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Studying the Consumer Preferences and Consumption Attitudes of Traditional Tarhana

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Abstract

This research was carried out to determine the attitudes towards the consumption of tarhana which is an important traditional taste and also accepted as a functional food. In the study, composition, nutritional value and widespread use of tarhana were directed to 302 individuals with different sociodemographic characteristics, and it was aimed to reveal the factors affecting their consumption attitudes by evaluating the obtained answers.

As a result of the research, it was determined that the majority of the participants had information about the production and consumption of tarhana. While consumers living in rural areas are aware of the consumption of tarhana in different ways other than soup, this ratio is decreasing in some regions. While it was determined that sensory properties such as taste and smell in the use of tarhana, consumption style also changed consumer attitude, it was observed that the participants had a certain level of knowledge about the production and storage conditions. Another result obtained from the study is that to prevent loss of healthy local products like tarhana and increase prevalance in the national or international markets, effective marketing and advertising activities is needed.

Keywords: Tarhana, Consumer Preferences, Local Foods, Consumer Attitudes

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Instraction

Tarhana is one of the most important traditional fermented semi-ready foods in Turkey. According to literature, Turkish people in Middle Asia were the first to produce it. Afterwards, it spread to different parts of the world (Gurbuz et al. 2011). There are 17 different types of tarhana found in different regions of Turkey. These are Ege, Trakya, Gediz, Sivas, Maraş, Beyşehir, Kastamonu wet, Göce, Immigrant, Cranberries, Dough, Meat, Milk, Grape, Lump, Wheat Tarhana and tarhana with minced meat, turnip and beet (Coşkun 2014; Gok, 2021).

The composition of tarhana changes with different formulations. Basically, it is prepared from wheat flour, yoghurt, different vegetables (tomato and paprika, or their pastes), salt, herbs, and spices. The ratio of yoghurt to wheat flour is usually 0.5:1 or 1:1. In some regions, the yoghurt content may be reduced or replaced with milk, and one or more of the following ingredients may be used: egg, soybean, corn, barley and rye flour, chickpea, lentils, cornelian cherry, and baker's yeast (*Sc. cerevisiae*) (Koca et al. 2015; Ovando-Martinez et al. 2014; Ozdemir et al. 2007). Increasing the amount of yoghurt in a tarhana formulation leads to an increase in the total lactic acid bacteria (LAB) count before and after fermentation, which also results in elevated lactic acid levels in the final product (Ozdemier et al. 2007). The fermentation period varies from 1 d to 1 week according to the desired properties. If a sour taste is preferred, the fermentation is prolonged. LAB in yoghurt and yeast are responsible for acid formation during fermentation and the leavening effect. After maturation, the dough is divided into small portions and sun-dried. During natural drying, exposure to direct sunlight is avoided because the color becomes pale and the quality of the product decreases. Oven drying is generally conducted at 55 °C for 72 h. When the dough is dry (does not stick to the hand), it is crumbled, sieved, and powder form of tarhana is obtained (Çelik et al. 2010; Ekinci and Kadakal 2005; Kıvanc and Funda 2017).

Traditional tarhana is in the dough-form after fermentation and can be used without drying. This form is called wet tarhana. If the dough is dried under the sun or in a dryer, it is called dry tarhana. Dry tarhana may be in a nugget, sheet, or powder form (Certel et al. 2007Erbaş et al. 2006). Tarhana is also prepared as a snack in the form of "tarhana chips" (Yıldırım and Güzeler 2016). Powdered tarhana is used as breadcrumb for coating the red or white meat before frying. Erbaş et al. (2006) concluded that wet tarhana has better sensory and some nutritional properties than dry tarhana since drying reduces some nutritional aspects, e.g., by lowering the amount of some organic acids compared to wet tarhana. Wet tarhana can be stored up to 6 months after refrigeration. Dry tarhana can be stored up to 2 years without refrigeration (Dalgic and Belibagli 2008).

Tarhana is a semi-ready food, can be cooked easily in a short time, and can be consumed as soup at breakfast, lunch, or dinner. It is mixed with cold water (1:1) and allowed to hydrate for 30 min. The thawed tarhana is cooked in water (1:4). Typically, meat or vegetable stock is used as the cooking water to increase both the flavor and nutritional value. For flavoring, sautéed tomato or paste, garlic, and some seasoning is added to the cooking water, and the ingredients are boiled together.

The average composition of tarhana has been determined as 10.2% (w/w) moisture, 16% protein, 60.9% carbohydrates, 5.4% fat, 1% crude fiber, 3.8% salt, and 6.2% ash (Dağlıoğlu 2000; Ibanoğlu et al. 1995; Kabak and

Dobson 2011; Ozdemir et al. 2007; Tamer et al. 2007). Tarhana is a good source of total minerals that are readily bioavailable (Ca, Mg, Zn, and K). With an increasing acidity and phytase activity in the fermentation medium, the total amount of minerals and proteins increases as a result of phytic acid fermentation loss (Ozdemir et al. 2007). Tarhana contains such minerals as calcium (109 mg/100 g), magnesium (78 mg/100 g), potassium (114 mg/100 g), and copper (450 mg/100 g) (Dağlıoğlu 2000). Dried tarhana prepared from yoghurt inoculated with different concentrations of probiotic culture (0.5–4.5%) has a protein content ranging between 18–20% (Dağlıoğlu 2000; Ibanoğlu et al. 1995). The lowest protein content (6.77%) has been reported for a sample containing cornelian cherry instead of yoghurt (Tamer et al. 2007). Seven water-soluble vitamins—ascorbic acid, niacin, pantothenic acid (vitamin B5), pyridoxine (vitamin B6), thiamine (vitamin B1), folic acid, and riboflavin (vitamin B2)—have been detected in commercially produced tarhana (Ekinci and Kadakal 2005).

Turkish Standardization Institute categorized tarhana into four types based on the method of production used. These are "flour tarhana," "goce tarhana," "semolina tarhana," and "mixed tarhana." The sensory properties of tarhana are affected by the type of ingredients used and fermentation, which is preformed by yoghurt bacteria, such as *Lb. bulgaricus* and *Streptococcus* (*St.*) *thermophilus*, and *Sc. cerevisiae*. It has a slightly sour taste with a strong yeast flavor because of lactic acids and some organic compounds produced by LAB and yeast. Two types of fermentation (alcohol and lactic acid fermentation) occur concurrently and are catalyzed by the microorganisms from yoghurt, baker's yeast, or sourdough. The yeast and LAB produce ethanol, carbon dioxide, and lactic acid, as well as other fermentation products, e.g., aldehydes, ketones, and different organic acids. Tarhana fermentation lasts 1–7 d (Dağlıoğlu et al. 2000; Ibanoğlu et al. 1995; Işık and Yapar 2012; Kumral 2015). In some fermentations, sourdough is used (Şimşek et al. 2017).

It has been reported that during tarhana fermentation, as a result of LAB activity in fermenting tarhana, levels of the following increase: amino acids, such as valine, methionine, tryptophan, alanine, isoleucine/leucine, phenylalanine, arginine, proline, and lysine; water-soluble vitamins, such as riboflavin, thiamine, niacin, pyridoxine, and folic acid; organic acids, such as lactic acid, acetic acid, propionic acid, and pyruvic acid (Kabak and Dobson 2011; Ozdemir et al. 2007; Gok 2021). Because of its high nutritive value and easy digestibility, tarhana is preferentially used for feeding babies, children, the elderly, and ailing individuals (Coşkun 2014; Dağlıoğlu 2000; Ekinci and Kadakal 2005; Erbaş et al. 2006; Gabrial et al. 2010; Ibanoğlu et al. 1995; Koca et al. 2006; Kıvanc and Funda 2017; Ozdemir et al. 2007; Sengun et al. 2009; Tamer et al. 2007). Tarhana formulations prepared from cornelian cherry and blackthorn fruits are less well known, have a sour taste, and are consumed locally, mostly by people who are sick.

Fermentation of tarhana leads to protein breakdown as a result of the proteolytic activity of LAB and yeast, which increases protein digestibility (Bilgiçli et al. 2006; Dağlıoğlu et al. 2002; Ibanoğlu et al. 1995; Işık and Yapar 2012). The produced organic acids and bacteriocins, low pH (3.8–4.4), and low moisture (6–11%) content have a bacteriostatic effect on pathogens and spoilage microorganisms during long-term storage of tarhana powder and extend the

shelf life. Lactic acid is the dominant organic acid in tarhana. Organic acids, mainly lactic acid and acetic acid, produced by LAB are effective antimicrobial agents, and they reduce the pH of food to prevent the growth of hazardous food microorganisms (Magala et al. 2013).

Tomato and paprika, or their pastes used in the original tarhana recipes enhance the functional properties of tarhana because of biologically active compounds and dietary fibers that they contain. Examples of such enhancing compounds in the tomato are lycopene, phenolics, organic acids, vitamins, and many other beneficial components, e.g., dietary fiber, pectin, oil, and protein in the pulp, seed, and skin (Lu et al. 2019).

The antimicrobial properties of tarhana were investigated by Dağlıoğlu et al. (2002). A tarhana dough mixture was inoculated with *Escherichia coli* and *Staphylococcus* (*S.*) *aureus*. After fermentation, these pathogens could not survive, and their viability decreased because of a combined effect of fermentation products, such as organic acids and ethanol, and the NaCl used (Dağlıoğlu et al. 2002). The production of a natural, safe, and healthy food in which lactic acid fermentation exerts an important biopreservative effect is paramount. LAB and their metabolites act as biopreservatives in foods. LAB can be used in cereal food products because of its ability to detoxify mycotoxins and phytase production (Andrabi et al. 2016; Kıvanc and Funda 2017).

The amount of essential amino acids, such as threonine, lysine, and tryptophan, is low in cereals. Further, cereal protein digestibility is also very low because of the presence of phytic acid, tannins, and polyphenols, which bind protein and render them indigestible. LAB fermentation of different cereals has been shown to effectively reduce the amount of phytic acid and tannins, as well as improve protein and mineral availability (Andrabi et al. 2016). During the fermentation of tarhana samples, reduction in the phytic acid levels was observed. It was attributed to the production of phytase and its activity in the fermenting mixture (Bilgiçli et al. 2006; Kumral 2015). *Lb. plantarum* present in the fermented product produces high levels of extracellular and intracellular phytase, which reduce phytate levels and enhance the bioavailability of various minerals, such as iron, manganese, and zinc (Sumengen et al. 2013). Tarhana produced with flour fortified with wheat germ and bran has a high phytic acid content before fermentation, which is considerably reduced after fermentation (Bilgiçli and İbanoğlu 2007).

Karakaya and El (1999), identified quercetin (5.092 mg/100 g) as the major flavonoid present in homemade tarhana. Black grape, red lettuce, and strawberry contain 2.15, 2.65, and 1.75 (mg/100 g) quercetin, respectively (D'Andrea 2015). These levels are lower than those determined in tarhana by Karakaya and El (1999). Quercetin levels in red onion (39 mg/100 g), common onion (20 mg/100 g), cranberry (15 mg/100 g), and blueberry (8 mg/100 g) are high compared to tarhana. Red onion can be used to increase the nutritive benefits of tarhana. There is growing new interest in the scientific community in flavonoids and their derivatives with diverse biological properties. The daily intake of quercetin in the common diet has been estimated to be 5–40 mg/d (Russo et al. 2012). In the Western diet, it is high and approximately 15 mg (D'Andrea 2015; Lesjak et al. 2018). Quercetin is one of the most often studied dietary flavonoids, and has great therapeutic potential for the prevention and

treatment of different chronic diseases, including cardiovascular and neurodegenerative diseases, as well as cancer (D'Andrea 2015; Lesjak et al. 2018). As a nutraceutical for functional foods, quercetin may be used within 0.008–0.5% or 10–125 mg/serving (D'Andrea 2015). Thus, tarhana may be one of the important sources for quercetin, as a food serving.

Sengun et al. (2009) studied eight different local tarhana samples and concluded that the composition of LAB during fermentation varies depending on the raw material, fermentation time, and techniques used in the production of tarhana.

Some studies were performed to enhance the functional properties of tarhana by using different cereal or legumes as the raw materials, different vegetables, and different probiotic bacteria for fermentation. Increasing the probiotic culture concentrations increased the number of probiotic bacteria in dried tarhana (Capela et al. 2006; Gabrial et al. 2010; Ibanoglu et al. 1999; Şimşek et al. 2017). In a study of Şimşek et al. (2017), homemade and commercial tarhana dough were fermented with sourdough.

Because of high nutritional value tarhana with natural, delicious, semi-ready form it was accepted as functional food and can be stored for a very long time without any food additives. It is a very important fermented product of Turkish cuisine culture and important winter food prepared by drying yoghurt in general, called "Kurut" in Central Asia (Coşkun, 2014; Gok, 2021). It is accepted that Turks and Mongols who migrated from Central Asia brought Tarhana to the Anatolia and spread to their close neighbors, such as Iraq, Iran and to the eastern and western countries such as Greece, Hungary, and Finland via Rumelia during the Ottoman Empire (Coşkun, 2014). Tarhana is consumed under different names in some countries like “Kishk” in Syria, Lebanon, Jordan, Palestine, and Egypt, “kushuk” in Iran and Iraq, “tahonyaltalkuna” in Hungary and Filland, “trahana” in Greece and “atole” in Scotland (Gok, 2021).

There are four types of tarhana recipes in the standards: "flour tarhana", "goce tarhana", "semolina tarhana" and "mixed tarhana". In general, tarhana may vary depend on the regions with variaotions in prepeartion (Coşkun, 2014). Today the most common tarhana is obtained by mixing flour with yoghurt, tomato, capia pepper, onion, mint and salt to form dough and allowed to ferment then dryed and powdered. There are also many various types of tarhana prepared in the different regions (Şimşek, et al., 2017; Kıvanç & Funda, 2017). Use of different raw materials and preparation techniques result in variability in fermentation and cause differences in taste, smell and nutritional value. Tarhana types found in the regions of our country show different characteristics from salty to sweet; Aegean tarhana, goce tarhana, ball tarhana, Thrace tarhana, white tarhana, Gediz tarhana, minced tarhana, kiren (cranberry) tarhana, Beyşehir tarhana, immigrant tarhana, Kastamonu wet tarhana, Sivas tarhana, Maraş tarhana, turnip tarhana, beet tarhana, milk tarhana, dough tarhana, meat tarhana, grape tarhana, sweet tarhana (Coşkun, 2014; Kıvanç and Funda, 2017).

Materials and Methods

This study is quantitative research from observational research methods, it is descriptive and cross-sectional, and methodologically exploratory. A questionnaire was prepared by using literature studies and consists of two parts. The first part includes sociodemographic questions. The second part consists of 22 questions

investigating the tarhana consumption attitude created by the researcher as a result of the literature review.

The questionnaire was named as "Questionnaire on Tarhana Consumption Attitudes" and five-point Likert type scale was used. The answers are "Strongly Disagree", "Disagree", "Netiher Agree Nor Disagree", "Agree" and "Strongly Agree". Due to the pandemic, data were collected online between November and December 2020 by simple random sampling method. The questionnaire form was created from the website www.onlineanketler.com.

The population of the research is chosen from an unknown population. The unknown population sample size calculation was used categorically to evaluate the outcome criterion. When the literature is examined, it is seen that the data is limited compared to tarhana consumption in Turkey. In the study conducted by Tümer et al. (2017) it was determined that the minimum rate for the consumption of tarhana chips were 31.8% (Tumer et al. 2017).

When this study and Cohen effect size standards are taken as reference, the sample sizes calculated separately with the G Power 3.1.9.4 program, with the view that the medium effect size should be 0.30, were found to be 310 (with an effect size of 0.318) and 348 (with an effect size of 0.300) (Jacob, 1992).

In calculating the sample, the margin of error for type 1 was 5% and margin of error for type 2 was taken as 95%. Accordingly, to ensure the validity of the research, the minimum sample size was determined as 348 people and data collection was terminated by reaching 356 people. As 4 questionnaires were incomplete, they were excluded from the analysis and the answers of 352 people were evaluated.

Data were analyzed using MS Excel 2016 and SPSS 22.0 programs. In the presentation of the analysis, descriptive statistical methods such as frequency, percentage, mean, standard deviation, lower and upper values were used. Chi-square analysis or likelihood ratio estimation, which is one of the probability estimation methods that should be selected by considering the ratio of the parameters representing the number of observations below 5 in the comparison analysis, was taken into consideration compared to the total number of parameters. In addition, considering the median parameter range and the 0.25-0.75 percentile, age groupings were formed as "23 years and under", "24-41 years" and "42 years and above".

Factor analysis

To group the items in the questionnaire created by the researcher under factors, exploratory factor analysis was used. Kaiser Meier Olkin and Bartlett sphericity test was applied to measure the suitability of sample adequacy for factor analysis. Principal components were selected and oblimin rotation method was used to explain the factors. The explanation of the factors was completed in 21 iterations, although the eigenvalue was left at 1 and the maximum number of iterations was left at 25 in order to interfere with the matrix trace at a minimum level. This situation shows that the data set and the prepared items are quite suitable for factor analysis.

Study Results and Discussion

The findings of the study include the participants' sociodemographic information, tarhana consumption

preferences, ideas about tarhana preparation, tarhana consumption patterns, information about tarhana content and attitudes towards tarhana.

Sociodemographic structure of the participants

The demographic characteristics of the research participants are as follows: 69.3% of the participants are women and 30.7% are men. 57.7% of them are single and 49.4% of them are between 24-41 years old (Figure 1).
The educational status of the participants is as follows.74.4% of the participants are university graduates, 18.8% are high school graduates, 4% are secondary school graduates and 2.8% are primary school graduates. While the rate of private sector employees among the participants is 30.7%, 28.4% are students and 15.9% are not working.
It was observed that 27.8% of them had a monthly income of 0-1000 TL, 23% had a monthly income of 5000 TL or more, 21.6% had a monthly income of 3001-500 TL, and 19.3% had a monthly income between 2001-3000 TL (Figure 1).
The average age of the participants is 32.36±12.01, a high percentage of them are university graduates and their monthly income is over 3000 TL. This result shows that the Participants are economically independent when making their choices.

"Figure 1"

factor analysis

In the factor analysis based on the answers given to the questions measuring the preferences and attitudes of tarhana consumers, it was determined that the items were gathered under 6 groups (factors)

As a result of the KMO and Bartlett sphericity test, the KMO value was found to be 0.833, and the sphericity result was found to be significant ($p=0.000<0.05$). It was seen that the factors created by taking the eigenvalue as a minimum of 1 consisted of 6 factors and explained 61,108% of the total variance.

"Table 1"
"Table 2"

When the factor loading difference was evaluated by considering the 0.10 threshold value, it was seen that only two items (S6 and S16) loaded on more than one factor. In this case, it was thought that the prepared questionnaire could be used as a scale in a more comprehensive study.
The first factor consists of 7 items (S12, S17, S18, S19, S20, S21, S22) measuring "Tradition-Storability-Promotion" and the Factor eigenvalue was calculated as 6,224 and it was found that it explained 28.292% of the variance.
The second factor consists of 4 items (S4, S5, S8, S9). It was named as "Tarhana as a Snack" considering the ingredients. The factor eigenvalue was 2.185 explaining 9.931% of the variance.
The third factor is the factor that measures the phenomenon of "liking" and consists of 2 items (S2, S3). The factor eigenvalue was 1.475 and explained 6.706% of the variance.
The fourth factor is the factor that measures "Preparation and Consumption as Main Meal" and consists of 2 questions (S7, S15). Its eigenvalue was calculated as 1,367 and it was seen that it explained 6,213% of the variance.
The fifth factor consisted of 5 items (S1, S6, S10, S11, S16). The items and their loads were evaluated and determined as the "Being Healthy" factor. In naming, it was thought that those with higher factor

loads were dominant. The eigenvalue is 1.184, and the explained variance is 5.380%.
The sixth and last factor consists of 2 items (S13, S14). It is named as "Consumption Attitude" according to the expressions of the items. The factor eigenvalue is 1.009 and the explained variance is 4.585%.

"Effecet of Traditionality, storability and promotion in tarhana consumption" factor

172 (48.9%) of the participants "strongly agree" with the opinion "Tarhana can be consumed in all seasons" and 226 (64.2%) answered "I strongly agree" with the statement "Tarhana is a traditional product". This is the most agreed item between the participants.
202 (57.4%) people said, "I strongly agree" to "Tarhana can be stored dry", 207 (58.8%) people said, "I strongly agree" to "Tarhana can be stored for a long time" and 225 (63.9%) people said, "I totally agree" to "Tarhana can be a national flavor with the right promotion" 183 (52.0%) respondents said, "I Strongly Agree" to the statement "Advertising tarhana on platforms such as TV and social media increases its consumption" and 206 (58.5%) participants said, "Strongly Agree" to the statement "Sales of tarhana in touristic places ensures its recognition"

"Tarhana as a snack" factor

While 96 (27.3%) participants said, "I agree" to "Tarhana can be consumed as nut snack", 122 participants (34.7%) said "Indecisive" to "Tarhana should be consumed as a snack food eaten between meals". This is the item that participants are most undecided about.
While 101 (28.7%) participants said, "I agree" to "Tarhana can be consumed as chips", 84 (23.9%) participants answered "disagree" to "I consume tarhana instead of chips".

"Liking" factor

194 (55.1%) people said, "strongly disagree" to the statement "I don't like the taste of tarhana". This was the most disagreed item, and to the statement "I do not like the smell of tarhana", 187 (53.1%) people answered, "I strongly disagree".

"Preparation and consumption as a main meal" factor

While 119 (33.8%) of the participants answered, "disagree" to the proposition "Tarhana should be consumed as a main meal alone", 89 (25.3%) people answered "Indecisive" to "Tarhana is prepared using herbal and animal products".

"Being healthy" factor

161 (45.7%) and 191 (54.3%) participants said, "strongly agree" to "I know about tarhana" and "Tarhana should be consumed as soup", respectively.
225 participants (63.9%) "Strongly Agree" with the statement "Tarhana consumption is beneficial for health" and 202 (57.4%) participants "Strongly Agree" with the statement "Tarhana is a functional (health-supporting) product". Lastly, 145 (41.2%) people said, "strongly agree" with the statement "Fermentation method is used in making tarhana"

"Consumption Attitude" factor

220 people (62.5%) said "strongly agree" to the statement "I consume tarhana as home made" and 153 (43.5%) participants answered "disagree" to the statement "I buy tarhana from the market"

Comparison of Independent Qualitative Variables with Items

The items related to tarhana consumption attitudes of consumers were compared with gender, marital status, age groups, educational status, occupational status, and income status.

Tarhana consumption attitudes by gender

When Table 3 is examined, it is seen that gender is effective in the consumption attitude of tarhana. A significant difference ($p<0.05$) was found between the genders in the answers given by the participants to the following propositions: "Tarhana can be consumed as a snack", "Tarhana should be consumed as a main meal alone", "Tarhana can be consumed in all seasons", "Fermentation method is used in making tarhana", "Tarhana can be stored for a long time", "Tarhana can be a national flavor with the right promotion", "Advertising of tarhana places , like TV and social media increases its consumption", "Selling tarhana in touristic places ensures its recognition".

However, no significant relationship was found between the genders in the answers given to the other questions ($p>0.05$). According to the results obtained, we can think that women are more interested and knowledgeable in the consumption of tarhana than men, that they can contribute to different consumption trends such as snacks instead of soup, and that they can increase the consumption diversity of tarhana. In addition to these, we can conclude that by increasing the consumption of tarhana by women, tarhana can go beyond the local and contribute to it becoming a national flavor.

"Table 3"

Tarhana consumption attitudes according to marital status

There was a significant difference between the participants for item "I have knowledge about Tarhana" and their marital status ($p<0.05$). Married people agree with this view more than single people (Table 4).

"Table 4"

Tarhana consumption attitudes by age groups

A significant difference was found between the answers given by the participants to the item "I have knowledge about Tarhana" and the age groups ($p<0.05$). It was observed that the rate of agreeing with this opinion of the older age groups was higher than those of the younger age groups (Table 5). A significant difference was found between the answers given by the participants to the item "I know about Tarhana" and the age groups ($p<0.05$). It was observed that the rate of agreeing with this opinion of the older age groups was higher than those of the younger age groups.

"Table 5"

There was no significant difference between age groups in their views on whether tarhana can be consumed as a main dish alone or as chips, bought from the market and sold in order to be recognized in touristic places ($p>0.05$) (Table 5)

Tarhana consumption attitudes according to education level

A significant difference was found between the answers given by the participants to the statement "I don't like the taste of tarhana" and their

educational status ($p<0.05$) (Table 6). It has been found that primary and secondary school graduates agree with this view less than those at other education levels.
There is a significant difference between the responses given to the items "Tarhana can be consumed as a snack", "Tarhana can be consumed as chips", "I consume tarhana instead of chips", "Tarhana is a functional (health-supporting) product" ($p<0.05$). University and high school graduates are the education group that gives the answer "Strongly Agree" with the highest rate. As the education level decreased, the preference for consuming tarhana as a snack decreased.

"Table 6"

Tümer et al. (2017) in their study to determine the behavior of 384 consumers living in Maraş regarding the consumption of Maraş tarhana in 2017, it was found that the tendency to consume Maraş tarhana chips instead of potato chips decreased as the age and income level increased, older age groups and those with high income levels preferred potato chips more. And, likewise, with the increase in the level of education, it was concluded that the participants preferred Maraş tarhana more than potato chips (Tümer et al. 2017).

In the research conducted by Öncebe and Demircan (2019), it was stated that the education level of consumers is effective in the consumption of functional foods (Öncebe and Demirci, 2019). As a result of this study, it is seen that the evaluation of tarhana outside of soup, which is the traditional consumption form, is accepted as the education level increases.

It can be concluded that the innovative use of tarhana in different recipes apart from soup is an alternative for those who do not want to consume it as soup, as well as contributing to increasing the consumption of tarhana, removing it from the perception of a local product, and making it ready for consumption at any time in packaged products such as chips

Tarhana consumption attitudes according to occupational status

The responses of the participants to the statement "I know about Tarhana" differed significantly according to their professional status ($p<0.05$) (Table 7). Employed, unemployed, retired, and other groups agreed with the statement "I know about tarhana" more than students.

"Table 7"

However, there was no significant difference between the occupational status of the participants and the following statements: "I don't like the taste of tarhana", "I don't like the smell of tarhana", "Tarhana should be consumed alone as a main meal", "Tarhana consumption is beneficial for health", "Tarhana is a functional product" (health-supporting product), "I buy tarhana from the market", "Fermentation method is used in making tarhana", and "Tarhana is a traditional product"
The taste and smell of tarhana is generally appreciated by participants from all professions. It has been approved by every professional group that "it can be consumed alone as a main meal", "homemade tarhana is preferred", "it is a functional and traditional fermented product beneficial to health". There was no significant difference between these propositions and occupational groups ($p>0.05$).

Tarhana consumption attitudes according to income status

A significant difference was found between the answers given by the participants to the item "I know about Tarhana" and their income status ($p<0.05$) (Table 8). It is seen that those with a high-income level agree with this view more than those with a lower income level

"Table 8"

While the taste and smell of tarhana was not liked by the participants with high income level, they stated that they could consume it "as nut snack" and "as a snack food eaten between meals" instead of chips. Although all income groups mostly approve that it is a useful and functional product in terms of health, it was accepted by the majority of the participants with high income levels.

The increase in the income level of the participants who preferred to consume homemade tarhana instead of buying it from the market created a significant difference ($p<0.05$). As the income level increased, the preference for homemade tarhana consumption increased.

Conclusion and Recommendations

As a result, it has been determined that the participants have general knowledge about tarhana and that tarhana is seen as a local product. It has been concluded that the sensory characteristics such as taste and smell and the way of consumption also change the consumer attitude in the use of tarhana, and its consumption is not common in rural areas except for soup. It has been determined that consumers have information about the production and storage conditions of tarhana, which they see as a healthy meal.

It was determined that the sociodemographic structure of the participants was effective on the sensory characteristics such as taste and smell in the consumption of tarhana and the way of consumption, and it was observed that the participants had a certain level of knowledge about the production and storage conditions.

Although tarhana has nutritional values and taste, it has remained mostly local. Tarhana has an important gastronomic value, its consumption areas should be expanded with different shapes and ingredients other than soup, and it should be evaluated both in terms of promotion of the country and economic benefit. Tarhana, a traditional fermented instant soup, can find its place in international markets as a functional food.

The functional product market in the world developed rapidly after 1980 and countries with large economies such as Japan and the USA made significant gains from this market. In Turkey too, the functional product market has been developing rapidly in recent years (Gök and Ulu, 2019).

While many countries are trying to create and market functional products, there are already countless local products such as tarhana that have proven themselves for centuries in terms of health. Studies should be carried out to promote tarhana as a functional product rather than a local product. In order to reach the goal with the information obtained, it is necessary to increase the consumption of tarhana by giving individuals the habit of consuming tarhana at a younger age. It is also thought that it should be promoted in order to raise awareness and increase tarhana consumption.

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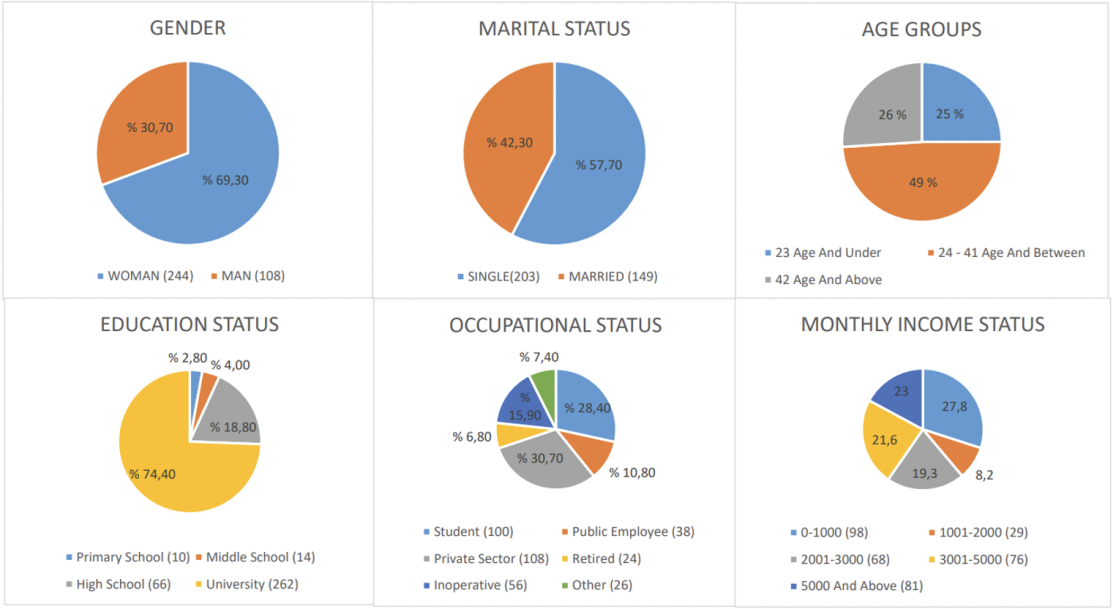

Table 1. Factor Analysis

No	Değişkenler	x̄	Faktör 1	Faktör 2	Faktör 3	Faktör 4	Faktör 5	Faktör 6	Ext.
S1	Tarhana information	4.17	*0.121*	*0.125*	*-0.126*	*0.095*	**0.533**	*0.035*	0.429
S2	Enjoy the taste	1.92	*-0.034*	*-0.033*	**0.856**	*-0.054*	*-0.030*	*0.050*	0.787
S3	Liking the smell	1.83	*0.024*	*0.000*	**0.920**	*0.035*	*0.070*	*-0.011*	0.811
S4	İt can be a cookie	3.06	*-0.118*	**0.887**	*-0.058*	*0.049*	*0.039*	*-0.022*	0.769
S5	İt can be a dec meal	3.16	*-0.015*	**0.408**	*0.018*	*-0.516*	*-0.054*	*-0.037*	0.458
S6	Consumption as a soup	4.38	*0.061*	*-0.220*	*-0.121*	*-0.324*	**0.402**	*-0.088*	0.400
S7	The fact that it can be main meal alone	3.12	*0.238*	*0.147*	*0.063*	**-0.430**	*-0.076*	*-0.436*	0.492
S8	Chips can be	3.23	*0.032*	**0.873**	*0.032*	*0.104*	*0.076*	*0.094*	0.758
S9	Choosing tarhana istead of chips	2.99	*0.175*	**0.482**	*-0.181*	*-0.351*	*0.039*	*0.032*	0.521
S10	Be healty – or healty	4.53	*-0.020*	*0.030*	*0.075*	*0.081*	**0.875**	*0.007*	0.725
S11	Be a functional product	4.47	*-0.053*	*0.040*	*-0.037*	*-0.107*	**0.850**	*-0.077*	0.749
S12	İt can be consumed in all seasons	4.19	**0.408**	*0.049*	*0.073*	*-0.098*	*0.349*	*-0.092*	0.463
S13	It should be homemade	4.48	*0.173*	*-0.010*	*-0.018*	*-0.039*	*0.232*	**-0.642**	0.673
S14	Be available at the grocery store	2.01	*0.141*	*0.119*	*0.092*	*-0.116*	*-0.018*	**0.813**	0.675
S15	Vegetable and animal preparedness	3.31	*0.156*	*0.215*	*0.011*	**0.553**	*-0.026*	*-0.180*	0.426
S16	fermentation can be used in the production of	4.05	*0.170*	*0.017*	*-0.036*	*0.364*	**0.429**	*-0.251*	0.571
S17	being a traditional product	4.57	**0.518**	*0.022*	*-0.198*	*0.152*	*0.185*	*-0.046*	0.541
S18	it can be stored dry	4.36	**0.581**	*-0.120*	*-0.008*	*-0.175*	*0.167*	*0.205*	0.460
S19	it can be stored for a long time	4.43	**0.732**	*0.029*	*0.069*	*0.131*	*0.066*	*-0.051*	0.598
S20	Ulusal lezzet olabilirliği	4.52	**0.810**	*-0.044*	*-0.047*	*-0.001*	*0.011*	*-0.071*	0.713
S21	Consumption may increase with advertising	4.34	**0.865**	*0.033*	*-0.103*	*0.048*	*-0.108*	*0.012*	0.728
S22	It can be sold in tourist places for recognition	4.46	**0.853**	*0.020*	*-0.002*	*0.016*	*-0.075*	*-0.038*	0.697
	Özdeğer		**6.224**	**2.185**	**1.475**	**1.367**	**1.184**	**1.009**	
	Varyans variance		**28.292**	**9.931**	**6.706**	**6.213**	**5.380**	**4.585**	
	Kümülatif Varyans cumulative variance		**28.292**	**38.223**	**44.929**	**51.142**	**56.522**	**61.108**	

χ2: 2857.516; KMO=0.833; df=231; p=0.000

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Table 2. Data on the participants attitude to tarhana consumption

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree	
		N	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
S1	I have information about tarhana .	12	*3.4*	14	*4.0*	37	*10.5*	128	*36.4*	**161**	***45.7***
S2	I don't like the taste of tarhana	**194**	***55.1***	75	*21.3*	20	*5.7*	43	*12.2*	20	*5.7*
S3	I don't like the smell of tarhana .	**187**	***53.1***	88	*25.0*	36	*10.2*	33	*9.4*	8	*2.3*
S4	Tarhana can be consumed as a snack	54	*15.3*	72	*20.5*	77	*21.9*	**96**	***27.3***	53	*15.1*
S5	Tarhana should be consumed as a dec meal .	27	*7.7*	63	*17.9*	**122**	***34.7***	106	*30.1*	34	*9.7*
S6	Tarhana should be consumed as a soup.	7	*2.0*	12	*3.4*	11	*3.1*	131	*37.2*	**191**	***54.3***
S7	Tarhana alone should be consumed as the main meal.	13	*3.7*	119	***33.8***	**85**	*24.1*	82	*23.3*	53	*15.1*
S8	tarhana can be consumed as chips.	44	*12.5*	69	*19.6*	69	*19.6*	**101**	***28.7***	69	*19.6*
S9	I consume tarhana instead of chips.	61	*17.3*	**84**	***23.9***	66	*18.8*	79	*22.4*	62	*17.6*
S10	Consumption of tarhana is beneficial for health.	4	*1.1*	5	*1.4*	16	*4.5*	102	*29.0*	**225**	***63.9***
S11	Tarhana is a functional (health-promoting) product.	0	*0.0*	5	*1.4*	25	*7.1*	120	*34.1*	**202**	***57.4***
S12	Tarhana can be consumed in all season.	6	*1.7*	24	*6.8*	39	*11.1*	111	*31.5*	**172**	***48.9***
S13	I consume tarhana homemade	1	*0.3*	12	*3.4*	23	*6.5*	96	*27.3*	**220**	***62.5***
S14	I buy the tarhana at the grocery store and consume it.	116	*33.0*	**153**	***43.5***	51	*14.5*	27	*7.7*	5	*1.4*
S15	Tarhana is prepared using vegetable and animal products.	45	*12.8*	50	*14.2*	**89**	***25.3***	86	*24.4*	82	*23.3*
S16	Fermentation method is used in the production of tarhana.	5	*1.4*	18	*5.1*	78	*22.2*	106	*30.1*	**145**	***41.2***
S17	Tarhana is a traditional product.	3	*0.9*	5	*1.4*	8	*2.3*	110	*31.3*	**226**	***64.2***
S18	tarhana is stored dry.	5	*1.4*	21	*6.0*	19	*5.4*	105	*29.8*	**202**	***57.4***
S19	Tarhana can be stored for a long time.	2	*0.6*	9	*2.6*	31	*8.8*	103	*29.3*	**207**	***58.8***
S20	Tarhana can become a national delicacy with the right introduction.	5	*1.4*	6	*1.7*	16	*4.5*	100	*28.4*	**225**	***63.9***
S21	The Tv of Tarhana. advertising in places such as social media increases consumption.	2	*0.6*	10	*2.8*	38	*10.8*	119	*33.8*	**183**	***52.0***
S22	The sale of tarhana in tourist places allows it to be recognized.	2	*0.6*	6	*1.7*	25	*7.1*	113	*32.1*	**206**	***58.5***

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Table 3. Tarhana consumption attitudes of the participants according to their gender (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2
		n	%	n	%	n	%	n	%	n	%	p
S1	Woman	9	3.7	9	3.7	24	9.8	93	38.1	109	44.7	1.562[b] 0.814
	Male	3	2.8	5	4.6	13	12.0	35	32.4	52	48.1	
S2	Woman	138	56.6	51	20.9	14	5.7	25	10.2	16	6.6	3.966[a] 0.411
	Male	56	51.9	24	22.2	6	5.6	18	16.7	4	3.7	
S3	Woman	123	50.4	64	26.2	27	11.1	23	9.4	7	2.9	3.377[a] 0.497
	Male	64	59.3	24	22.2	9	8.3	10	9.3	1	0.9	
S4	Woman	25	10.2	47	19.3	59	24.2	74	30.3	39	16.0	**19.117[a] 0.001***
	Male	29	26.9	25	23.1	18	16.7	22	20.4	14	13.0	
S5	Woman	17	7.0	42	17.2	92	37.7	71	29.1	22	9.0	3.462[a] 0.484
	Male	10	9.3	21	19.4	30	27.8	35	32.4	12	11.1	
S6	Woman	4	1.6	7	2.9	10	4.1	86	35.2	137	56.1	4.931[b] 0.295
	Male	3	2.8	5	4.6	1	0.9	45	41.7	54	50.0	
S7	Woman	5	2.0	75	30.7	63	25.8	63	25.8	38	15.6	**11.273[a] 0.024***
	Male	8	7.4	44	40.7	22	20.4	19	17.6	15	13.9	
S8	Woman	27	11.1	42	17.2	47	19.3	74	30.3	54	22.1	7.007[a] 0.136
	Male	17	15.7	27	25.0	22	20.4	27	25.0	15	13.9	
S9	Woman	40	16.4	55	22.5	52	21.3	53	21.7	44	18.0	4.032[a] 0.402
	Male	21	19.4	29	26.9	14	13.0	26	24.1	18	16.7	
S10	Woman	4	1.6	2	0.8	9	3.7	73	29.9	156	63.9	5.319[b] 0.256
	Male	0	0.0	3	2.8	7	6.5	29	26.9	69	63.9	
S11	Woman	0	0.0	4	1.6	17	7.0	83	34.0	140	57.4	0.290[b] 0.962
	Male	0	0.0	1	0.9	8	7.4	37	34.3	62	57.4	
S12	Woman	2	0.8	15	6.1	33	13.5	70	28.7	124	50.8	**11.133[b] 0.025**
	Male	4	3.7	9	8.3	6	5.6	41	38.0	48	44.4	
S13	Woman	1	0.4	8	3.3	14	5.7	63	25.8	158	64.8	2.771[b] 0.597
	Male	0	0.0	4	3.7	9	8.3	33	30.6	62	57.4	
S14	Woman	83	34.0	105	43.0	33	13.5	21	8.6	2	0.8	3.597[b] 0.463
	Male	33	30.6	48	44.4	18	16.7	6	5.6	3	2.8	
S15	Woman	28	11.5	33	13.5	57	23.4	60	24.6	66	27.0	7.306[a] 1.121
	Male	17	15.7	17	15.7	32	29.6	26	24.1	16	14.8	
S16	Woman	2	0.8	13	5.3	46	18.9	71	29.1	112	45.9	**10.419[b] 0.034***
	Male	3	2.8	5	4.6	32	29.6	35	32.4	33	30.6	
S17	Woman	1	0.4	2	0.8	6	2.5	75	30.7	160	65.6	3.891[b] 0.421
	Male	2	1.9	3	2.8	2	1.9	35	32.4	66	61.1	
S18	Woman	3	1.2	17	7.0	15	6.1	70	28.7	139	57.0	2.911[b] 0.573
	Male	2	1.9	4	3.7	4	3.7	35	32.4	63	58.3	
S19	Woman	0.0	1	0.4	21	8.6	72	29.5	150	61.5	0.0	**19.119[b] 0.001***
	Male	1.9	8	7.4	10	9.3	31	28.7	57	52.8	1.9	
S20	Woman	1	0.4	2	0.8	13	5.3	70	28.7	158	64.8	**9.744[b] 0.045***
	Male	4	3.7	4	3.7	3	2.8	30	27.8	67	62.0	
S21	Woman	0	0.0	3	1.2	26	10.7	87	35.7	128	52.5	**12.121[b] 0.016***
	Male	2	1.9	7	6.5	12	11.1	32	29.6	55	50.9	
S22	Woman	0	0.0	1	0.4	19	7.8	76	31.1	148	60.7	**13.268[b] 0.010***
	Male	2	1.9	5	4.6	6	5.6	37	34.3	58	53.7	

***: p<0.05; [a]:Ki-kare test ; [b]:Likelihood ratio**

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Table 4. Tarhana consumption attitudes of the participants according to their marital status (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2
		n	%	n	%	n	%	n	%	n	%	p
S1	Single	5	*2.5*	10	*4.9*	31	*15.3*	80	*39.4*	77	*37.9*	**20.295** [a]
	Married	7	*4.7*	4	*2.7*	6	*4.0*	48	*32.2*	84	*56.4*	**0.000***
S2	Single	103	*50.7*	53	*26.1*	13	*6.4*	26	*12.8*	8	*3.9*	**9.990**[a]
	Married	91	*61.1*	22	*14.8*	7	*4.7*	17	*11.4*	12	*8.1*	**0.041***
S3	Single	94	*46.3*	61	*30.0*	24	*11.8*	22	*10.8*	2	*1.0*	**15.081** [b]
	Married	93	*62.4*	27	*18.1*	12	*8.1*	11	*7.4*	6	*4.0*	**0.005***
S4	Single	18	*8.9*	31	*15.3*	52	*25.6*	65	*32.0*	37	*18.2*	**29.632** [a]
	Married	36	*24.2*	41	*27.5*	25	*16.8*	31	*20.8*	16	*10.7*	**0.000***
S5	Single	9	*4.4*	29	*14.3*	85	*41.9*	60	*29.6*	20	*9.9*	**17.313** [a]
	Married	18	*12.1*	34	*22.8*	37	*24.8*	46	*30.9*	14	*9.4*	**0.002***
S6	Single	6	*3.0*	7	*3.4*	9	*4.4*	90	*44.3*	91	*44.8*	**20.004** [b]
	Married	1	*0.7*	5	*3.4*	2	*1.3*	41	*27.5*	100	*67.1*	**0.000***
S7	Single	6	*3.0*	68	*33.5*	52	*25.6*	48	*23.6*	29	*14.3*	1.362[a]
	Married	7	*4.7*	51	*34.2*	33	*22.1*	34	*22.8*	24	*16.1*	0.851
S8	Single	17	*8.4*	36	*17.7*	42	*20.7*	60	*29.6*	48	*23.6*	**11.797** [a]
	Married	27	*18.1*	33	*22.1*	27	*18.1*	41	*27.5*	21	*14.1*	**0.019***
S9	Single	36	*17.7*	51	*25.1*	48	*23.6*	33	*16.3*	35	*17.2*	**14.711** [a]
	Married	25	*16.8*	33	*22.1*	18	*12.1*	46	*30.9*	27	*18.1*	**0.005***
S10	Single	2	*1.0*	2	*1.0*	13	*6.4*	71	*35.0*	115	*56.7*	**14.849** [b]
	Married	2	*1.3*	3	*2.0*	3	*2.0*	31	*20.8*	110	*73.8*	**0.005***
S11	Single	0	*0.0*	3	*1.5*	18	*8.9*	82	*40.4*	100	*49.3*	**13.430** [b]
	Married	0	*0.0*	2	*1.3*	7	*4.7*	38	*25.5*	102	*68.5*	**0.004***
S12	Single	4	*2.0*	17	*8.4*	35	*17.2*	65	*32.0*	82	*40.4*	**28.572** [b]
	Married	2	*1.3*	7	*4.7*	4	*2.7*	46	*30.9*	90	*60.4*	**0.000***
S13	Single	1	*0.5*	5	*2.5*	21	*10.3*	58	*28.6*	118	*58.1*	**17.061** [b]
	Married	0	*0.0*	7	*4.7*	2	*1.3*	38	*25.5*	102	*68.5*	**0.002***
S14	Single	61	*30.0*	87	*42.9*	39	*19.2*	14	*6.9*	2	*1.0*	**10.174** [b]
	Married	55	*36.9*	66	*44.3*	12	*8.1*	13	*8.7*	3	*2.0*	**0.038***
S15	Single	18	*8.9*	26	*12.8*	63	*31.0*	51	*25.1*	45	*22.2*	**13.042** [a]
	Married	27	*18.1*	24	*16.1*	26	*17.4*	35	*23.5*	37	*24.8*	**0.011***
S16	Single	3	*1.5*	12	*5.9*	52	*25.6*	59	*29.1*	77	*37.9*	4.678[b]
	Married	2	*1.3*	6	*4.0*	26	*17.4*	47	*31.5*	68	*45.6*	0.322
S17	Single	0	*0.0*	2	*1.0*	5	*2.5*	75	*36.9*	121	*59.6*	**12.567** [b]
	Married	3	*2.0*	3	*2.0*	3	*2.0*	35	*23.5*	105	*70.5*	**0.014***
S18	Single	3	*1.5*	14	*6.9*	13	*6.4*	69	*34.0*	104	*51.2*	7.631[b]
	Married	2	*1.3*	7	*4.7*	6	*4.0*	36	*24.2*	98	*65.8*	0.106
S19	Single	0	*0.0*	2	*1.0*	24	*11.8*	63	*31.0*	114	*56.2*	**14.568** [b]
	Married	2	*1.3*	7	*4.7*	7	*4.7*	40	*26.8*	93	*62.4*	**0.006**
S19	Single	0	*0.0*	2	*1.0*	24	*11.8*	63	*31.0*	114	*56.2*	**14.568** [b]
	Married	2	*1.3*	7	*4.7*	7	*4.7*	40	*26.8*	93	*62.4*	**0.006**
S20	Single	0	*0.0*	2	*1.0*	12	*5.9*	69	*34.0*	120	*59.1*	**19.290** [a]
	Married	5	*3.4*	4	*2.7*	4	*2.7*	31	*20.8*	105	*70.5*	**0.001***
S21	Single	0	*0.0*	4	*2.0*	23	*11.3*	75	*36.9*	101	*49.8*	6.701[b]
	Married	2	*1.3*	6	*4.0*	15	*10.1*	44	*29.5*	82	*55.0*	0.153
S22	Single	0	*0.0*	1	*0.5*	14	*6.9*	64	*31.5*	124		8.348[b]
	Married	2	*1.3*	5	*3.4*	11	*7.4*	49	*32.9*	82		0.080

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Table 5. Tarhana consumption attitudes of the participants according to their age groups (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2 p
		n	%	n	%	n	%	n	%	n	%	
S1	23 and under	4	4.7	6	7.0	18	20.9	32	37.2	26	30.2	**29.284[b] 0.000***
	24-41 between	7	4.0	4	2.3	17	9.8	66	37.9	80	46.0	
	42 and above	1	1.1	4	4.3	2	2.2	30	32.6	55	59.8	
S2	23 and under	34	39.5	26	30.2	4	4.7	18	20.9	4	4.7	**21.365[a] 0.006***
	24-41 between	98	56.3	35	20.1	13	7.5	16	9.2	12	6.9	
	42 and above	62	67.4	14	15.2	3	3.3	9	9.8	4	4.3	
S3	23 and under	38	44.2	26	30.2	12	14.0	10	11.6	0	0.0	**18.573[b] 0.017***
	24-41 between	88	50.6	43	24.7	20	11.5	16	9.2	7	4.0	
	42 and above	61	66.3	19	20.7	4	4.3	7	7.6	1	1.1	
S4	23 and under	9	10.5	17	19.8	25	29.1	20	23.3	15	17.4	**34.997[a] 0.000***
	24-41 between	22	12.6	24	13.8	37	21.3	62	35.6	29	16.7	
	42 and above	23	25.0	31	33.7	15	16.3	14	15.2	9	9.8	
S5	23 and under	2	2.3	14	16.3	42	48.8	19	22.1	9	10.5	**27.671[a] 0.001***
	24-41 between	12	6.9	26	14.9	63	36.2	59	33.9	14	8.0	
	42 and above	13	14.1	23	25.0	17	18.5	28	30.4	11	12.0	
S6	23 and under	4	4.7	1	1.2	4	4.7	41	47.7	36	41.9	**22.681[b] 0.004***
	24-41 between	2	1.1	7	4.0	7	4.0	65	37.4	93	53.4	
	42 and above	1	1.1	4	4.3	0	0.0	25	27.2	62	67.4	
S7	23 and under	1	1.2	33	38.4	26	30.2	13	15.1	13	15.1	11.001[a] 0.202
	24-41 between	9	5.2	56	32.2	42	24.1	45	25.9	22	12.6	
	42 and above	3	3.3	30	32.6	17	18.5	24	26.1	18	19.6	

	23 and under	7	*8.1*	17	*19.8*	20	*23.3*	23	*26.7*	19	*22.1*	
S8	24-41 between	20	*11.5*	28	*16.1*	35	*20.1*	55	*31.6*	36	*20.7*	11.003 [a]
	42 and above	17	*18.5*	24	*26.1*	14	*15.2*	23	*25.0*	14	*15.2*	0.201
		20	*23.3*	26	*30.2*	25	*29.1*	8	*9.3*	7	*8.1*	
	23 and under											
S9	24-41 between	30	*17.2*	38	*21.8*	34	*19.5*	40	*23.0*	32	*18.4*	**35.367** [a]
	42 and above	11	*12.0*	20	*21.7*	7	*7.6*	31	*33.7*	23	*25.0*	**0.000***
		0	*0.0*	0	*0.0*	8	*9.3*	37	*43.0*	41	*47.7*	
	23 and under											
S10	24-41 between	2	*1.1*	2	*1.1*	8	*4.6*	47	*27.0*	115	*66.1*	**32.622** [b]
	42 and above	2	*2.2*	3	*3.3*	0	*0.0*	18	*19.6*	69	*75.0*	**0.000***
		0	*0.0*	1	*1.2*	9	*10.5*	39	*45.3*	37	*43.0*	
	23 and under											
S11	24-41 between	0	*0.0*	1	*0.6*	14	*8.0*	56	*32.2*	103	*59.2*	**17.988** [b]
	42 and above	0	*0.0*	3	*3.3*	2	*2.2*	25	*27.2*	62	*67.4*	**0.006***
	23 and under	1	*1.2*	9	*10.5*	39	*45.3*	37	*43.0*	1	*1.2*	
S12	24-41 between	1	*0.6*	14	*8.0*	56	*32.2*	103	*59.2*	1	*0.6*	**47.151** [b]
	42 and above	3	*3.3*	2	*2.2*	25	*27.2*	62	*67.4*	3	*3.3*	**0.000***
	23 and under	0	*0.0*	1	*1.2*	11	*12.8*	32	*37.2*	42	*48.8*	
S13	24-41 between	1	*0.6*	6	*3.4*	11	*6.3*	35	*20.1*	121	*69.5*	**25.608** [b]
	42 and above	0	*0.0*	5	*5.4*	1	*1.1*	29	*31.5*	57	*62.0*	**0.001***
	23 and under	22	*25.6*	38	*44.2*	15	*17.4*	10	*11.6*	1	*1.2*	
S14	24-41 between	67	*38.5*	66	*37.9*	26	*14.9*	12	*6.9*	3	*1.7*	10.615 [b]
	42 and above	27	*29.3*	49	*53.3*	10	*10.9*	5	*5.4*	1	*1.1*	0.225
	23 and under	7	*8.1*	8	*9.3*	38	*44.2*	21	*24.4*	12	*14.0*	
S15	24-41 between	24	*13.8*	29	*16.7*	37	*21.3*	40	*23.0*	44	*25.3*	**26.089** [a]
	42 and above	14	*15.2*	13	*14.1*	14	*15.2*	25	*27.2*	26	*28.3*	**0.001***
	23 and under	2	*2.3*	7	*8.1*	28	*32.6*	30	*34.9*	19	*22.1*	
S16	24-41 between	3	*1.7*	5	*2.9*	36	*20.7*	42	*24.1*	88	*50.6*	**29.690** [b] **0.000***

	42 and above	0	*0.0*	6	*6.5*	14	*15.2*	34	*37.0*	38	*41.3*	
	23 and under	0	*0.0*	0	*0.0*	1	*1.2*	48	*55.8*	37	*43.0*	
S17	24-41 between	1	*0.6*	2	*1.1*	7	*4.0*	40	*23.0*	124	*71.3*	**41.783** [b] **0.000***
	42 and above	2	*2.2*	3	*3.3*	0	*0.0*	22	*23.9*	65	*70.7*	
	23 and under	0	*0.0*	7	*8.1*	7	*8.1*	38	*44.2*	34	*39.5*	
S18	24-41 between	3	*1.7*	10	*5.7*	12	*6.9*	41	*23.6*	108	*62.1*	**30.238** [b] **0.000***
	42 and above	2	*2.2*	4	*4.3*	0	*0.0*	26	*28.3*	60	*65.2*	
	23 and under	0	*0.0*	0	*0.0*	17	*19.8*	35	*40.7*	34	*39.5*	
S19	24-41 between	0	*0.0*	4	*2.3*	12	*6.9*	48	*27.6*	110	*63.2*	**41.728** [b] **0.000***
	42 and above	2	*2.2*	5	*5.4*	2	*2.2*	20	*21.7*	63	*68.5*	
	23 and under	0	*0.0*	1	*1.2*	10	*11.6*	40	*46.5*	35	*40.7*	
S20	24-41 between	3	*1.7*	4	*2.3*	6	*3.4*	39	*22.4*	122	*70.1*	**41.545** [b] **0.000***
	42 and above	2	*2.2*	1	*1.1*	0	*0.0*	21	*22.8*	68	*73.9*	
	23 and under	0	*0.0*	3	*3.5*	17	*19.8*	39	*45.3*	27	*31.4*	
S21	24-41 between	0	*0.0*	5	*2.9*	21	*12.1*	52	*29.9*	96	*55.2*	**46.477** [b] **0.000***
	42 and above	2	*2.2*	2	*2.2*	0	*0.0*	28	*30.4*	60	*65.2*	
	23 and under	0	*0.0*	1	*1.2*	8	*9.3*	31	*36.0*	46	*53.5*	
S22	24-41 between	0	*0.0*	3	*1.7*	14	*8.0*	54	*31.0*	103	*59.2*	9.907[b] 0.272
	42 and above	2	*2.2*	2	*2.2*	3	*3.3*	28	*30.4*	57	*62.0*	

***: p<0.05; [a]:Ki-kare test ; [b]:Olabilirlik oranı**

Table 6. Tarhana consumption attitudes according to the trainings of the participants (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2 p
		n	%	N	%	n	%	n	%	n	%	
S1	Primary School	0	*0.0*	0	*0.0*	0	*0.0*	4	*40.0*	6	*60.0*	20.751 0.054
	Middle School	2	*14.3*	2	*14.3*	1	*7.1*	5	*35.7*	4	*28.6*	
	High School	1	*1.5*	6	*9.1*	6	*9.1*	17	*25.8*	36	*54.5*	
	University	9	*3.4*	6	*2.3*	30	*11.5*	102	*38.9*	115	*43.9*	
S2	Primary School	6	*60.0*	2	*20.0*	0	*0.0*	0	*0.0*	2	*20.0*	**16.323 0.010***
	Middle School	10	*71.4*	1	*7.1*	1	*7.1*	2	*14.3*	0	*0.0*	
	High School	30	*45.5*	12	*18.2*	1	*1.5*	16	*24.2*	7	*10.6*	
	University	148	*56.5*	60	*22.9*	18	*6.9*	25	*9.5*	11	*4.2*	
S3	Primary School	6	*60.0*	1	*10.0*	1	*10.0*	0	*0.0*	2	*20.0*	20.708 0.055
	Middle School	11	*78.6*	2	*14.3*	1	*7.1*	0	*0.0*	0	*0.0*	
	High School	33	*50.0*	12	*18.2*	8	*12.1*	11	*16.7*	2	*3.0*	
	University	137	*52.3*	73	*27.9*	26	*9.9*	22	*8.4*	4	*1.5*	
S4	Primary School	0	*0.0*	8	*80.0*	2	*20.0*	0	*0.0*	0	*0.0*	**55.487 0.000***
	Middle School	6	*42.9*	5	*35.7*	2	*14.3*	1	*7.1*	0	*0.0*	
	High School	16	*24.2*	20	*30.3*	13	*19.7*	11	*16.7*	6	*9.1*	
	University	32	*12.2*	39	*14.9*	60	*22.9*	84	*32.1*	47	*17.9*	
S5	Primary School	0	*0.0*	2	*20.0*	3	*30.0*	5	*50.0*	0	*0.0*	18.859 0.092
	Middle School	2	*14.3*	2	*14.3*	4	*28.6*	6	*42.9*	0	*0.0*	
	High School	10	*15.2*	15	*22.7*	20	*30.3*	13	*19.7*	8	*12.1*	
	University	15	*5.7*	44	*16.8*	95	*36.3*	82	*31.3*	26	*9.9*	
S6	Primary School	0	*0.0*	0	*0.0*	0	*0.0*	3	*30.0*	7	*70.0*	15.677 0.206
	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	6	*42.9*	8	*57.1*	
	High School	3	*4.5*	3	*4.5*	1	*1.5*	15	*22.7*	44	*66.7*	
	University	4	*1.5*	9	*3.4*	10	*3.8*	107	*40.8*	132	*50.4*	
S7	Primary School	0	*0.0*	3	*30.0*	1	*10.0*	4	*40.0*	2	*20.0*	16.867 0.155
	Middle School	0	*0.0*	2	*14.3*	1	*7.1*	5	*35.7*	6	*42.9*	
	High School	2	*3.0*	26	*39.4*	15	*22.7*	12	*18.2*	11	*16.7*	
	University	11	*4.2*	88	*33.6*	68	*26.0*	61	*23.3*	34	*13.0*	
S8	Primary School	4	*40.0*	4	*40.0*	0	*0.0*	2	*20.0*	0	*0.0*	**40.525 0.000***
	Middle School	1	*7.1*	3	*21.4*	6	*42.9*	4	*28.6*	0	*0.0*	
	High School	13	*19.7*	20	*30.3*	14	*21.2*	12	*18.2*	7	*10.6*	
	University	26	*9.9*	42	*16.0*	49	*18.7*	83	*31.7*	62	*23.7*	
S9	Primary School	2	*20.0*	1	*10.0*	4	*40.0*	3	*30.0*	0	*0.0*	**25.175 0.014***
	Middle School	0	*0.0*	2	*14.3*	0	*0.0*	7	*50.0*	5	*35.7*	
	High School	10	*15.2*	19	*28.8*	10	*15.2*	14	*21.2*	13	*19.7*	
	University	49	*18.7*	62	*23.7*	52	*19.8*	55	*21.0*	44	*16.8*	
S10	Primary School	2	*20.0*	0	*0.0*	0	*0.0*	1	*10.0*	7	*70.0*	20.332 0.061
	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	2	*14.3*	12	*85.7*	
	High School	0	*0.0*	1	*1.5*	1	*1.5*	18	*27.3*	46	*69.7*	
	University	2	*0.8*	4	*1.5*	15	*5.7*	81	*30.9*	160	*61.1*	
S11	Primary School	0	*0.0*	0	*0.0*	3	*30.0*	7	*70.0*	7	*70.0*	**24.872 0.003***
	Middle School	0	*0.0*	0	*0.0*	1	*7.1*	13	*92.9*	12	*85.7*	
	High School	2	*3.0*	0	*0.0*	27	*40.9*	37	*56.1*	46	*69.7*	
	University	3	*1.1*	25	*9.5*	89	*34.0*	145	*55.3*	160	*61.1*	
S12	Primary School	0	*0.0*	0	*0.0*	0	*0.0*	4	*40.0*	6	*60.0*	16.437 0.172
	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	3	*21.4*	11	*78.6*	
	High School	0	*0.0*	5	*7.6*	7	*10.6*	24	*36.4*	30	*45.5*	
	University	6	*2.3*	19	*7.3*	32	*12.2*	80	*30.5*	125	*47.7*	
S13		0	*0.0*	0	*0.0*	0	*0.0*	3	*30.0*	7	*70.0*	10.261

	Primary School											0.593
	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	2	*14.3*	12	*85.7*	
	High School	0	*0.0*	1	*1.5*	5	*7.6*	22	*33.3*	38	*57.6*	
	University	1	*0.4*	11	*4.2*	18	*6.9*	69	*26.3*	163	*62.2*	
		4	*40.0*	5	*50.0*	1	*10.0*	0	*0.0*	0	*0.0*	
	Primary School											
S14	Middle School	4	*28.6*	9	*64.3*	1	*7.1*	0	*0.0*	0	*0.0*	10.101 0.607
	High School	21	*31.8*	27	*40.9*	8	*12.1*	9	*13.6*	1	*1.5*	
	University	87	*33.2*	112	*42.7*	41	*15.6*	18	*6.9*	4	*1.5*	
		4	*40.0*	0	*0.0*	1	*10.0*	1	*10.0*	4	*40.0*	
	Primary School											
S15	Middle School	2	*14.3*	3	*21.4*	5	*35.7*	2	*14.3*	2	*14.3*	17.889 0.119
	High School	9	*13.6*	12	*18.2*	20	*30.3*	16	*24.2*	9	*13.6*	
	Univrsity	30	*11.5*	35	*13.4*	63	*24.0*	67	*25.6*	67	*25.6*	
		0	*0.0*	1	*10.0*	1	*10.0*	2	*20.0*	6	*60.0*	
	Primary School											
S16	Middle School	0	*0.0*	0	*0.0*	1	*7.1*	7	*50.0*	6	*42.9*	11.473 0.466
	High School	2	*3.0*	5	*7.6*	18	*27.3*	19	*28.8*	22	*33.3*	
	University	3	*1.1*	12	*4.6*	58	*22.1*	78	*29.8*	111	*42.4*	
		0	*0.0*	0	*0.0*	0	*0.0*	4	*40.0*	6	*60.0*	
	Primary School											
S17	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	3	*21.4*	11	*78.6*	16.838 0.156
	High School	0	*0.0*	3	*4.5*	1	*1.5*	30	*45.5*	32	*48.5*	
	University	3	*1.1*	2	*0.8*	7	*2.7*	73	*27.9*	177	*67.6*	
		0	*0.0*	0	*0.0*	0	*0.0*	3	*30.0*	7	*70.0*	
	Primary School											
S18	Middle School	0	*0.0*	3	*21.4*	0	*0.0*	2	*14.3*	9	*64.3*	17.131 0.145
	High School	0	*0.0*	4	*6.1*	1	*1.5*	25	*37.9*	36	*54.5*	
	University	5	*1.9*	14	*5.3*	18	*6.9*	75	*28.6*	150	*57.3*	
		0	*0.0*	0	*0.0*	2	*20.0*	4	*40.0*	4	*40.0*	
S19	Primary School											20.691 0.055
	Middle School	0	*0.0*	1	*7.1*	0	*0.0*	1	*7.1*	12	*85.7*	
	Highschool	0	*0.0*	5	*7.6*	8	*12.1*	20	*30.3*	33	*50.0*	
	University	2	*0.8*	3	*1.1*	21	*8.0*	78	*29.8*	158	*60.3*	
		0	*0.0*	0	*0.0*	0	*0.0*	3	*30.0*	7	*70.0*	
	Primary School											
S20	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	1	*7.1*	13	*92.9*	15.742 0.203
	High School	0	*0.0*	1	*1.5*	1	*1.5*	25	*37.9*	39	*59.1*	
	University	5	*1.9*	5	*1.9*	15	*5.7*	71	*27.1*	166	*63.4*	
		0	*0.0*	0	*0.0*	2	*20.0*	4	*40.0*	4	*40.0*	
	Primary School											
S21	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	2	*14.3*	12	*85.7*	17.732 0.124
	High School	0	*0.0*	2	*3.0*	4	*6.1*	31	*47.0*	29	*43.9*	
	University	2	*0.8*	8	*3.1*	32	*12.2*	82	*31.3*	138	*52.7*	
		0	*0.0*	0	*0.0*	0	*0.0*	6	*60.0*	4	*40.0*	
	Primary School											
S22	Middle School	0	*0.0*	0	*0.0*	0	*0.0*	5	*35.7*	9	*64.3*	12.103 0.437
	High School	0	*0.0*	2	*3.0*	2	*3.0*	20	*30.3*	42	*63.6*	
	University	2	*0.8*	4	*1.5*	23	*8.8*	82	*31.3*	151	*57.6*	

***: p<0.05; [a]:Ki-kare test ; [b]:Olabilirlik oranı**

Table 7. Tarhana consumption attitudes of the participants according to their professional status (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2 p
		n	%	n	%	n	%	n	%	n	%	
	Student	5	5.0	6	6.0	17	17.0	38	38.0	34	34.0	
	Public Employee	2	5.3	0	0.0	3	7.9	13	34.2	20	52.6	
	Private Sector	0	0.0	3	2.8	13	12.0	35	32.4	57	52.8	**43.812** [b]
S1	Retired	0	0.0	4	16.7	2	8.3	7	29.2	11	45.8	**0.002***
	İnoperative	3	5.4	1	1.8	2	3.6	24	42.9	26	46.4	
	Other	2	7.7	0	0.0	0	0.0	11	42.3	13	50.0	
	Student	49	49.0	24	24.0	3	3.0	18	18.0	6	6.0	
	Public Employee	22	57.9	8	21.1	3	7.9	4	10.5	1	2.6	
	Private Sector	67	62.0	18	16.7	7	6.5	10	9.3	6	5.6	24.255 [b]
S2	Retired	14	58.3	4	16.7	1	4.2	5	20.8	0	0.0	0.231
	İnoperative	26	46.4	15	26.8	5	8.9	6	10.7	4	7.1	
	Other	16	61.5	6	23.1	1	3.8	0	0.0	3	11.5	
	Student	50	50.0	29	29.0	11	11.0	10	10.0	0	0.0	
	Public Employee	21	55.3	6	15.8	8	21.1	2	5.3	1	2.6	
	Private Sector	61	56.5	25	23.1	8	7.4	11	10.2	3	2.8	24.460 [b]
S3	Retired	15	62.5	4	16.7	2	8.3	3	12.5	0	0.0	0.223
	Public Employee	23	41.1	19	33.9	6	10.7	6	10.7	2	3.6	
	Other	17	65.4	5	19.2	1	3.8	1	3.8	2	7.7	
	Student	11	11.0	15	15.0	28	28.0	27	27.0	19	19.0	
	Public Employee	5	13.2	6	15.8	10	26.3	9	23.7	8	21.1	
	Private Sector	21	19.4	14	13.0	25	23.1	30	27.8	18	16.7	**47.188** [a]
S4	Retired	4	16.7	13	54.2	3	12.5	2	8.3	2	8.3	**0.001***
	Inoperative	5	8.9	17	30.4	10	17.9	20	35.7	4	7.1	
	Other	8	30.8	7	26.9	1	3.8	8	30.8	2	7.7	
	Student	4	4.0	16	16.0	46	46.0	24	24.0	10	10.0	
	Public Employee	2	5.3	9	23.7	13	34.2	12	31.6	2	5.3	
	Private Sector	12	11.1	12	11.1	37	34.3	36	33.3	11	10.2	**33.129** [b]
S5	Retired	3	12.5	6	25.0	2	8.3	10	41.7	3	12.5	**0.033***
	Inoperative	6	10.7	14	25.0	14	25.0	18	32.1	4	7.1	
	Other	0	0.0	6	23.1	10	38.5	6	23.1	4	15.4	
	Student	4	4.0	16	16.0	46	46.0	24	24.0	10	10.0	**32.767** [b]
S6	Public Employee	2	5.3	9	23.7	13	34.2	12	31.6	2	5.3	**0.036***
	Private Sector	12	11.1	12	11.1	37	34.3	36	33.3	11	10.2	
	Retired	3	12.5	6	25.0	2	8.3	10	41.7	3	12.5	
	Inoperative	6	10.7	14	25.0	14	25.0	18	32.1	4	7.1	
	Other	0	0.0	6	23.1	10	38.5	6	23.1	4	15.4	
	Student	2	2.0	40	40.0	24	24.0	18	18.0	16	16.0	
	Public Employee	1	2.6	19	50.0	3	7.9	9	23.7	6	15.8	
	Private Sector	5	4.6	32	29.6	33	30.6	24	22.2	14	13.0	27.688 [b]
S7	Retired	0	0.0	8	33.3	6	25.0	8	33.3	2	8.3	0.117
	Inoperative	3	5.4	12	21.4	11	19.6	17	30.4	13	23.2	
	Other	2	7.7	8	30.8	8	30.8	6	23.1	2	7.7	
	Student	6	6.0	18	18.0	25	25.0	28	28.0	23	23.0	
	Public Employee	2	5.3	10	26.3	5	13.2	14	36.8	7	18.4	
	Private Sector	17	15.7	13	12.0	27	25.0	29	26.9	22	20.4	**33.562** [b]
S8	Retired	5	20.8	8	33.3	2	8.3	7	29.2	2	8.3	**0.029***
	Inoperative	7	12.5	14	25.0	9	16.1	16	28.6	10	17.9	
	Other	7	26.9	6	23.1	1	3.8	7	26.9	5	19.2	
	Student	20	20.0	24	24.0	30	30.0	15	15.0	11	11.0	
	Public Employee	11	28.9	6	15.8	6	15.8	9	23.7	6	15.8	
	Private Sector	13	12.0	28	25.9	17	15.7	23	21.3	27	25.0	**34.096** [b]
S9	Retired	6	25.0	7	29.2	3	12.5	5	20.8	3	12.5	**0.025***
	Inoperative	6	10.7	16	28.6	6	10.7	19	33.9	9	16.1	
	Other	5	19.2	3	11.5	4	15.4	8	30.8	6	23.1	
	Student	0	0.0	2	2.0	7	7.0	34	34.0	57	57.0	
	Public Employee	0	0.0	0	0.0	1	2.6	10	26.3	27	71.1	
	Private Sector	2	1.9	3	2.8	5	4.6	35	32.4	63	58.3	28.827 [b]
S10	Retired	0	0.0	0	0.0	0	0.0	7	29.2	17	70.8	0.091
	Inoperative	0	0.0	0	0.0	3	5.4	10	17.9	43	76.8	
	Other	2	7.7	0	0.0	0	0.0	6	23.1	18	69.2	
	Student	0	0.0	1	1.0	9	9.0	43	43.0	47	47.0	
	Public Employee	0	0.0	0	0.0	3	7.9	10	26.3	25	65.8	
	Private Sector	0	0.0	4	3.7	11	10.2	35	32.4	58	53.7	24.352 [b]
S11	Retired	0	0.0	0	0.0	0	0.0	7	29.2	17	70.8	0.059
	Inoperative	0	0.0	0	0.0	1	1.8	16	28.6	39	69.6	
	Other	0	0.0	0	0.0	1	3.8	9	34.6	16	61.5	
	Student	2	2.0	16	16.0	16	16.0	32	32.0	34	34.0	**40.428** [b]
S12	Public Employee	0	0.0	0	0.0	3	7.9	12	31.6	23	60.5	**0.004***

	Private Sector	2	1.9	5	4.6	10	9.3	33	30.6	58	53.7	
	Retired	0	0.0	0	0.0	1	4.2	9	37.5	14	58.3	
	Inoperative	0	0.0	1	1.8	7	12.5	17	30.4	31	55.4	
	Other	2	7.7	2	7.7	2	7.7	8	30.8	12	46.2	
	Student	1	1.0	1	1.0	13	13.0	32	32.0	53	53.0	
	Public Employee	0	0.0	3	7.9	0	0.0	4	10.5	31	81.6	
S13	Private Sector	0	0.0	5	4.6	5	4.6	23	21.3	75	69.4	**43.688 [b] 0.002***
	Retired	0	0.0	0	0.0	0	0.0	11	45.8	13	54.2	
	Inoperative	0	0.0	1	1.8	5	8.9	16	28.6	34	60.7	
	Other	0	0.0	2	7.7	0	0.0	10	38.5	14	53.8	
	Student	27	27.0	45	45.0	18	18.0	9	9.0	1	1.0	
	Public Employee	16	42.1	14	36.8	5	13.2	2	5.3	1	2.6	
S14	Private Sector	39	36.1	42	38.9	17	15.7	8	7.4	2	1.9	20.932 [b] 0.401
	Retired	5	20.8	16	66.7	2	8.3	1	4.2	0	0.0	
	Inoperative	21	37.5	23	41.1	5	8.9	7	12.5	0	0.0	
	Other	8	30.8	13	50.0	4	15.4	0	0.0	1	3.8	
	Student	9	9.0	12	12.0	38	38.0	21	21.0	20	20.0	
	Public Employee	7	18.4	12	31.6	2	5.3	8	21.1	9	23.7	
S15	Private Sector	11	10.2	14	13.0	29	26.9	28	25.9	26	24.1	**34.144 [a] 0.025***
	Retired	3	12.5	4	16.7	4	16.7	8	33.3	5	20.8	
	Inoperative	8	14.3	5	8.9	12	21.4	15	26.8	16	28.6	
	Other	7	26.9	3	11.5	4	15.4	6	23.1	6	23.1	
		4	4.0	7	7.0	22	22.0	30	30.0	37	37.0	
	Student	0	0.0	2	5.3	8	21.1	14	36.8	14	36.8	
	Public Employee	1	0.9	6	5.6	25	23.1	26	24.1	50	46.3	
S16	Private Sector	0	0.0	0	0.0	3	12.5	13	54.2	8	33.3	24.520 [b] 0.220
	Retired	0	0.0	3	5.4	13	23.2	13	23.2	27	48.2	
	Inoperative	0	0.0	0	0.0	7	26.9	10	38.5	9	34.6	
	Student	0	0.0	2	2.0	3	3.0	43	43.0	52	52.0	
	Public Employee	0	0.0	2	5.3	1	2.6	11	28.9	24	63.2	
S17	Private Sector	1	0.9	1	0.9	4	3.7	27	25.0	75	69.4	30.929 [b] 0.056
	Retired	0	0.0	0	0.0	0	0.0	8	33.3	16	66.7	
	Inoperative	0	0.0	0	0.0	0	0.0	14	25.0	42	75.0	
	Other	2	7.7	0	0.0	0	0.0	7	26.9	17	65.4	
	Student	1	1.0	12	12.0	5	5.0	37	37.0	45	45.0	**39.669**
S18	Public Employee	0	0.0	0	0.0	1	2.6	14	36.8	23	60.5	**[b] 0.005***
	Private Sector	0	0.0	6	5.6	10	9.3	24	22.2	68	63.0	
	Retired	0	0.0	0	0.0	0	0.0	10	41.7	14	58.3	
	Inoperative	2	3.6	2	3.6	2	3.6	13	23.2	37	66.1	
	Other	2	7.7	1	3.8	1	3.8	7	26.9	15	57.7	
	Student	0	0.0	2	2.0	15	15.0	36	36.0	47	47.0	
	Public Employee	0	0.0	0	0.0	1	2.6	10	26.3	27	71.1	
S19	Private Sector	0	0.0	4	3.7	10	9.3	30	27.8	64	59.3	**34.075 [b]**
	Retired	0	0.0	2	8.3	0	0.0	6	25.0	16	66.7	**0.026***
	Inoperative	0	0.0	1	1.8	4	7.1	14	25.0	37	66.1	
	Other	2	7.7	0	0.0	1	3.8	7	26.9	16	61.5	
	Student	0	0.0	3	3.0	8	8.0	38	38.0	51	51.0	
	Public Employee	1	2.6	0	0.0	3	7.9	10	26.3	24	63.2	
S20	Private Sector	0	0.0	2	1.9	4	3.7	22	20.4	80	74.1	**36.610 [b]**
	Retired	0	0.0	0	0.0	0	0.0	8	33.3	16	66.7	**0.013***
	Inoperative	2	3.6	1	1.8	0	0.0	16	28.6	37	66.1	
	Other	2	7.7	0	0.0	1	3.8	6	23.1	17	65.4	
	Student	0	0.0	5	5.0	15	15.0	44	44.0	36	36.0	
	Public Employee	0	0.0	0	0.0	3	7.9	13	34.2	22	57.9	
S21	Private Sector	0	0.0	3	2.8	15	13.9	25	23.1	65	60.2	**41.716 [b]**
	Retired	0	0.0	1	4.2	0	0.0	8	33.3	15	62.5	**0.003***
	Inoperative	0	0.0	1	1.8	4	7.1	22	39.3	29	51.8	
	Other	2	7.7	0	0.0	1	3.8	7	26.9	16	61.5	
	Student	0	0.0	3	3.0	9	9.0	31	31.0	57	57.0	
	Public Employee	0	0.0	0	0.0	0	0.0	12	31.6	26	68.4	
S22	Private Sector	0	0.0	2	1.9	14	13.0	27	25.0	65	60.2	**40.520 [b] 0.004***
	Retired	0	0.0	1	4.2	0	0.0	10	41.7	13	54.2	
	Inoperative	0	0.0	0	0.0	2	3.6	25	44.6	29	51.8	
	Other	2	7.7	0	0.0	0	0.0	8	30.8	16	61.5	

***: p<0.05; [a]:Ki-kare test ; [b]:Olabilirlik oranı**

Table 8. Participants' attitudes towards consuming tarhana according to their income level (N=352)

		Totally Disagree		Disagree		Undecided		Agree		Totally Agree		χ2 p
		N	%	n	%	n	%	n	%	n	%	
S1	0-1000	5	5.1	5	5.1	15	15.3	41	41.8	32	32.7	33.362 [b] 0.007*
	1001-2000	0	0.0	2	6.9	5	17.2	11	37.9	11	37.9	
	2001-3000	2	2.9	4	5.9	8	11.8	26	38.2	28	41.2	
	3001-5000	0	0.0	1	1.3	5	6.6	29	38.2	41	53.9	
	5000 and above	5	6.2	2	2.5	4	4.9	21	25.9	49	60.5	
S2	0-1000	39	39.8	27	27.6	7	7.1	17	17.3	8	8.2	39.211 [b] 0.001*
	1001-2000	16	55.2	3	10.3	0	0.0	7	24.1	3	10.3	
	2001-3000	39	57.4	18	26.5	2	2.9	7	10.3	2	2.9	
	3001-5000	52	68.4	11	14.5	3	3.9	9	11.8	1	1.3	
	5000 and above	48	59.3	16	19.8	8	9.9	3	3.7	6	7.4	
S3	0-1000	40	40.8	30	30.6	15	15.3	11	11.2	2	2.0	28.215 [b] 0.030*
	1001-2000	15	51.7	10	34.5	2	6.9	1	3.4	1	3.4	
	2001-3000	38	55.9	12	17.6	5	7.4	12	17.6	1	1.5	
	3001-5000	49	64.5	15	19.7	4	5.3	7	9.2	1	1.3	
	5000 and above	45	55.6	21	25.9	10	12.3	2	2.5	3	3.7	
S4	0-1000	4	4.1	18	18.4	25	25.5	34	34.7	17	17.3	37.578 [a] 0.002*
	1001-2000	4	13.8	12	41.4	8	27.6	3	10.3	2	6.9	
	2001-3000	13	19.1	16	23.5	10	14.7	22	32.4	7	10.3	
	3001-5000	17	22.4	8	10.5	21	27.6	18	23.7	12	15.8	
	5000 and above	16	19.8	18	22.2	13	16.0	19	23.5	15	18.5	
S5	0-1000	5	5.1	22	22.4	37	37.8	24	24.5	10	10.2	34.960 [a] 0.004*
	1001-2000	2	6.9	3	10.3	13	44.8	11	37.9	0	0.0	
	2001-3000	4	5.9	9	13.2	24	35.3	24	35.3	7	10.3	
	3001-5000	12	15.8	9	11.8	14	18.4	30	39.5	11	14.5	
	5000 and above	4	4.9	20	24.7	34	42.0	17	21.0	6	7.4	
S6	0-1000	3	3.1	3	3.1	3	3.1	44	44.9	45	45.9	21.192 [b] 0.171
	1001-2000	0	0.0	0	0.0	0	0.0	13	44.8	16	55.2	
	2001-3000	0	0.0	2	2.9	4	5.9	30	44.1	32	47.1	
	3001-5000	2	2.6	3	3.9	2	2.6	20	26.3	49	64.5	
	5000 and above	2	2.5	4	4.9	2	2.5	24	29.6	49	60.5	
S7	0-1000	2	2.0	39	39.8	19	19.4	21	21.4	17	17.3	17.706 [b] 0.341
	1001-2000	2	6.9	4	13.8	10	34.5	6	20.7	7	24.1	
	2001-3000	1	1.5	24	35.3	14	20.6	20	29.4	9	13.2	
	3001-5000	4	5.3	28	36.8	19	25.0	14	18.4	11	14.5	
	5000 and above	4	4.9	24	29.6	23	28.4	21	25.9	9	11.1	
S8	0-1000	8	8.2	17	17.3	18	18.4	33	33.7	22	22.4	22.896 [a] 0.117
	1001-2000	2	6.9	7	24.1	11	37.9	6	20.7	3	10.3	
	2001-3000	11	16.2	10	14.7	15	22.1	20	29.4	12	17.6	
	3001-5000	14	18.4	11	14.5	12	15.8	24	31.6	15	19.7	
	5000 and above	9	11.1	24	29.6	13	16.0	18	22.2	17	21.0	
S9	0-1000	17	17.3	29	29.6	25	25.5	15	15.3	12	12.2	31.701 [a] 0.011*
	1001-2000	2	6.9	7	24.1	9	31.0	8	27.6	3	10.3	
	2001-3000	6	8.8	13	19.1	11	16.2	23	33.8	15	22.1	
	3001-5000	15	19.7	17	22.4	12	15.8	13	17.1	19	25.0	
	5000 and above	21	25.9	18	22.2	9	11.1	20	24.7	13	16.0	
S10	0-1000	0	0.0	0	0.0	7	7.1	33	33.7	58	59.2	36.768 [b] 0.002*
	1001-2000	0	0.0	0	0.0	2	6.9	12	41.4	15	51.7	
	2001-3000	2	2.9	0	0.0	1	1.5	26	38.2	39	57.4	
	3001-5000	2	2.6	3	3.9	1	1.3	11	14.5	59	77.6	
	5000 and above	0	0.0	2	2.5	5	6.2	20	24.7	54	66.7	
S11	0-1000	0	0.0	0	0.0	7	7.1	43	43.9	48	49.0	30.257 [b] 0.003*
	1001-2000	0	0.0	0	0.0	1	3.4	11	37.9	17	58.6	
	2001-3000	0	0.0	0	0.0	5	7.4	31	45.6	32	47.1	
	3001-5000	0	0.0	3	3.9	3	3.9	15	19.7	55	72.4	
	5000 and above	0	0.0	2	2.5	9	11.1	20	24.7	50	61.7	
S12	0-1000	2	2.0	10	10.2	13	13.3	33	33.7	40	40.8	24.277 [b] 0.084
	1001-2000	0	0.0	2	6.9	3	10.3	9	31.0	15	51.7	
	2001-3000	0	0.0	3	4.4	8	11.8	30	44.1	27	39.7	
	3001-5000	4	5.3	3	3.9	7	9.2	18	23.7	44	57.9	
	5000 and above	0	0.0	6	7.4	8	9.9	21	25.9	46	56.8	
S13	0-1000	1	1.0	1	1.0	10	10.2	31	31.6	55	56.1	43.075 [b] 0.000*
	1001-2000	0	0.0	0	0.0	4	13.8	11	37.9	14	48.3	
	2001-3000	0	0.0	0	0.0	4	5.9	21	30.9	43	63.2	
	3001-5000	0	0.0	9	11.8	0	0.0	13	17.1	54	71.1	
	5000 and above	0	0.0	2	2.5	5	6.2	20	24.7	54	66.7	
S14	0-1000	30	30.6	41	41.8	14	14.3	13	13.3	0	0.0	32.246 [b] 0.009*
	1001-2000	6	20.7	18	62.1	5	17.2	0	0.0	0	0.0	
	2001-3000	20	29.4	36	52.9	10	14.7	2	2.9	0	0.0	
	3001-5000	32	42.1	30	39.5	6	7.9	5	6.6	3	3.9	
	5000 and above	28	34.6	28	34.6	16	19.8	7	8.6	2	2.5	
S15	0-1000	8	8.2	10	10.2	31	31.6	25	25.5	24	24.5	18.259 [b] 0.309
	1001-2000	2	6.9	4	13.8	9	31.0	7	24.1	7	24.1	
	2001-3000	6	8.8	12	17.6	20	29.4	16	23.5	14	20.6	
	3001-5000	12	15.8	11	14.5	11	14.5	21	27.6	21	27.6	
	5000 and above	17	21.0	13	16.0	18	22.2	17	21.0	16	19.8	
S16		2	2.0	7	7.1	23	23.5	31	31.6	35	35.7	

	0-1000											
	1001-2000	0	*0.0*	0	*0.0*	7	*24.1*	8	*27.6*	14	*48.3*	17.259 [b]
	2001-3000	0	*0.0*	3	*4.4*	17	*25.0*	23	*33.8*	25	*36.8*	
	3001-5000	0	*0.0*	6	*7.9*	16	*21.1*	22	*28.9*	32	*42.1*	0.369
	5000 and above	3	*3.7*	2	*2.5*	15	*18.5*	22	*27.2*	39	*48.1*	
		0	*0.0*	2	*2.0*	0	*0.0*	40	*40.8*	56	*57.1*	
	0-1000											
	1001-2000	0	*0.0*	0	*0.0*	2	*6.9*	11	*37.9*	16	*55.2*	**39.933** [b]
S17	2001-3000	0	*0.0*	0	*0.0*	2	*2.9*	29	*42.6*	37	*54.4*	
	3001-5000	2	*2.6*	3	*3.9*	1	*1.3*	12	*15.8*	58	*76.3*	**0.001***
	5000 and above	1	*1.2*	0	*0.0*	3	*3.7*	18	*22.2*	59	*72.8*	
		2	*2.0*	9	*9.2*	4	*4.1*	36	*36.7*	47	*48.0*	
	0-1000											
	1001-2000	0	*0.0*	3	*10.3*	2	*6.9*	9	*31.0*	15	*51.7*	24.265 [b]
S18	2001-3000	0	*0.0*	2	*2.9*	5	*7.4*	23	*33.8*	38	*55.9*	
	3001-5000	3	*3.9*	4	*5.3*	6	*7.9*	14	*18.4*	49	*64.5*	0.084
	5000 and above	0	*0.0*	3	*3.7*	2	*2.5*	23	*28.4*	53	*65.4*	
	0-1000	0	*0.0*	1	*1.0*	15	*15.3*	30	*30.6*	52	*53.1*	
	1001-2000	0	*0.0*	0	*0.0*	4	*13.8*	8	*27.6*	17	*58.6*	**42.733** [b]
S19	2001-3000	0	*0.0*	2	*2.9*	5	*7.4*	30	*44.1*	31	*45.6*	
	3001-5000	2	*2.6*	3	*3.9*	4	*5.3*	8	*10.5*	59	*77.6*	**0.000***
	5000 and above	0	*0.0*	3	*3.7*	3	*3.7*	27	*33.3*	48	*59.3*	
	0-1000	0	*0.0*	1	*1.0*	4	*4.1*	40	*40.8*	53	*54.1*	
	1001-2000	0	*0.0*	0	*0.0*	2	*6.9*	8	*27.6*	19	*65.5*	**42.290** [b]
S20	2001-3000	0	*0.0*	0	*0.0*	3	*4.4*	26	*38.2*	39	*57.4*	
	3001-5000	3	*3.9*	2	*2.6*	4	*5.3*	6	*7.9*	61	*80.3*	**0.000***
	5000 and above	2	*2.5*	3	*3.7*	3	*3.7*	20	*24.7*	53	*65.4*	
	0-1000	0	*0.0*	4	*4.1*	14	*14.3*	37	*37.8*	43	*43.9*	
	1001-2000	0	*0.0*	0	*0.0*	4	*13.8*	7	*24.1*	18	*62.1*	16.581 [b]
S21	2001-3000	0	*0.0*	2	*2.9*	6	*8.8*	26	*38.2*	34	*50.0*	
	3001-5000	2	*2.6*	2	*2.6*	6	*7.9*	20	*26.3*	46	*60.5*	0.413
	5000 and above	0	*0.0*	2	*2.5*	8	*9.9*	29	*35.8*	42	*51.9*	
		0	*0.0*	1	*1.0*	7	*7.1*	31	*31.6*	59	*60.2*	
	0-1000											
	1001-2000	0	*0.0*	0	*0.0*	2	*6.9*	11	*37.9*	16	*55.2*	19.262 [b]
S22	2001-3000	0	*0.0*	0	*0.0*	3	*4.4*	27	*39.7*	38	*55.9*	
	3001-5000	2	*2.6*	1	*1.3*	5	*6.6*	18	*23.7*	50	*65.8*	0.255
	5000 and above	0	*0.0*	4	*4.9*	8	*9.9*	26	*32.1*	43	*53.1*	

***: p<0.05; [a]:Ki-kare test ; [b]:Olabilirlik oranı**