351	10	124.187	37.256	86.931	21.733	4,0
2015-2016	12.418.660	2.121.351	13,6	168.750	33.750	135.000	27.000	5,0
2016-2017	9.668.778	3.577.115	7	66.180	9.930	56.250	12.500	4,5
2017-2018	12.098.596	3.189.532	11,8	143.000	7.150	135.850	26.000	5,2
2018-2019	12.492.281	3.294.750	7,3	91.000	5.500	85.500	17.000	5,0
2019-2020	12.492.281	3.294.750	9,8	127.500	15.000	112.500	25.000	4,5
2020-2021	13.442.136	2.999.011	5,0	67.211	6.721	60.490	13.442	4,5
2021-2022	13.732.722	3.059.735	8,7	120.000	12.000	108.000	24.000	4,5
2022-2023	14.130.053	2.673.400	10,3	145.000	10.000	135.000	27.000	5,0

Table 2. Official Data of the Ministry of Agriculture and Forestry

AYDIN REKOLTE FORECAST								
YEAR	Number of trees		Olive grain per tree (Kg)	Olives to be obtained (Ton)	Olives to be divided into dishes (Ton)	Olives to be divided into oil (Tons)	Olive oil to be obtained (Ton)	Olive grains for 1 kg of olive oil (Kg)
	Bearing Fruit	Not Bearing Fruit						
2012-2013	21.940.698	2.495.217	7,9	173.639	49.778	123.861	23.830	5,2
2013-2014	22.058.345	5.871.777	5,5	120.421	26.308	94.113	17.343	5,0
2014-2015	22.076.091	2.251.196	7	152.651	48.053	104.598	20.512	5,1
2015-2016	21.941.499	2.408.727	5,3	117.173	39.568	77.605	15.694	4,9
2016-2017	22.201.194	2.324.978	11	283.151	58.239	224.912	37.554	6,0
2017-2018	22.811.443	2.292.496	19,3	440.796	77.676	363.120	68.650	5,3
2018-2019	22.387.754	2.514.812	9,0	200.889	31.985	168.904	33.781	5,0
2019-2020	22.193.288	2.430.472	17,4	334.030	77.049	256.981	52.272	4,9
2020-2021	22.092.794	2.468.514	5,5	120.704	31.622	89.082	16.197	5,5
2021-2022	21.559.929	2.228.534	13,3	287.749	43.693	244.056	42.370	5,8
2022-2023	22.662.164	2.421.767	19,0	429.860	77.906	351.954	61.609	5,7

ANALYSIS AND EVALUATION OF THE DATA OBTAINED FROM THE RESEARCH

Demographic Characteristics and Shopping Information of Surveyed Visitors

Four hundred eight respondents from Hatay and Aydin provinces, especially female olives and olive oil consumers, participated in this study. May July 1, 2024, the survey was conducted in the districts of Hatay and Aydin province between the dates of May 1 and July 1, 2024. The survey was conducted in the districts of Hatay and Aydin Dec. The demographic characteristics of the respondents in this study are given in Table 3. When we look at the demographic characteristics of the respondents who participated in the survey, we see that in Hatay, the interest and interest of young age groups in olive and olive oil consumption is at the upper limit, while in Aydin, the interest of adults between the ages of 25-44 towards these products is higher. These demographic differences may shape olive and olive oil consumer preferences, marketing strategies, and sales tactics in both regions. Again, when the education levels in these two provinces are analysed, most consumers are at the university level. The high education level in Hatay indicates an increase in olive and olive oil consumption, while in Aydin, a more comprehensive range of education levels indicates that these products are widely consumed. When the marital status of the individuals who participated in the survey was analysed, the majority of the respondents in Hatay were single consumers, 52%. In comparison, 60.6% of the respondents in Aydin were married. Consumers who participated in the survey were asked open-ended questions about their income status, and the grouping system in the table was created within the framework of an inevitable comparison. In the group of those who did not specify their income, it was thought that students and homemakers could be included in this group since the respondents gave the answers of students and homemakers in response to the survey statements. The 19,999 TL and below group represents students and low-income respondents earning minimum wage. The group between 20-39,999 TL represents the survey participants in the middle-upper class. The group of 40.000 TL and above is characterised as upper class. While the average income of the survey participants in Hatay is 22672.57, the average income in Aydin is 23388.94. Based on these data, it would be more accurate for olive and olive oil sellers to determine their price levels according to the averages of these two provinces. The olive and olive oil consumers who participated in the study were asked about their occupations in an open-ended question; the participants' occupational information is given in Table 1. Looking at the occupational information of the participants, it is seen that the rate of public employees in Hatay (37%) is higher than the rate in Aydin (25%). On the other hand, the proportion of homemakers in Aydin (36.1%) is higher than in Hatay (24.5%), suggesting that homemakers have a significant share in olive and olive oil consumption in Aydin. While private sector employees have similar shares in both provinces (Hatay 20%, Aydin 22.6%), the number of students is higher in Hatay (16.5%) than in Aydin (10%). The self-employed are overrepresented in Aydin (6.3%) compared to Hatay (2%). These data reveal that olive and olive oil consumer profiles in Hatay and Aydin differ according to occupational groups. Marketing strategies should be shaped according to these differences in occupational groups in both provinces. For example, while campaigns targeting homemakers may be more prevalent in Aydin, strategies targeting public employees may be prioritised in Hatay.

Table 3. Demographic Characteristics of Participants

	HATAY		AYDIN		Education Level	HATAY		AYDIN	
	F	(%)	F	(%)		F	(%)	F	(%)
Age									
24 years and younger	87	36,5	22	10,6	Primary and Secondary Education	19	9,5	45	21,6
25-34 years old	79	39,5	96	46,2	High School	40	20	43	20,7
35-44 years old	22	11	60	28,8	University	129	64,5	102	49
45 years and older	26	13	30	14,4	Master's Degree and Above	12	6	18	8,6
Total	200	100	208	100	Total	200	100	208	100
Income (TL)	F	(%)	F	(%)	Profession	F	(%)	F	(%)
Those who did not specify income	55	27,5	60	28,8	Student	33	16,5	20	10
19,999 TL and below	46	23	55	26,4	Housewife	49	24,5	75	36,1
Between 20-29.999 TL	18	9	24	11,5	Public Employee	74	37	53	25
Between 30-39.999 TL	39	19,5	32	15,4	Private Sector Employee	40	20	47	22,6
40.000 TL and above	42	21	37	17,8	Self-employment	4	2	13	6,3
Total	20	100	208	100	Total	200	100	208	100
Marital Status	F	(%)	F	(%)					
Married	96	48	126	60,6					
Single	104	52	82	39,4					
Total	200	100	208	100					

The research data show a significant relationship between the demographic characteristics of olive and olive oil consumers in Hatay and Aydın and their usage preferences. These analyses support the validity of our research hypotheses and emphasise the influence of demographic criteria on consumer preferences.

PARTICIPANTS SHOPPING INFORMATION

Respondents in the two provinces were asked where they usually shop for olives and olive oil. This question is essential for businesses and consumers who sell olives and olive oil. The results are given in Table 4.

Table 4. Participants' Shopping Information-1

The Place Where Olive Oil Shopping is Done				
	HATAY		AYDIN	
	F	%	F	%
Place of purchase				
Direct Manufacturer	89	44,5	128	61,6
Other	19	9,5	61	29,5
Total	108	54	189	91,1
We Produce Ourselves	123	61,5	97	46,7
General Total	231	115,5	286	137,8

While oil production from one's garden is expected in Hatay, direct purchases from producers are preferred in Aydın. Moreover, the proportion of purchases from other sources is higher in Aydın than in Hatay. These results show the differences in consumer shopping preferences between the two provinces. This information can help shape marketing strategies for olive oil according to the respective regions. For example, in Hatay, direct communication with producers who produce their oil from their crops can increase sales, while in Aydın, online shopping platforms or chain markets can be encouraged. In addition, studies addressing these two regions can be conducted to examine why olive and olive oil shopping from chain markets and other platforms is not done or remains weak, especially in Hatay, and studies that build trust in consumers and the people of the region can be provided.

Table 5. Participants' Shopping Information-3

The Most Important Criteria in Olive and Olive Oil			
HATAY		AYDIN	
CRITERIA	TOTAL SCORE	CRITERIA	TOTAL SCORE
Taste	937	Taste	818
Smell	827	Colour	804
Colour	762	Quality	725
Price	699	Price	724
Quality	591	Brand	664
Brand	588	Smell	633
Other	0	Other	0

The respondents were asked to rank the criteria that affect them when purchasing olives and olive oil in order of importance, and the answers were subjected to scoring using the ordinal ranking method. The results of the statements are given in Table 5. The most important criteria for purchasing olives and olive oil in Hatay:

- **Taste and Smell Priority:** Taste and smell were among the important criteria in both provinces. Dec. This shows that olive and olive oil consumers emphasize the taste and smell of products, and this is the critical factor.
- **Colour and Quality:** Color and quality are also among the essential criteria. This reveals that consumers attach importance to the visual fascination and quality of the products.
- **Price and Brand:** Price and brand statements are essential to attracting consumers' attention. However, they rank behind factors such as taste, smell, colour, and quality.

This table highlights certain differences in consumers' preferences when purchasing olives and olive oil in Hatay and Aydın provinces. For example, taste, smell and color are of critical importance in Hatay, while taste, color and quality come to the fore in Aydın. These differences may be due to the cultural and geographical characteristics of both provinces, as well as the habits of consumers.

Table 6. Participants' Shopping Information-4

Preferred Brands for Olive and Olive Oil Shopping		
Brand	HATAY	AYDIN
My Own Oil	79	50
Komili	30	33
Tariş	2	49
Yudum	7	12
Kırlangıç	1	13
Other	81	51
Total	200	208

This table compares consumers' olive oil brand preferences in the two provinces. Table 6 gives the findings obtained when the brands preferred by consumers in Hatay and Aydın provinces are compared.

- **Own Oil and Other Brands:** In both provinces, consumers prefer oil produced from their crops. This indicates that they attach importance to local production and naturalness. In addition, the choices in the Other category are also noteworthy and include local producers and different brands. In other options, consumers prefer domestic brands such as Kaplan, Sızma, Sırma, Sidal, Oleamea, Marmarabirlik, Aktepe Birlik, Aydoğmuş, Egem, Nova Vera and Eti. In this respect, factories, direct producers and different brands are among the prominent preferences in both provinces.
- **Brand Preferences:** While the Tariş brand is more preferred in Aydın, Komili and other brands remain popular in Hatay. This shows that marketing and sales tactics, strategies and brand awareness are also important in addition to regional differences.

Moreover, differences in the brands consumers prefer may be due to factors such as product quality, product price, packaging design, product content or marketing campaigns. These results can be an essential guide for marketing professionals and business owners to understand local markets better and respond to customer needs.

COMPARISON OF OLIVE OIL USAGE AREAS OF OLIVE OIL CONSUMERS LIVING IN HATAY AND AYDIN

This part of the study compares the general uses of this crop by olive oil consumers who participated in the survey in Aydın and Hatay provinces. Table 7 shows the statements regarding the usage areas for the participants of both provinces and the answers of the participants. When the answers given by the participants to the statements are analysed, there is a difference of 0.36 between the averages of the participants (Hatay: 3.41, Aydın: 3.77) calculated by considering all statements. When Hatay and Aydın provinces are compared, the statements with the highest average in the olive oil usage areas of olive and olive oil consumers in Hatay province are listed as follows:

1. Olive oil is used in soap making (4,22 points)
2. Olive oil is used to repair hardened and challenging-to-open objects (4.08 points)
3. Olive oil is used to massage the body (4.06 points)
4. Olive oil is used for the treatment of fractures, dislocations and sprains in the body (3.99 points)
5. Olive oil is used in cosmetics (3.97 points)
6. Olive oil is used for frying (3.89 points)
7. Olive oil is used for diaper rash and redness (3,70 points)
8. Olive oil is used to repair rusted objects (3,30 points)
9. Furniture, wooden goods and decorative products are made from olive wood (3.09 points)

When Hatay and Aydın provinces are compared, the statements with the highest average in the olive oil usage areas of olive and olive oil consumers in Aydın province are listed as follows:

1. Olive oil is used to massage the body (4.52 points)
2. Olive oil is used in soap making (4.51 points)
3. Olive oil is used in cosmetics (4.48 points)
4. Olive oil is used for diaper rash and redness (4.43 points)
5. Olive oil is used to repair hardened and challenging-to-open objects (4.42 points)
6. Olive oil is used for the treatment of fractures, dislocations and sprains in the body (4.31 points)
7. Olive oil is used to repair rusted objects (3.92 points)
8. Furniture, wooden goods and decorative products are made from olive wood (3.71 points)
9. Olive oil is used to polish wooden objects (3.46 points)
10. Olive oil is used for cleaning furniture (3.2 points)
11. Olive oil is used for frying (3.02 points)

When both lists are examined, 9 of the 13 statements in the survey questions are expected. When the usage areas of olive oil in both provinces are examined, it is noteworthy that this product is used in cosmetics, health, food, cleaning, and especially in the production, maintenance, and repair of wooden products. The participant responses in Table 7 show that olive and olive oil usage is versatile and clearly expresses the trendy usage areas of this product in recent periods.

Table 7. Participants Responses to the Statements Related to the Uses of Olive Oil

HATAY			AREAS OF USE	AYDIN		
N	Mean	St. Deviation		N	Mean	St. Deviation
200	3,70	1,544	Olive oil is used in diaper rash and redness.	208	4,43	1,144
200	4,06	1,366	Olive oil is used for massaging the body.	208	4,52	1,103
200	2,68	1,692	Olive Kernel is used to make the rosary.	208	2,13	1,459
200	3,89	1,576	Olive oil is used in frying.	208	3,02	1,806
200	2,58	1,624	Olive oil is used to polish wooden objects.	208	3,46	1,75
200	2,08	1,495	Olive oil is used for cleaning furniture.	208	3,2	1,838
200	2,71	1,792	Olive kernel is used as heating fuel.	208	2,99	1,767
200	4,22	1,348	Olive oil is used in soap making.	208	4,51	1,138
200	3,97	1,387	Olive oil is used in cosmetics.	208	4,48	1,076
200	3,30	1,692	Olive oil is used to repair rusted objects.	208	3,92	1,595
200	4,08	1,408	Olive oil is used to repair hardened and challenging-to-open objects.	208	4,42	1,169
200	3,09	1,708	Furniture, wooden goods and decorative products are made from olive wood.	208	3,71	1,669
200	3,99	1,384	Olive oil treats fractures, dislocations and sprains in the body.	208	4,31	1,267
	3,41		TOTAL		3,77	

1: I never use it, 2: I do not use it, 3: No idea, 4: I use it, 5: I always use it

COMPARISON OF OLIVE OIL CONSUMERS' PERCEPTIONS OF OLIVE OIL LIVING IN HATAY AND AYDIN

In this part of the study, statements about olive oil for olive oil consumers in Hatay and Aydin provinces participating in the survey are included, and these statements are compared in general. Single Factor Multiple Variance Analysis (MANOVA) was applied to determine whether there is a difference between the responses of olive and olive oil consumers in both provinces to the statements about olive oil. The results of the MANOVA analysis and Hotelling's T-test are shown in Table 8.

In Hatay and Aydin provinces, there is a significant difference in participation in the statements related to olive oil for consumers of olive oil. There are significant differences in the following statements:

1. I think that olive oil deserves the money I pay (<.001)
2. Packaging is essential when buying olive oil (<.001)
3. Extra virgin olive oil has the highest nutritional value (<.001)
4. I trust branded olive oil more (<.001)
5. Mosquitoes do not bite skin smeared with olive oil (<.001)
6. Olive oil is good for chronic constipation and has a protective effect on the stomach (<.001)
7. Olive oil regenerates cells and protects against cancer (<.001)

Table 8. Comparison of Responses to Statements Related to Olive and Olive Oil in Hatay and Aydin Province

Statements	Means		F VALUE	MEANINGFULNESS LEVEL
	HATAY	AYDIN		
I think olive oil prices are affordable.	2,17	2,09	0,335	0,563
I think olive oil deserves the money I pay for it.	2,71	2,18	11,275	<.001
I think expensive olive oil is of better quality.	2,46	2,64	1,366	0,243
Perfect olive oil burns the throat when drunk.	3,78	4,08	5,690	0,018
Packaging is important when buying olive oil.	3,59	4,23	20,203	<.001
Extra virgin olive oil has the highest nutritional value.	3,93	4,35	14,278	<.001
I trust branded olive oil more.	2,64	4,00	76,407	<.001
It is necessary to buy quality products from familiar producers.	4,64	4,80	4,122	0,043
Olive oil nourishes the skin, strengthens the nails and nourishes the hair.	4,73	4,88	5,434	0,020
Mosquitoes do not bite the skin smeared with olive oil.	3,37	4,21	41,839	<.001
Olive oil is good for chronic constipation and has a protective effect on the stomach.	4,49	4,83	18,918	<.001
Olive oil regenerates cells and protects against cancer.	4,41	4,79	19,315	<.001
Dishes made with olive oil are more delicious than other oils.	4,74	4,84	2,808	0,095

Hotelling's T Test F Value = 10,596 Degrees of Freedom = 13 Level of Significance = <.001

It is seen in Table 8 that Hotelling's T-test result is significant (Significance Level <.001). Accordingly, it can be said that the perceptions of olive and olive oil in Hatay and Aydin provinces are different from each other as a whole. Olive and olive oil consumers in Aydin believe more in the various benefits of olive oil and have more trust in branded products. In addition, consumers in Aydin give higher scores on issues such as the care of the packaging and the perception of the quality of olive oil's ability to burn the throat. On the other hand, Olive and olive oil consumers in Hatay are less convinced that olive oil offers value for money and have lower satisfaction rates. At the same time, Hatay olive oil consumers, who are aware of olive oil's nutritional value and health benefits, show high confidence in buying a quality product from a familiar producer. This shows high trust in local producers and the tendency to prefer local products. Satisfaction with the price of olive oil and its value for money is also not high in Aydin, but there is a more pronounced perception of the relationship between price and quality of olives and olive oil. The belief that expensive olive oil is better quality is more common in Aydin than in Hatay. These data show that olive and olive oil consumers in both provinces have different judgments and priorities regarding olive oil, and these differences should be considered when marketing strategies are being developed.

When the information sources that olive and olive oil consumers in the two provinces most trust and attach importance to in their product purchase decisions are analysed, it is seen that 55.6% of the respondents consider their family as the most trusted source of information. This is because the majority of families are olive oil producers, so since they know and consume class A olive oil, there is usually more confidence in the choice of

families. This emphasises that family plays a vital role in consumers' decision-making process. Expert Opinion was identified as the second most reliable source of information by 29.9% of the respondents. The majority (50.7%) of the information sources used by consumers during product research show that they obtained the information for product research from their families. This indicates that consumers prefer to get information by consulting their families before purchasing. Expert Opinion ranked second with 28.7%. Regarding the first source of information that Olive and Olive Oil consumers use to draw attention to products, 49% of them get information about the product from their families. These tables show us that the family is essential in attracting consumers' attention, even though social networking platforms are perceived to be ahead. In the second place, Expert Opinion maintains its place at 25%. The answers to the statements reveal that family and expert opinions play an essential role in the product purchase phase of Olive and Olive Oil users. These findings are essential to determine marketing strategies and consumer relationship management. In addition, the fact that product promotion and marketing strategies are family-oriented shows that consumers can be more effective in decision-making.

Table 9. Accepted and Rejected hypotheses

	HYPOTHESES	STATUS
H1	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that olive oil prices are affordable.	REJECTED
H2	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that olive oil deserves the money paid for it.	ACCEPTED
H3	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that expensive olive oil is of better quality.	REJECTED
H4	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that perfect olive oil will burn the throat when drunk.	REJECTED
H5	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that packaging is essential when buying olive oil.	ACCEPTED
H6	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that extra virgin olive oil has the highest nutritional value.	ACCEPTED
H7	There is a significant difference between consumers in Hatay and Aydn in terms of trusting branded olive oil more.	ACCEPTED
H8	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that it is necessary to buy quality products from familiar producers.	REJECTED
H9	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that olive oil nourishes the skin, strengthens the nails and nourishes the hair.	REJECTED
H10	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that mosquitoes will not bite the skin smeared with olive oil.	ACCEPTED
H11	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that olive oil is good for chronic constipation and has a stomach protective effect.	ACCEPTED
H12	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that olive oil regenerates cells and protects against cancer.	ACCEPTED
H13	There is a significant difference between consumers in Hatay and Aydn in terms of thinking that dishes made with olive oil are tastier than other oils.	REJECTED

Table 10. Responses of consumers in Aydn and Hatay provinces to statements about their preferences for Attraction, Purchase and Research sources

Olive and Olive Oil Consumers' Preference for Introductions Sources.						
OLIVE OIL						
Information Source	Purchasing		Research		Attracting Attention	
	F	%	F	%	F	%
Advertisement	4	1,0	10	2,5	25	6,1
Sales Person	6	1,5	7	1,7	6	1,5
Introduction	11	2,7	13	3,2	21	5,1
Friends' Advice	38	9,3	54	13,2	54	13,2
Family	227	55,6	207	50,7	200	49,0
Expert Opinion	122	29,9	117	28,7	102	25,0
TOTAL	408	100	408	100	408	100

CONCLUSIONS AND RECOMMENDATIONS

This research was conducted among consumers in Hatay and Adana provinces, the two most crucial olive and olive oil regions. The research focuses on comparing the two provinces in terms of olive oil usage and perceptions. In the two provinces, in-depth and face-to-face interviews were first conducted on consumers and their preferences, and answers were obtained from experts in this field to question which areas the crop is used mainly. The questions were enriched with the findings obtained from the experts and the literature studies, and a 5-point Likert scale was used in the survey study with the idea that the participants could respond better and the measurement could be healthier.

The results and recommendations obtained in this study can be listed as follows:

1. When the purchasing behaviour of olive and olive oil consumers in the two provinces is examined, there is a general dissatisfaction among consumers, especially regarding the price corresponding to the quality of this product, and at the same time, olive oil is mainly bought directly from the producer in both provinces, or it is the consumers' product. They do not prefer to buy from retail outlets, and they emphasise their distrust of these places. There is an inverse relationship between this view of consumers and the fact that retail outlets are more popular among the new branded sellers in this field. Regarding price stability, it is concluded that consumers in both provinces give more importance to the first three most essential criteria of the product, which are Taste, Smell and Color, as well as the conditions in how and how the product is produced, price and brand are the last essential criteria. If a product has the first three criteria, they will continue to consume it regardless of the price.
 - In this sector, producers and sellers can gain consumers' trust by transparently presenting all the production process details to consumers. In addition, by allowing consumers to try products on a minimal scale, they can ensure that they understand the value of quality products. Developing products by giving importance to customer satisfaction and taking feedback into account creates a positive perception in consumers and ensures loyal customers. In addition, maintaining price stability and conducting campaigns, especially for low-income groups, will enable sellers to gain a strong position in the market.
2. Consumers in the two provinces use olives and olive oil primarily in food, health, cleaning, and cosmetics, and it is seen that they produce and consume all kinds of products for this crop's whole body and fruit. While the prevalence of the healing effect of this product in Hatay province, especially in cases such as falls, sprains, dislocations or fractures in the field of health, is less known in Adana province. While comparing these two provinces in the general subject of the research, expanding the areas of use in these two provinces and other provinces and enriching the market of this product can lead individuals to a healthier and more conscious consumer profile. The areas mentioned above of use still maintain and improve their effectiveness. The marketing world can provide consumers with a broader range of uses for this product.
 - This situation offers essential opportunities in the marketing world. First, the areas of use of olives and olive oil can be introduced to consumers through information and various local events. By making agreements with influencers and experts, content can be created that introduces the areas of use of the product, and all segments can have access to the areas of use related to this product. By creating small samples and distributing free trial products to consumers through various trainings, especially local events, consumer interest can be attracted, thus increasing diversity in regions that do not know the usage area of olive and olive oil and creating a solid position in the market.
3. Advertisements, promotions, expert opinions from salespeople, etc., are sources of information that consumers use in their research. Olives and olive oil have started to attract attention thanks to the culinary trends spread over the internet. This has popularised the use of olive oil and increased consumer demand for these products. However, although information sources such as advertising and promotion, which are effective in attracting attention, emphasise visuality, the family element or expert opinions, which are classical sources of research, information, purchasing and attracting attention, are still among the sources that maintain their importance. Some information may still be undiscovered or, even if discovered, may not have seen the light of day.
 - Especially in this regard, marketers can emphasise the value of this product among families by creating campaigns aimed at families and gaining their support. By collaborating with family members who produce and consume their own olives and olive oil, consumer loyalty can be gained by creating content that emphasises the importance of family in information sources such as advertising and social media.

Marketers, advertising companies, and research companies can expand their efforts to reach this golden information waiting to be discovered and create a wide range of uses for this product.

As a result, much different information and results can be obtained when this research is applied in different periods and cities. The findings from the two cities were shared with the participants in this research, and the findings mutually influenced the participants and created new experiences and uses. New information and usage areas can be reached when this research is applied in other cities favouring olives and olive oil.

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The authors have no conflict of interest to declare.

Author contribution

All authors have read and accepted the final version of the article. The authors confirm that the Text, Figures and Tables are original and have not been published before.

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