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EXAMINING THE HEALTHY EATING ATTITUDES OF GASTRONOMY AND CULINARY ARTS STUDENTS: THE CASE OF KARABUK UNIVERSITY

Gastronomi ve Mutfak Sanatları Öğrencilerinin Sağlıklı Beslenme Tutumlarının İncelenmesi: Karabük Üniversitesi Örneği

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Abstract

To examine the healthy eating attitudes of gastronomy and culinary arts students. Quantitative research method was used. Gastronomy and culinary arts students studying at Karabuk University / Faculty of Tourism. Participants consisted of 154 gastronomy and culinary arts students. 62.3 of the students are female, and 37.7 are male. 81.2% of them are between the ages of 18-and 24, and 18.8% are between 25-and 30. The data were collected from the participants by an online questionnaire. Students' healthy eating attitudes. The obtained data were analyzed in SPSS v.22 programs. Tests of difference (t-test, ANOVA), correlation, and chi-square are used. Gastronomy students do not have positive, healthy eating attitudes. No correlation was found between gastronomy education and healthy eating attitudes. Gastronomy students with healthy eating attitudes contribute positively to community nutrition and help the student maintain their body mass index.

Key words: Gastronomy, Nutrition, Students, Healthy Eating Attitude

Öz

Çalışmada Karabük Üniversitesi'nde öğrenim gören Gastronomi ve Mutfak Sanatları öğrencilerinin sağlıklı beslenme tutumları incelenmiştir. Bu doğrultuda nicel araştırma yöntemi kullanılmıştır. Veri toplamak için anket tekniği kullanılmış ve 154 öğrenciye ulaşılmıştır. Elde edilen veriler SPSS v.22 programında analiz edilmiştir. Elde edilen

veriler sonucunda sağlıksız beslenme alışkanlıkları cinsiyete göre farklılık görülmektedir ($p<0.05$). Gastronomi öğrencilerinin sınıf düzeyi yükseldikçe beslenme bilgilerinin arttığı sonucuna ulaşılmıştır. Ayrıca gastronomi eğitimi ile beslenme bilgisi arasında pozitif bir ilişki vardır ($p<0.05$). Gastronomi eğitimi ile sağlıklı beslenme tutumları arasında ilişki bulunamamıştır ($p>0.05$). Bu durum gastronomi öğrencilerinin sağlıklı beslenme konusunda daha fazla eğitim almaları gerektiğini göstermektedir. Bu çalışmada Karabük Üniversitesi Gastronomi ve Mutfak Sanatları öğrencileri ile sınırlı kalmaktadır. İleri ki araştırmalarda farklı üniversitelerin gastronomi bölümleri öğrencilerine de ulaşılarak daha kapsamlı araştırmalar gerçekleştirilmelidir.

Anahtar kelimeler: Gastronomi, Beslenme, Öğrenciler, Sağlıklı Beslenme Tutumu

Introduction

Inadequate and unbalanced nutrition is one of Turkey's main problems that menace public health. Inadequate and unbalanced nutrition, diabetes, osteoporosis, iron deficiency, cardiovascular diseases, etc., cause chronic health problems (Ayhan et al., 2012). Healthy and adequate nutrition protects the individual's health and contributes to the increase in the quality of life by ensuring that the population is healthy. Thus this condition reduces the resources spent by the countries on health (Blotnicky, Mann, and Joy, 2015). Healthy nutrition is protective opposite chronic diseases in all age groups. Healthy nutrition is protective opposite chronic diseases in all age groups. Despite this, unhealthy eating habits are among university students; it is known that sedentary lifestyles and fast-food consumption are common (Cousineau, Goldstein, and Franko, 2004). With the spread of fast-food nutrition style, obesity has increased in all age groups, but the most intense increase was seen in young adults age groups (Zuercher and Sibylle, 2012). Therefore, it is important to regulate university students' nutritional habits, provide the necessary public health education, and protect individual health from disease types (Hilger-Kolb and Diehl, 2019).

In this study, the health nutrition attitudes of Gastronomy and Culinary Arts students who receive culinary education with an interdisciplinary approach to food and the relationship of these attitudes with gastronomy education and body mass index (BMI) were investigated. For this purpose, an online survey was conducted with Gastronomy and Culinary Arts students studying at Karabuk University.

Literature Review

Healthy Nutrition

Healthy nutrition refers to a diet applied for growth and development, maintaining life, protecting, and improving health. If individuals eat healthily, they are protected from morbid obesity and malnutrition (Pekcan, 2008; Bozüyük et al., 2012). Unfortunately, from the Industrial Revolution to today's modernism, it has become challenging to challenge the healthy nutrition order with the acceleration of the lifestyle and the spread of fast-food nutrition. With globalization, ready-made foods have replaced healthy foods. The consumption of additives with the same taste and nutritional content, which

is poor in terms of macro and micronutrients, has increased (Türk, Gürsoy, and Ergin, 2007). To prohibit these problems, many countries have developed healthy eating guides and are working to raise people's awareness to protect public health. Besides, organizations affiliated with the United Nations establish healthy nutrition guides; they purpose to preserve health and reduce the rate of the disease caused by malnutrition. Healthy nutrition guides suggest the same things and recommend increasing the consumption of balanced, varied, low-fat, and natural-organic vegetables and fruits (Baysal, 1998). In addition, every meal of the day is important for human health. Individuals who consume three main meals insufficiently in macro and micronutrients or skip meals experience physical and mental problems. For example, suppose the breakfast meal is not balanced and regular or cut. In that case, the individual faces impairment and distraction in cognitive activities, physical strain, low blood sugar, slowing of metabolism, and weight gain (Çetik Yıldız, 2020).

Overweight and obesity are defined as abnormal or excessive fat accumulation that can impair health. Body Mass Index (BMI) is a simple height-weight index commonly used to classify overweight and obesity in adults. It is calculated by dividing an individual's weight in kilograms by the square of their height in meters (kg/m2) (WHO, 2021).

When the BMI (kg/m2) classification reported by the World Health Organization (WHO) for adult individuals is examined:

- Individuals with a BMI between 25.0 and 29.9 kg/m2 are overweight,
- Individuals with a BMI of 30.0 kg/m2 or more are considered obese (WHO, 2021).

Because BMI is the same for adults of both sexes and all ages, it is the most useful metric for determining the population-level distribution of overweight and obesity. However, since it may not correspond to the same degree of obesity in different individuals, it should be considered a simple guide. Although the BMI values of an athlete of the same body weight and an individual living a sedentary life may seem the same, muscle and fat mass distribution in body weights may differ (WHO, 2021).

Nutritional Habits of University Students

According to the data of the YÖK (Council of Higher Education of Turkey), for the years 2020-2021, 8,240,997 university students are studying in Turkey (YÖK, 2021). The university period consists of individuals in the young adult age group who have reached the end of their childhood (Mazıcıoğlu and Öztürk, 2003).

Inadequate and unbalanced nutrition is shared among all age groups in Turkey. Within these age groups, university students living separately from their families, with insufficient financial means, living in their own house for the first time, trying to adapt to a new order, and facing psychological problems stemming from all these changes are the most common group with malnutrition (Ermiş, Doğan, Erilli and Satıcı, 2014). In addition, university students' perception of freedom and therefore adopting an irregular lifestyle, the mainstream and fashion-based perception of " thinness is beauty" among female students, the excessive exercise by male students, and unhealthy eating habits

due to malnutrition are seen (Tekkurşun Demir and Cicioğlu, 2019). Unhealthy eating habits are the basis of many diseases that students may encounter in their later years (Güleç, Yabancı, Göçgeld, and Bakır, 2008).

Numerous studies have shown that university students skip meals, adopt a sedentary lifestyle, eat primarily fast food and ready-made food, do not consume enough water, consume insufficient milk and dairy products, and consume insufficient fruit and vegetables (Türk, Taner Gürsoy, and Ergin; 2007; Özyazıcıoğlu et al., 2008; Onurlubaş, Gökhan Doğan, and Demirkıran; 2015; Dülger and Mayda, 2016). University students' most common unhealthy eating behavior is skipping meals with snacks and unhealthy foods. Especially breakfast is the meal that students skip the most and ignore, and this leads to weight gain, academic failure, physical strain, impaired cognitive activities, and many other problems (Aydoğan, Arslan, Daşkapan, and Çakır, 2016). For example, according to Reuter, Forster, and Brister (2021), while university students eat regular breakfast, which affects their grade point average positively, fast food consumption affects them negatively. In addition, according to the results, healthy eating habits increase academic performance. Considering that young adulthood involves many periods after it, malnutrition attitudes of students should be prevented, and chronic diseases, especially obesity, that they may encounter in their later years should be controlled (Çil, Caferoğlu, and Bilgiç, 2018).

Gastronomy Students and Nutritional Habits

Nutrition is the basis of the continuation of humanity and human life. Therefore, the cook profession and cooking practices are as old as human history. Especially after the 17th century, cooking and science began to come together, and especially with the spread of scientific and modernist culinary approaches in the late 1970s and early 2000s, the science of gastronomy came to the fore, and the terms healthy nutrition and medical cuisine emerged (Pérez-Llorens, 2019). Considering that nutrition is unavoidable for human life and the rate of eating out has increased because of the fast life brought by modern life, it can be said that this term gains more importance today. The principal component of the execution of the science of gastronomy is humans. For this reason, it is of immense importance for public health to educate individuals who receive gastronomy education about healthy nutrition and to use healthy nutrition principles in food practices (Altavilla, Guijarro, and Perez, 2021).

Gastronomy has gained importance in the last 20 years. Gastronomy and Culinary Arts have started to be taught at undergraduate, graduate, and doctoral levels in many educational institutions in most countries. In addition to these, culinary education in high school and associate degrees are common throughout many countries. It covers both theoretical and practical courses in the fields of cooking, nutrition principles and menu planning, food safety and hygiene, food chemistry and structure, food and beverage management is provided to receive (Akgündüz, Akdağ, and Güneş; 2021). Students who receive this education play, and will play, a vital role in the population's food intake now and in the years to come because they work primarily in school cafeterias, universities, hospitals, and restaurants (Altavilla, Pérez, and Tuells, 2019). For

this reason, gastronomy students who receive this education and will work in institutions where public health will be protected in the future should know healthy nutrition and healthy cooking techniques. These students, who are the future chefs, can potentially affect the nutritional quality (Bertaldo et al., 2021). Moreover, by contributing to public health with nutrition education, gastronomy students can have a balanced and regular diet, maintain their body mass index, and increase their quality of life and academic success. For example, according to Lanuza et al. (2020), the quality of life of well-nourished students was higher than those who were not well-nourished.

For all these reasons, it is assumed that gastronomy students eat healthily, have positive nutritional attitudes, and have knowledge about healthy foods, which constitutes the study's university.

Other Studies in the Literature Regarding the Healthy Eating Attitudes of University Students

The fact that there are mistakes and problems in the nutrition of university students has led to many studies in the literature. Nutritional knowledge of university students differs according to age, gender, class, and studying department. Based on Cooke and Papadaki's (2014) study, the nutritional information of university students consisting of various departments is different according to gender, age, and body mass index. According to Al-Khamess's (2009) study, university students do not consume enough vegetables and consume unhealthy fats more often. Water consumption is insufficient. Most students ignore it and consume foods containing food additives. Similarly, according to Ortega et al. (1997), while cereals and vegetables are consumed less than recommended, it was concluded that the consumption of dairy products, fish, and fruit was sufficient.

Men consumed more meat, milk, bread, and alcohol, while women consumed more fruit and vegetables. According to the studies of Barić, Šatalic, and Lukešić (2009), it was determined that the most frequently skipped meal among students was breakfast. Men consume more red meat, cereals, and fast food, while women consume more low-fat dairy products, whole-grain foods, and breakfast cereals. The fruit was the most preferred snack in both groups.

According to the study by Özenoğlu, Yalnız, and Uzdil (2018), nutrition and physical activity protect from chronic non-communicable diseases. Healthy food and physical activity are higher in fourth-grade students than 1st-grade students. This situation proves the effect of healthy nutrition education. According to Ayhan et al. (2012), only 29.6% of the students participating in the research regularly eat three main meals. 41.3% of them are fed with a healthy snack and three main meals. While the most important meal is dinner (44.6%), the most skipped meal is breakfast (58.2%).

According to the results of these studies, the following hypotheses were formed.

H1: Food and nutrition knowledge show significant differences according to the grade levels of gastronomy students.

H2: Food and nutrition knowledge show significant differences according to the gender of gastronomy students.

H3: Balanced and regular nutrition show a significant difference according to their classes of gastronomy students.

H4: Balanced and regular nutrition show a significant difference according to the gender of gastronomy students.

H5: Unhealthy eating habits show a significant difference according to their classes of gastronomy students.

H6: Unhealthy eating habits show a significant difference according to the gender of gastronomy students.

H7: The feelings toward unhealthy foods show a significant difference according to their classes of gastronomy students.

H8: The feelings towards unhealthy foods show a significant difference according to the gender of gastronomy students.

H9: Vegetable and fruit consumption shows a significant difference according to their classes of gastronomy students.

H10: Vegetable and fruit consumption shows a significant difference according to the gender of gastronomy students.

H11: The feelings toward sugary foods show a significant difference according to their classes of gastronomy students.

H12: The feelings towards sugary foods show a significant difference according to the gender of gastronomy students.

H13: The healthy eating attitudes show significant differences according to the ages of gastronomy students.

H14: The healthy eating attitudes show significant differences according to the ages of gastronomy students.

H15: There is a positive correlation between gastronomy education and healthy eating attitudes.

Method

This study aimed to examine the healthy eating attitudes of Gastronomy and Culinary Arts students studying at Karabuk University. For this purpose, using the quantitative research method, the data were collected by the questionnaire technique, and the data were analyzed using SPSS v.22.

Universe and Sampling

The cluster Sampling Method was used in the study. The research universe consists of Gastronomy and Culinary Arts students studying at Karabuk University. According to the 2020-2021 Academic Year data of the Higher Education Council, a total of 182 students are studying in the Department of Gastronomy and Culinary Arts at Karabuk University (YÖK, 2021). The questionnaire forms were applied online between July 2021 and January 2022 by sending them to the students currently studying. 162 students were reached for the research, and 154 valid questionnaires were evaluated.

Data Collection Tool

A questionnaire technique was used to collect data for this quantitative study. The questionnaire form is the Attitude Scale towards Healthy Eating; developer and Cicioğlu developed this scale consisting of twenty-one questions and four sub-dimensions. However, because of the explanatory factor analysis, the scale was considered 6-dimensional, and statistical analysis was made within this framework. In the questionnaire used for the research, a 5-point Likert type scale was used (1-Strongly Disagree, 5-Strongly Agree). However, the Likert type was coded in reverse for hostile questions.

Results

Obtained data were analyzed with SPSS v.22 programs, and in data analysis; Frequency analysis and cross tables for demographic characteristics, explanatory factor analysis for sub-dimensions, into account since a Likert type scale was used for normality distribution skewness & kurtosis coefficients were taken. It was determined that the data were normally distributed. From parametric difference tests, Correlation analysis was used for the One-Sample T-test and One Way ANOVA correlation tests. As a result of the reliability analysis, Cronbach's alpha was found t be 31, and it was concluded that the data were valid and dependable, and the internal consistency was high.

Table.1: Demographic Characteristics of Gastronomy Students Participating in the Study

Gender	Female	96	62,3	154
	Male	58	37,7	%100
Grade	1	53	34,4	154 %100
	2	42	27,3	
	3	11	7,1	
	4	24	15,6	
	Graduate	24	15,6	
Age	18-24	125	81,2	154
	25-30	29	18,8	%100
BKI	18.5 and below (underweight)	13	8,4	154

	18.5-24.9 (normal weight)	102	66,2	%100
	25-29.9 (overweight)	25	16,2	
	30-39.9 (obese)	14	9,1	

More than half (62.3%) of the study participants are female, and 37.7% are male. The age group consists of young adults in the 18-24 age group. 81.2% of the participants are in the 18-24 age group, and 18.8% are in the 25-30 age group. 34.4% of the participants are first-year students. Second-year students consist of 27.3% of the participants. Third-grade students comprised 7.1% of the total participants. The fourth-year and postgraduate participants are at the same level (15.6%). When the body weights of the individuals are examined, it is seen that more than half (66.2%) are average weight, but 25.3% are overweight or obese (Table 1).

Table 2: BMI Cross-Table by Age, Gender and Class of Students and Correlation Analysis of BMI and Demographic Characteristics

BKI		**18.5 and below (underweight)**	**18.5-24.9 (regular)**	**25-29.9 (overweight)**	**30-39.9 (obese)**	**Total**	**Correlation**
Gender	Female	12	67	12	5	96	**p=,001**
	Male	1	35	13	9	58	**,272****
Grade	1	3	36	7	7	53	P=,451
	2	2	31	4	5	42	
	3	1	8	2	0	11	
	4	4	16	4	0	24	
	Graduate	3	11	8	2	24	
Age	18-24	11	86	16	13	126	P=,627
	25-30	2	16	9	1	28	

"**p<0.01", "*p<0.05"

Twelve of the female students participating in the study are underweight, while only one of the male students is underweight. While 67 of the female students are of average weight, 35 of the male students are of average weight. While twelve of the female students are overweight and 5 of them are obese, 13 of the male students are overweight, and 9 of them are obese. In terms of gender, it is seen that men are proportionally more overweight and obese. In addition, a significant and positive correlation was found between gender and BMI ($p < 0.05$). No significant correlation was found between class and age, and BMI ($p > 0.05$) (Table 2).

Table 3: Explanatory Factor Analysis of Students' Health Nutrition Attitudes

Healthy Eating Attitudes	**Factor Loads**	**Variance %**
Nutrition and Nutrition Knowledge		
I know which foods contain protein.	,879	
I know which foods contain carbohydrates.	,841	
I know which foods contain vitamins/minerals	,771	**16,286**
I know the benefits of healthy eating.	,767	
I know what healthy foods are.	,656	
Balanced and Regular Nutrition		
I eat main meals (breakfast-lunch and dinner) regularly.	,771	
I drink at least 1.5 litres of water a day.	,636	
I eat protein-containing foods (meat, milk, eggs, etc.) every day.	,634	**12,22**
I skip main meals. *	,633	
Unhealthy Eating Habits		
I eat junk food (chips, biscuits, etc.) every day. *	,760	
I am feed quickly. *	,747	
I spend my main meal with foods such as cake and biscuits. *	,723	**11,747**
I drink at least one glass of acidic/carbonated beverages every day. *	,704	
Feeling towards Unhealthy Foods		
I enjoy eating fast food products (burgers, pizza, etc.). *	,796	
I like to eat fried foods. *	,690	**10,29**
I enjoy eating delicatessen products (sausage, sausage, etc.). *	,683	
Vegetable and Fruit Consumption		
I regularly consume fruit.	,628	**7,36**
I do not like to eat fruit. *	,613	
I eat vegetables at least three meals a week.	,565	
Feeling for Sugary Foods		
I am happy when I eat sorbet desserts (baklava, künefe, etc.). *	,756	**6,28**
I am happy when I eat sugary foods (chocolate, cake, etc.). *	,577	
Cronbach Alpha: 0.831 **Total Variance:** 64,167. **Rotation Method:** Kaiser Normalization and Varimax, Number of Iterations: 5, Inference **Method:** Principal Component Analysis, **KMO Eligibility Criterion.** ,789 **Barlett Test of Sphericity x2:** 1147,872 p: ,000 Scale type: 5-point likert: strongly disagree, disagree, neither agree nor disagree, agree, strongly agree.		
*Star symbol sentences are negative expressions.		

As a result of the explanatory factor analysis of the study, factors with an eigenvalue more significant than one were considered for Kaiser Normalization, and it was seen that the Healthy Eating Attitude Scale was gathered under six factors. The total variance of the six factors formed is 64,167. According to Scherer, Luther, and Wiebe (1988), this value is higher than 50%, indicating accurate analysis. In addition, all item values in factor analysis should not be less than 0.40 (Field, 2000). In the factor analysis, the value of all items was higher than 40%. As a result of the exploratory factor analysis, the first factor is food and nutritional information. It consists of 5 items and covers 16,286% of

the total variance. The second factor is a balanced and regular diet. It consists of 4 items and covers 12.22% of the total variance. The third factor is unhealthy eating habits. It consists of 4 items and covers 11,747% of the total variance. The fourth factor is the feeling toward unhealthy foods. It consists of 3 items and covers 10.29% of the total variance. The fifth factor is the consumption of vegetables and fruits. It consists of 3 items and covers 7.36% of the total variance. The sixth factor is the feeling toward sugary foods. It consists of 2 items and covers 6.28% of the total variance.

After the exploratory factor analysis, normality tests were performed for each factor. Since the scale type used is Likert, skewness & kurtosis coefficients were considered. Normality coefficients are given in Table 4.

Table 4: T-test Table for the Differences of Students' Healthy Eating Attitudes by Gender

Nutrition and Nutrition Information	Female	96	4,364	,606	1,760	0,080
	Male	58	4,137			
Balanced and Regular Nutrition	Female	96	3,447	,118	,940	0,075
	Male	58	3,258			
Unhealthy Eating Habits	Female	96	3,604	,000	2,712	**0,012**
	Male	58	3,344			
Feeling towards Unhealthy Foods	Female	96	2,177	,000	2,129	**0,034**
	Male	58	2,620			
Vegetable and Fruit Consumption	Female	96	3,750	,142	2,539	**0,012**
	Male	58	3,241			
Feeling for Sugary Foods	Female	96	3,020	,170	2,146	**0,000**
	Male	58	2,603			

When the gender variable of the individuals participating in the study was examined, food and nutrition knowledge and dimensions of balanced and regular nutrition did not show a significant difference in terms of gender ($p>0.05$). In this case, hypotheses **H2** and **H4** were rejected. Unhealthy eating habits differed significantly by gender ($P<0.05$). Unhealthy eating habits of gastronomy students; Consumption of junk food, fast food, and skipping the main meal with foods such as cake and biscuits did not differ based on gender, while consumption of sodas showed a significant difference according to genders. Consumption of soda is higher, especially among female students. The feelings of gastronomy students towards unhealthy foods differed significantly according to their genders ($P<0.05$). While men like to consume fast food products more, female

students want to consume delicatessen products more. Vegetable and fruit consumption of gastronomy students showed a significant difference according to their gender (P<0.05). Female students consume more vegetables and fruits. The feelings of gastronomy students towards sugary foods show a significant difference according to their gender (P<0.05). While female students are happier when they consume sherbet desserts, male students are more comfortable when they eat chocolate cake. Based on these results, the **H6** hypothesis was partially rejected, while the **H8**, **H10**, and **H11** beliefs were accepted (Table 4).

Table 5: Anova Table Regarding the Differences of Students' Healthy Eating Attitudes According to Classes

Variable	Groups	N	Factors	F	p	Tukey
Class	1st class	53	Nutrition and Nutrition Information	3,414	**0,011**	1. 3,90 2. 4,11 3. 4,27 4. 4,37 G. 4,41
	2 st class	42	Balanced and Regular Nutrition	2,269	0,064	-
	3 st class	11	Unhealthy Eating Habits	2,666	**0,035**	1. 4,00 2. 3,45 3. 3,72 4. 4,00 G. 4,41
	4 st class	24				
	Graduate	24	Feeling towards Unhealthy Foods	,761	0,552	-
			Vegetable and Fruit Consumption	1,084	0,366	-
			Feeling for Sugary Foods	1,864	0,120	-

When the differences in the healthy eating attitudes of the gastronomy students according to their classes were examined, it was concluded that the 4th grade and graduate students had higher food and nutrition knowledge (p<0.05). Most of the students have increased knowledge about macro and micronutrients. It was concluded that the higher the class level, the higher the protein, carbohydrate, vitamin, and mineral knowledge (p<0.05). However, the participants stated that they did not know about healthy foods and the benefits of a healthy diet (p>0.05). **H1** hypothesis was accepted. The balanced and regular nutrition attitudes of gastronomy students do not differ significantly according to their classes (p>0.05). **H3** hypothesis was rejected. Unhealthy eating habits of gastronomy students show a significant difference according to their classes (p<0.05). Consumption of junk food, fast food, and snacking with foods such as cake and biscuits did not differ based on classes, while consumption of sodas differed significantly according to their classes. It was determined that especially 1st year, 4th, and graduate students consumed more acidic beverages. The **H5** hypothesis was partially accepted (P<0.05). Emotions towards unhealthy foods, consumption of vegetables and

fruits, and feelings towards sugary foods do not differ significantly according to classes (p>0.05). **H7, H9, and H12** hypotheses were rejected (Table 5).

Table 6: T-test Table for the Differences of Students' Healthy Eating Attitudes by Age

Nutrition and Nutrition Information	18-24	125	4,079	,630	2,427	**0,016**
	25-30	29	4,428			
Balanced and Regular Nutrition	18-24	125	3,261	,008	3,370	**0,000**
	25-30	29	3,892			
Unhealthy Eating Habits	18-24	125	3,507	0,410	,349	0,754
	25-30	29	3,500			
Feeling towards Unhealthy Foods	18-24	125	2,634	,087	,950	0,344
	25-30	29	2,750			
Vegetable and Fruit Consumption	18-24	125	4,039	,457	,308	0,759
	25-30	29	4,357			
Feeling for Sugary Foods	18-24	125	2,166	,995	,915	0,362
	25-30	29	2,285			

When the differences in healthy nutrition attitudes of gastronomy students according to their ages were examined, it was determined that food and nutrition knowledge, especially protein knowledge and consumption, were higher in the 25-30 age group (p<0.05). There is a significant difference in the age group regarding balanced and regular nutrition (p<0.05). It has been concluded that the 25-30 age group consumes main meals more regularly. Unhealthy eating habits, feelings towards unhealthy foods, consumption of vegetables and fruits, and sugary foods did not differ significantly according to age (>0.05). Hypothesis H13 was partially accepted (Table 6).

Table 7: Chi-Square Test Table for Differences in Students' BMIs According to Their Healthy Eating Attitudes

Variable	**Factors**	χ^2	**p**
BKI	Nutrition and Nutrition Information	109,169	0,000
	Balanced and Regular Nutrition	23,727	0,000
	Unhealthy Eating Habits	74,636	0,000
	Feeling towards Unhealthy Foods	60,221	0,000
	Vegetable and Fruit Consumption	124,117	0,000
	Feeling for Sugary Foods	67,299	0,000

According to the results of the chi-square analysis, there is a significant relationship between gastronomy students' healthy eating attitudes and BMI ($p<0.05$). **H14** hypothesis was accepted (Table 7).

Table 8: The Correlation Students' Healthy Eating Attitudes and Gastronomy Education

Variable	Correlation	P
Gastronomy Education	Nutrition and Nutrition Information	**0,020 ,188***
	Balanced and Regular Nutrition	**0,039 ,166***
	Unhealthy Eating Habits	0,212
	Feeling towards Unhealthy Foods	0,138
	Vegetable and Fruit Consumption	0,642
	Feeling for Sugary Foods	0,607

"**p<0.01", "*p<0.05"

When the relationship between gastronomy education and the healthy eating attitude scale of the students participating in the study is examined, there is a significant and positive correlation between gastronomy education and nutritional knowledge ($p<0.05$). There is a powerful and positive correlation between gastronomy education and balanced and regular nutrition ($p<0.05$). However, there is no correlation between gastronomy education and healthy eating attitudes ($p>0.05$). Hypothesis **H15** was partially rejected (Table 8).

Conclusion and Suggestions

This study aimed to examine the healthy eating attitudes of Gastronomy and Culinary Arts students studying at Karabuk University.

As a result of the research, it was determined that their nutritional knowledge increased as gastronomy students' class level and age increased. Similar to the study of Özenoğlu, Yalnız, and Uzdil (2018), it was concluded that 4th grade and graduate students were more knowledgeable about macro and micronutrients in particular. In addition, students have an elevated level of knowledge about macro and micronutrients. Despite this, the fact that gastronomy students state that they do not know about healthy foods and the benefit of a healthy diet shows that more education should be given to these students about healthy nutrition.

There is a significant and positive relationship between gastronomy education and a balanced and regular diet. However, despite this, the fact that healthy eating attitudes do not correlate with gastronomy education; shows that although they know about healthy nutrition and food, they cannot change their feelings and attitudes towards unhealthy foods. Chefs with gastronomy training need more comprehensive nutrition education to provide healthy food and guidance on this issue (Altavilla, Guijarro, and Perez, 2021). Similarly, according to the study by Yolcuoğlu and Kızıltan (2021), it was

determined that nutrition education is effective in sustainable and healthy eating behaviors.

Nutrition education is essential for the individual's health and the community's health. Considering this situation, training should be given to increase the nutritional knowledge of chefs who have a vital role in the nutrition of the society, panels should be organized, and the regulation of curricula that increase the healthy knowledge level of students in high school, associate and undergraduate education will enable these individuals to become more productive in their professional lives.

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