



Research Article

IDENTIFYING THE PROBLEMS OF VEGETARIAN AND VEGAN CUSTOMERS AND THE FACTORS AFFECTING THEIR BUSINESS PREFERENCES: THE CASE OF TÜRKİYE**

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Abstract

Recently, meat production and consumption, plant-based diets, and communications related to healthy eating have become significant topics in the interdisciplinary field of food studies. This research aims to detail the traditional understanding of nutrition, the challenges faced in healthy and vegan diets, and the treatments encountered in food and beverages that influence consumer choices and businesses. The study employs a qualitative research method based on inductive reasoning in nutrition design. Additionally, the research follows a 'case study' pattern. Interviews have been conducted in the provinces of Ankara, Antalya, Istanbul, Izmir, and Bursa using an interview formula. The data obtained in the study were analyzed using content analysis and well-established analytical methods. In the process of data analysis, the Maxqda software program was used to store the data and ensure easy access to the obtained codes. The study identified key issues faced by individuals following healthy and vegan lifestyles, including insufficient menu variety, lack of information, and pricing. It was found that women face more problems with businesses compared to men. When it comes to their vegetarian/vegan business preferences, participants prioritized the following factors in gastronomy practices: taste, food safety, hygiene-sanitation, and personal service quality. Other factors, in order of importance, included references, social media, and physical conditions. Relational analyses between the themes revealed a connection between business preferences for healthy/vegan practices and life issues.

Keywords: Vegetarianism, Veganism, Food and Beverage Businesses, Consumer Preferences

Introduction

Throughout the history, a significant portion of the world's population consumed plant-based diets out of necessity or choices. In the past, meat-free diet was advocated based on religious, ethical or philosophical values rather than scientific reasoning (Sabaté and Soret, 2014). Vegetarianism/veganism, which refers to the practice of abstaining from the consumption of meat, has become widely popular in today's world (Rivera and Shani, 2013; Clarys et al., 2014; Rizzo et al., 2016; Mehta, 2017). This situation has also increased awareness on potential benefits of plant-based diets (PBD) (Phillips, 2005; Fuentes and Fuentes, 2021). PBD has become one of the primary diets in Western countries and scientific community (Estell, Hughes and Grafenauer, 2021; Marrone et al., 2021). This increasing interest in PBD is related with the fact that a well-planned vegan diet may reduce chronic diseases, such as obesity, hypertension, coronary diseases and cancer, thanks to its macro and micro components (Cheng, Lin and Tsai, 2014). According to the Academy of Nutrition and Dietetics, vegetarian diets are nutritionally adequate for all phases of life as long as they are well-planned (Hargreaves et al., 2021; Shipman, 2021). However, there are some concerns about vegetarian diets (Craig, 2009). The main concerns are animal welfare, safe and natural food, fair and ethical trade, and the negative effects of meat consumption on mental health and environment (Smart, 2004; Ruby, 2012; Rothgerber, 2014; Sabaté and Soret, 2014). Besides, a diet without meat may result with inadequate intake of essential vitamins and minerals (McEvoy, Temple and Woodside, 2012; Bedin et al., 2018; Marrone et al., 2021). The best way to address

**Bu çalışma, 2022 yılı Nisan ayında Ankara Hacı Bayram Veli Üniversitesi Lisansüstü Eğitim Enstitüsü Gastronomi ve Mutfak Sanatları Doktora Programında tamamlanan, Sibel Ayyıldız'ın "Vejetaryen Beslenme Anlayışı ve Vejetaryen ve Vegan Bireylerin Yiyecek İçecek İşletme Tercihine Etki Eden Faktörlerin Belirlenmesi" başlıklı doktora tezinden üretilmiştir.

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DOI: 10.33083/joghat.2025.482

these concerns is making preparations and plans to maintain a balanced and healthy vegetarian diet (McEvoy and Woodside, 2010).

Sustainable diets aim to provide a health life for the current and future generations and contribute to food and nutrition security (Sabaté and Soret, 2014; Akay and Demir, 2020). PBDs use fewer natural resources and are associated with less environmental damage than animal-based diets (Dilek and Fennell, 2018; Shipman, 2020). Within this context, scientific debates on meat production and consumption, PBDs and vegetarian diets have recently become important issues in interdisciplinary food studies (Tosun et al., 2020). However, most studies on vegetarian diets focus on how to become vegetarian and maintain a vegetarian identity in a meat-centered culture (Fuentes and Fuentes, 2021). Besides, information on the needs of vegetarians, who dine out, and the responses of food and beverage businesses to these needs is still limited. The number of scientific studies on the needs and preferences of vegetarians in food and beverage businesses is not sufficient. Besides, there is a gap in the literature on the food industry serving vegetarian population (Shani and DiPietro, 2007). The findings of this study, which aims to identify the preferences and problems of vegetarians/vegans and determine the factors affecting their preferences in food and beverage businesses, may contribute to further studies on vegetarian diet and food industry.

Literature Review

Vegetarianism is a diet that involves the consumption of plant-based foods rather than foods of animal origin. People that prefer plant-based food but consume a limited amount of food of animal origin, such as dairy products, eggs and fish, are considered as vegetarians (Shani and DiPietro, 2007; Karabudak, 2012; Rivera and Shani, 2013; Kınıkoğlu, 2016; Özcan and Baysal, 2016; Cagnina, Cicero and Osti, 2017; Dinu et al., 2017; Mehta, 2018; Ayyıldız and Sezgin, 2021). On the other hand, veganism refers to the rejection to consume all animal products to limit animal cruelty and exploitation as much as possible. Vegans may also refuse to go to circuses, watch movies featuring live animals, or buy products, such as cosmetics and detergents that are tested on animals (Cherry, 2006; Hoffman et al., 2013; Doyle, 2016; Janssen et al., 2016; Cagnina et al., 2017; Ilgaz et al., 2018; Ayyıldız and Sezgin, 2021; Jovandaric, 2021; Shipman, 2021). Global vegetarian population in 2018 was about 400 million, constituting 8-10% of world population (Shipman, 2021). With a 40% of total population, India is the country with the highest prevalence of vegetarianism (Hargreaves et al., 2021). The prevalence of vegetarianism in Germany, UK, and Spain and the Scandinavian countries were reported at 10-11%, 9-10% and 5-6%, respectively. There is no official data on vegetarian and vegan population in Turkey. However, this issue has attracted growing attention in various fields, including health and social sciences and tourism studies (Madenci and Özkök, 2018).

Vegetarianism had its origins in ancient civilizations (Phillips, 2005; Hargreaves et al., 2021). Known for their contributions to philosophy and mathematics, Pythagoras, Socrates and Horace encouraged a meatless, natural and healthy diet (Kansanen, 2013; Raba et al., 2019; Meesters and Meesters, 2020). While the 19th century vegetarianism was associated with the motto “meat is bad” (Yeh, 2013), 20th century vegetarianism revolved around religious concerns, food science, environmental problems, biological diversity and animal welfare (Shipman, 2021).

Vegetarians do not consume red meat but may consume other animal products. Types of vegetarianism include lacto-vegetarians, lacto-ovo-vegetarians, ovo-vegetarians, polo-vegetarians and pesco-vegetarians. There are certain groups that are not considered as vegetarians but related with vegetarianism. These groups include semi-vegetarians (flexitarians), macrobiotics, rawists, fruitarians, strictly vegetarians, true vegetarian and low-meat eaters (Sabaté, Ratzin-Turner and Brown, 2001; Kansanen, 2013; Chavan, 2015; Hossain, 2016; Melina et al., 2016; Altaş, 2017; Ginsberg, 2017; Corrin and Papadopoulos, 2017; Marioitti, 2017; Aktaş and Özkök, 2018; Raba et al., 2019; Sezgin and Ayyıldız, 2019; Altundağ and Payas, 2021; Ayyıldız and Sezgin, 2021; Bakaloudi et al., 2021; Hargreaves et al., 2021; Perrine, 2021).

Motivations of vegetarianism

Animal welfare, environmental concerns and health constitute the primary sources of motivations in vegetarianism (McDonald, 2000; Marangon et al., 2016; Cagnina et al., 2017; Dewan, 2017; Perrine, 2021; Simons et al., 2021). Health-motivated vegetarianism gained scientific credibility as research on nutrition and diseases progressed in the 20th century (Dobersek, 2020). Other reasons of vegetarianism include disgust and taste preferences, financial concerns and poverty, lack of resources, patriarchy, global food inequality, food beliefs, weight concerns, political issues, animal-related diseases and antimicrobials and hormones used on animal husbandry (Smart, 2004; Fox and Ward, 2008; Craig, 2009; Marangon et al., 2016; Cagnina et al.,

2017; Dagnieli and Mariotti, 2017; Petti et al., 2017; Rosenfeld and Burrow, 2017; Tosun et al., 2020; Ayyıldız and Sezgin, 2021).

Importance of vegetarian/vegan diets in gastronomy

PBDs have been a concern of scientific studies since the last decade of the 20th century. Awareness on the long-term positive effects of vegetarianism on human health and food chain has gradually increased (Leitzmann, 2014). Thus, the number of vegetarian and vegan consumers, and the consequent demand for vegetarian and vegan diets have significantly increased in many industrial countries (Janssen et al., 2016; Shipman, 2021). Today, wheat and soy-based meat alternatives, textured vegetable proteins (TVPs), beans and legumes, seeds (rapeseed, flax, hemp and canola seeds) and mushroom-based meat substitutes constitute alternative sources of vegetable-based proteins (Boutiou, Arhakis and Anttonen, 2019; Kyriakopoulou, Dekkers and der Goot, 2019; Ismail, 2020; Estell et al., 2021; Polat and Tuncel, 2021). With the increasing demand for vegetarian products, such as veggie burger or tofu steak, retail food companies have paid greater attention to meat substitutes (Shani and DiPietro, 2007; Rivera and Shani, 2013). Recently, vegan meal service delivery has substantially increased in major cities of Turkey (Kaplıca, 2019). Smartphone applications and social media enabled the vegetarians to discover their nutritional needs and to access to food and beverage facilities (Melina, Craig and Levin, 2016). Increasing usage of social media has attracted the attention of firms and directed them to use internet and social media platforms in marketing activities (Erkan, 2019). The analysis of perceptions and preferences of consumers is essential to understand their purchasing behavior (Massaglia, Merlino and Borra, 2018). Identifying consumption behaviors and expectations of consumers contributes to long-term predictions and marketing strategies (Seçer and Boğa, 2017). The review of the literature about the research subject shows that most studies dealt with the relationship between vegetarianism/veganism and health. Table 1 presented the existing studies on the research subject in social sciences.

Table 1. Scientific studies on the relationships between vegetarian/vegan individuals and food and beverage services

Author	Dimensions	Type of Study
Rivera ve Shani, 2013	Attitude and Orientation towards Vegetarian Food in the Restaurant Industry	Article
Sünnetçioğlu ve Türkmen, 2017	A Study on the Problems Vegans Face in Restaurants	Article
Nalçacı İkiz ve Solunoğlu, 2018	Are Vegetarian/Vegan Hotels Possible in Turkey? A Conceptual Discussion	Article
Salehi, 2018	Vegetarian Food Practices İn Food Services, Attitudes And Practices Towards Vegetarian Food İn Hotel Businesses	Thesis
Dilek, 2018	Ethical Purchasing Decisions for Vegan Food Products	Article
Vatan ve Türkbay, 2018	Concept of Vegetarian and Vegan, Types of Vegetarianism and Veganism, Vegetarian Tourist and Vegan Tourist	Article
Eryücel vd., 2020	Evaluation of Knowledge and Awareness Levels of Restaurant Employees by Vegan/Vegetarians	Book Section
Ayyıldız ve Sezgin, 2021	Food and Beverage Business Preferences and Problems of Vegetarian/Vegan Individuals	Article

Source: Created by the authors.

The reflection of current developments in vegetarian diet has been quite limited in the academic literature. This limited development is primarily related with the fact that much of the existing works on vegetarianism focused on the relationship between health and nutrition. As Rivera and Shani (2013) suggested, vegetarianism has been a neglected phenomenon in food service sector.

Method

This study analyzed the preferences of vegetarians in food and beverage businesses in order to fill the gap in the literature on vegetarianism. The primary aims of the study were to identify the problems experienced by vegetarians/vegans in food and beverage businesses in five major cities of Turkey and to reveal the factors affecting their business preferences. The reason behind choosing these cities is related with the fact that these cities hosted a number of vegetarian and vegan-friendly business. We identified 29 vegetarian businesses during the course of the study, including 21 in Istanbul and 2 restaurants in each of the remaining cities, namely, Ankara, Antalya, Izmir and Bursa.

The study adopted an inductive approach and used qualitative methods to gather data since the qualitative method enabled the researchers to reveal detailed knowledge on the opinions and experiences of participants in their own context. We employed a holistic multiple-case study method, which refers to the in-depth description and analysis of a limited system (Merriam, 2018). Within this context, we analyzed each case from a holistic perspective and compared the cases.

Vegetarians and vegans living in Ankara, Antalya, İstanbul, İzmir and Bursa provinces of Turkey constituted the population. We used criterion and snowball sampling methods since these methods were in line with the aims of the study. Criterion sampling refers to the study of all cases that meet certain conditions. Criterion may be determined by the researchers or the previous studies may be used to determine criteria (Baltacı, 2018). Within this context, the sample of this study comprised vegetarians and vegans that visited vegetarian and vegan businesses in Ankara, Antalya, İstanbul, İzmir and Bursa.

The study comprised 51 vegan and 31 vegetarian participants living in Ankara (15), İstanbul (30), İzmir (12), Bursa (12) and Antalya (13). Data were collected using a semi-structured questionnaire with open-ended questions, which was prepared in line with the literature (Han and Ryu, 2009; Ryu and Han, 2010; Arıker, 2012; Haghghi et al., 2012; Jin, Lee and Huffman, 2012; Albayrak, 2014; Cheng et al., 2014; Ünal, Akkuş and Akkuş, 2014; Ertürk, 2018). Ethical approval was obtained before the study. Participants were informed about the aim and the scope of the study. Due to COVID-19 pandemic, data were collected online between January 24th 2019 and August 16th 2020. Interviews were tape-recorded and archived. The primary benefit of using online interviews was that the participants expressed their thoughts and feelings without any influence.

Coding refers to the procedure of fragmenting and classifying text to form explanations and comprehensive themes in the data (Creswell, 2021). Thematic analysis, on the other hand, is a model, which is used to express how participants perceive a certain situation by using themes (categories) and codes (Bal, 2016; Merriam, 2018). Themes, which are composed of codes, describe the primary findings of a study. They constitute the main headings of a qualitative study (Creswell, 2019). Within this context, Table 2 presented the codes and themes of our study.

Table 2. Themes and codes

Themes	Codes	Examples to statements
Cuisine/food preferences of vegetarians/vegans	Fast Food Turkish cuisine International cuisine Veganized food Home food All food types	<i>“I am open to new tastes. However, I could not adapt to new generation of vegan food. I prefer vegetarian food of Turkish cuisine. I eat for pleasure (P20, Antalya, Vegan)”</i> .
Factors affecting the business preferences of vegetarians/vegans	Lack of menu diversity Poor knowledge of personnel High prices Insecurity Lack of alternative businesses Attitudes and behaviors of personnel Hygiene & sanitation Tasteless food Unhealthy food Physical conditions Ethical awareness Inadequate portions High personnel turnover Advertisement Location	<i>“Vegan food is too expensive, especially vegan deserts are sold at excessive prices. For example, we pay 50-60TL for a vegan desert although it costs 20TL. This is insane... Veganism turned into a market. In fact, this market is constantly growing in size. There are those exploiting this market (P4, Ankara, Vegan)”</i> .
Factors Affecting Vegetarian/Vegan Individuals' Business Preferences	Gastronomic factors affecting business preferences <ul style="list-style-type: none"> • Taste • Safe food • Hygiene & sanitation • Quality of service • Pricing • Menu diversity • Maintaining different factors 	<i>“Some say that vegetarians living in Istanbul are luckier. However, I do not agree with this opinion. This is because of the fact that institutionalized chain vegan businesses are weak in terms of taste and service quality. I do not believe that these businesses can provide healthy and safe food due to high number of customers or other</i>

<ul style="list-style-type: none"> • 100% vegetarian/vegan business • Ethical awareness • Food presentation 	<i>reasons. Consequently, the popularity of a business cannot be the most important criteria for my business preference (P79, Istanbul, Vegetarian)”. </i>
<ul style="list-style-type: none"> Other factors affecting business preferences • References • Social media • Physical conditions • Popularity • Location • Uniqueness 	

Source: Created by the authors.

Descriptive analysis is based on summarizing and evaluating qualitative data. This is a type of qualitative analysis, which starts with the systematic description of obtained data, addresses cause-and-effect relations and ends with certain conclusions (Yıldırım and Şimşek, 2016). Content analysis, on the other hand, is the comprehensive and systematic analysis of qualitative data to identify patterns, prejudices and meanings (Bal, 2016). While conducting content analysis, researchers develop a number of categories and count the number of cases that match with these categories (Silverman, 2018). During the analysis, we used computer software to store data and access to codes. Besides, we used MAXQDA software to explain and illustrate codes and themes. MAXQDA enables the researchers to code personal characteristics, evaluate test-retest reliability, visualize findings, and most importantly analyze qualitative data (Creswell, 2019).

Validity in a qualitative study is an attempt to evaluate the accuracy of the findings, which is defined by both the participants and researchers (Creswell, 2021). All steps taken to ensure the validity of the research were controlled. Besides, an independent consultant followed the pace of research for issues, such as research questions, relationship between variables and data interpretation. A Cronbach's alpha of 0.80 is required to indicate internal consistency (Baltacı, 2017). After obtaining expert opinion on the similarity between the codes, we achieved a Cronbach's alpha of 0.81.

Conducting interviews with vegetarians, especially vegans, constituted the major problem of this study. Since we placed an extra effort to establish trust with the participants, data collection process took longer than expected. *“Ethics Committee Approval” was obtained for this study at the meeting of Ankara Hacı Bayram Veli University Ethics Committee dated 03/06/2020 and numbered E.15142.*

Findings

We found that being a vegetarian/began due to ethical concerns was higher in female participants. On the other hand, 2 male participants expressed that they became vegetarian due to health concerns (Table 3).

Table 3. Motivation of vegetarian/vegan participants

Vegetarian/Veganism Motivations	Number of Vegetarians	Number of Vegans	Gender	
			Woman	Man
Ethic	11	35	30	16
Health	2	-	-	2
Ecological	-	-	-	-
Ethics and health	5	8	8	5
Ethical and ecological	6	5	6	5
Ethics, ecological and health	1	2	-	3
Health and ecological	1	-	-	1
Health and disgust	4	-	4	-
Ethics, politics and industrialization	1	-	1	-
Unspecified	-	1	1	-
Total	31	51	50	32

Theme 1: Cuisine/food preferences of vegetarians/vegans

The main cuisine/food preferences of the participants were fast food, Turkish cuisine and international cuisine, respectively. Although fast food was not a healthy and safe diet, most participants preferred it due to the limited number of food and beverage businesses offering vegetarian/vegan food. Fast food preference was higher in Istanbul, Antalya and Izmir, respectively. Additionally, some of the participants expressed that they preferred Turkish cuisine in vegetarian/vegan businesses since it was more healthy than fast food and since they were

not open to new tastes. The participants, who liked international food, mostly preferred Italian, Indian, Egyptian, Mexican, Far East, Middle Eastern, and especially Lebanese cuisine. The reasons behind choosing international cuisine were the desires to make change in food products and experience different tastes.

“I do not like to consume fast food. However, I prefer it due to lack of any alternatives (P2, Ankara, Vegan)”.

“I prefer Turkish food as I know its ingredients and consider it as safer (P74, İstanbul, Vegetarian)”.

Theme 2: Problems experienced by vegetarians/vegans in businesses

The participants experienced various problems in vegetarian/vegan businesses. The primary problems included lack of menu diversity, poor knowledge of personnel, high prices, insecurity, attitudes and behaviors of personnel, and lack of alternative businesses, respectively. Other problems were hygiene&sanitation, tasteless and unhealthy food, physical conditions, ethical awareness, inadequate portions and high personnel turnover.

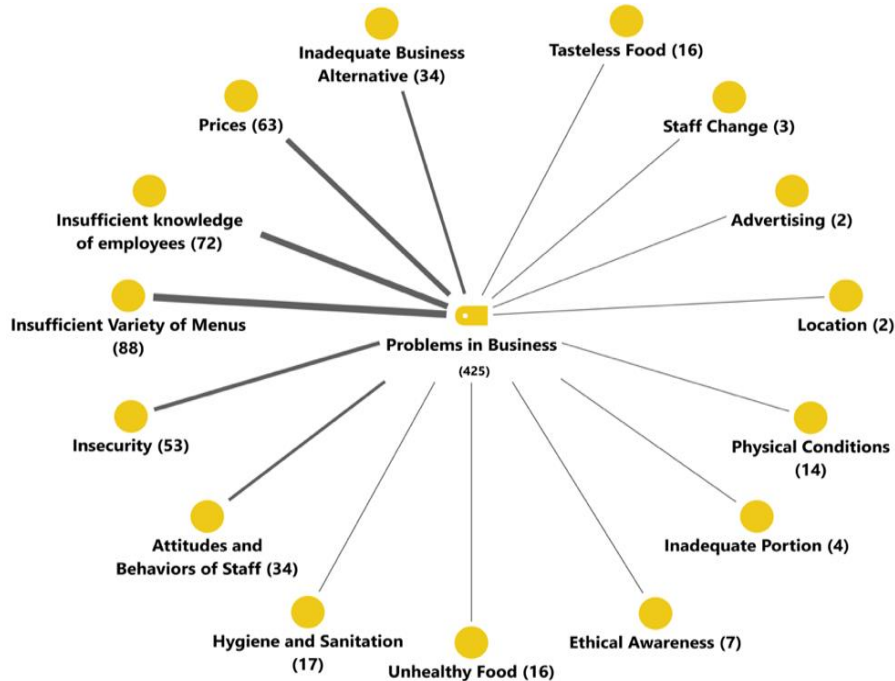


Figure 1. Problems experienced by vegetarians/vegans in businesses

Female participants experienced more problems than males. Primary problems expressed by the female participants were insecurity, attitudes and behaviors of personnel and tasteless food whereas male participants expressed unhealthy food as the primary problem. The problems were mostly experienced in İstanbul and Ankara. Vegan participants experienced more problems than vegetarian participants. The major problems of vegan participants were the lack of menu diversity, poor knowledge of personnel and high prices, respectively. The first five problems experienced by the participants are detailed below.

Lack of menu diversity: The participants expressed that menus in the vegetarian/vegan businesses were insufficient in terms of both quality and quantity. Consequently, these businesses could not meet their demands. Lack of menu diversity was a primary problem even in İstanbul, which hosted the highest number of vegetarian and vegan businesses (21 businesses).

Poor knowledge of personnel: Poor knowledge of personnel about vegetarianism and especially veganism was the second problem. Participants expressed that the personnel did not have sufficient knowledge on nutrient content of food offered by the business. Besides, especially service personnel did not have knowledge on vegan diet. This situation had an adverse effect on consumer satisfaction and sustainability of restaurants.

“The personnel do not understand or want to understand when I say that I am a vegan. But when I say that I am allergic to milk derivatives, you are taken into consideration (P17, Bursa, Vegan)”.

“When we don’t get answers to our questions about the content of menu cards, we leave the restaurant and do not visit it for a long time. These restaurants, which are already quite few in number, cannot be sustainable if they cannot maintain consumer satisfaction (P53, Ankara, Vegan)”.

High Prices: Most of the participants were dissatisfied with the high prices in vegan and vegetarian businesses. They expressed that these prices were in fact a type of exploitation since the prices of meat cannot be higher than vegetables or legumes.

“I think the most important problem in vegan and vegetarian businesses is the high prices. There is no meat or butter in the food, I cannot understand how it is so expensive. I know that these businesses have to survive, but such a high price is not reasonable (P18, Bursa, Vegan)”.

High price of the meals offered by vegan/vegetarian businesses is explained with reference to the prices of nutrient contents, such as seitan and tofu, absence of any competitors and inability of the restaurants to sell at low prices to increase profit due to low demand for vegan/vegetarian food. Besides, significant inconsistency in the prices of vegan/vegetarian food led the participants to feel as if they were deceived. They were primarily concerned with the high prices of vegan patisserie. Feeling of insecurity: Participants felt insecure to vegan and vegetarian businesses since the nutrient content of menu were not shared with the customers, the personnel did not give clear answers and due to concerns about cross-contamination or the possibility of food of animal origin. The participants especially felt insecure to businesses with vegetarian/vegan option.

“Veganism has become a very open market. In fact, this market continues to grow. However, many restaurants abuse this situation. High prices of vegan food and patisserie is probably due to these reasons (P4, Ankara, Vegan)”.

“Cross-contamination is a serious problem. When you are eating French fries, you start to think whether the potato was fried in the same oil as another food of animal origin. This is an incredibly disturbing situation (P16, Bursa, Vegan)”.

“In particular, restaurants with vegan and vegetarian options are not transparent about the nutrient content of food; they do not share information with the customer (P22, İstanbul, Vegan)”.

Participants also expressed that knowledge of personnel on nutrient content of food increased the trust in vegetarian and vegan businesses and had a positive impact on customer loyalty.

Lack of alternative restaurants: The participants expressed that the number of vegetarian and vegan businesses was quite limited that they even went hungry. Limited number of alternatives forced the participants to choose non-vegan restaurants and deprived them of new gastronomic experiences. Although both Antalya and Izmir had two vegan/vegetarian businesses, the number of participants expressing lack of alternatives as a major problem was higher in Antalya. Participants ignored many problems due to the lack of alternative businesses.

“I feel like I have to support the businesses for its survival and I tolerate the problems. Since we do not have many alternatives, we ignore the problems. Consequently, the businesses do not attempt to correct their deficiencies. It even eliminates the need for businesses to take measures against our problems (P13, Antalya, Vegan)”.

Theme 3: Factors affecting the business preferences of vegetarians/vegans

Factors affecting business preferences of the participants can be grouped into two main categories, namely “gastronomic factors” and “other factors”.

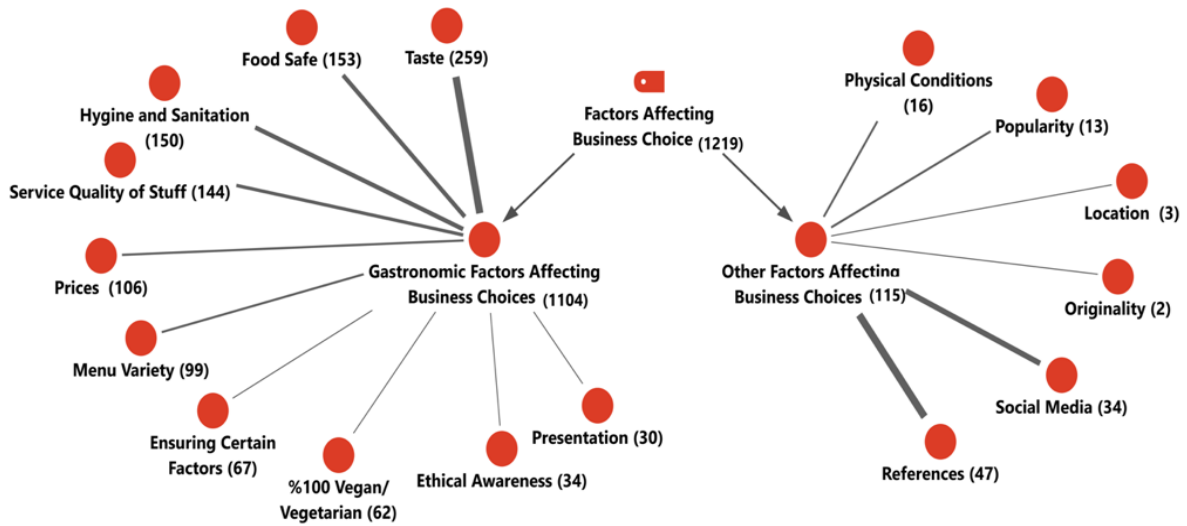


Figure 2. Theme of factors affecting business preferences: Codes and subcodes

Gastronomic factors affecting business preferences were tastes, safe food, hygiene & sanitation, quality of service, pricing, menu diversity, maintaining different factors, 100% vegetarian/vegan business, ethical awareness and food presentation, respectively. Other factors affecting business preferences were references, social media, physical conditions, popularity, location and uniqueness, respectively.

Taste and safe food were the major factors affecting the preferences of the participants. Safe food was defined as healthy and clean food, which does not have the risk of cross contamination and which does not contain animal products or food additives. Although the participants considered hygiene & sanitation as important factors affecting their restaurant preferences, they were not sufficient on their own; rather, they acted together with other factors, such as taste and menu diversity, in shaping restaurant preferences. However, the participants were reluctant to visit businesses that did not meet hygiene & sanitation requirements.

Popularity of the business was not an important factor affecting the preferences of the participants. Participants expressed that popular businesses are more crowded, which, in turn, may have a negative impact on gastronomic factors, such as taste, food safety, hygiene and service quality. Customer loyalty and satisfaction were higher in restaurants that were less popular.

Binary comparison between two cities: We performed binary comparison of all codes in order to reveal the similar and different codes and themes expressed by participants from different cities.



Figure 3. Binary comparison of Ankara and İstanbul

As illustrated in Figure 3, we examined similar and different codes and themes on business preferences and the problems experienced by the participants from Ankara and İstanbul. Accordingly, taste, hygiene&sanitation, safe food, service quality and menu diversity were the common factors affecting restaurant preferences of the participants in Ankara and İstanbul. Unlike the case of İstanbul, participants from Ankara experienced problems about location and advertisement whereas the participants from İstanbul had problems about insufficient portion size.

Relational analyses

Relational analyses emerge from the convergence of participants' opinions. We firstly analyzed the relationship between the categories of gastronomic factors and other factors affecting business preferences. The analysis revealed a significant relationship between these two categories. For example, the participants that expressed 100% vegetarian/vegan business as a factor influencing their preferences also talked about references and social media. This finding indicates that the participants attempted to access to 100% vegetarian/vegan businesses using references and social media.

Relations between themes

The links between different factors in the code map indicated that these factors were expressed by the participants concurrently.

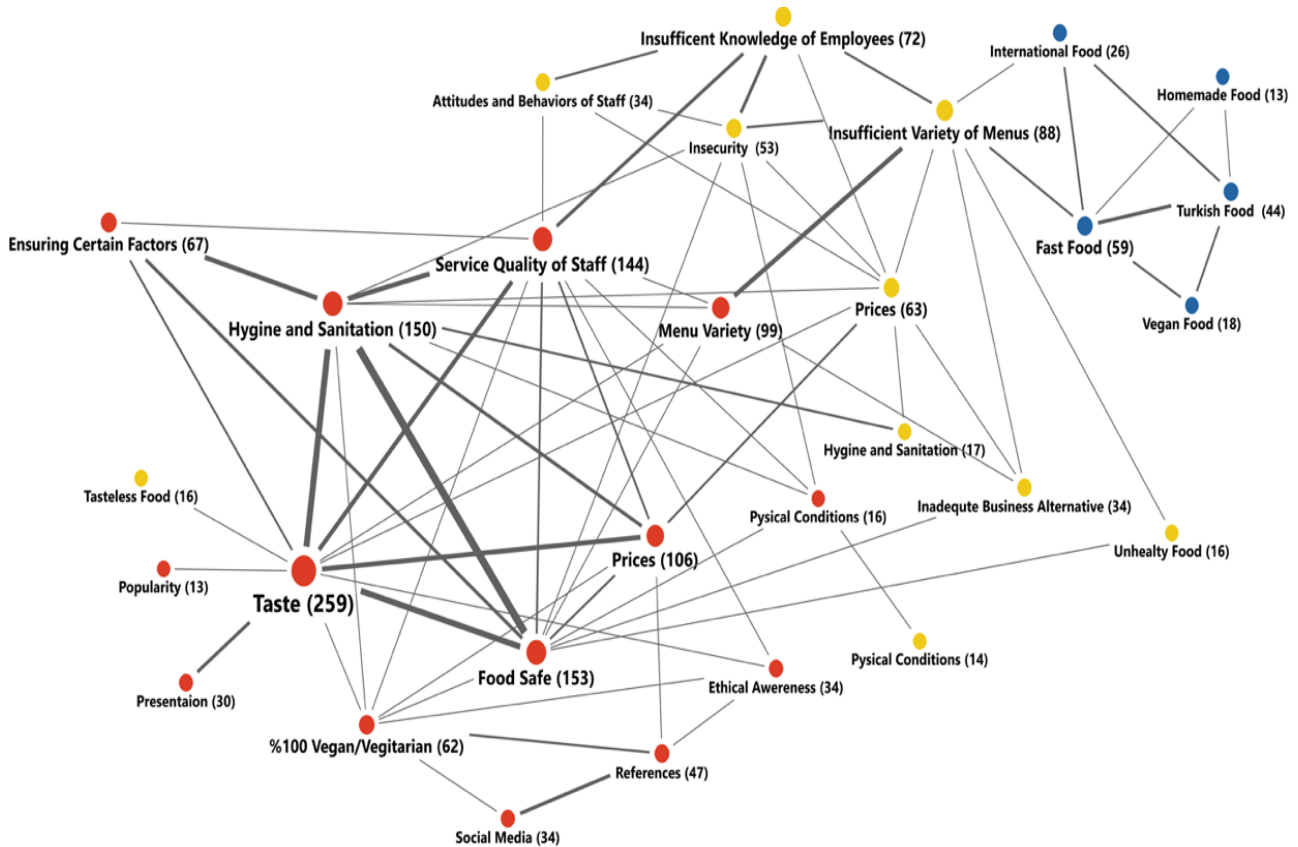


Figure 4. Code map

The intensity of relationship between the factors were illustrated in Figure 4 using thick or thin lines. Thick lines indicated factors that were frequently expressed by the participants. For example, the thickest line was between factors of hygiene & sanitation and safe food. The line indicated that participants that talked about safe food also dealt with hygiene & sanitation. Besides, there was an intense relationship between taste, hygiene & sanitation, tasteless food and prices. These findings indicated that the participants did not express a single factor to explain the problems experienced or the factors influencing their business preferences; rather multiple factors were expressed in relation to each other.

Code cloud

Intensity of codes in the statements of participants was illustrated in Figure 5. Codes with larger font size indicated that these codes were more frequently expressed by the participants whereas the codes with smaller font size meant that these codes were less frequently expressed. Accordingly, taste, service quality, safe food, hygiene & sanitation, menu diversity and price were the factors that were frequently expressed by the participants. This finding indicated that participants experienced problems about these factors, or these factors influenced their restaurant preferences.

Discussion and Conclusion

This study found that health was not a primary source of motivation behind choosing a vegetarian diet. Contrary to our finding, Rosenfeld and Tomiyama (2021) stated that health was the main factor behind being a vegetarian in both males and females. However, health and disgust were the main reasons behind being a vegetarian/vegan in only female participants of our study. Similarly, Rothgerber (2013) reported that females expressed more disgust and negative attitudes towards eating meat than males.

We found that fast food and Turkish cuisine were the most preferred food types. Similarly, Ayyıldız and Sezgin (2021) reported that vegetarians and vegans mostly consumed fast food. Shipman (2021) noted that it is possible to adopt a vegetarian diet if the individual is familiar to a cuisine that includes plant-based foods. Given that Turkish cuisine generally consists of plant-based foods, it is not surprising that the participants of our study preferred Turkish cuisine. Besides, female participants were more open to new tastes. Similarly, Forestell, Spaeth and Kane (2012) found that vegetarian women were more open to new gastronomic experiences.

The primary problems experienced by the participants were lack of menu diversity, poor knowledge of personnel, high prices, insecurity, attitudes and behaviors of personnel and lack of alternative businesses. Hargreaves et al. (2021) noted that the barriers to adopting vegetarianism included prices, lack of alternatives, difficulty of preparing vegetarian food, difficulties in finding options when eating in restaurants, lack of knowledge about meat-free eating and the fear that a vegetarian diet may be nutritionally inadequate. Similarly, Ayyıldız and Sezgin (2021) reported that high prices, insecurity and poor knowledge of personnel on nutrient content of foods were the primary problems experienced by vegetarians and vegans. These problems resulted with menu fatigue and a decrease in customer loyalty. Imposition of existing foods and the inability of businesses to offer alternatives are quite challenging for the sustainability of food and beverage businesses. Knowledge of personnel on nutrient content of food increased trust and customer loyalty to the businesses. Consequently, food and beverage businesses may take customer trust into consideration while attempting to overcome their problems.

The participants in our study expressed that vegetarian/vegan businesses could not meet their demands since the menu was not sufficient in terms of quality and quantity. Nalçacı-İkiz and Solunoğlu (2018) reported that although most of the hotel businesses offered vegetarian food, they did not provide menu alternatives for vegetarian customers. Rivera and Shani (2013) noted that vegetarian customers demanded more types of vegetarian food. Akkan and Bozyiğit (2020) found that vegetarians were under social pressure or could not find vegetarian foods in restaurants. Shani and DiPietro (2007) underlined the importance of menu development for the success of a restaurant organization.

Participants of our study mostly expressed that the personnel did not have sufficient knowledge about the nutrient content of food. Eryücel et al. (2020) underlined the importance of poor knowledge of personnel. Similarly, Cagnina et al (2017) reported that knowledge about the nutrient content of vegetarian food increased customer satisfaction in vegetarians and vegans.

The participants had concerns about the high prices of vegetarian foods, and especially patisserie. According to Tosun et al. (2020), targeting wealthy consumers in vegan foods and high prices of meat substitutes were controversial issues. Additionally, the absence of alternative restaurants forced vegans and vegetarians to choose non-vegan restaurants and deprived them of new gastronomic experiences. Rivera and Shani (2013) noted that most vegetarians had to choose non-vegan restaurants for dining out.

In our case, taste, safe food and hygiene & sanitation were the primary gastronomic factors affecting the business preferences of vegetarians and vegans. Ayyıldız and Sezgin (2021) reported that ethical and environmental awareness of enterprises, 100% vegetarian/vegan business, taste and price were the most important criteria in preferring businesses. We also found that taste was an important factor affecting business preferences of vegetarian and vegan customers. Similarly, Clicerì et al. (2018) underlined the importance of taste influencing food preferences of vegetarians and vegans. Similarly, Cheng et al. (2014) food quality and taste were among the most important attributes to attract customers.

The most important gastronomic factors affecting the preferences of participants were taste, safe food, hygiene & sanitation, service quality and prices. The factors in second broad category of ‘other factors’ were references, social media, physical conditions and popularity, respectively. Especially taste and service quality were the factors with positive impacts on customer satisfaction and loyalty. On the other hand, high prices and lack of hygiene & sanitation deterred the participants to visit the business again. We also found that unpopular

businesses were associated with higher customer satisfaction and loyalty. Additionally, vegetarian and vegan participants were aware of their demands from food and beverage businesses.

There was a relationship between the categories of `gastronomic factors` and `other factors` in affecting business preferences of the vegetarian and vegan customers. Physical condition of the `other factors` category was related with the hygiene & sanitation and service quality factors of the category of `gastronomic factors`. Besides, there was a relationship between references and social media factors of the `other factors` category and 100% vegetarian/vegan business factor of the category of `gastronomic factors`. These findings indicated that the factors affecting food and beverage businesses were interrelated.

Relational analysis between themes revealed a relationship between problems experienced and the factors affecting business preferences of vegetarians and vegans. There was an intense relationship between the `taste` factor affecting business preferences and other factors, including hygiene & sanitation, tasteless food and prices. The code cloud revealed that taste, service quality, safe food, hygiene & sanitation, menu diversity and price were the factors that were frequently expressed. This finding indicated that participants experienced problems about these factors or these factors influenced their restaurant preferences.

Based on these findings, we may make a number of suggestions. Firstly, vegetarian and vegan businesses should periodically update their menu in order to maintain menu sustainability. Menu development should not only result with an increase in menu diversity but also improve the nutrient content of vegetarian food. Besides, food and beverage businesses should provide alternatives for vegetarian and vegan customers. Information on customer demands should be provided by service personnel to kitchen personnel. Service personnel should be informed about the nutrient content of menu items in order to increase customer trust. Furthermore, standard prices are crucial to build customer trust. Standard receipts may be used for a sustainable taste. Standard portion size may be determined to meet customer demands. Feedbacks may be received from vegetarian and vegan customers to be a professional vegetarian and vegan business. These feedbacks and criticisms should be objectively evaluated to find solutions to the problems and improve service quality. This study found that the participants ignored some of the problems since vegetarian and vegan businesses were few in number. Therefore, vegetarian and vegan customers may express their problems so that the businesses may find proper solutions and provide more professional service.

The sustainability of vegetarian and vegan diet is parallel to the sustainability of food and beverage businesses. Due to this reason, food and beverage businesses that offer vegetarian and vegan diets should properly meet the demands for alternatives. Additionally, the tourism dimension of vegetarianism and veganism may be further researched since tourism destinations are frequently visited by vegetarian and vegan tourists. To support food and beverage businesses offering service to vegetarian and vegan customers, further academic studies on the problems of these businesses may be conducted in the fields of entrepreneurship and marketing.

Implications for gastronomy: Current developments in the field of gastronomy resulted with an increased focus on vegetarian and vegan diets. Parallel to the increase in the number of vegetarian and vegan customers, the awareness on the long-term positive effects of these diets have increased. Food and beverage businesses should identify the demands of these customers to reach them and increase their satisfaction. Additionally, it is crucial to ensure the standards and sustainability in vegetarian and vegan menu development. The findings of this study may contribute to food and beverage businesses by identifying the problems of vegetarian and vegan customers and the factors affecting their business preferences. In addition, other gastronomic implications are as follows:

- Academics in the field of Gastronomy and Culinary Arts should produce more delicious and qualified alternative food recipes for vegetarian/vegan individuals. These tried and standardized recipes should be disseminated to various audiences through national and international publications, books and media outlets.
- The potentials of vegetarian/vegan food and beverages should be developed and included in tourism policies in order to get a larger share of gastronomy tourism revenues.
- Vegetarian/vegan food and beverages can be an important gastronomy element to make destinations where foreign tourists are hosted attractive. For this reason, local foods and foods from international cuisine should be included in business menus.
- Information about the working and marketing strategies of the most successful vegetarian/vegan businesses in international platforms should be obtained and adapted to the businesses in Turkey.

- For the sustainability of vegetarian/vegan businesses, necessary cooperation should be ensured within the framework of gastronomy with international institutions and businesses that are considered to be more developed.

Limitations of the study: The study was limited to 29 vegetarian establishments, 21 restaurants in Istanbul and 2 restaurants each in the other cities of Ankara, Antalya, Izmir and Bursa. The reason of this, there were only 29 vegetarian establishments in Turkey at the time of the research. Another limitation of the survey is that it was conducted with the participation of 51 vegans and 31 vegans.

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