



The use of prehistoric foods for resilience in heritage tourism: a case of Çatalhöyük, Turkey

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Abstract

Heritage tourism has been cited as a progressively increasing popular tourism form globally. Archaeological heritage is among the most significant contributors to the trend. This multi-disciplinary study of archaeology, gastronomy, and tourism aims to revive past authentic culinary culture, asking: (1) can archaeological research contribute to reviving the authentic culinary culture of the prehistoric people? (2) which ancient form is preferred by today's tourists: as it actually was about 10,000 years ago or it needs manipulation in favour of modern fashion? Two archaeologist authors researched and interpreted the materials excavated in Çatalhöyük, a UNESCO Neolithic heritage site. Then, a gastronomist author re-evaluated the data to cook special dishes in line with the interpreted genuine culinary culture. The sensory analysis of the dishes was scientifically carried out by tourism experts at three different times. The results showed that foods of the past survive and the taste of prehistoric times coincides with that of today and that past culinary products are practically provided in archaeodestinations and enjoyed by masses. Moreover, it constitutes the groundwork for future empirical studies focusing on food-born increased site visitations. The study comprises both practical and theoretical implications in destination managing, servicing, and creating attractions in heritage areas.

Keywords: foods for tourism planning; archaeo-gastronomy; foods as tourist attraction; foods for destination management; archaeological foods for resilience.

Practical Application: Our study indicates that served with such prehistoric opportunities like the foods, customers in archaeodestinations would experience the authenticity of the old and the different, and thus the curiosity of modern man over the daily life of Prehistoric man will be satisfied in this way. However, empirical studies of larger subject groups are required to confirm the findings in the future.

1 Introduction

Endless needs and desires of people have always been to the chief concern to tourism. Food has been among them as part of the heritage of the past. This aspect in the progressive development of tourism as a science and industry has always been a case in point progressively increasing for the last decades. Foods have been tackled through applied methods and techniques as the chief component of the culinary culture, some of which date back to the beginning of systematic living of humanity at prehistoric times. While applying these methods and techniques, the past should be analysed and well established in tourism (Durna & Babür, 2011). These methods and techniques are to be revised since the majority of today's tourists have grown more meticulous, due to COVID-19, about various aspects of destinations, which are rarely existent earlier. Among them are how much populated they are, what facilities they serve, and how far their locations are from densely populated areas. Even so, the tourism industry has various options for resilience after the COVID-19 pandemic.

Over the past several decades, cultural heritage has progressively been more appealing for more enlightened tourists (Bayarsaikhan et al., 2020). Thus, heritage tourism, which accounts for %40 of any tourism activity all over the

world (World Tourism Organization, 2018), has turned out to be a great industry. Among the chief components of heritage tourism has been archaeological tourism (archaeotourism) with its most popular archaeodestinations (ADs) in different corners of the globe from Machu Picchu, Pompei, Ephesus to Petra or Angkor Wat. The critical option is the promotion of ADs reinforced with gastronomical attractions of old and modern discernments, focusing specifically on those in nature far away from infested populated urban centres.

This paper hypothesizes that ADs are likely to become more attractive to tourists with the activities they provide like learning, edutaining, eating, and drinking in their natural tranquillity. With this prescience, it presupposes that thematic ancient culinary service in those areas are supposed to increase their level of tourist attractions through the concept service and/or the service logic. After all, destination managers strive to achieve success with different concepts and practices in a competitive environment (Ottenbacher & Harrington, 2007). Businesses offering standard meals and concepts today are already being replaced by innovative destination areas with a specific theme (Durna & Babür, 2011). Due to their nature, tourism services

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need to update their service mentality in line with the demands from visiting tourists (Sezgin et al., 2008). Thus, the study strives to answer two questions: (1) would it be possible to revive the authentic culinary culture of the prehistoric period through archaeological interpretations for their service in Ads, (2) if yes, which form would be revived and served to the taste of today's tourists to add additional value perception to the destinations: whether as what it was actually about 10,000 years ago or as it is manipulated according to modern fashion?

This multi-disciplinary study of archaeology, gastronomy, and tourism aims to revive and benefit from Neolithic culinary culture at an authentic Prehistoric archaeological destination, Çatalhöyük, a UNESCO World Heritage site, for the taste of today's tourists through sensory analysis. The interpretation of archaeological finds by archaeologists and tourism professionals for tourism purposes is not a common phenomenon; however, the outcomes of COVID-19 have forced the authors to re-evaluate ADs in the remote areas for the revival of the industry. For this purpose, Çatalhöyük, a prehistoric village in central Turkey, 52 km from the city of Konya was chosen as the focal destination. After all, beginning in 1961 and still being carried out today, Çatalhöyük Excavation Project has been the most comprehensive and complex archaeological excavation project the globe ever done (Marciniak, 2015).

With the study, the materials of Prehistoric Culinary Culture (PCC) at Çatalhöyük were gathered from the literature and analysed by archaeologists, who researched and interpreted the materials through archaeological methods focusing on the culinary remains excavated in Çatalhöyük. Through the reinterpretations of materials, it was possible to determine what the authentic materials used in PCC of the time were most probably like. The gastronomical interpretations of PCC and its revival as part of the destination attraction today are new phenomena. Another author, who is a gastronomist, re-evaluated the data through the gastronomical principles, interpreted them, and hypothesized about the genuine culinary culture of the time. The materials cooked and those used for cooking have archaeologically revealed sound evidence on the ingredients and the cooking methods of the most common dishes. Consequently, a special dish was cooked by the authors, using genetically unchanged ingredients and materials still found in the destination. Later, its descriptive sensory analysis was scientifically carried out with tourism experts at three different times.

The study contributes to the existing literature in several ways: First, focusing on service practices by both tourist's and provider's gazes, it contributes to practices in ADs in which traditional ways of practices are challenged. Second, the study reveals that interdisciplinary coordination of practices can lead to experience value co-creation in themed tourist settings in archaeological destinations and that both tourist and provider practices depend on the practices of integrated interdependent actors in a specific tourist setting. The study fills the gap in research on value creation in post-COVID-19 multi-actor-based and themed tourism experiences, illustrating both tourists' gaze and the managerial potential of practical studies. The investigated case of Çatalhöyük represents intensive theming and interdependencies between scientists from various distinct

areas and their practices to interpret the authentic theme in the culinary culture of Prehistoric people. Theoretically, the study presents a theory of tourist engagement and value creation through services in experimenting PCC in ADs. Such interdependencies between theoretical and practical studies are also evident in most tourism settings. The findings can be associated with other tourism settings as well.

2 Literature review

The food production and appetites of human societies from prehistoric times have witnessed similar intertwined processes of culinary innovation, historical process, and cultural evolution and deftly transmission, which means that every meal eaten on earth today has an evolutionary tale to tell (Gremillion, 2011). Dietary shift from non-human apes to ancestral hominins, from nut cracking of primates to stereotypical food acquisition began with meat consumption (Wrangham, 2009; Bunn, 2007; Dart, 1953). In plant foods, the nutrient density altered in time (Conklin et al., 2002) as well as foraging methods (O'Connell et al., 2002). Archaeological interpretations reveal that staple foods were introduced less than 10,000 years ago (Lindeberg, 2009), the time when similar interpretations can be made for Çatalhöyük as well. The archaeological record provides solid evidence to tell how human species have been able to produce such diversity of prehistoric and historic food systems reaching today (Hublin & Richards, 2009). Therefore, human acquisition, processing, and consumption of food in a specific archaeological site is the product of inclusive archaeological endeavours and interpretation.

Heritage interpretation in archaeological areas begin and end with the archaeologists (Saitta, 1994) specialized in that specific site not with tour guides or the locals. It is an 'experience of being' as a hermeneutical facility contrary to 'an experience of event'. Here, past and present are made interconnected and the interrelation of artefacts and signs provides archaeologists, based on multisensory experience, with a significant instrument revealing various associations and interpretations whereby a sensorial layer is added (Arckens & Leus, 2011). Literature is rich in number of subjects on cultural heritage interpretation (Sorset, 2014) on site, all pointing out the benefits of presentation 'in situ' (Arckens & Leus, 2011). Archaeologists seek to investigate and explore the sites' identity, memories, and myths (Ross, 2020). All these are among the major reasons that an increasing number of masses are magnetized to these places of interest as part of cultural or heritage tourism.

Cultural or Heritage tourism (C/HT) has long been among the significant determiners of global travels and tourism industries (Harfst et al., 2021). As an increasing number of travellers grow keen to visit heritage areas, archaeological destinations (ADs) have globally become one of the key components of C/HT. Hence, archaeological heritage all over the world has created a tourism form; archaeotourism, which is the product of nearly all the materials left by past civilizations to be inscribed for the attention of modern humanity. These include, as well as many, the culinary culture of first human dwellers.

The food products of past and present cultures can be measured through sensory analysis, a relatively young discipline

in existence for roughly 60 years, to find out the success and the quality of a product from human responses to definite food, dish or meal (Drake, 2007). Sensory tests are applied when a profile of a product on all of its perceived sensory characteristics is questioned (Murray et al., 2001). The use of descriptive sensory tests has progressively increased (Food Engineering, 2003) as their capacity to determine relationships between consumer preference and descriptive sensory as a product of solid measurement (Lawless & Heymann, 1998). The result of the test provides the scientists with the volatile compound analyses and thus interpret flavour perception (Acree et al., 1984).

2.1 Archaeo-gastronomy

Today gastronomy and tourism are interdependent since the basis of tourism is somehow included in food and beverage culture. Trips to farms, wine production sites, or ADs are organized to experiment different experiences and are included in gastronomic tourism (Akbaba & Kendirci, 2016), where what to service is critical. After all, gastronomy tourism can be defined as a form of tourism that provides tourists with the opportunity to experience different food and beverage experiences. Here, Neolithic way of cooking can be one striking alternative as a new service strategy, service excellence and a value adding factor.

The habits of food consumption of the first known people from Prehistoric times can be determined by the archaeological evaluation and interpretations of the materials obtained from excavations. Although the findings shed light on various themes in many distinct areas, they might be alluring for masses. Therefore, archaeology and tourism have been interdependently studied in several studies (Burtenshaw & Palmer, 2014; Erdogan, 2021; Giraudo & Porter, 2010; Li & Qian, 2017; Jusoh et al., 2017) and their co-existence have been examined from several respects (Mazzola, 2015; Oehmichen-Bazán, 2018; Oscarsson, 2013; Radziwiłko, 2019; Ross et al., 2017; Walker & Carr, 2013). Additional variables to ADs increase their level of tourist

attractions (Gao et al., 2018) and archaeological heritage has been a progressive component among them for the last three decades. Doubtlessly, man has always had a kind of culinary culture as nutrition has been the vital need since his existence. He has had to be engaged in many activities such as hunting, gathering, cultivating and trading in order to survive and create his culinary culture. This, in recent years, has resulted in many people's traveling for gastronomic purposes, bringing about the global proliferation of activities on gastronomy. Subjects such as what and how the first humans consumed, where and how they served, and how they survived to the present have become a subject of curiosity. Devising, planning, and administering all the answers of these questions as a sustainable tourism facility in ADs express what archaeo-gastronomy is as a part of archaeotourism.

2.2 Archaeological background and Çatalhöyük

Çatalhöyük is located in Konya Plain on the Central Anatolian plateau in Turkey, between 36° 22' and 39° 08' north parallels and 31° 14' and 34° 05' east meridians (Wikizero, 2018). It is 52 km southeast of Konya (Figure 1), a city with a population of over 2 million. From the archaeological point, Asia Minor (Anatolia) within the Fertile Crescent, a part of modern Turkey today, has become the focus of research on Neolithic Cultures in the 10th millennium BC. In southern Central Anatolia, it is known that the domestication trials of grains and animals were made in the Konya Plain in Boncuklu Höyük in 8300 BC (Baird et al., 2018). Morphological evidence obtained from the excavations at Aşıklı Höyük shows that wild sheep and goats (caprines) were found in the region in 8300 BC (Stiner et al., 2014, pp. 8404-8409). In addition, it is understood from the remains unearthed in the excavations that animals such as waterfowl, fish, turtles, cattle (*bos primigenius*), deer, gazelle (*dama dama*), wild boar (*sus scrofa*), sheep, and goat (*Ovis/Capra*) were hunted and consumed in both settlements, showing that the hunter-gatherer tradition still continued (Baysal, 2013).



Figure 1. Location of Çatalhöyük in Turkey. Source: Çatalhöyük Research Project (2022).

Çatalhöyük is the most important Neolithic settlement, where wild plants were domesticated and intensive agricultural activities were carried out for the first time in the history of mankind, where wild animals were domesticated and kept in the settlement, and where these products were cooked with the terracotta pots and thus consumed (Hodder & Cessford, 2004).

It takes its name as Çatalhöyük because it consists of two elevated mounds (Figure 2). Of these, the height of the eastern mound from the plain level is approximately 21 meters and it is spread over an area of 13.5 hectares, while the western mound is 400 meters in diameter and 6 meters high (Mellaart, 2003).

Çatalhöyük was a large settlement of the period when human beings settled down, and a new life order was established with the new technological knowledge of approximately 3000 to 8000 people living in one settlement (Hodder & Cessford, 2004, pp. 19-20). In Çatalhöyük houses, whose doorway could not be identified, the entrance was provided over the roofs and entered by descending stairs (Hodder, 2006). The houses consist of the main room including the fireplace to cook and a side room for storage (Haydaroglu, 2006). In the southern part of the houses, where food is prepared, there was an oven and a stove (Hodder, 2006; Haydaroglu, 2006). In these hearths and furnaces, the action of cooking with the help of clay balls was replaced by sand-tempered pots from the VI layer (Hodder, 2006).

2.3 Prehistoric culinary culture in Çatalhöyük

It is understood from the pottery remains that the dishes were mostly cooked in these pots above the ovens or stoves in a house. Analysis of the rib bones of some male and female

human skeletons at Çatalhöyük revealed carbon particles, possibly stemming from dense smoke. It is understood from the examined female skeleton that women were more exposed to smoke (Birch, 2005). This shows that although both Çatalhöyük men and women are exposed to smoke (for warming up during the winters), women might have spent more time in smoke and/or fire-related actions. This suggests that there was job segregation in domestic actions in Çatalhöyük as for cooking and servicing. At this point, it is estimated that women generally stayed at home and it was women who cooked and served the meals. The common materials they use in daily nutrition were gathered around the vicinity. From the intense vegetative additive bursts and cracks found on the vessel surfaces (Figure 3), it can archaeologically be interpreted that the tradition of herbal additives in dishes was dominant in Çatalhöyük early Neolithic culinary culture.

No traces of direct contact with fire or thermal degradation due to heat were observed in the clay contents of these products with intense vegetable additives. It is estimated that these vessels were probably used for storing or serving food rather than for cooking (Hodder, 2006). It is assumed that the cooking process in these vessels is carried out using additional tools: 'clay balls' (Atalay, 2013). It is also understood that the cooking action in the pottery in Çatalhöyük was mostly carried out with mineral-added vessels that were found after the VI layer (Hodder, 2006) which suggests a change in the taste of the meals. These dark-faced, mineral-added, narrowed rim jars are divided into different groups according to their form and clay properties (Özdöl, 2006; Yalman et al., 2013). Özdöl defined this pottery as the Middle Neolithic Pottery of Çatalhöyük (between levels VII-IV/III) (Özdöl, 2006), which were most probably among the main sources of cooking tradition of the period.

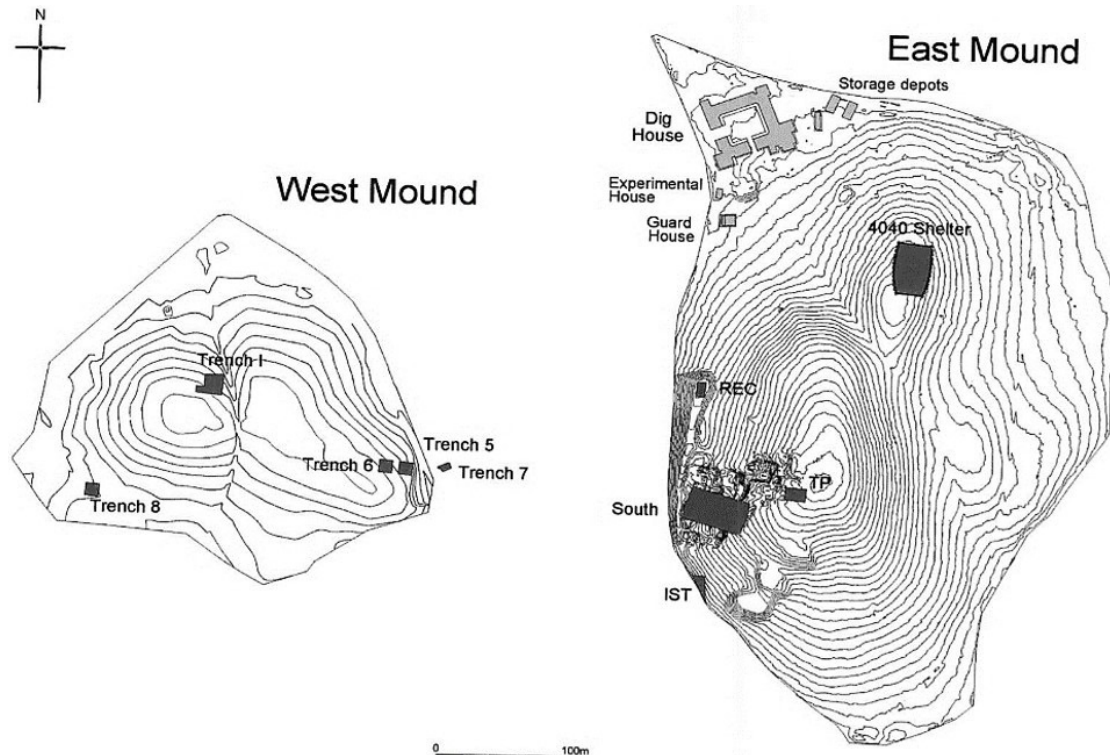


Figure 2. Areas excavated in the East and West Mounds in Çatalhöyük. Source: Çatalhöyük Research Project (2013).



Figure 3. Neolithic cooking vessels. Source: Çatalhöyük Research Project (2013).

From Çatalhöyük excavations, it was determined that Neolithic people consumed some species of insects and plants they collected from nature. They fed on the meat of the animals they hunted and the herbs they collected. Carbon analyses of the finds from the excavations at Çatalhöyük reveal that the inhabitants of the mound consumed both grain and meat in the Neolithic Period (Pearson et al., 2015). Domestication of plants let people feed more on them (İlkgül, 2005; Manheimer et al., 2015) specifically after the discovery of the fire (Uhri, 2015). In addition to the plants grown depending on the geographical conditions in the Neolithic Period, products with a long storage capacity were widely preferred and it is now known that wheat (einkorn) was stored in the storage areas found in the uncovered houses (Hodder, 2006). Although it is known that pottery is generally used for cooking meat and animal fat not wheat, wheat (einkorn) particles were found in two ceramic samples (Van Neer et al., 2013), which suggests that wheat must have been cooked with meats. It is understood that the residents of Çatalhöyük took animal foods from domesticated wheats and sheep species (Henton, 2013) and analyses show that the pots were used to cook mutton and animal fats (Pitter, 2013) and wheat at the same time (Figure 4).

With the introduction of fire into the daily life of mankind, the term gastronomy which is derived from the combination of the words gaster (stomach) and nomas (law) in the Ancient Greek language (Diker et al., 2016), began with the emergence of the cooking process (Wrangham & Carmody, 2010). As a critical component of gastronomy, cooking is considered to be a significant development that appears as the first food processing technique as well as its social and cultural effects (Aguilera, 2018). With the introduction of widespread use of fire in daily life, the number of domesticated animals and plants increased progressively in time, and cooking methods became known by the surrounding communities (Akın & Gültekin, 2015). All in



Figure 4. Çatalhöyük Neolithic plant residues. Source: Erdoğan (2020).

all, cooking has become indispensable to humanity over time, expressing something more than just a physical need for survival (Bober, 2001).

2.4 Tourism background of Çatalhöyük

The International Çatalhöyük Research Project was carried out under the sponsorship of Boeing, Shell, Yapı Kredi and Koçtaş, by a team of scientists of different disciplines from different countries, the most comprehensible scientific excavation ever on the globe. The project has contributed a lot to the area regarding tourism activities as a result of various tourism organizations and touristic events focusing on cultural tourism (Table 1) organised in the area for about 15 years.

However, in recent years, since the tourism activity around Çatalhöyük has not been recorded due to COVID-19 pandemics, reliable data could not be reached. The data gathered between 2016 and 2017 by excavation team, when the excavations were

Table 1. Regular touristic activities organized in the Province of Konya.

Event Name	Attribute	Date	Issuer Organization
Tourism Week Activities	National	15-22, April	Provincial Directorate of Culture and Tourism
Museums Day	International	May 18	Provincial Directorate of Culture and Tourism
Çatalhöyük Culture Festival	National	23-26, June	Çumra Municipality
Nowruz Spring Festival	National	March 21	Provincial Directorate of Culture and Tourism

Source: Erdoğan (2020).

carried out effectively, were used for a short glimpse at the tourism activities in the area.

In 2016, the number of tourists visiting Çatalhöyük was 1,497, which placed it in the 6th order to host tourists physically in place among the other tourist destinations in the region (Table 2).

After the peak number of visitors in 2015 (the highest number ever recorded is 20,858 visitors), it dropped 7,7% overall in 2016. In addition, figures for 2016 fell below the 20,000 marks for the first time since Çatalhöyük's Book was written as a World Heritage site in 2012, with a total of 19,225 records of tourist visits. The number of visitors increased from 11,565 in 2016 to 12,360 in 2017; In this period, the highest number of visitors was registered, with a total increase of 12,3%. The data can be evaluated as promising for bringing the region to tourism again; however, it seems difficult to predict that the overall numbers will increase in the coming years due to the hardships in international flights and national travel restrictions.

3 Methods

The study was planned in September, 2020 and the World Heritage site of almost 8000 Neolithic residents (7100-6000 BC), Çatalhöyük, was chosen as the case point. It is the first and the largest Neolithic village among the first settlements of humanity in south-central Anatolia. Two archaeologists, one is an archaeotourism PhD holder, and one is a member of Çatalhöyük excavation team as an archaeologist of prehistory, researched and interpreted the materials from September to November 2020, through archaeological methods focusing on the culinary remains excavated in Çatalhöyük. Then, another author who is a PhD holder in gastronomy, re-evaluated the data gathered from archaeological finds through the gastronomical principles, interpreted them, and hypothesized about the genuine culinary culture of the era from November to December, 2020.

Three types of a special dish depending on deferring ingredients were cooked in the practical cuisine of Necmettin Erbakan University, Department of Gastronomy and Culinary Arts on 05, 12, and 19 January, 2021, using the same genetically unchanged ingredients and materials. These were the materials that were considered to be the most common at their time in the settlement between 7500-8300 BC such as einkorn wheat, mutton breast and thigh, pottery, and oak wood fire. For the sensory analysis, three types of dishes that consist of common ingredients (einkorn wheat, mutton breast and thigh) in pottery on oak wood fire were cooked depending on 3 different additional ingredients (plain, salty, and thyme) in a way that Prehistoric people were thought to most likely have consumed during their

Table 2. Visit statistics in Konya in 2016 (Provincial Directorate of Culture and Tourism).

Konya Mevlâna Museum	2,429,000
Konya Karatay (Tile Works) Museum	39,266
Konya İnce Minare Medrese Taş-Ahşap Eserler Museum	35,586
Konya Atatürk House Museum	16,039
Konya Akşehir N.Hoca Arkeoloji ve Etnografya Museum	15,632
Konya Çatalhöyük Örenyeri	14,597
Konya Akşehir Batı Cephesi Karargâhı Museum	8,909
Konya Arkeoloji Museum	8,774
Konya Ereğli Museum	6,630
Konya Etnografya Museum	6,072
Konya Total	2,580,505

Source: Erdoğan (2020).

time. In addition to the common ingredients, the products were prepared plain, salty, and thyme because of the archaeological consideration and interpretation that spices such as salt and thyme must have widely been used by the Prehistoric people. Later, its scientific sensory analysis was carried out on the same dates by the same tourism experts at three different times.

For the sensory analysis of the dishes which are the wheat-meat mixture, seven people, who had not consumed them before, were selected as panellists. They were knowledgeable and experienced on food, and they were trained about the panel before the sensory examination. In sensory analysis, general appearance, smell, taste, texture, and general taste criteria were focused, each of which was evaluated over 5 points. The scores were 1 (I almost hate it), 2 (I don't like it), 3 (I am in two minds), 4 (I like it) and 5 (I love it very much). The total score was calculated from the points given.

4 Results and discussion

When evaluated under the light of archaeological finds, it is understood that the residents of Çatalhöyük consumed the animals they hunted or raised while consuming both wild and domesticated plants. Therefore, it was interpreted that Çatalhöyük residents consumed both protein and carbohydrate-rich products. Moreover, it is revealed from the study that Neolithic people had a feast culture as well as a carnivorous and herbivorous diet. The results of the excavations reveal similar consequences to those by Bogaard; the masses meeting at the same point consumed their meals together (Bogaard, 2005).

Grinding stones uncovered in Çatalhöyük suggest that at least a certain group grounded certain plant seeds for food. The

storage containers made of clay in the form of bee honeycombs unearthed in the architectural structure in Çatalhöyük show that the Neolithic people obtained and stored daily surplus products. The dense fruit or rind residues found in materials suggest that they must have been collected and stored in certain periods. Considering that modern humans collect and store certain products in certain periods today, it is understood that similar traditions have continued for thousands of years for the survival of their culinary activities. The products stored for ages were most probably the same in materials and methods as those gathered in Çatalhöyük for this empirical study. Moreover, it is conclusively interpreted from the archaeological finds that wheat (einkorn) and meat (mutton) were among the most common Prehistoric ingredients of about 8000 Çatalhöyük residents' daily meals. Also, the evidence from archaeobotanical studies suggests that salt and thyme were existent during the time. However, there is yet little evidence to claim that Prehistoric people used thyme in their regular diets. Therefore, the dish with wheat (einkorn) and meat (mutton) was cooked with three different ways: plain, salty, thymed.

In terms of general appearance, salty, thyme and plain products received the highest scores, $4,28 \pm 0,48b$, $3,85 \pm 0,69a$, $3,71 \pm 0,48a$ respectively. The appearance of thyme and plain products are similar. As to textures, the product with thyme got the highest score, $4,14 \pm 0,37b$ (Table 3). Salty and thyme products were similar in terms of texture. The reason for this situation is thought to stem from the fresh thyme plant and salt added to the product where salt hardened the meat.

When the odour values of the products were examined, those thyme and salty products scored higher, $3,85 \pm 1,06a$, $3,85 \pm 0,37a$ respectively, while the plain product scored lower $3,42 \pm 0,78b$. Here, it is seen that thyme and salt covered the odour of mutton. For this reason, the plain product without spices received a lower score ($3,42 \pm 0,78b$) in terms of odour. As for flavour, salty, thyme and plain products received scores from the highest to lowest, $3,71 \pm 0,95c$, $3,00 \pm 0,81b$, $2,85 \pm 1,06a$ respectively. All of the participants evaluated the sensory analysis of three dishes statistically different from each other in terms of flavour. The reasons for this were thought to be that salt is the most commonly used spice today and has a place in people's common taste. For this reason, the salty product was more appreciated in terms of flavour in the study. The most liked products in terms of general rating were determined as salty, plain, and thyme products, $4,14 \pm 0,37b$, $3,42 \pm 0,78a$, $3,28 \pm 0,75a$ respectively. All in all, it was observed that today's people

Table 3. The effects of products cooked plain and cooked with different spices on some sensory properties (X-Sx).

Sensory Feature	Plain	Salty	Thyme
General Appearance	$3,71 \pm 0,48a$	$4,28 \pm 0,48b$	$3,85 \pm 0,69a$
Texture	$3,42 \pm 0,78a$	$4,00 \pm 0,00b$	$4,14 \pm 0,37b$
Odour	$3,42 \pm 0,78b$	$3,85 \pm 0,37a$	$3,85 \pm 1,06a$
Flavour	$2,85 \pm 1,06a$	$3,71 \pm 0,95c$	$3,00 \pm 0,81b$
General Rating	$3,42 \pm 0,78a$	$4,14 \pm 0,37b$	$3,28 \pm 0,75a$

Differences by different letters on the same line are significant.

think in favour of their accustomed fashion of modern world when it comes to culinary preferences.

This study revealed that archaeological research for the nutritional habits of the prehistoric people is carried out in three different ways: the food remains, the fire area used in cooking, and the pots in which these foods were cooked and stored. Information about the food consumed by prehistoric people can be understood from the plant and animal remains gathered in the settlements, among which are botanical remains, phytoliths, and micromorphological traces. Further, bones belonging to hunted or domesticated animals found in settlements provide information about their nutritional habits. Information on how these products were cooked and consumed is gathered and interpreted through uncovered furnaces and/or fire pits, as well as terracotta pots, clay balls, stone pots, and stone tools. Moreover, isotope analyses on human bones discovered in settlements have recently given significant clues about the diet of Prehistoric man (Pitter, 2013; Evershed, 2008). It is intriguing whether such archaeological examinations have the capacity to reveal facts about the authentic culinary culture of the past.

Archaeological areas have their own attractions stemming from their nature and interpretations. Any component of archaeological remains is of potential to allure people to ADs. During the visit, providing the chance of experimenting and being a part of far past cultures increases the attractational value of ADs. Such a contribution can be provided through the revival of the culinary culture of the time. There is no doubt mankind has always had a kind of culinary culture from the first man on the earth because nutrition has always been the vital need for his survival. This perception, in recent years, has fostered traveling for gastronomic purposes and resulted in the proliferation of activities on a subject of curiosity such as what the first humans consumed and how they tasted. From this study, one can conclude that culinary products of prehistoric people can easily be adopted by modern tourists, who are most likely allured by remote destinations in their tranquillity away from urban centres.

The study initially revealed clear implications that archaeological materials yield accurate information about past culinary cultures and the results can be materialized and served such as the special dish cooked with the ingredients and materials used at the time. The study further revealed that the gastronomical methods of today can apply to the Prehistoric culinary culture. That is, it becomes clear at the end that even the earliest cultures, regardless of the time span, are connected with today's gastro tourism perception. All in all, archaeological research coordinated with gastronomical studies can be designed to revive and materialize PCC, and area managers are to be sensitive about serving the products of PCC to modern customers in their areas, which creates the potential to attract more tourists to ADs.

5 Conclusion

It is concluded that archaeological research led to a clear understanding of past cultures including the authentic culinary culture of Prehistoric times. Therefore, it became possible through the archaeological research to revive the authentic

culinary culture of Çatalhöyük in the prehistoric period. One can clearly see that past culinary cultures can be revived for the taste of modern humans at ADs. And this most probably results in positive destination identity and increase in the number of tourists' visitations. Here, it is observed from the test results that genuine forms, methods, cooking materials, and ingredients of PCC should be used in producing authentic foods of the era. They should be offered as how they were served and consumed as the way they were done in their actual times. They should not be manipulated in line with modern fashion. However, various spices need to be added in line with the taste of modern tourists, keeping in mind that modern taste has an important effect on how to serve the ancient dishes. In addition, for tourism destinations to equilibrate the effect of the Covid 19 pandemic, there is a need to create destination identity to refer to "archaeo-gastronomy" or "archaeo-services" implying the service of the archaeological culinary cultures of the past. Served with such opportunities in ADs, customers in these areas would experience the new and the different, and thus the curiosity of modern man over the daily life of Prehistoric man will be satisfied in this way.

The study contributes to Tourism Planning & Development, Food & Beverage, Culture & Heritage Tourism, and post-Covid19 Tourism. The findings suggest that archaeologically revived culinary cultures of their lordly period be revived and served at the areas, that archaeological studies take into account the tourism potential of old culinary cultures, and that area managers should care more about the old ways of services at ADs. Consequently, the study fills the gap in the literature, providing both a practical and a theoretical foundation for future research on destination culture, effects of prehistoric culinary culture over destination attraction and their impact on the heritage tourism industry through empirical and theoretical studies. Such interdependencies between theoretical and practical studies are also evident in most tourism settings. Consequently, the findings can be associated with other tourism settings as well.

The study is not limitless. The subject group of this study was limited due to the Covid-19 restrictions, so further studies are needed to test and implement the data by larger groups of subjects, exploring if the results are adaptable to other ADs as well. Moreover, further studies are needed to examine whether such archaeologically revived culinary cultures lead to more tourists to visit ADs for nutritional purposes as well while it is a common belief that they are visited for historical awareness, sightseeing, and educational purposes only. The service of authentic products in destinations to today's tourists are most likely to contribute to the attraction value of destinations. So, such studies will show whether it will contribute to more visitations for gastronomic interests as well as for cultural purposes when they are served an opportunity to experiment with an authentic part of the daily life of their creator civilizations.

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