

Research Article

Determinants of Geographical Indicated Kırklareli Oak Honey Consumption Reasons with Special Reference to the Influence of Nutritional Knowledge and Health Status

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Abstract

Kırklareli is known as a leading province in oak honey production in Turkey. Kırklareli is located at the foothills of Istranca Mountains and has a rich oak diversity, therefore it is an important source for oak honey production. Oak honey is one of the secretion honeys and the Hungarian oak, which has the highest secretion production capacity, is one of the seven oak species commonly found in the oak forests of Kırklareli. This region has a great importance especially due to the presence of the bee eco type known as Thracian Bee. As a result of the work carried out by the Kırklareli Beekeepers Association and the Provincial Directorate of Agriculture and Forestry, an isolated zone with a diameter of 30 km was established to protect the bee eco-type. In this way, the oak region and bee species have been protected and Kırklareli Oak Honey has turned into a unique production area. In this study, it was tried to determine the reasons of consumers who prefer Kırklareli Oak Honey with Geographical Indication. A questionnaire was sent to 403 participants between the ages of 18-70 living in Kırklareli Central District and other districts through web social media platforms. A 5-point Likert scale was used to measure the reasons for the participants' preference for oak honey and then reduced to 4 sub-factors by factor analysis. The results of the data analysis were evaluated and the following conclusions were reached about the consumption preferences of individuals consuming Geographically Signed Kırklareli Oak Honey. It was determined that the most important reason for the individuals participating in the research was that oak honey is rich in antioxidants and minerals and is healthy. In addition, it was seen that there was a significant and parallel relationship between 4 sub-factors such as preference, trust, labelling, health and price among those who consume Geographically Signed Kırklareli Oak Honey. Individuals prefer to buy healthy oak honey from reliable producers and sellers who sell certified products. They attach importance to labels showing the quality and content of the product and prefer products with affordable prices. It was also concluded that Geographical Indication elements positively affect the purchasing decisions of the product.

Keywords: Oak Honey, Geographical Indication, Kırklareli, Consumer Preferences, Consumer Attitudes

INTRODUCTION

Honey has a great historical and cultural importance for Turkey. Indications that honey was collected from flowers by bees in Anatolia date back to approximately 8-9 thousand years ago [1]. Honey has always been an important food source in Anatolia [2]. Anatolia's rich vegetation and ecosystem diversity provide an excellent environment for honey production. Throughout history, honey has been attributed a special value by physicians. Roman physicians stated that honey is a powerful antidote, Hippocrates likened honey to air and water, and Egyptian, Greek and Arab physicians used honey as a syrup or ointment by mixing it with herbs in the treatment of various eye, mental and nervous diseases [3]. Since ancient times, honey has been used to cure ulcers, asthma, throat infections, tuberculosis, thirst, hiccups, fatigue, eczema, dizziness, hepatitis, constipation, haemorrhoids, eye diseases, worms and wounds [4]. Modern scientific research shows that honey can be potentially useful in the treatment of various health problems and preventive measures. Honey may contribute to the treatment of a number of health problems such as diabetes [5], respiratory diseases and asthma [6], digestive system disorders [7], immune system [8, 9], memory [10], some types of cancer [11]. Flavonoids and polyphenols, bioactive molecules that act as antioxidants, are the main components of honey and honey has phytochemical, anti-inflammatory [12], antimicrobial [13] and antioxidant [14] properties. Some dark-coloured honeys, especially oak honey, can be particularly effective in the treatment of conditions such as chronic wounds, burns, diabetes and ulcers and have been used as complementary therapy on animals and in clinical trials [15]. Secretory honeys, such as Kirklareli Oak Honey, are recognised as alternative and supportive products for health [16]. These health-related properties make oak honey a functional food. In recent years, consumers have recognised honey not only as a nutrient but also as a dietary

supplement and functional food. According to the Ministry of Agriculture and Forestry's 2022 Beekeeping Products Report, Turkey ranks second worldwide in honey production, but 22nd in world honey exports. This shows that Turkey's honey needs to be further promoted in the international arena while creating a large market for countries with high honey production [17]. Honey production and the number of enterprises in Turkey is quite high. However, most of the honey produced in Turkey is reserved for local consumption and therefore forms a local market. However, in the marketing of honey by producers and sellers, it is important to consider issues such as the awareness of local consumers, their preferences and the factors affecting these preferences [17]. Most of the studies on honeys in Turkey have focused on the contents, nutritional values and geographical characteristics of honeys. However, more research should be conducted on how the demographic characteristics of consumers affect their consumption of local honeys and what their preferences are [18]. Kirklareli Oak Honey is a local product and has a geographical indication and the rarity of such researches increases the importance of this subject.

Kirklareli and Oak

Turkey's honey diversity is shaped by geographical and climatic conditions. There are more than 20 species of oak trees in the country and this diversity is based on geographical regions and climates. Kirklareli is located at the foot of the Istranca (Yıldız) Mountains. It has large oak forests due to its climate and vegetation [19, 20, 21]. The main oak species found in Kirklareli oak forests include *Q. petraea* (sessile oak, common), *Q. robur* (sessile oak, common), *Q. frainetto* (Hungarian oak, common), *Q. cerris*, *Q. hartwissiana*, *Q. infectoria* and *Q. pubescens*. A study showed that 7 oak species found in Kirklareli Istranca oak forests produce secretion, but the main source of oak honey is *Quercus frainetto* ten. This species has

glandular hairs in its fruits and the secretion that produces oak honey was found to be of vegetable origin. The sap in the tree exits the fruits through the glandular hairs. Oak leaves and fruits are affected by day and night temperature differences in summer [22, 23]

Thracian Bee Eco Type

Turkey has been harbouring many honey bee species and eco-types for many years. The fact that the country has indigenous honey bee breeds makes Turkish beekeeping important not only within the country but also worldwide. Honey bee colonies in Anatolia have existed for thousands of years and during this time they have adapted and differentiated to local ecological conditions [24]. Thracian bee is a bee species commonly found in the Thrace region of Turkey. Genetic analyses show that 86% of the bee samples collected from the Thrace region carry the genetic characteristics of the Carnian race [25]. Although there are genetic similarities between Thracian bee and Carnian bee samples, these two genotypes are thought to originate from the same source [26]. A study conducted in Kırklareli showed that the bees in the isolated region were genetically differentiated among themselves, but separated from bees from other regions [27]. In order to preserve its purity, it is kept as a native ecotype in an isolated region with a diameter of thirty kilometres within the borders of Kırklareli province with the support of the Ministry of Food, Agriculture and Livestock [28]. The species, which is known to be genetically close to the Carnian race (*Apis Mellifera Carnica*), has been registered as Thracian Bee Eco Type. With this registration, Thracian bee has been taken under protection as one of the rich natural heritages of Turkey. It is aimed to maintain genetic diversity and to provide resources for future breeding studies. Thracian bees are perfectly adapted to the climatic conditions and vegetation of the Thracian region. These bees are resistant to variable weather conditions, can survive

the long winter months in good health and can live successfully in hot, dry summers and temperate climates. Thracian bees usually have a brown or dark coloured body and may be slightly larger than other bees. They have parts covered with bristles which increase their pollen carrying capacity. Their high honey production capacity, harmonious behaviour and strong colonies make the Thracian bee valuable. These characteristics, together with their contribution to the economy, emphasise the importance of the Thracian bee.

Characteristics of Kırklareli Oak Honey

In Turkey, most of the oak honey is produced in the Thrace Region, especially within the borders of Kırklareli [29]. Kırklareli Oak Honey produced by Trakya Bee belongs to the category of secretion honeys and is a dark coloured and viscous mono flora honey with high mineral values. This honey has a unique, woody taste and aroma. The oak fruits usually produce maximum secretion between the 20th of June and the first week of August and this process usually lasts for a week. The secretion is triggered by the high temperature difference between day and night and the acorns secrete a sweet sap. Thracian Bees collect this sweet nectar and contribute to the production of this special honey. Thracian Bees digest the collected liquid in their stomachs and add some enzymes. Then they transfer this sweet mixture to another bee, this transfer process is repeated approximately two to three times. When the honeycomb is filled with honey, the beekeeper takes it out of the hive and starts this production process. The result is a dark coloured honey, namely Kırklareli Oak honey, which has different properties from nectar honey. Kırklareli Oak honey is darker in colour and thicker in consistency than other honeys. The taste is often reminiscent of molasses, but it is not overly sweet and usually does not crystallise. This honey contains lower amounts of pollen than other honeys. It also contains many minerals (calcium,

magnesium, manganese, sodium, potassium, copper, chromium and iron) and vitamins. It also contains many essential amino acids. It contains phenolic acids such as protocatechuic acid and is known for its antimicrobial properties. Studies show that Kırklareli Oak honey has a high level of antimicrobial effect against pathogenic microorganisms [30]. Kırklareli Oak honey production is of great importance for the region. Analyses carried out to determine the quality parameters contributed to the geographical indication of this honey [31, 32, 33, 34]. Kırklareli Oak Honey, which is very rich in mineral and antioxidant content, is a registered honey. In 2018, a protocol was signed between Kırklareli Provincial Directorate of Agriculture and Forestry and Trakya Development Agency and with this project, "Kırklareli Oak Honey Geographical Indication Registration" studies were initiated. As a result, Kırklareli Oak Honey was entitled to receive a "Geographical Indication Registration Certificate" on 12 February 2021.

Geographical Indication and Kırklareli Oak Honey

The rapid development of technology and information systems in a globalised world supports individuals to easily obtain information about products around the world, find the products they want and even buy them from online sales platforms. Although this development offers a great opportunity for producer countries to promote and market their products, it becomes difficult for consumers to identify the origin of products and prevent counterfeiting. The registration of geographical indications ensures the promotion and protection of a particular product. These are products that have a unique relationship with their place of production, based on local production and origin [35]. The European Union quality policy aims to protect geographical origins and the unique characteristics of traditional products. Geographical indications constitute intellectual property rights for the

names of specific products and play an important role in trade negotiations between the EU and other countries. Geographical indications provide these rights for specific products that have a strong link between the area of production and their unique characteristics [36]. The names of products registered by designation of origin are those with the strongest link to their origin. Generally, food products, beverages and agricultural products are registered in this way. A product registered by designation of origin must be labelled with the registration mark (logo) and this label must include all the registered characteristics [37]. The production, processing and preparation processes of products registered with a designation of origin must take place in a specific region. Kırklareli Oak Honey is an important example in this context. Academic studies on oak honey have shown that oak honey has high antioxidant substances and phenolic components [34]. In addition, it has been determined that oak honey has a high level of antimicrobial effect against pathogenic microorganisms [30]. Therefore, oak honey is entitled to receive geographical indication. Geographically marked products play an important role in the marketing of Kırklareli as a touristic destination [38]. Geographically labelled products are products that depend on the characteristics, flora, production techniques and traditions of the regions where they are produced. Therefore, they make an important contribution to the search for reliable and specialised products for consumers [39]. When forming our preferences and visiting tourist destinations, GI products help us to make safe choices [40, 41]. It has also been observed that such products play a decisive role in tourism expenditures [42]. Turkey, as a country with rare geographical features, harbours various local and GI products. The limited research on local honeys and consumer relations emphasises the importance of research in this field. More studies should be conducted on the promotion, branding, marketing and sales

of these products. Scientific research on geographically marked products points to a promising area in the future.

Some Literature on Factors Affecting Consumers' Honey Preferences

In a study to examine the honey purchasing habits of consumers and to guide their behavioural habits, it was concluded that almost half of the consumers preferred to buy only branded honey, almost half of them preferred to buy both branded and unbranded local honey, and 7.5% preferred to buy only unbranded local honey, and they thought that the consumption of both branded honey and unbranded local honey was a natural treatment [43]. In the study conducted to determine the consumption preferences of Zara honey in Sivas, Zara, it was concluded that individuals used the appropriate and reliable honey consumption preferences [44]. In a study conducted in the city centres of Bingöl, Elazığ, Malatya and Tunceli, it was observed that consumers would be willing to pay more for natural and organic honey and this willingness was parallel to the increase in the rate of education [45]. In a study examining the consumer preferences of honey consumers living in Erzurum province, it was concluded that as the education level of the consumers increased, their honey consumption increased, and the number of children in the family and the increase in income increased honey consumption [46]. In another study to determine the awareness and consumption preferences of Ege University undergraduate students towards bee products, it was concluded that approximately three-quarters of the students participating in the study consumed an average of 297 grams of honey per month, mostly for breakfast, because of their habits, the packaging and apitherapy information were effective and they found the price of honey high [47]. In another study conducted in Izmir province and its central districts, the type of honey consumed more by consumers was studied and it was concluded that pine honey, which is

obtained from pine forests dominating the flora of the region, was preferred more [48]. During the literature reviewed, it was noticed that the reasons for the preference of honey by consumers are mostly apitherapy properties, flavour and nutritiousness, and the habits of consumers. In addition, the result that some consumers are willing to pay more for natural and local honeys with the idea that honey is healing was found to be remarkable in terms of creating parameters for honey marketing strategies.

MATERIALS and METHODS

This research is of cross-sectional research type and the material of the research is questionnaires, one of the quantitative research methods [49]. Questionnaires are tools for standardising observations in social sciences [50]. The population of the study consists of individuals over the age of 19 and under the age of 75 living in Kırklareli province (Provincial Centre, Lüleburgaz, Babaeski, Demirköy, Kofçaz, Pehlivan köy, Pınarhisar, Vize). As of 2022, the population of Kırklareli is 369.347 people. The number of individuals in this age range, taking into account the population data of the same year, shows that the research population is 272,233 people. The estimated sample size calculated from the research population with a reliability level of '90% and a margin of error of '5% is 384 people. However, 403 people participated in the survey. The individuals selected for the sample were determined randomly. The data of the study were collected through an online survey conducted between 12-25 May 2023 with a total of 403 Oak honey consumers in 8 central districts of Kırklareli province. The questionnaire form was delivered to the sample group online via Google Forms and the responses were collected online. The questionnaire used in the research consists of four sections. The first section includes the "Voluntary Participation Consent Question" and the second section of the questionnaire was opened for the participants who answered this question. In

the second part, the participants were asked whether they had consumed Kırklareli Oak Honey before and the participants who had not consumed it were excluded from the questionnaire. In the third section, there are 7 questions to determine the demographic characteristics of the participants such as gender, age, education level, average monthly income level, occupation and the effect of geographical indication on the individual's honey preference. In the fourth and last section, a questionnaire consisting of 17 variables was applied to determine the reasons for the participants' preference for Kırklareli Oak Honey. This questionnaire is grouped under four factors such as preference, trust, label and health-price. The participants answered the questions using a 5-point Likert scale as "Not at all effective", "Not effective", "Undecided", "Effective", "Effective", "Very effective". The data of the study were analysed using SPSS-22 software. Frequency tables were created for sociodemographic questions, independent sample t-test was applied to determine the differences in group averages of variables, One-Way ANOVA Analysis and Kruskal Wallis-H Analysis were applied for variables with 3 or more groups. In this study, Pearson correlation analysis was applied to determine the direction and strength of the relationship between the scales. The analyses were applied at $\alpha=0.05$ level as the statistical significance level. The scale used in the study was a 5-point Likert scale consisting of 17 variables to determine the reasons for preference of Kırklareli Oak Honey consumers. This scale is grouped under four different factors: preference, trust, label and health-price. This scale was developed by Rüveyda Yüzbaşıoğlu and used in this study with her permission [44]. The reliability of the scale was calculated as a result of the reliability tests performed by the questionnaire developer in a complete and complete manner. Cronbach's Alpha reliability coefficients were found as follows:

Preference: 0.815 **Labelling:** 0.658
Trust: 0.695 **Health-Price:** 0.687

These reliability coefficients are acceptable in terms of internal consistency and reliability of the scale. In addition, Istanbul Okan University Human Research Ethics Committee approved the study on 10.05.2023.

In this section, which includes the research results and discussion, the findings obtained on the factors affecting the preference for Geographically Signed Kırklareli Oak Honey are evaluated.

RESEARCH FINDINGS and DISCUSSION

After the consent of the participants participating in the study was obtained, the question "Have you ever eaten Kırklareli Oak Honey before?" was asked first. As a result of this question, it was determined that 403 participants had consumed Kırklareli Oak Honey before and the study continued with the participants who consumed this oak honey. All of the participants are individuals living in Kırklareli and it has been observed that the rate of recognising and knowing the Geographical Indication Kırklareli Oak Honey has a high value of %73,1. However, it has been observed that still 26.9% of them do not have information about this geographically labelled product of their region or do not have tasting experience. These results have led to the conclusion that the promotion, advertisement and awareness of Kırklareli Oak Honey should be increased. One of the important results of these findings shows that a special product such as Geographically Signed Kırklareli Oak Honey can be a potential economic opportunity for local communities. However, promotion and awareness need to be increased for the product to achieve a sustainable market share and growth. However, the study has also taken an important step to understand the impacts of GI products on local consumers. 86.4% of the respondents stated that the geographical indication influenced their product

preferences. This shows that GI is an important factor shaping product preference among consumers. As a result, it was revealed that promotion and awareness activities should be increased for the sustainability of special products such as Kırklareli Oak Honey with Geographical Indication. In addition, understanding the effects of GI on consumers can help us better evaluate the contribution of such products to the local economy. This study can be an important reference source for those who want to further investigate the effects of GI products on local consumer behaviour.

Tablo 1: Normality Assumption and Reliability Analysis Findings of the Research Scale

Since the kurtosis and skewness values of the scales did not exceed the -2; +2 limits, parametric tests were used in the analyses [51]. The reliability of the scales is at an adequate level. A Cronbach Alpha coefficient between 0.60 and 0.80 indicates that the scale is moderately reliable, and a coefficient between 0.80 and 1.00 indicates that the scale is highly reliable [52, 53].

Tablo 2: Sociodemographic Data on Research Participants

Of the participants in the study, 48,4 % were male and 51,6 % were female. While the rate of married participants is 61,3%, the rate of single participants is 38,7%. The age distribution of the participants is as follows: '28.5% are between the ages of 18-29, '23.6% are between the ages of 30-39, '24.1% are between the ages of 40-49 and '16.1% are between the ages of 50-59. Finally, 7,7 % of them are between the ages of 60-69. In terms of education, 3.7% of the participants are literate, 9.9% are primary school graduates, 37.5% are high school graduates and 48.9% have higher education level. In terms of income, 26.8% had an income of 8,500 TL and below, while 22.1% were in the income range of 8,501-11,500 TL. Furthermore, 21.3% of the participants have an income between 11,501-16,000 TL,

while 29.8% have an income of 16,001 TL and above. According to the occupational distribution of the participants, 12.2% are housewives, 29.8% are private sector employees, 16.4% are self-employed, 13.4% are retired, 14.6% are public sector employees and 13.6% are not working. 86,4 % of the participants stated that geographical indication was effective in their oak honey consumption preferences, while 13,6 % stated that it was not effective.

Tablo 3: Results of Independent Sample t-Test Analysis for Gender Variable

The Preference Subdimension Scale Score does not show a statistically significant difference depending on gender differences ($p=0,134>0,05$). Trust Subdimension Scale Score also does not show a statistically significant difference depending on gender differences ($p=0,147>0,05$). However, Labelling Subdimension Scale Score shows a significant difference between gender groups ($p<0,0001$). The mean Labelling Subdimension Score of women is significantly higher than that of men. The Health and Price Subdimension Scale Score does not show a statistically significant difference according to gender groups ($p=0,120>0,05$). The Attitude towards Determining Reasons for Preference Scale Score shows a statistically significant difference between gender groups ($p=0,031, p<0,05$). The attitude scores of women on this issue are significantly and significantly higher than those of men. In addition, a study conducted in Izmir and 11 districts found that the amount of honey consumption of men was higher than women based on gender variable [48]. Yılmaz's study also reached similar results regarding the gender variable [54]. This study shows that gender does not have a determining effect on GI labelled products. Women's preference for labelled products is positive as they attach more importance to quality, labelling and safety issues. Both women and men want the honey they prefer to consume to be healthy and affordable.

Table 4: Results of Independent Sample t-Test Analysis for Marital Status Variable

61,4 % of the participants were married and 38,6 % were single. There is a statistically significant difference in the Preference Subdimension Scale Score between married and singles ($p=0,002<0,05$). The mean Preference Subdimension Score of singles is significantly higher than that of married people. The Trust Subdimension Scale Score also shows a statistically significant difference between married and singles ($p=0,001<0,05$). The mean Trust Subdimension Score of singles is significantly higher than that of married people. In addition, the Labelling Subdimension Scale Score and the Health and Price Subdimension Scale Score also show statistically significant differences between married and singles ($p=0.000<0.05$). The Attitude Scale Score for Determining Reasons for Preference also shows a statistically significant difference between married and single people ($p=0,000<0,05$). The attitude scores of singles on this issue are significantly higher than those of married individuals. While single individuals prefer to consume more honey than married individuals, they attach more importance to factors such as labelling, trust, health and price. The results of different studies may differ due to the effect of cultural differences [55].

Table 5: One-Way ANOVA Results for Age Variable

According to the age variable groups, the Preference Subdimension Scale Score shows a statistically significant difference ($p=0,001<0,05$). In particular, the mean Preference Subdimension Score of the participants aged between 18-29 years is significantly higher than the participants aged between 30-39 years. Likewise, individuals aged 18-29 years prefer to consume oak honey more than individuals aged 40-49 years. The Trust Subdimension Scale Score also shows a statistically significant difference according to the age

variable groups ($p=0,001<0,05$). In particular, the average Trust Subdimension Score of the participants aged 18-29 is significantly higher than the participants aged 30-39. Likewise, individuals aged 18-29 years prefer to question the reliability of oak honey more than individuals aged 40-49 years and individuals in other age groups. The Label Subdimension Scale Score also shows a statistically significant difference according to the age variable groups ($p=0,000<0,05$). In particular, the mean Label Subdimension Score of the participants aged 18-29 is significantly higher than the participants aged 40-49 and the participants aged 60 and over. This shows that the respondents between the ages of 18-29 care more about the label factor when choosing oak honey. The Health and Price Subdimension Scale Score also shows a statistically significant difference according to the age variable groups ($p=0.003<0.05$). The mean Health and Price Subdimension Score of the participants between the ages of 18-29 is significantly higher than the participants between the ages of 30-39. Likewise, individuals between the ages of 18-29 care more about health and price factors than individuals between the ages of 40-49. The Attitude Scale Score for Determining Reasons for Preference also shows a statistically significant difference according to age groups ($p=0.000<0.05$). In particular, the mean score of the Attitude Towards Determining Reasons for Preference Scale of the participants between the ages of 18-29 is significantly higher than the participants between the ages of 30-39 and 40-49. 76.3% of the participants are young and able to work between the ages of 18-49. Young people prefer to consume oak honey more than middle-aged and elderly people. In addition, young people attach more importance to the oak honey to be labelled, reliable, healthy and affordable. These results show that the preference for Geographical Indication Oak Honey decreases with increasing age. It should be taken into consideration that cultural

differences may have an effect between the results of different studies [56, 57]. For example, in Croatia, it was found that honey consumption decreased with increasing age and respondents preferred to buy honey directly from producers. In addition, a study in Italy, where the elderly population is dense, showed that there is a direct proportional relationship between age and honey consumption rates [58].

Tablo 6: Kruskal Wallis-H Analysis Results for Education Level Variable

Considering that there is a concrete relationship between the education levels of the participants and their consumption preferences, the education levels of the participants were analysed. 37,4% of the participants have high school education and 48,8% have university and higher education. A statistically significant difference was found between the Preference Subdimension Scale Scores based on the education level variable ($p=0.000$, $p<0.05$). The mean Preference Subdimension Scale score of primary school graduates is significantly and significantly higher than the scores of universities and above graduates. In addition, the scores of high school graduates also show a significant difference compared to the scores of universities and above graduates. A statistically significant difference was also found between the Trust Subdimension Scale Scores according to the education level variable ($p=0.005$, $p<0.05$). The mean Trust Subdimension Score of high school graduates is significantly and significantly higher than the scores of universities and above graduates. Labelling Subdimension Scale Scores also show a statistically significant difference according to the education level variable ($p=0.001$, $p<0,05$). The mean Labelling Subdimension Scale score of high school graduates is significantly higher than the scores of universities and above graduates. There is also a statistically significant difference between the Health and Price Subdimension Scale Scores

according to the education level variable groups ($p=0,009$, $p<0,05$). The mean Health and Price Subdimension Score of high school graduates is significantly higher than the scores of universities and higher education graduates. The Attitude Scale Scores for Determining the Reasons for Attitudes also show a statistically significant difference according to the level of education variable ($p=0,000$, $p<0,05$). The mean score of the Attitude Scale for Determining the Reasons for Attitudes of high school graduates is significantly higher than the scores of universities and above graduates. The effects of taste, appearance and previous experiences on the reasons for preference of Kırklareli Oak Honey of individuals with high school and above education are higher than those of high school graduates. High school graduates attach more importance to the labelled oak honey and its quality than university and above graduates. In addition, high school graduates think that honey is healthy and want the price to be more affordable. These results show that honey consumption increases as the level of education increases. Similarly, a study conducted in Erzurum observed that consumers' honey preferences increased with increasing education level and found that individuals with higher education levels consumed more honey [46]. These findings emphasise the effect of education level on consumption preferences.

Tablo 7: One-Way Anova Analysis Results for Occupation Variable

There are statistically significant differences on oak honey preferences and attitudes of the participants according to their occupational groups. In the preference sub-dimension; private sector employees, self-employed and unemployed individuals have higher preference scores than public sector employees. This shows that these groups attach more importance to oak honey preferences and emphasise certain preference criteria more. In the trust sub-dimension; non-working respondents and

retired people have higher trust sub-dimension scores than public employees. This shows that these groups care more about the reliability of oak honey and therefore prefer it. In the label sub-dimension; housewives, self-employed and non-employed respondents have higher label sub-dimension scores than public employees. This shows that these groups care more about the labelled oak honey and consider the quality of the product. In the sub-dimension of health and price; no statistically significant difference was found between the occupational groups. In other words, these factors are not determinative in terms of preference among occupational groups. When the reasons for preference are analysed, private sector employees, self-employed and unemployed individuals have higher reasons for preference scores than public sector employees. This shows that these groups have more positive attitudes towards preferring oak honey and consider the reasons for preference more.

In conclusion, the occupational groups of the respondents seem to be an influential factor on their preferences and attitudes towards oak honey. Especially private sector employees, self-employed and unemployed individuals prefer this product more and base their preferences on certain criteria. These findings emphasise the necessity to consider consumer groups and occupational groups when developing marketing and product promotion strategies.

Tablo 8: Results of One-Way Anova Analysis for Income Variable

It shows that the income levels of the participants have significant effects on their preferences and attitudes towards oak honey. In the preference sub-dimension, there is a significant difference between the participants with low income and the participants with high income.

Participants with lower income evaluated the preference for oak honey with higher

scores. This shows that participants with lower income prefer oak honey more.

In the trust sub-dimension, no statistically significant difference was found in the trust sub-dimension according to the income variable groups. Therefore, income level does not seem to be an effective factor in determining oak honey preferences in terms of trust. In the label sub-dimension; there is a significant difference between the participants with low income and the participants with high income in the label sub-dimension. Participants with lower income levels care more about the labelling of oak honey.

In the sub-dimension of health and price; no significant difference was found between income groups. In other words, income level does not seem to affect oak honey preferences in terms of health and price. When the reasons for preference are analysed; there is a significant difference between the participants with low income and the participants with high income in the sub-dimension of reasons for preference. Participants with lower income levels attach more importance to the reasons for preference.

These results show that income level has an effect on consumers' preferences for oak honey. Participants with lower income levels prefer oak honey more and care more about labelling and reasons for preference when determining their preferences. These findings emphasise the importance for marketers to consider income level when determining target customer segments and pricing strategies.

Tablo 9: Independent Sample t-Test Analysis Results for Geographical Indication Effect Variable in Consumption Preference of Geographically Signed Kirklareli Oak Honey

There is a significant difference between the participants with geographical indication effect and those without geographical

indication effect in terms of Preference Subdimension Score. Participants with geographical indication effect evaluated the preference of oak honey with higher scores. This shows that geographical indication has a positive effect on consumers' preference for oak honey. Likewise, there is a significant difference between the participants with geographical indication effect and those without geographical indication effect in terms of Trust Subdimension Score. Participants with geographical indication effect evaluated trust higher in oak honey preference. This shows that geographical indication increases the trust of consumers. There is a significant difference between the participants with geographical indication effect and those without geographical indication effect in terms of Labelling Subscale Score. Participants with geographical indication effect gave more importance to the label in their oak honey preferences. This shows that the product labels of the geographical indication have a positive effect on consumers. No significant difference was found between the groups with and without geographical indication effect in terms of Health and Price Subdimension Scores. This shows that geographical indication is not effective in determining consumers' preferences in terms of health and price. There is a significant difference between the participants with geographical indication effect and those without geographical indication effect in terms of Attitude Scale Scores for Determining Reasons for Preference. Participants with geographical indication effect evaluated the reasons for preference with higher scores. This shows that geographical indication has a positive effect on consumers' reasons for preferring oak honey.

As a result, it is seen that geographical indication has a significant effect on Kırklareli Oak Honey preferences and consumers pay attention to trust, labelling and reasons for preference when choosing oak honey. These results show that

geographical indication can create a positive perception in consumers about the quality and origin of a product and affect their preferences. Furthermore, these results emphasise the importance of marketing and promotion strategies of geographically marked products such as Kırklareli Oak Honey.

Tablo 10: Correlation Analysis Findings of 4 Sub-Factors Affecting Participants' Consumption Preferences for Geographically Signed Kırklareli Oak Honey

According to the results of the correlation analysis, a significant and strong relationship was found between the attitudes of the individuals participating in the study towards the consumption of Geographically Signed Kırklareli Oak Honey. A positive and strong relationship was found between the Preference Subdimension and the Trust Subdimension with a confidence level of '99% ($r=0,747$; $p=0,000$). This result shows that the participants prefer the products they trust.

A positive and strong relationship was also found between the Preference Subdimension and Labelling Subdimension with a confidence level of '99% ($r=0,727$; $p=0,000$). A positive and strong relationship was also found between the Preference Subdimension and the Health and Price Subdimension with a confidence level of '99% ($r=0,635$; $p=0,000$). A positive and very strong relationship was observed between the Preference Subdimension and the Attitude Scale for Determining the Reasons for Preference with 99% confidence level ($r=0.936$; $p=0.000$). These results show that there is a strong and significant relationship between the reasons for preferences and attitudes.

There is also a positive and strong relationship between the Trust Subdimension and the Labelling Subdimension with a confidence level of 99% ($r=0.729$; $p=0.000$). There is also a positive and strong relationship between

Trust Subdimension and Health and Price Subdimension with a confidence level of '99% ($r=0,682$; $p=0,000$). A positive and very strong relationship was observed between the Trust Subdimension and the Attitude Scale for Determining Reasons for Preference with a confidence level of '99% ($r=0,885$; $p=0,000$).

There is also a positive and strong relationship between the Label Subdimension and the Health and Price Subdimension with a confidence level of '99% ($r=0,659$; $p=0,000$). There is a positive and very strong relationship between the Label Subdimension and the Attitude Scale for Determining Reasons for Preference with a confidence level of '99% ($r=0,868$; $p=0,000$).

Finally, there was a positive and strong relationship between the Health and Price Subdimension and the Attitudes Towards Determining Reasons for Preference Scale with a confidence level of '99% ($r=0,799$; $p=0,000$). A study conducted with visitors to Edirne, Kırklareli and Tekirdağ regions reveals that most of the respondents share the view that gastronomy products and local foods represent these regions. This opinion encourages visitors to visit these regions again. In addition, it was concluded that if the products with geographical indication in the Thrace region are effectively promoted and advertised, it can strengthen the gastronomic identity of the region [59]. In a study examining honey consumers' knowledge about bee products, trust levels and purchasing preferences, it was concluded that the most effective sources affecting the purchasing behaviour of consumers were neighbours, relatives and friends. Newspapers, magazines and advertisements had less influence on purchasing behaviour [60]. Yüzbaşıoğlu stated that offering reliable and healthy products to consumers will increase the regional attractiveness and profit margin of advertisements [44]. According to the responses of the research participants, advertisements positively affected their

preferences by 60.7%. It is seen that the accessibility of honey, i.e., the fact that it is sold in local markets and vendors, positively affected the participants at a high rate of 85.1%. A study conducted in the provinces of Artvin, Bayburt, Giresun, Gümüşhane, Ordu, Rize, Samsun, Samsun and Trabzon aimed to determine the level of honey consumption and awareness of consumers. According to the results of this study, the participants mostly prefer to obtain honey from bee breeders and then from markets [61]. As it is known, honey consumers trust the products they buy from local product sellers and associations more. Among the respondents who prefer Kırklareli Oak Honey, the appearance of the honey is an important factor with a positive effect of 81.7%. The physical attractiveness of the product is one of the main factors that trigger purchase decisions and these results support this view. In addition, it was observed that the respondents' previous experience of knowing and consuming honey was effective in their preference of Kırklareli Oak Honey, which is a local product, with a rate of '71.3%. Consumers tend to prefer the honey they are used to base on their past experiences. In addition, with a rate of '83.9%, the participants positively evaluate the source from which the honey is obtained, i.e., the nectar, while preferring Kırklareli Oak Honey. The origin of honey is recognised as a determining factor in its nutritional values. 91.8% of the respondent's state that the colour and density of honey have a positive effect on their preference for Kırklareli Oak Honey. In a different study, it was found that consumers were most affected by the consistency of honey and this factor was an important factor in determining their honey preferences. This result is similar to our study [61]. In addition, it is observed that the production of this product by producer associations has a positive effect on the preference of the participants for Kırklareli Oak Honey at the rate of '79 %. In another study, the researchers concluded that 54.2% of the consumers prefer to buy honey

directly from the producer [62]. In another study, it was concluded that honey consumers prefer to buy honey and bee products from local markets and producers, they consider honeycomb honey as the most reliable bee product in terms of the reliability of these products and they trust local product sellers who preserve traditional beekeeping knowledge more [60]. It is seen that the trust factor is extremely important in consumer preferences. In addition, the majority of consumers think that it is safer to buy honey from consumer associations and producers. It is observed that 95.6% of the participants who prefer Kırklareli Oak Honey consider the quality of honey as a positive factor. These results indicate that consumers consider the quality of honey as an important factor and are concerned that quality parameters can be easily changed. According to the results of a study conducted in Niğde to determine the level of food safety and consumer awareness, consumers are concerned about adulteration, residue and adulteration when purchasing honey from the market and feel a lack of confidence. The individuals participating in the study tend to buy honey from the producer because they believe that they are more reliable when purchasing honey. In addition, participants may have the opinion that honey is less reliable compared to previous years [63]. It was observed that the hygienic quality of honey had a positive effect on the participants' preference for Kırklareli Oak Honey with a rate of 88.9%. In addition, it was determined that the taste and flavour of the honey had a positive effect on the preference of the participants for Kırklareli Oak Honey with a rate of 96.8%. It was also observed that the packaging of honey was effective in the preference of the respondents at a rate of 65.4%. While packaged products give confidence for protection from contaminating factors, some consumers may be concerned about the content of packaged products. Studies show that consumers' packaging

preferences are an important factor when buying honey. In particular, it is stated that consumers who care about packaging mostly prefer glass jars. This preference may be associated with the desire and concern of consumers to observe the product and to be sure about the content [61]. In other studies, it was similarly revealed that most of the pine honey consumers prefer to buy honey in glass jars and have the desire to see the product and be sure [48]. However, in some studies, it was observed that consumers' preference for purchasing honey in glass jars was lower [62]. Another study conducted by Dolu and Marangöz [60] also revealed that consumers' preference for honey and bee products packaging is mostly glass jars. In the light of these similar studies, it is understood that honey consumers have certain concerns about trust and tend to prefer packaged products that they can see inside. The fact that the honey is natural and unadulterated and that it has health and safety features is an important factor in the preference of the participants for Kırklareli Oak Honey. In this context, in a study, it was determined that consumers want to buy organic and natural honey and this preference has a parallel relationship with income and education level [45]. Consumers establish a strong link between the healthiness of honey and the fact that it is natural and unadulterated. In addition, the presence of production and expiry dates on the honey is an important element of trust for consumers. For example, in a study conducted in Ordu, it was concluded that most of the consumers trust the sellers from whom they buy honey and they want to have more information about the honey they will buy [64]. Although honey consumers generally have great trust in local products and sellers, they consider labelling as an important purchasing factor. One of the main reasons why consumers want to see the production and expiry dates on the honey is closely related to the element of trust. In addition, it is seen that the brand and company names on the honey have an

important effect on the participants' preference for Kırklareli Oak Honey. The tendency to pay attention to Geographical Indication labels is also a factor that directs purchasing behaviour. In particular, in a study examining how consumers living in Mersin perceive GI labels and the factors affecting these perceptions, the most important factors affecting the purchasing behaviour of consumers were listed as price, product certificates and content. In addition, the participants who are familiar with the concept of geographical indication represent a segment that perceives the geographical indication label as a sign of quality [65]. Most of the consumers have sufficient knowledge about geographical indications and they seem to be willing to pay extra while preferring such products. The association of honey with health has a great effect on the respondents' preference for Kırklareli Oak Honey. Consumers have started to see honey as a product that supports their health rather than just a food source. This has increased even more with the effect of the concept of apitherapy, which has become popular in recent years. Health awareness is an important factor that consumers take into consideration when choosing honey. Especially as the income levels increase, the quality and health consciousness of consumers increases [63]. In a study conducted in Ordu, it was observed that more than half of the honey consumers consume honey for health reasons and therefore health consciousness affects purchasing behaviour [64]. The nutritional value of honey also stands out as an important factor for the participants to prefer Kırklareli Oak Honey. Consumers determine their preferences with the importance they attach to the nutritional value of honey. However, price is another important factor that consumers consider when purchasing honey. Similar results were obtained in studies conducted in other provinces, and price was found to be a factor affecting purchasing behaviour [62]. These factors show that consumers give importance to criteria such as health,

nutritional value and price while determining their preferences. In addition, the impact of geographical indications and labels on consumers is also evident. It was concluded that consumers perceive geographically labelled products as a sign of quality and are willing to pay more for such products [65]. This emphasises the importance of promotion and marketing of GI products such as Kırklareli Oak Honey. Since consumers seem to pay attention to geographical indications and labels, the correct use of these elements can provide a great advantage to producers and sellers. These results reveal that factors such as geographical indication of the product, reliability, health, labelling and price are decisive in shaping consumer preferences. These findings can be an important guide for the development of marketing strategies and better promotion of geographically marked products such as Kırklareli Oak Honey to consumers.

CONCLUSION and RECOMMENDATIONS

This study examined the preferences and sociodemographic characteristics of individuals consuming Geographically Signed Kırklareli Oak Honey produced in Kırklareli, one of the important oak honey production regions of Turkey. The study shows that 76.3% of the respondents are young and middle-aged, workable population. It was also found that most of the respondents were female and married. The income level is mostly at or above the minimum wage level and about 39.4% of them are not actively working (retired, housewife, not working). 73.1% of the individuals have consumed Geographical Indication Kırklareli Oak Honey before and recognise the product. Women attach more importance to quality, reliability and labelling elements of oak honey. Both women and men prefer oak honey, which they believe to be affordable and healthy. According to the research, although the

number of married respondents is high, single individuals prefer oak honey consumption more than married individuals. This preference of singles can be explained by loneliness anxiety and the desire to focus on a healthy lifestyle. It is expected that the tendency of individuals to consume honey decreases as they get older. This can be attributed to current health and nutrition trends. In particular, factors such as low calorie burning, inactivity and diabetes may lead to a decrease in dessert consumption. Geographical Indication Kırklareli Oak Honey can be a preferred product in balanced nutrition programmes with its antioxidant values and flavonoid richness. Private sector employees, self-employed and non-working individuals consume more oak honey than public sector employees and pensioners. This result may be due to the fact that retired people prefer this product less due to the end of their active working life and decreased mobility. In addition, it is observed that non-working individuals care more about the labelling and quality characteristics of oak honey than pensioners and public employees. It was observed that individuals with income below the minimum wage preferred oak honey more than those with medium and above income. This may suggest that as the income level increases, consumers may tend to move away from the concern of meeting their basic nutritional needs and tend towards luxury products. It is observed that as income increases, consumers' quality and health consciousness increases. Individuals with high school education and above attach more importance to the characteristics such as taste, odour and consistency of oak honey and label information. It is also observed that individuals in this group attach more importance to label information and quality parameters. As the level of education decreases, it is observed that concerns about being misled and deceived in product preference increase. In conclusion, one of the most important factors determining the preferences of individuals consuming oak

honey is the perception that the product is healthy. Consumers want to be sure of the reliability of the product and therefore, they attach importance to the fact that it is a geographically labelled product. These results provide valuable clues for marketing strategies and promotional campaigns.

Suggestions for Kırklareli Geographical Indication Oak Honey producers, producer associations and local administrations can be as follows

Consumers should be encouraged to prefer this product by emphasising its unique and high-quality features. The product can be promoted through informative events, flavour experiences and campaign discounts. The health benefits of oak honey should be emphasised by organising campaigns focusing on healthy lifestyle and nutrition. Marketing strategies should effectively use communication channels such as television, radio, internet and social media to attract the attention of consumers. By understanding consumption preferences in relation to income level, marketing professionals can adjust product pricing accordingly. Campaigns emphasising the local characteristics of the product can increase the tourism revenues of Kırklareli and contribute to the local economy. These recommendations can be used to increase the promotion and sales of Geographical Indication Kırklareli Oak Honey and help the product contribute to the local economy.

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Table 1. Normality Assumption Analysis and Reliability Analysis

| Scale | N ⁱ | Centre. | SS ⁱⁱ | Kolmogorov Smirnov (p) | Skewness | Kurtosis | Cronbach's Alpha |
|---|----------------|---------|------------------|------------------------|----------|----------|------------------|
| Preference | 403 | 27,31 | 4,793 | 0,000 | -0,298 | 0,026 | 0,815 |
| Trust | 403 | 16,72 | 2,392 | 0,000 | -0,563 | 0,691 | 0,698 |
| Label | 403 | 12,15 | 2,294 | 0,000 | -0,742 | 0,169 | 0,658 |
| Health and Price | 403 | 12,60 | 1,866 | 0,000 | -0,616 | 0,670 | 0,687 |
| Attitude towards Determining Reasons for Preference | 403 | 68,77 | 10,082 | 0,000 | -0,276 | 0,174 | 0,909 |

* p <0,05

Table 2. Sociodemographic Information Table

| Demographic Characteristics | N (403) | Percentage (%) |
|--|-------------------------|----------------|
| Gender | Women | 51,6 |
| | Male | 48,4 |
| Marital Status | Married | 61,3 |
| | Single | 38,7 |
| Selection Geographical Indication | Yes | 86,4 |
| | No | 13,6 |
| Age | 18-29 years old | 28,5 |
| | 30-39 years old | 23,6 |
| | 40-49 years old | 24,1 |
| | 50-59 years old | 16,1 |
| | 60-69 years old | 7,7 |
| Education | Literate | 3,7 |
| | Primary school graduate | 9,9 |
| | High school graduate | 37,5 |
| | University and above | 48,9 |
| Income | 8500 TL and less | 26,8 |
| | 8501-11500 TL | 22,1 |
| | 11501-16000 TL | 21,3 |
| | 16001 TL and above | 29,8 |
| Profession | Housewife | 12,2 |
| | Private sector employee | 29,8 |
| | Self-employment | 16,4 |
| | Pensioner | 13,4 |
| | Public employee | 14,6 |
| | Not working | 13,6 |

Table 3. Gender Variable t-Test Table

| Scale | Group | N | Centre. | SS | T ⁱⁱⁱ | SD ^{iv} | P ^v |
|---|-------|-----|---------|--------|------------------|------------------|----------------|
| Preference | Women | 208 | 27,66 | 4,480 | 1,504 | 401 | 0,134 |
| | Male | 195 | 26,94 | 5,092 | | | |
| Trust | Women | 208 | 16,88 | 2,332 | 1,454 | 401 | 0,147 |
| | Male | 195 | 16,54 | 2,448 | | | |
| Label | Women | 208 | 12,54 | 2,068 | 3,599 | 401 | 0,000* |
| | Male | 195 | 11,73 | 2,448 | | | |
| Health and Price | Women | 208 | 12,74 | 1,792 | 1,559 | 401 | 0,120 |
| | Male | 195 | 12,45 | 1,935 | | | |
| Attitude towards Determining Reasons for Preference | Women | 208 | 69,82 | 9,412 | 2,170 | 401 | 0,031* |
| | Male | 195 | 67,65 | 10,660 | | | |

* p < 0,05

Table 4. Marital Status Variable t-Test Table

| Scale | Group | N | Centre. | SS | T | SD | P* |
|---|---------|-----|---------|--------|-------|-----|-------|
| Preference | Married | 247 | 26,69 | 4,277 | 3,131 | 401 | 0,002 |
| | Single | 156 | 28,29 | 5,383 | | | |
| Trust | Married | 247 | 16,40 | 2,286 | 3,323 | 401 | 0,001 |
| | Single | 156 | 17,22 | 2,476 | | | |
| Label | Married | 247 | 11,79 | 2,272 | 4,080 | 401 | 0,000 |
| | Single | 156 | 12,72 | 2,216 | | | |
| Health and Price | Married | 247 | 12,33 | 1,772 | 3,607 | 401 | 0,000 |
| | Single | 156 | 13,02 | 1,936 | | | |
| Attitude towards Determining Reasons for Preference | Married | 247 | 67,21 | 9,068 | 3,818 | 401 | 0,000 |
| | Single | 156 | 71,25 | 11,091 | | | |

* p < 0,05

Table 5. Age Variable One-Way ANOVA Analysis

| Scale | Group | N | Centre. | SS | Var. K | K.T. ^{vi} | SD | K.O. ^{vii} | F ^{viii} | P |
|---|-------------------------|-----------------|---------|--------|------------------------|--------------------|----------|---------------------|-------------------|-------|
| Preference | 18-29 years old | 115 | 28,77 | 5,609 | GA^{ix} | 398,115 | 4 | 99,529 | 4,482 | 0,001 |
| | 30-39 years old | 95 | 26,65 | 4,331 | GI^x | 8838,113 | 398 | 22,206 | | |
| | 40-49 years old | 97 | 26,47 | 4,430 | Total | 9236,228 | 402 | | | |
| | 50-59 years old | 65 | 27,51 | 3,969 | | | | | | |
| | 60 years and over | 31 | 26,13 | 4,455 | | | | | | |
| | Total | 403 | 27,31 | 4,793 | | | | | | |
| | Trust | 18-29 years old | 115 | 17,50 | 2,664 | GA | 107,075 | 4 | 26,769 | 4,859 |
| 30-39 years old | | 95 | 16,53 | 2,202 | GI | 2192,677 | 398 | 5,509 | | |
| 40-49 years old | | 97 | 16,40 | 2,095 | Total | 2299,752 | 402 | | | |
| 50-59 years old | | 65 | 16,48 | 2,144 | | | | | | |
| 60 years and over | | 31 | 15,90 | 2,663 | | | | | | |
| Total | | 403 | 16,72 | 2,392 | | | | | | |
| Label | | 18-29 years old | 115 | 12,90 | 2,413 | GA | 112,467 | 4 | 28,117 | 5,588 |
| | 30-39 years old | 95 | 12,03 | 2,190 | GI | 2002,600 | 398 | 5,032 | | |
| | 40-49 years old | 97 | 11,80 | 2,149 | Total | 2115,067 | 402 | | | |
| | 50-59 years old | 65 | 11,98 | 2,095 | | | | | | |
| | 60 years and over | 31 | 11,13 | 2,334 | | | | | | |
| | Total | 403 | 12,15 | 2,294 | | | | | | |
| | Health and Price | 18-29 years old | 115 | 13,14 | 2,152 | GA | 55,873 | 4 | 13,968 | 4,139 |
| 30-39 years old | | 95 | 12,36 | 1,856 | GI | 1343,199 | 398 | 3,375 | | |
| 40-49 years old | | 97 | 12,30 | 1,562 | Total | 1399,072 | 402 | | | |
| 50-59 years old | | 65 | 12,66 | 1,544 | | | | | | |
| 60 years and over | | 31 | 12,10 | 1,868 | | | | | | |
| Total | | 403 | 12,60 | 1,866 | | | | | | |
| Attitude towards | | 18-29 years old | 115 | 72,30 | 11,931 | GA | 2268,312 | 4 | 567,078 | 5,848 |
| | 30-39 years old | 95 | 67,57 | 9,110 | GI | 38590,686 | 398 | 96,962 | | |
| Determining Reasons for Preference | 40-49 years old | 97 | 66,98 | 8,597 | Total | 40858,998 | 402 | | | |
| | 50-59 years old | 65 | 68,63 | 8,468 | | | | | | |
| | 60 years and over | 31 | 65,26 | 9,791 | | | | | | |
| | Total | 403 | 68,77 | 10,082 | | | | | | |

* p < 0,05

Table 6. Education Level Variable Kruskal Wallis-H Analysis

| Scale | Group | N | Centre. | SS | SD | H | P |
|--|-------------------------|----------|----------------|-----------|-----------|----------|----------|
| Preference | Literate | 15 | 29,60 | 5,654 | 3 | 29,969 | 0,000 |
| | Primary school graduate | 40 | 28,20 | 3,904 | | | |
| | High school graduate | 151 | 28,46 | 4,653 | | | |
| | University and above | 197 | 26,07 | 4,702 | | | |
| | Total | 403 | 27,31 | 4,793 | | | |
| Trust | Literate | 15 | 16,73 | 3,615 | 3 | 12,681 | 0,005 |
| | Primary school graduate | 40 | 17,00 | 2,309 | | | |
| | High school graduate | 151 | 17,11 | 2,322 | | | |
| | University and above | 197 | 16,36 | 2,311 | | | |
| | Total | 403 | 16,72 | 2,392 | | | |
| Label | Literate | 15 | 12,93 | 2,685 | 3 | 17,622 | 0,001 |
| | Primary school graduate | 40 | 12,48 | 1,768 | | | |
| | High school graduate | 151 | 12,57 | 2,214 | | | |
| | University and above | 197 | 11,70 | 2,344 | | | |
| | Total | 403 | 12,15 | 2,294 | | | |
| Health and Price | Literate | 15 | 13,20 | 2,145 | 3 | 11,496 | 0,009 |
| | Primary school graduate | 40 | 12,55 | 1,358 | | | |
| | High school graduate | 151 | 12,90 | 1,904 | | | |
| | University and above | 197 | 12,32 | 1,870 | | | |
| | Total | 403 | 12,60 | 1,866 | | | |
| Attitude towards Determining Reasons for Preference | Literate | 15 | 72,47 | 13,368 | 3 | 24,466 | 0,000 |
| | Primary school graduate | 40 | 70,22 | 8,148 | | | |
| | High school graduate | 151 | 71,05 | 9,789 | | | |
| | University and above | 197 | 66,45 | 9,914 | | | |
| | Total | 403 | 68,77 | 10,082 | | | |

*p <0,05

Table 7. Occupation Variable One-Way ANOVA Analysis

| Scale | Group | N | Centre | SS | Var. K | K.T. | SD | K.O. | F | P |
|-------------------------|-------------------------|-----|--------|-------|--------------|----------|-----|--------|-------|-------|
| Preference | Housewife | 49 | 27,22 | 4,629 | GA | 482,163 | 5 | 96,433 | 4,373 | 0,001 |
| | Private sector employee | 120 | 27,53 | 4,914 | GI | 8754,065 | 397 | 22,051 | | |
| | Self-employment | 66 | 27,95 | 4,518 | Total | 9236,228 | 402 | | | |
| | Pensioner | 54 | 26,89 | 4,027 | | | | | | |
| | Public employee | 59 | 25,08 | 4,534 | | | | | | |
| | Not working | 55 | 28,95 | 5,223 | | | | | | |
| | Total | 403 | 27,31 | 4,793 | | | | | | |
| Trust | Housewife | 49 | 16,55 | 2,566 | GA | 103,473 | 5 | 20,695 | 3,741 | 0,003 |
| | Private sector employee | 120 | 17,01 | 2,431 | GI | 2196,278 | 397 | 5,532 | | |
| | Self-employment | 66 | 16,95 | 2,123 | Total | 2299,752 | 402 | | | |
| | Pensioner | 54 | 16,04 | 2,306 | | | | | | |
| | Public employee | 59 | 15,95 | 2,452 | | | | | | |
| | Not working | 55 | 17,44 | 2,167 | | | | | | |
| | Total | 403 | 16,72 | 2,392 | | | | | | |
| Label | Housewife | 49 | 12,41 | 2,263 | GA | 138,796 | 5 | 27,759 | 5,576 | 0,000 |
| | Private sector employee | 120 | 12,58 | 2,065 | GI | 1976,271 | 397 | 4,978 | | |
| | Self-employment | 66 | 12,27 | 2,209 | Total | 2115,067 | 402 | | | |
| | Pensioner | 54 | 11,46 | 2,204 | | | | | | |
| | Public employee | 59 | 11,05 | 2,438 | | | | | | |
| | Not working | 55 | 12,69 | 2,372 | | | | | | |
| | Total | 403 | 12,15 | 2,294 | | | | | | |
| Health and Price | Housewife | 49 | 12,39 | 1,846 | GA | 67,537 | 5 | 13,507 | 4,027 | 0,001 |
| | Private sector employee | 120 | 12,90 | 1,894 | GI | 1331,535 | 397 | 3,354 | | |

| | | | | | | | | | | |
|--|-------------------------|----|--------|--------|--------------|-----------|-----|---------|-------|-------|
| | Self-employment | 66 | 12,76 | 1,665 | Total | 1399,072 | 40 | | | |
| | Pensioner | 54 | 12,07 | 1,779 | | | | | | |
| | Public employee | 59 | 11,97 | 1,847 | | | | | | |
| | Not working | 55 | 13,11 | 1,902 | | | | | | |
| | Total | 40 | 12,60 | 1,866 | | | | | | |
| | | 3 | | | | | | | | |
| Attitude towards Determining Reasons for Preference | Housewife | 49 | 68,57 | 9,998 | GA | 2517,793 | 5 | 503,559 | 5,214 | 0,000 |
| | Private sector employee | 12 | 70,010 | 10,085 | GI | 38341,204 | 397 | 96,577 | | |
| | Self-employment | 66 | 69,94 | 9,374 | Total | 40858,998 | 402 | | | |
| | Pensioner | 54 | 66,46 | 9,042 | | | | | | |
| | Public employee | 59 | 64,05 | 9,500 | | | | | | |
| | Not working | 55 | 72,18 | 10,681 | | | | | | |
| | Total | 40 | 68,77 | 10,08 | | | | | | |
| | | 3 | | 2 | | | | | | |

*p < 0,05

Table 8. Income Variable One-Way ANOVA Analysis

| | Group | N | Centre. | SS | Var. K | K.T. | SD | K.O. | F | P |
|--|--------------------|-----|---------|--------|--------------|-----------|-----|---------|-------|-------|
| Preference | 8500 TL and less | 108 | 27,94 | 5,194 | GA | 234,368 | 3 | 78,123 | 3,463 | 0,016 |
| | 8501-11500 TL | 89 | 28,26 | 4,601 | GI | 9001,861 | 399 | 22,561 | | |
| | 11501-16000 TL | 86 | 26,60 | 4,254 | Total | 9236,228 | 402 | | | |
| | 16001 TL and above | 120 | 26,55 | 4,775 | | | | | | |
| | Total | 403 | 27,31 | 4,793 | | | | | | |
| Trust | 8500 TL and less | 108 | 16,89 | 2,645 | GA | 33,005 | 3 | 11,002 | 1,937 | 0,123 |
| | 8501-11500 TL | 89 | 17,10 | 2,336 | GI | 2266,746 | 399 | 5,681 | | |
| | 11501-16000 TL | 86 | 16,31 | 2,138 | Total | 2299,752 | 402 | | | |
| | 16001 TL and above | 120 | 16,57 | 2,336 | | | | | | |
| | Total | 403 | 16,72 | 2,392 | | | | | | |
| Label | 8500 TL and less | 108 | 12,29 | 2,587 | GA | 76,807 | 3 | 25,602 | 5,012 | 0,002 |
| | 8501-11500 TL | 89 | 12,81 | 1,839 | GI | 2038,260 | 399 | 5,108 | | |
| | 11501-16000 TL | 86 | 12,05 | 2,046 | Total | 2115,067 | 402 | | | |
| | 16001 TL and above | 120 | 11,61 | 2,370 | | | | | | |
| | Total | 403 | 12,15 | 2,294 | | | | | | |
| Health and Price | 8500 TL and less | 108 | 12,55 | 2,185 | GA | 17,333 | 3 | 5,778 | 1,668 | 0,173 |
| | 8501-11500 TL | 89 | 12,92 | 1,673 | GI | 1381,739 | 399 | 3,463 | | |
| | 11501-16000 TL | 86 | 12,66 | 1,561 | Total | 1399,072 | 402 | | | |
| | 16001 TL and above | 120 | 12,35 | 1,873 | | | | | | |
| | Total | 403 | 12,60 | 1,866 | | | | | | |
| Attitude towards Determining Reasons for Preference | 8500 TL and less | 108 | 69,66 | 11,544 | GA | 1020,975 | 3 | 340,325 | 3,409 | 0,018 |
| | 8501-11500 TL | 89 | 71,09 | 9,394 | GI | 39838,023 | 399 | 99,845 | | |
| | 11501-16000 TL | 86 | 67,63 | 8,586 | Total | 40858,998 | 402 | | | |
| | 16001 TL and above | 120 | 67,08 | 9,851 | | | | | | |
| | Total | 403 | 68,77 | 10,082 | | | | | | |

*p < 0,05

Table 9. t-Test Table of Geographical Indication Effect Variable in Choice

| Scale | Group | N | Centre. | SS | T | SD | P |
|---|-------|-----|---------|-------|-------|-----|-------|
| Preference | Yes | 348 | 28,11 | 4,321 | 9,223 | 401 | 0,000 |
| | No | 55 | 22,27 | 4,597 | | | |
| Trust | Yes | 348 | 17,08 | 2,126 | 6,877 | 401 | 0,000 |
| | No | 55 | 14,44 | 2,720 | | | |
| Label | Yes | 348 | 12,52 | 2,033 | 7,888 | 401 | 0,000 |
| | No | 55 | 9,78 | 2,447 | | | |
| Health and Price | Yes | 348 | 12,79 | 1,741 | 5,369 | 401 | 0,000 |
| | No | 55 | 11,38 | 2,164 | | | |
| Attitude towards Determining Reasons for Preference | Yes | 348 | 70,49 | 9,018 | 9,057 | 401 | 0,000 |
| | No | 55 | 57,87 | 9,694 | | | |

* p <0,05

Table 10. Correlation Analysis

| | 1 | 2 | 3 | 4 | 5 | |
|---|---------|---------|---------|---------|---------|---|
| Preference (1) | 1 | | | | | |
| Trust (2) | 0,747** | 1 | | | | |
| Label (3) | 0,000 | 0,727** | 0,729** | 1 | | |
| Health and Price (4) | 0,000 | 0,000 | 0,000 | 0,659** | 1 | |
| Attitude towards Determining Reasons for Preference (5) | 0,000 | 0,000 | 0,000 | 0,885** | 0,799** | 1 |
| | 0,000 | 0,000 | 0,000 | 0,000 | 0,000 | |

ⁱ N (N Factorial)ⁱⁱ SS (Standard Deviation)ⁱⁱⁱ T (Consistency)^{iv} SD (Degrees of Freedom)^v P (P-value)^{vi} KT (Sum of Squares)^{vii} KO (Mean squares)^{viii} F (Frequency)^{ix} GA (Confidence Interval)^x Gİ (VVithin-subjects Design)