

Attitudes of cooking program students towards the sustainability of gastronomy tourism

Mustafa Sarkım¹, Soner Beşcanlar¹ 

¹Yozgat Bozok University, Yozgat, Türkiye

Abstract

This study aims to understand the attitudes of culinary program students toward the sustainability of gastronomy and to identify the factors influencing these attitudes. Sustainable gastronomy is an important approach that includes elements such as the use of local products, reduction of environmental impacts, prevention of food waste, and preservation of cultural heritage. In this context, the main objective of the study is to evaluate students' attitudes toward the sustainability of gastronomy and to examine how these attitudes differ according to variables such as sector experience, gender, and cultural environment. The research was conducted in 2024 with 245 participants selected from among students studying in the field of gastronomy. A survey method was used as the data collection tool. The analyses revealed that sector experience did not have a significant effect on students' attitudes toward sustainable gastronomy. In contrast, gender created a significant difference in some dimensions of sustainable gastronomy attitudes; specifically, female students were found to be more sensitive and positive toward sustainability issues than their male counterparts. Regarding the variable of cultural environment, no significant difference was found in students' attitudes toward the sustainability of gastronomy. These findings indicate that increasing sustainability awareness in gastronomy education should not be based solely on sector experience but should also include activities and content designed to strengthen gender-based awareness. The lack of a significant effect of the cultural environment suggests that sustainability perceptions are shaped similarly, independent of cultural contexts. To improve the generalizability of the findings, studies with larger sample groups and in-depth interview methods are recommended.

Keywords

Keywords: Gastronomy, Sustainability, Cooking program

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The authors declare no conflict of interest.

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Author Contributions

Author Name	Email	ORCID	Contrib. %	Roles
Mustafa Sarkım (Assist. Prof.)	mustafa.sarkim@bozok.edu.tr	0000-0003-4701-7064	60%	Conceptualization, Methodology, Software, Formal analysis
Soner Beşcanlar (Lecturer)  (corresponding)	soner.bescanlar@bozok.edu.tr	0000-0001-9151-7379	40%	Conceptualization, Formal analysis, Resources, Data Curation

Artificial Intelligence Usage Statement

The authors declare that no generative artificial intelligence or AI-assisted tools were used at any stage of the preparation of this manuscript, including idea development, data collection, data analysis, text writing, language editing, or reference management. All academic, ethical, and legal responsibility for the content, analyses, and conclusions of the article rests entirely with the authors.



1. Introduction

Sustainable gastronomy has become an increasingly important concept in recent years due to its focus on reducing environmental impacts, preserving cultural heritage, and supporting local economies. The gastronomy sector, as part of the tourism industry, plays a crucial role in promoting environmentally friendly practices and ensuring the long-term viability of food systems (Scarpato, 2002). In this context, understanding the attitudes of future professionals, particularly culinary program students toward sustainable gastronomy is critical for shaping future industry practices and educational policies (Kayran & Kayran, 2025).

Culinary education not only equips students with technical cooking skills but also instills values and awareness related to sustainability (Seçim, 2020). Factors such as sector experience, gender, and cultural background may influence students' perceptions and attitudes toward sustainability (Serio et al., 2025). While some studies suggest that professional experience enhances understanding of sustainable practices, others argue that formal education and individual values can be equally or even more influential (Aslan & Aktaş, 2011; Alagöz et al., 2015; Ödemiş, 2023). Additionally, gender-based differences in environmental awareness have been highlighted in several studies (Yayla, 2020; Can et al., 2023; Civelek, 2023), with findings often suggesting that female students tend to display greater sensitivity toward sustainability issues (Aşık, 2018; Kiliñç, 2020).

Given these considerations, this study aims to explore the attitudes of culinary program students toward the sustainability of gastronomy and to examine whether these attitudes differ according to sector experience, gender, and cultural environment. By identifying the factors that influence sustainability perceptions, the research seeks to provide insights that can guide curriculum development, industry practices, and future research in sustainable gastronomy.

2. Literature Review

Tourism has become one of the important forces of social change and development as a sociocultural phenomenon integrated with nature, people, infrastructure, facility characteristics, and interpersonal relationships (Özbek, 1991). Sustainability is defined as "a sensitive and stable state that develops in harmony with the natural, social, and cultural environment in which human activities take place" (Middleton & Hawkins, 1998). Emphasizing that sustainability is on the agenda of the 21st century, Dyllick and Hockerts (2002) pointed out that the concept of sustainability creates opportunities to approach a fairer and healthier world in social evolution and embodies the preservation of natural and cultural elements for future generations. Franzoni (2015) stated that in many studies, the dimensions of this concept are addressed through "social, economic, and environmental" indicators. As seen in examples worldwide, certain policies are also implemented in our country to ensure the sustainability of tourism. In this context, efforts are made to distribute tourism benefits equitably among all stakeholders and to make tourism effective throughout the year to achieve economic and social development.

The concept that emerges for tourism to be sustainable is alternative tourism types. Among these, one of the most important for our country, rich in resources, is gastronomic elements. Gastronomic elements can be listed as a country's food processing practices, local products, regional flavors, cooking courses, and eco-agriculture practices. For all these elements to be regionally sustainable, policies should be developed and implemented collectively by all stakeholders. Considering all these gastronomic elements within a sustainability framework, the concept of sustainable gastronomy is defined in the literature. Sustainable gastronomy refers to handling food production, consumption, and culinary culture in an environmentally conscious, economically fair, and socially healthy manner. This concept aims to develop approaches that respect nature and human health in all processes from food production to consumption (Yurtseven, 2011).

A review of the literature shows that studies on the sustainability of gastronomy tourism have become widespread only in recent years. The studies accessed in this context indicate that sustainable gastronomy tourism has been evaluated from different disciplinary perspectives (Choi & Sirakaya, 2005; Yurtseven, 2011; Durlu et al., 2013; Rinaldi, 2017; Alonso et al., 2018; Mandal, 2018; Ceyhun Sezgin & Şanlıer, 2018; Sorcaru, 2019; Aliyeva & Kurgun, 2020; Sabur & Güneş, 2023; Arslan et al., 2023; Ertaş Sabancı & Okur, 2024; Yurt & Dinvar, 2024; Ceylan, 2024; Ayyıldız & Kargıoğlu, 2024). It would be useful to discuss the scope and results of some of these studies. The reviewed research reveals that sustainable gastronomy tourism has been addressed in different dimensions.

Accordingly, Alonso et al. (2018) proposed a theoretical framework based on stakeholder and social practice theory in the context of sustainable gastronomy tourism development. The study found that by adhering to ethical and proactive principles and socio-economic and environmental constraints, operators incorporated alternative seafood into their menus, thereby contributing to environmental sustainability.

Choi and Sirakaya (2005) aimed to develop a scale to assess residents' attitudes toward sustainable tourism. After a pre-test phase, an 800-item established attitude scale for sustainable community tourism was administered to 51 households

in a small tourism community in Texas. The psychometric properties of the SUS-TEs, along with its practical and theoretical implications, were discussed within the framework of sustainable tourism development.

Yurt and Dinvar (2024) aimed to identify the gastronomic products in Safranbolu, Karabük, that could receive geographical indication registration within the scope of sustainable gastronomy tourism. In addition to sustainability elements such as healthy and balanced food production and reducing food waste, the study emphasized that local culinary culture could contribute to tourism attractiveness. Based on the data obtained, the products with the strongest potential for geographical indication registration in Safranbolu were determined as *peruhi*, Safranbolu *bükmesi*, *oğmaç* soup, *uzun pakla*, meat-based *keşkek*, saffron pudding (*safranlı zerde*), and mulberry sherbet (*karadut şerbeti*). It was also concluded that restaurant businesses did not frequently prefer geographically indicated products in their menus.

Yurtseven (2011) measured the perceptions of Gökçeada visitors regarding the importance and satisfaction of basic sustainable gastronomy tourism elements, using visitor types based on local and authentic perspectives, and applied importance–satisfaction analysis to identify Gökçeada’s strengths and weaknesses as a sustainable gastronomy tourism destination for repositioning its strategy. The study found that Gökçeada is an important sustainable gastronomy destination for sustainable gastronomy tourists. Therefore, building Gökçeada as a sustainable gastronomy tourism destination requires a strategic implementation.

In the literature, it is observed that attitudes toward sustainable tourism show significant differences according to various variables. For example, Çarıkçı (2024) found differences in sustainable tourism perceptions according to participants’ gender. Similarly, Kiliç et al. (2020), in their study on university students, revealed significant differences not only in gender but also in economic benefit, natural environment, nature, and social cost dimensions. In addition, significant relationships were determined between students’ cultural environments and their attitudes toward sustainable tourism. Serio et al. (2025) examined sustainability and environmental sensitivity in the travel behavior of university students and showed that attitudes varied depending on gender and cultural environment. These studies demonstrate that students’ tourism experiences, gender, and cultural environments influence their perceptions of sustainability. Therefore, the hypotheses proposed in the present research, listed below, are supported by these findings:

H1: There is a significant difference between culinary program students’ tourism sector experience and their perceptions of gastronomy sustainability.

H2: There is a significant difference between culinary program students’ gender and their perceptions of gastronomy sustainability.

H3: There is a significant difference between culinary program students’ cultural environment and their perceptions of gastronomy sustainability.

3. Methodology

Purpose and Importance

Destinations are turning to different tourism alternatives according to their own potential (Kivela & Crotts, 2005). In Türkiye, gastronomy tourism is one of the most important of these alternatives (Durlu Özkaya et al., 2013). Among the key stakeholders of tourism in the development processes of gastronomy tourism and in managing gastronomy more sustainably are the future gastronomy professionals. The purpose of this research is to determine the attitudes of culinary program students toward the sustainability of gastronomy. The study is important in this respect, as identifying the attitudes and behaviors of students—the future tourism stakeholders—will enable better managerial and operational decisions to be made and the development of appropriate and effective policies (Yılmaz & Akman, 2018; Seçilmiş & Soydan, 2020; Bayram, 2023).

Population and Sampling

The population of this research consists of culinary program students in 2024. According to YÖK (Council of Higher Education) 2024 data, a total of 6,611 students are enrolled in culinary programs at both public and private universities in Türkiye. The study was conducted between September and December 2024 using a convenience sampling method among students studying at different universities. Bryman and Cramer (2004) state that an adequate sample size can be obtained by multiplying the number of items by five to ten. In this study, which included a total of 27 scale items, after removing incomplete and incorrect questionnaires, data analysis was performed on 245 valid responses. It can therefore be stated that the number of collected data is sufficient to represent the population (Bryman & Cramer, 2004, as cited in Gündüz Çetin & Nalbantoğlu Yılmaz, 2016).

Data Collection Method

In this research, the survey technique was used as the data collection tool. The questionnaire form consists of two sections. The first section includes five questions designed to determine the demographic characteristics of the participants. The second section contains 27 statements measuring the participants’ attitudes toward the perception of gastronomy sustainability. The statements in this section were developed based on the Sustainable Tourism Attitude Scale created by Sırakaya-Türk et al. (2008). For the Turkish adaptation of the scale, studies by Altıntaş (2010) and Ayazlar (2017) were used. The statements were rated on a 5-point Likert scale as follows: 1=Strongly Disagree; 2=Disagree; 3=Neither Agree nor Disagree; 4=Agree; 5=Strongly Agree. The overall reliability coefficient (α) of the data collection instrument was found to be 0.790. This value indicates that the overall reliability of the questionnaire is high.

Data Analysis and Findings

In the evaluation of the scale, several analyses were utilized, including exploratory factor analysis, reliability and validity analyses, and confirmatory factor analysis. According to Yap and Khong (2006), exploratory factor analysis is applied to make a large number of statements more manageable. Although similar to exploratory factor analysis, confirmatory factor analysis differs philosophically and is used to test how well the variables represent the construct. Confirmatory factor analysis, which is employed to determine how well the theoretically specified dimensions reflect reality, allows for the acceptance or rejection of a pre-established theory (Hair et al., 2014). Accordingly, SPSS and AMOS 20 software packages were used to conduct the reliability and validity analyses of the study.

Regarding the gender distribution of the students who participated in the research, 44.8% (n=110) were female, and 55.2% (n=135) were male. When examining their tourism sector experience, 54.9% (n=139) of the participants had experience in the sector, while 41.9% (n=106) had no sectoral experience. The distribution of participants according to cultural environment is as follows: 43.5% from Central Anatolia Region (n=110), 11.5% from Black Sea Region (n=29), 18.6% from Mediterranean Region (n=47), 4% from Marmara Region (n=10), 3.6% from Eastern Anatolia Region (n=9), 4% from Southeastern Anatolia Region (n=10), and 11.9% from Aegean Region (n=30).

Table 2. Demographic Findings

<i>Variable</i>	<i>n</i>	<i>%</i>
<i>Gender</i>		
<i>Female</i>	110	44.8
<i>Male</i>	135	55.2
<i>Tourism Sector Experience</i>		
<i>Yes</i>	139	54.9
<i>No</i>	106	41.9
<i>Cultural Environment</i>		
<i>Central Anatolia Region</i>	110	43.5
<i>Black Sea Region</i>	29	11.5
<i>Mediterranean Region</i>	47	18.6
<i>Marmara Region</i>	10	4.0
<i>Eastern Anatolia Region</i>	9	3.6
<i>Southeastern Anatolia Region</i>	10	4.0

Source: Authors’ own elaboration

Within the scope of the exploratory factor analysis, KMO and Bartlett’s test values and the factor loadings of the items were examined. In the KMO sample adequacy test, the KMO value was 0.726, and the Bartlett’s test result was $p < 0.05$. Since a KMO value of 0.70 or higher indicates an adequate sample size for establishing a good level of correlation (Can, 2018), it can be stated that the data are suitable for factor analysis. In this context, Principal Component Analysis was used as the factor extraction method, and Varimax was applied as the rotation method. Items with factor loadings of 0.50 or higher (Hair et al., 2014) were considered to belong to the relevant scale, while items with loadings below this threshold were removed from the analysis, and the remaining items were re-evaluated. The findings obtained as a result of the exploratory factor analysis are presented in Table 3.

Table 3. Exploratory Factor Analysis Findings

Factors	Factor Loadings	Eigenvalues	Explained Variance (%)
ENVIRONMENTAL SUSTAINABILITY		3.829	16.647
Gastronomy tourism should protect the environment.	.927		
Proper development of gastronomic tourism should always protect the natural habitat.	.860		
The community environment should be preserved both now and in the future.	.878		

Those involved in gastronomic tourism should increase their efforts for environmental protection.	.813		
LONG-TERM PLANNING		3.369	14.648
I believe that successful management of gastronomic tourism requires advanced planning.	.864		
I believe a long-term perspective is needed in planning tourism development.	.858		
Gastronomic tourism development plans should be updated continuously.	.824		
The gastronomic tourism industry should be planned for the future.	.759		
Gastronomic tourism should be planned for all twelve months of the year.	.743		
PERCEIVED ECONOMIC BENEFITS		3.010	13.088
I believe gastronomy tourism is beneficial for the local population's economic situation.	.905		
Gastronomy tourism creates new markets for local products.	.886		
I like gastronomy tourism because it provides new income sources for the community.	.884		
Tourism constitutes an important part of local government tax revenues.	.833		
ENSURING VISITOR SATISFACTION		2.844	12.364
Gastronomy businesses should take responsibility for visitor satisfaction.	.965		
The tourism industry should provide high-quality gastronomic experiences for its visitors.	.960		
Meeting the needs of visitors is the responsibility of gastronomy businesses.	.926		
PERCEIVED SOCIAL COSTS		2.373	10.318
With the development of gastronomy tourism, my place of residence has become overcrowded.	.839		
Gastronomy resources in my area are overused by tourists.	.820		
At least half of the employees in gastronomy businesses should be recruited from the local community.	.820		
Residents should benefit equally from the advantages of tourism.	.743		
MAXIMIZING COMMUNITY PARTICIPATION		1.986	8.636
Everyone in the community should be included in gastronomic tourism decisions regardless of their background.	.921		
Full participation of all individuals in the community in the management of gastronomic tourism development should be ensured.	.854		
Residents should be given the opportunity to participate in tourism development management.	.836		

Total Explained Variance (%): 75.700, Kaiser-Meyer-Olkin Measure of Sampling Adequacy: .726, Bartlett's Test of Sphericity Chi-Square: 3790.037, Degrees of Freedom: 253, p-value: .000, Cronbach's Alpha (α): .845
Source: Authors' own elaboration

According to the factor analysis, items that loaded on more than one factor with differences less than 0.10 between their factor loadings were recommended to be excluded from the analysis (Büyüköztürk et al., 2015); therefore, six items were removed from the analysis. As a result of the factor analysis, six factors consisting of 23 items were formed. These factors were identified as environmental sustainability, perceived economic benefits, maximizing community participation, long-term planning, perceived social benefits, and visitor satisfaction.

The resulting dimensions largely overlap with those proposed by Choi and Sirakaya (2005). While the first five dimensions are exactly the same as those identified by Choi and Sirakaya (2005), it was observed that the items belonging to their last two dimensions were grouped under a single dimension in this study, emerging as a sixth factor.

The normal distribution results for the six factors identified through factor analysis were examined by looking at the skewness and kurtosis coefficients. According to Tabachnick and Fidell (2019), if $n > 200$, skewness and kurtosis coefficients are evaluated in normality tests. Accordingly, since the dataset size is 245, skewness and kurtosis values were examined among the normal distribution tests. The skewness coefficients ranged from -0.448 to 1.382, and the kurtosis coefficients ranged from 0.018 to 1.774. When skewness and kurtosis values are within ± 1.5 , the data are considered to comply with normal distribution (Tabachnick & Fidell, 2019). As the data were suitable for normal distribution, parametric hypothesis tests were used in the analysis. In the research, frequency analysis and mean scores of the items were reported, and t-tests and one-way ANOVA analyses were used for hypothesis testing.

The arithmetic means of the factors resulting from the participants' responses regarding their attitudes toward the sustainability of gastronomy are shown in Table 4. Since the mean scores for Environmental Sustainability ($\bar{x} = 4.00$), Social Costs ($\bar{x} = 4.25$), Economic Benefits ($\bar{x} = 4.10$), and Ensuring Visitor Satisfaction ($\bar{x} = 4.03$) were greater than 4 ($\bar{x} > 4$), the students' perceptions of these factors are considered high. The mean score for Long-Term Planning ($\bar{x} = 3.97$) is slightly below 4 ($\bar{x} < 4$), indicating a moderate but close-to-high perception level, while participation in the Community-Centered Economy factor ($\bar{x} = 3.17$) is considered moderate. These results indicate that students displayed positive attitudes toward the effects of gastronomy tourism on sustainability for the factors of environmental sustainability, economic benefits, social costs, ensuring visitor satisfaction, and long-term planning, while they exhibited a neutral attitude toward statements related to the community-centered economy factor.

Table 4. Arithmetic Means of Factors

Factors	\bar{x} (Mean)	SD (Standard Deviation)
Environmental Sustainability	4.00	0.33
Perceived Social costs	4.25	0.038
Perceived Economic Benefit	4.10	0.032
Ensuring Visitor Satisfaction	4.03	0.027
Long-Term Planning	3.97	0.025
Maximizing Community Participation	3.17	0.042
Overall Mean	3.92	

Source: Authors' own elaboration

The following section presents findings based on the results of the hypothesis tests. Table 5 provides the t-test results regarding whether there is a significant difference between culinary program students' tourism sector experience and their perceptions of gastronomy sustainability.

The t-test results indicate that there is no statistically significant difference in perceptions of gastronomy sustainability depending on whether students have prior experience in the gastronomy sector. Based on this information, the hypothesis "H1: There is a significant difference between culinary program students' tourism sector experience and their perceptions of gastronomy sustainability" was rejected.

Table 5. T-Test Results on Participants' Gastronomy Sector Experience and Their Attitudes Toward Gastronomy Sustainability

Factors	Sector Experience	n	\bar{x} (Mean)	SD	t	p
Environmental Sustainability	Yes	139	3.80	0.07	-0.390	.690
	No	106	3.85	0.07		
Perceived Social Cost	Yes	139	3.69	0.00	0.557	.685
	No	106	3.65	0.00		
Perceived Economic Benefit	Yes	139	3.43	0.05	-1.042	.299
	No	106	3.34	0.07		
Ensuring Visitor Satisfaction	Yes	139	4.67	0.06	-1.035	.302
	No	106	4.76	0.05		
Long-Term Planning	Yes	139	2.83	0.04	0.768	.769
	No	106	2.89	0.06		
Maximizing Community Participation	Yes	139	2.63	0.05	0.407	.443
	No	106	2.67	0.06		

Source: Authors' own elaboration

Table 6 presents the t-test results regarding whether there is a significant difference between culinary program students' gender and their perceptions of gastronomy sustainability. In the Environmental Sustainability dimension, there is a significant difference between male and female students, $t(245) = -4.084$, $p < .001$. Similarly, a significant difference was also found in the Perceived Economic Benefit dimension, $t(245) = -2.221$, $p = .027$. For the other dimensions, $p > .05$, indicating no significant differences. Based on this information, the hypothesis "H2: There is a significant difference between culinary program students' gender and their perceptions of gastronomy sustainability" was accepted.

Table 6. T-Test Results on Participants' Gender and Their Attitudes Toward Gastronomy Sustainability

Factors	Gender	n	\bar{x} (Mean)	SD	t	p
Environmental Sustainability	Female	110	4,07	0,08	-4,084	,000*
	Male	135	3,62	0,06		
Perceived Social Cost	Female	110	3,64	0,06	,804	,422
	Male	135	3,70	0,05		
Perceived Economic Benefit	Female	110	3,31	0,06	-2,221	,027*
	Male	135	3,50	0,05		
Ensuring Visitor Satisfaction	Female	110	4,78	0,04	-1,618	,422
	Male	135	4,64	0,06		
Long-Term Planning	Female	110	3,94	0,05	-1,307	,192
	Male	135	4,12	0,05		
Maximizing Community Participation	Female	110	2,67	0,05	-,458	,647
	Male	106	2,63	0,06		

* $p < 0,05$

Source: Authors' own elaboration

Table 7 presents the one-way ANOVA test results regarding whether there is a significant difference between culinary program students' cultural environment and their perceptions of gastronomy sustainability. Variances were found to be

homogeneously distributed for the dimensions of environmental sustainability, long-term planning, perceived economic benefit, perceived social cost, and community-centered economy. However, the homogeneity assumption was violated for the ensuring visitor satisfaction dimension. When the assumption of variance homogeneity is violated, it is recommended to use Welch’s test instead of the classic ANOVA (Delacre et al., 2017). Therefore, robust tests were applied instead of the classic ANOVA. According to the Robust Tests of Equality of Means results for the ensuring visitor satisfaction dimension, the Welch test result indicated no significant difference between the groups (Welch’s $F(6,42.104) = 1.150, p = 0.351$). Based on this information, the hypothesis “H3: There is a significant difference between culinary program students’ cultural environment and their perceptions of gastronomy sustainability” was rejected.

Table 7. One-Way ANOVA Test Results on Participants’ Cultural Environment and Their Attitudes Toward Gastronomy Sustainability

Factors	Sum of Squares (Within Groups)	sd (Intra-group)	Mean Squares (Within Groups)	F	p
Environmental Sustainability	3,188	6	,531	,697	,652
Perceived Social costs	1,581	6	,264	,675	,670
Perceived Economic Benefit	1,384	6	,231	,426	,826
Ensuring Visitor Satisfaction	4,683	6	,238	,1148	,000*
Long-Term Planning	3,327	6	,554	,1542	,166
Maximizing Community Participation	3,026	6	,504	1,111	,356

* $p < 0.05$

Source: Authors’ own elaboration

4. Conclusion, Discussion and Recommendations

The impact of gastronomy on sustainability is a factor that directly affects all stakeholders in the tourism industry. Gastronomy tourism, one of the alternative types of tourism that is becoming increasingly important, not only provides benefits to the environment, society, and all stakeholders but also involves costs in ensuring its sustainability. Sustainability is a necessary and effective option for minimizing the negative impacts of tourism and achieving long-term success (Scarpato, 2003). Gastronomy workers, along with local residents as tourism stakeholders, play a significant role in sustainable development at tourism destinations (Ayazlar & Ayazlar, 2016). Gastronomy workers are individuals who provide services in businesses such as hotels, food and beverage establishments, entertainment, and transportation at destinations. Like all stakeholders, gastronomy workers must also have a voice in ensuring the sustainability of gastronomy. Including gastronomy stakeholders in meetings and decision-making processes related to sustainability is necessary for making more operational and functional decisions as sector representatives and for achieving better outcomes in the future. Exchanging ideas with stakeholders and measuring their opinions and perceptions through social interaction is considered effective in maintaining sustainable tourism processes. In this respect, it is important to evaluate the impact of tourism activities on workers to take preventive measures for issues arising in the management-local community-worker-tourist context.

In line with these developments, this study was conducted to determine the attitudes of culinary program students—future potential tourism workers—toward the sustainability of gastronomy. Identifying the attitudes and behaviors of these students is considered important for ensuring the sustainability of destinations by enabling better managerial and operational decisions and developing appropriate and timely policies.

Regarding the demographic characteristics of the participants, 44.8% ($n = 110$) of the students were female, and 55.2% ($n = 135$) were male. In terms of tourism sector experience, 54.9% ($n = 139$) had prior experience in the sector, whereas 41.9% ($n = 106$) had no sectoral experience. The distribution of participants by cultural environment was as follows: 43.5% Central Anatolia Region ($n = 110$), 11.5% Black Sea Region ($n = 29$), 18.6% Mediterranean Region ($n = 47$), 4% Marmara Region ($n = 10$), 3.6% Eastern Anatolia Region ($n = 9$), 4% Southeastern Anatolia Region ($n = 10$), and 11.9% Aegean Region ($n = 30$). The perceptions of culinary program students regarding the sustainability of gastronomy were grouped under six factors. Participation was high for environmental sustainability, perceived social cost, perceived economic benefit, ensuring visitor satisfaction, and long-term planning, while participation in the community-centered economy factor was moderate.

When the hypotheses formulated within the scope of the research were evaluated: “In our study, it was found that culinary students’ experience in the tourism sector did not lead to a significant difference in their perceptions of gastronomy sustainability. This finding aligns with Mocan et al. (2025), who reported limited awareness of sustainability perceptions among students in the HoReCa sector and found no clear link between sector experience and perception. Similarly, Gaspar et al. (2023) conducted a study in Spain showing that students’ perceptions of sustainable food focused more on the environmental dimension and that practical sector experience was not a determining factor—supporting our findings. On the other hand, although Seyitoğlu (2019) stated in his study on

internship experience that internships affected students' perceptions of professional competence, there was no direct finding on their role in sustainability perceptions, which also supports our results."

The absence of a significant difference in culinary program students' perceptions of gastronomy sustainability according to the cultural environment variable is consistent with similar findings in the literature. For example, Mocan et al. (2025) reported that the sustainability perceptions of student groups in the HoReCa sector were shaped mainly by general environmental awareness and curriculum content, with cultural or regional differences not creating meaningful variation in perception levels. Similarly, Gaspar et al. (2023), in their study on Nutrition and Food Science students in Barcelona, emphasized that despite cultural diversity, students' sustainability perceptions were largely similar and related more to education and individual awareness than to environmental factors or societal pressures. Seyitoğlu (2019) also indicated in his research on gastronomy students' professional perceptions that cultural environment differences had limited effects on students' attitudes and that their perspectives on sustainability were more related to program content and personal values. These findings are consistent with the current study's results and demonstrate that gastronomy students' perceptions of sustainability are shaped more by education and awareness processes than by regional or cultural differences.

The finding that there is a significant difference in culinary program students' perceptions of gastronomy sustainability according to gender largely overlaps with previous research. For example, Chen and Chai (2010), in their study examining university students' environmental attitudes and sustainable consumption behaviors, stated that female students were more sensitive to sustainability issues and had higher environmental responsibility awareness than male students. Similarly, Šenková (2020) found in their study on university students that female students had significantly higher perception scores in environmental sustainability and ethical consumption dimensions compared to male students. Gaspar et al. (2023), in their study on sustainable food perceptions, also found that gender was an important factor influencing sustainability perception and that female students had stronger awareness in this regard. Kiliç et al. (2020) determined that gender was a significant differentiating factor in Mehmet Akif Ersoy University students' attitudes toward sustainable tourism. Their findings revealed that female students exhibited more sensitive and supportive approaches to sustainable tourism principles, while male students displayed relatively lower levels of positive attitudes. These findings are consistent with the current study's result on gender differences and support the view that female students have a more sensitive and responsible perspective on gastronomy sustainability. This underscores the importance of developing balanced approaches in educational programs that strengthen sustainability awareness for both groups while considering gender differences. Compared to similar studies in the literature, the findings provide significant outputs that can guide both theoretical discussions and sectoral practices.

This study demonstrates that attitudes toward the sustainability of gastronomy cannot be explained by single variables alone. The findings reveal that factors such as gender and educational processes are stronger determinants than sector experience, emphasizing the multidimensional nature of sustainability perception. The research supports the significance of gender by showing that female students are more sensitive to sustainability issues than their male peers, providing additional evidence for gender-based approaches in gastronomy and tourism studies. The limited effect of cultural environment suggests that regional differences may not always be decisive and that sustainability perceptions are increasingly homogenized through global values and educational content. Finally, unlike studies that emphasize sector experience as a key factor, this research argues that sustainability perception is shaped not only by practical experience but also by education and individual awareness, opening an important area of discussion.

The findings of this study highlight the need to revise culinary program curricula to strengthen sustainability awareness. Considering that sector experience alone does not create a significant difference, it becomes essential to enrich course content, case studies, and in-class discussions with a stronger focus on sustainability. Furthermore, the finding that female students display more sensitive approaches to sustainability underscores the necessity of gender-based awareness initiatives—such as workshops, field studies, or project-based learning—to foster similar levels of awareness among male students.

The limited influence of cultural environment suggests the importance of creating platforms and intercultural activities where students from diverse cultural backgrounds can share perspectives on sustainability. Such initiatives would enrich sustainability education and broaden students' global outlooks. Additionally, the lack of a decisive role for experience indicates that industry-academia collaborations should not remain limited to internships. Instead, they should be supported by sustainability-focused projects, field trips, and joint industry-university workshops to provide a more comprehensive learning experience.

Finally, to enhance sustainability awareness in gastronomy, educational institutions and industry representatives are advised to develop joint strategies and policy recommendations—particularly focusing on gender-based awareness and the dissemination of sustainability standards. These approaches are critical for achieving long-term success and fostering social consciousness in the fields of sustainable tourism and gastronomy.

The findings of this research are considered limited in scope, as the study was conducted with 245 participants in 2024. It is recommended to expand the scope of future studies by conducting in-depth interviews and focus group discussions with individuals from different cultural backgrounds in order to better understand the perceptions of gastronomy sustainability among culinary program and gastronomy and culinary arts students, who are the future stakeholders of tourism. In addition, conducting future research in collaboration with sectoral stakeholders and comparing the perceptions of individuals from different sample groups may facilitate access to a larger and more diverse sample population. Furthermore, incorporating feedback from the industry could make the findings more practically applicable.

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