



Is gastronomy crucial for UNESCO sites' tourists? An important exploratory Italian study

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Abstract

The paper analyses the role of gastronomic experiences as potential tourist attractions for local development. The decision to focus on a particular UNESCO site, as the Carolino aqueduct, is based on a perceived knowledge gap regarding the lack of tourists for the Carolino aqueduct. The work is based on quantitative data collection among potential visitors of the aqueduct Carolino. Altogether, 840 valid questionnaires were collected a Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied. Findings reveal that that people's motivation, supplied food, prior knowledge and past experiences influence the gastronomic experiences. The gastronomic experiences in turn affect both satisfaction with the destination and destination loyalty. Thus, gastronomic experiences should be useful path to support the tourism in a UNESCO site, as the aqueduct Carolino. When discussing issues related to the cultural heritage, the question arises as to how should enhance the cultural heritage for tourism reasons. The results of this research demonstrate that gastronomic experiences are imperative to the success of cultural heritage tourism.

Keywords Gastronomy · Food · Tourism promotion · World Heritage Site by UNESCO · Tourist motivation

1 Introduction

Tourism and economic growth have been found to go hand in hand, especially in tourist destinations (Torres-Díaz et al. 2024). Tourist destinations are attaching ever-greater burden to food given its ability to appeal visitors, enhance travel experiences and achieve differential positioning as culinary destinations (Anton Martin et al. 2021; Lee et al. 2024). In fact, the gastronomic tourism is a product that is identified on a territorial basis and acts as one of the resources that could attract travelers to a region, country, and/or city (Nesterchuk et al. 2021). Thus, food plays an important role in the formation of destination brand image (Lai

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et al. 2018) and is a central element of gastronomic tourism but is not a separate part of it (Nesterchuk et al. 2021). In fact, the gastronomic tour includes elements as visiting museums and excursions in the area (Koval et al. 2020; Tserklevych et al. 2021). In other words, gastronomy is an important part of the cultural heritage and identity of tourist destinations (Lin et al. 2021). Similarly to cultural and landscape offers, gastronomy is usually associated with certain food that is recognized as a symbol that can express and represent the local culture and identity of the destination (Özdemir and Seyitoğlu 2017), attract tourists, and influence their behavior (Lai et al. 2018). For example, the Sagrada Familia in Barcelona (Spain), the Royal Palace in Naples (Italy) are icons of their cities' cultural heritage and provide a unique representation of where they are located, there are also unique typical dishes that must be tried when visiting certain destinations: paella in Valencia or pizza in Naples. They are local dishes that people identify and distinguish without having to name the city or country to which they belong. On the other hand, places as the Pyramids of Egypt or the Acropolis in Greece are examples of the 1007 cultural places inscribed on the World Heritage List by UNESCO. In fact, world Heritage is the designation for places on Earth that are of outstanding universal value to humanity and as such, have been inscribed on the World Heritage List to be protected for future generations to appreciate and enjoy. The recognition of a place as a World Heritage Site by UNESCO is an important element to preserve its historical and artistic inheritance and, at the same time, to encourage visits to that area (González Santa-Cruz and López-Guzmán 2017). In this framework, Campania region is home to seven UNESCO sites, a very large number of cultural heritage sites and an incredibly rich geographical diversity (Mileti et al. 2022). However, when compared with other Italian regions, tourism in Campania shows weakness with respect to other parts of the nation. According to some official data (IPSOS, 2024) tourist knowledge of Italian regions focuses mainly on Sicily, Tuscany, and Sardinia. In this ranking, Campania is only 11th; and much of the region is little explored and this is especially true of the region's rural areas and natural heritage (Mileti et al. 2022). In this context, to increase visitor numbers and survive in the long run, today's cultural heritage needs to understand their visiting publics including potential cultural (Gurel and Nielsen 2018) and gastronomic tourists (Nesterchuk et al. 2021). Food is often considered an important element of tourism development in territories whose attractiveness is in crisis.

(Amber Journey., 2018; Benedikto Market 2019; Corvo and Maticena 2018; Pizzichini et al. 2022).

As mentioned above, gastronomy is an important part of the cultural heritage and identity of tourist destinations (Lin et al. 2021). In fact, local food is marketed as being unique, comprising authentic products that are the result of local craftsmanship and the special nature and climate of the local area (Coff et al. 2020). The local aspect of food is not only used to brand the food products themselves, but also to brand the region (Coff et al. 2020). Thus, the nexus between gastronomy and tourism underlines its central role in promoting economic growth (Mehul Krishna Kumar, 2019) and gastronomic tourism is considered a subsection of cultural tourism (Marius et al., n.d.). In other words, cultural tourism and gastronomic ones are linked in different circumstances: as an integral element of local culture; as a source of income for the tourism industry; and in the form of tangible goods sold to tourists (Bebel-Pineda et al. 2019). However, the related scientific literature is scarce (Lin et al. 2021).

Considering these aspects within the field of tourism, the objective of this research is to identify if gastronomy determining the propensity of people to visit one out of seven

UNESCO sites in Campania region, as the aqueduct Carolino. In other words, the paper is aimed to investigate link between gastronomic experiences and UNESCO sites (Lima et al. 2024). This research tries to fill a gap in the current literature: in fact, to the best of our knowledge, this is the first paper investigating the issue in Italy. Moreover, this study might be useful to support tourism in Italian sites little known, as the aqueduct Carolino. In fact, the aqueduct Carolino was chosen because is of great historical and architectural interest, though it be little known and visited (G. Farina, *personal observation*).

The rest of the paper is organized as follows: Sect. 2 describes the study context; Sect. 3 shows the research hypotheses; Sect. 4 defines the methodological aspects; the data analysis and findings are shown and discussed in Sect. 5, Sect. 6 and Sect. 7; while conclusions are reported in Sect. 8.

2 The study context – the aqueduct Carolino

The aqueduct Carolino is a hydraulic engineering work designed by an Italian architect, Luigi Vanvitelli. Its construction begun in 1753, it was wanted by the King Charles of Bourbon, and it is an extraordinary infrastructure not only serving the Royal Palace of Caserta (Campania region - Italy) and the gardens, but also the mills, the ironworks and the manufacturing industries located along its path (Reggia di Caserta 2024). Thanks to the aqueduct, the water begins its journey at the foot of the Mount Taburno and reaches the Park of the Royal Palace of Caserta, after traveling for 38 km (Reggia di Caserta 2024). In 1997, the extraordinary monumental complex of Caserta that includes the aqueduct Carolino, the Royal Palace and the industrial complex of San Leucio have been inscribed on the World Heritage List by UNESCO (Reggia di Caserta 2024). However, as mentioned above, the aqueduct Carolino is little known and visited (G. Farina, *personal observation*).

3 Hypotheses development

Tourism is looked by almost every country as one of the main drivers behind economic growth and country image (Ullah et al. 2022). Tourists either travel because specific motivations, or they are interested to the characteristics of the destinations (Correia et al. 2009). According to some authors (Dann 1981) grouped visitors' motives in desire to flee and the urge to explore.

Other authors (Ullah et al. 2022), instead, found that tourists' motivations depend on destination, food, gastronomic experiences, and beautiful landscapes. Thus, tourism is linked to natural landscapes and delicious local foods (Hernandez-Rojas et al. 2021; Zada et al. 2019). According to some academics (Testa et al. 2019) tourists are increasingly traveling for gastronomic reasons, and there is a positive correlation between food and destinations because the food of a specific place is associated with its image. In other words, gastronomy meets a large variety of cultural expressions (Garibaldi and Pozzi 2018). In fact, many countries highlight food as the crucial element of their tourism offerings because of the increased motivation for local gastronomy (López-Guzmán 2018). According to Garibaldi (2021), in Italy the food and wine tourists are increasingly demanding. Look for places with beauty and integrity of the landscape, culture and traditions, as well as a quality food and

wine offering. Search for new food and new experiences. In other words, they love to connect cultural visits and shopping to food and wine experiences (Garibaldi 2021). Following all the considerations gathered above mentioned, we elaborate the following hypotheses:

H1: Tourists' motivations are linked with destination loyalty (Garibaldi 2021; Kovalenko et al. 2023; Lima et al. 2024; Ullah et al. 2022).

H2: Tourists' motivations are linked with gastronomic experiences (Garibaldi 2021; Garibaldi and Pozzi 2018; Kovalenko et al. 2023; Lima et al. 2024; Ullah et al. 2022).

H3: Food/Cuisine is linked with gastronomic experiences (Ab Karim and Chi 2010; Kovalenko et al. 2023).

As mentioned above, local food stuff is an important element for tourists (Ullah et al. 2022), and attracts visitors to consume and make motivational messages for other potential tourists (González Santa-Cruz and López-Guzmán 2017; Ullah et al. 2022). In other words, the degree of visitors' personal love for touristic activity is continually driven by knowledge, and previous experiences (Kivela and Crofts 2006). In fact, according to some authors (Kovalenko et al. 2023) past experiences and prior knowledge influence the gastronomy experience of people. In other words, a visitor who is interested in gastronomy and food-related activities usually shows more experience with such activities (Kovalenko et al. 2023). This in turn strengthens gastronomic knowledge (Kovalenko et al. 2023) and so, past experiences increase knowledge (Kovalenko et al. 2023).

Thus, it is assumed that:

H4: Knowledge is linked with gastronomic experiences (Kovalenko et al. 2023; Ullah et al. 2022).

H5: Past experiences are linked with gastronomic experiences (Kovalenko et al. 2023; Ullah et al. 2022).

H6: Knowledge is linked with previous experiences (Kivela and Crofts 2006).

Furthermore, local foods contribute to tourists' satisfaction and destination loyalty (Kastenholz et al. 2012; Khan et al. 2023; Ullah et al. 2022). Tourist satisfactions depend on food quality, destination importance, and the ecosystem (Almeida-García et al. 2020). According to some authors (Kivela and Crofts 2006) food is linked with the tourist destination. Many studies have identified and mentioned that local food can be used as a competitive tool and criterion for tourist attractions and destination loyalty (Carvache-Franco et al. 2020; Su et al. 2020; Ullah et al. 2022; Wondirad et al. 2021). In other words, gastronomy acts as a crucial factor for the consolidation and promotion of tourist destinations (López-Guzmán et al. 2017). In fact, it can enhance the touristic quality (Kivela and Crofts 2006) and increase the competitiveness of a specific destination (du Rand et al. 2003). In other words, food describes the story of a place and, as a cultural symbol of a community, is an important factor of the tourism experience (Coelho-Costa 2017). Food affects tourists' perceptions, satisfaction, and behavioral intentions before, during and post-visit towards the destination (Leong et al. 2017). Anyway, gastronomic aspects influence tourists' behavior (Berbel-Pineda et al. 2019). In the light of these observations, the following hypothesis is formulated:

H7: Gastronomic experiences have a positive effect on satisfaction with the specific tourist destination (Garibaldi 2021; Garibaldi and Pozzi 2018; Ullah et al. 2022).

H8: Satisfaction with the specific tourist destination has a positive impact on destination loyalty (Ullah et al. 2022).

H9: Gastronomic experiences are linked with destination loyalty (Ullah et al. 2022).

To sum up, based on the review of previous studies, Fig. 1 shows the proposed research hypotheses:

4 Materials and methods

4.1 Data collection, the sample and the questionnaire

The data came from a sample of 840 respondents in Italy, collected in the interval April 2024 –June 2024 using a web-based survey. The survey was spread through websites, social media, and emails to reach the widest audience, while reducing cost and time needs (Palmieri et al. 2024). Participants were recruited through invites to join in the online survey (made using Google drive) via Facebook, Instagram, and Twitter (Palmieri et al. 2024). These social networks were chosen because they allow to reach a large audience (Han et al. 2020). In addition, following the current literature about people’s behaviors (see e.g., Palmieri et al. 2021, 2022), a snowball sampling recruitment method was also applied, using the emails of our interpersonal relations to reach the widest audience. The inclusion rules were age over 18 years and being willing to visit the aqueduct Carolino. From an initial sample of 860 individuals, 20 respondents were later excluded from the study because they were under the age of 18 and/or they were not willing to visit the aqueduct Carolino, resulting in a final sample of 840 respondents. In addition, before starting the survey, a pre-test on 120 individuals was made to find any potential misreading and errors, and minor corrections were then made to the questionnaire accordingly.

Following the current literature about tourists’ behaviour (Ab Karim and Chi 2010; Dann 1981; Kovalenko et al. 2023; Lima et al. 2024; Lòpez-Guzmán 2018; Ullah et al. 2022), this research survey responded to different questions related with tourism and gastronomy

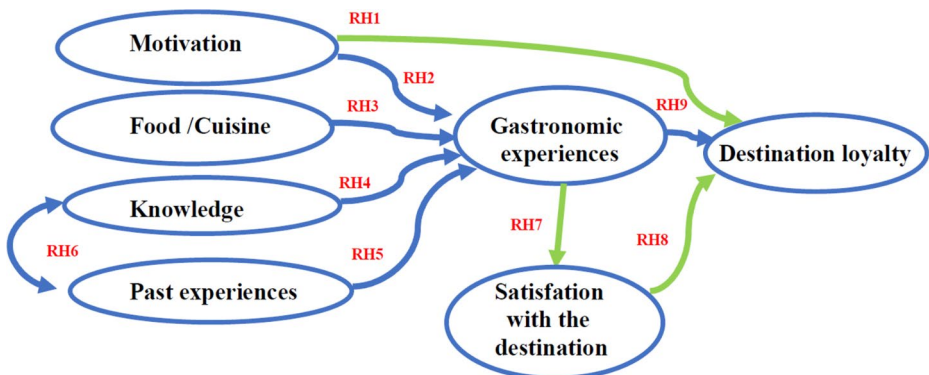


Fig. 1 The proposed theoretical model

(Table 1). Most of the items in the questionnaire are scored on a 1–10 Likert scale (1: totally disagree, to 10: totally agree). It is important to underline that this choice allowed us to collect more accurate information about people's preferences. Moreover, the questionnaire regards knowledge about the aqueduct Carolino and people's willingness to visit it. In particular, the willingness to visit it was measured by asking participants to answer a direct question on their will to visit the aqueduct Carolino. The survey took about 8–10 min to complete and was available in Italian.

4.2 Statistical analysis

In order to identify if gastronomic aspects determining the propensity of people to visit one out of seven UNESCO sites in Campania region such as the aqueduct Carolino, a Partial Least Squares Structural Equation Modeling (PLS-SEM) was applied (Hair et al. 2021). This method was chosen because the PLS-SEM allows us to evaluate the proposed conceptual model. In fact, the PLS-SEM estimates the measurement model, which reviews the constructs' validity and reliability, as well as the structural model, which evaluates the hypothetical relationships between the independent and dependent items (Henseler 2010). In other words, PLS-SEM is particularly appealing when the research objective focuses on prediction and explaining the variance of key target constructs by different explanatory constructs; the sample size is relatively small and/or the available data is non-normal (Hair et al. 2021). Speaking more precisely, this method is useful for studies (as this one) where research is prediction-oriented (Usakli and Kucukergin 2018). The analysis was conducted in two steps: first, a confirmatory factor analysis was performed to assess the latent variables, and second, a path analysis was performed to test the hypothesized causal structures between two or more dimensions (Hair et al. 2021). In addition, the analysis of reliability and validity of the proposed structural model were carried out by Cronbach's α coefficient, the composite reliability (CR) values, the average variance extracted (AVE) and the discriminant validity. Moreover, to verify the goodness of fit with the data, some indicators were applied, as the value of χ^2 and degree of freedom (χ^2/df), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), and root mean square error of approximation (RMSEA). Finally, to evaluate the multicollinearity, the variance inflation factor (VIF) was applied (Kim 2019). The analysis was conducted using R Studio (version 2023.12.1).

5 Data analysis

5.1 The analysis of reliability and validity

As mentioned above, the analysis of reliability and validity of the proposed structural model were carried out by Cronbach's α coefficient, the composite reliability values, the average variance extracted. Speaking more precisely and following some authors (Cronbach 1951), this study proposed that Cronbach's α coefficient should be above 0.7. In fact, the Cronbach's α coefficients for the studied constructs were 0.915, 0.892, 0.889, 0.911, 0.865, 0.923 and 0.945, respectively, all of which were higher than 0.7 (Table 2). The composite reliability values for the studied constructs, instead, were 0.944, 0.921, 0.833, 0.967, 0.899,

Table 1 The questionnaire

Construct	Items	References
Motivation	To discover the flavour of the local gastronomy	Kova-lenko et al. 2023; Lima et al. 2024; Ullah et al. 2022
	To offer a unique opportunity of understanding local culture	
	To be able to transfer my experiences with the local food and local culture	
	It allows me to enjoy pleasant moments with family and/or friends	
	To advise other tourists about both local culture and local gastronomic experiences	
	To be able to live my experience in relaxing atmosphere	
Food/Cuisine	To visit an UNESCO World Heritage Site	Ab Karim and Chi 2010; Kova-lenko et al. 2023
	Supplies a large variety of foods	
	Supplies a good quality food	
	Supplies regional food	
	Supplies attractive food presentation	
Knowledge	Supplies delicious food	Leong et al. 2017
	Read about local food prior to travel	
	Aware of local eating customs	
Past experiences	Knowledgeable about local food	Leong et al. 2017
	Pleasant	
	Good quality services	
	Learnt about the local food culture	
Gastronomic experiences	Improved travel experiences	Kova-lenko et al. 2023; Ullah et al. 2022
	Quality of the dishes	
	Price	
	Atmosphere of the establishment	
	Innovation and new flavours of the dishes	
	Service and hospitality	
Satisfaction with the destination	Cleanliness	Ab Karim and Chi 2010; Kova-lenko et al. 2023; Lima et al. 2024; Ullah et al. 2022
	Experience with the traditional gastronomy	
	How crucial is local food for you as a destination choice when traveling?	
	How significant are food experiences for you when you choose a place for your journey?	
	How significant is food aspects for you in relation with the satisfaction of your journey?	
	How crucial is UNESCO Sites brand for you as a destination choice when traveling?	
Destination loyalty	How important is UNESCO Sites brand for you when you choose a place for your voyage?	Kova-lenko et al. 2023; Lima et al. 2024; Ullah et al. 2022
	How significant is UNESCO Sites brand for you in relation with the satisfaction of your journey?	
	I tend to repeat a visit to a tourist destination if I fall in love with it	
	After an experience, I could recommend a specific destination for its gastronomy and local products	
	After an experience, I think I could come back to specific destination to savour its gastronomy again	
	After an experience, I could recommend a specific destination for its heritage monuments and buildings belonging to UNESCO world heritage sites	
	After an experience, I think I could come back to specific place to visit a UNESCO world heritage site again	

Note: The items are scored on a 1–10 Likert scale (1: totally disagree, to 10: totally agree)

Table 2 Cronbach's α , composite reliability values, average variance extracted

Construct	α	CR	AVE
Motivation	0.915	0.944	0.712
Food/Cuisine	0.892	0.921	0.866
Knowledge	0.889	0.833	0.801
Past experiences	0.911	0.967	0.756
Gastronomic experiences	0.865	0.899	0.871
Satisfaction with the destination	0.923	0.912	0.867
Destination loyalty	0.945	0.977	0.813

Note: α - Cronbach's α coefficient; CR - composite reliability values; AVE - average variance extracted. To satisfy the required standards: α coefficient should be above 0.7; CR should be higher than 0.7; AVE should be higher than 0.5

0.912, and 0.977, respectively and according to some authors (Hsu et al. 2016) the higher the value, the higher internal consistency of variables. Thus, the analysis confirmed a high internal consistency of items (Table 2). Other interesting indicator was the average variance extracted (AVE) that is how much variance captured by the latent variable among other variables in the constructs (Hsu et al. 2016). The higher AVE's values are, the observed variables can react more latent trait common factor between dimensions (Hsu et al. 2016). In particular, AVE's values for the dimensions were 0.712, 0.866, 0.801, 0.756, 0.871, 0.867, and 0.813, respectively (Table 2). Moreover, given that the CR and AVE values have satisfy the required standards (i.e., CR is higher than 0.7 and AVE is higher than 0.5), thus the correlation of consistency and convergent validity have proved to be existing in all constructs (Fornell and Larcker 1981). In other words, this study applied AVE values to examine the discriminant validity of all dimensions. AVE's square roots are higher than Pearson's correlation coefficients among all dimensions, which prove that discriminant validity exists among dimensions (Fornell and Larcker 1981), as shown in Table 3. Finally, the variance inflation factor (VIF) values ranged from 1.10 to 1.80, meaning that they were inferior to the cutoff of 5 (Hair et al. 2017), which, respectively, showed the confirmation of no multicollinearity.

5.2 The analysis of the sample with partial least squares structural equation modeling

As mentioned above, to verify the goodness of fit with the data, some indicators were applied: the value of χ^2 and degree of freedom (χ^2/df), goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI) and root mean square error of approximation (RMSEA). Speaking more precisely, the proposed model showed good fit with the data. In fact, χ^2 is equal to 379.1 with p -value < 0.000, degrees of freedom (df) = 179, χ^2/df = 2.117; GFI = 0.94; AGFI = 0.98; CFI = 0.98 and RMSEA is equal to 0.05.

Table 3 Discriminant validity

Construct	Motivation	Food/Cuisine	Knowledge	Past experiences	Gastronomic experience	Satisfaction with the destination	Destination Loyalty
Motivation	<i>0.844</i>						
Food/Cuisine	0.79	<i>0.930</i>					
Knowledge	0.75	0.73	<i>0.894</i>				
Past experiences	0.80	0.78	0.76	<i>0.869</i>			
Gastronomic experiences	0.70	0.69	0.66	0.65	<i>0.933</i>		
Satisfaction with the destination	0.72	0.69	0.68	0.66	0.65	<i>0.931</i>	
Destination Loyalty	0.73	0.71	0.70	0.69	0.63	0.61	<i>0.901</i>

Note: Square root of AVE in italics on diagonals. Off diagonals are Pearson correlation of constructs. The discriminant validity exists among dimensions if AVE's square roots are higher than Pearson's correlation coefficients

6 Empirical findings

6.1 Sample characteristics

Before beginning the analysis of structural equations, a descriptive analysis of the observable variables in the study was done. In particular, the sample was composed of 840 people of which 62% were women with age range from 18 to 60 (Table 4). A higher share of sample is well-educated (71.0% of respondents) and lives in Campania region (54.0% of the sample). Moreover, 98.0% of the sample knows what means the UNESCO sites; 58.0% of the participants had heard about the aqueduct Carolino in the past; 69.0% had never visited it (Table 4).

Table 5 shows the average valuation which the participants gave of each of the observable variables, measured via a 10-point Likert scale, where 1 is totally disagree and 10 is totally agree with proposed statements. In particular, if we focus on the observable variables which constitute the motivation, the most valued variable is advising other tourists about both local culture and local gastronomic experiences (7.5), followed by both discovering the flavour of the local gastronomy (7.2) and visiting an UNESCO World Heritage Site (7.2). Regarding the food/cuisine construct shows positive answers for all items. In fact, the most valued variable is supplies attractive food presentation (7.6), followed by supplies regional food (7.3), delicious food (7.1) and a large variety of foods (7.1). Moreover, if we focus on the observable variables which constitute the knowledge, all items show high values. In fact, the most valued variables are the information about local food (7.9 and 7.8) and awareness of local eating customs (7.1). Also, the past experiences show positive and high values for all items; in fact, values ranged between 7.0 and 7.2. If we focus on the observable variables which constitute the gastronomic experience, the most valued variable is the experience with the traditional gastronomy (7.7), followed by quality of the dishes (7.1) and the service and hospitality (7.1). Concerning the satisfaction with the destination, most of the interviewees consider the main motive to carry out tourism is the local food (8.0), followed by the importance of UNESCO sites brand when respondents choose a destination (7.9); while the least valued is the importance of UNESCO sites brand in relation with their satisfaction of journey (7.0). Finally, regarding to destination loyalty, most of the interviewees consider that they could come back to specific destination both to savour its gastronomy again (8.1) and to visit a UNESCO world heritage site again (8.0). Moreover, they tend to visit a destination again when they fall in love with it (8.0).

6.2 Findings

The results presented in Table 6 show that all research hypotheses are confirmed. In fact, the tourists' motivation influences both their destination loyalty ($\beta: 0.299, p < 0.000$) and their perception regarding the gastronomic experiences ($\beta: 0.287, p < 0.000$). Obviously, food/cuisine is linked with gastronomic experiences ($\beta: 0.647, p < 0.000$). Similarly, knowledge ($\beta: 0.699, p < 0.05$) and past experiences ($\beta: 0.525, p < 0.000$) are positively linked with gastronomic experiences. Also, the RH6 hypothesis was confirmed; according to which knowledge is linked with previous experiences ($\beta: 0.676, p < 0.000$). Moreover, gastronomic experiences influence both satisfaction with the destination ($\beta: 0.660, p < 0.05$) and destina-

Table 4 Sample descriptive statistics ($n=840$)

Gender		Age	
Male	38.0%	18–24	2.0%
Female	62.0%	25–29	6.0%
Total	100.0%	30–34	21.0%
Education		35–39	17.0%
Low education	29.0%	40–44	13.0%
High education	71.0%	45–49	12.0%
Total	100.0%	50–54	15.0%
Awareness meaning of the UNESCO sites		55–59	10.0%
Yes	98.0%	≥60	4.0%
No	2.0%	Total	100.0%
Total	100.0%		
Knowledge of the aqueduct Carolino		Have you ever visited the aqueduct Carolino before?	
Yes	58.0%	No	69.0%
No	42.0%	Yes	31.0%
Total	100.0%	Total	100.0%

tion loyalty ($\beta: 0.380, p < 0.000$). Finally, satisfaction with the destination impacts people's destination loyalty ($\beta: 0.516, p < 0.05$).

7 Discussion

Due to the recent interest on link between gastronomic experiences and cultural heritage tourism, a growing number of papers investigated the main drivers and barriers to visit cultural monuments, but the current literature about link between local gastronomy and UNESCO World Heritage Site in a European country is scarce. For these reasons, the present paper aims to study if gastronomic aspects determining the propensity of people to visit one out of seven UNESCO sites in Campania region such as the aqueduct Carolino. This site was chosen because people do not visit it due to a lack of knowledge (G. Farina, *personal observation*). UNESCO World Heritage Sites are icons to attract visitors in quest of learning about cultural heritage of specific destinations. The cultural heritage of a UNESCO classified city is what shapes the “sense of place” of the territory, being a key element for the economic development of the destination. In this framework, gastronomy, as a cultural heritage and a tourism resource, supports the cultural and social identities of a destination. In other words, in a UNESCO World Heritage Site, gastronomy can be a useful tool to deepen socialization at the destination, but also for visitors to experience the destination's heritage through their senses, increasing the intensity of the experience they live (Klarin et al. 2023; Lima et al. 2024).

According to Richards (2012) tourists travel to a specific destination for the purpose of finding and testing foods. For example, in Italy a larger number of travelers actively seek for experiences related to food and drink (Garibaldi and Pozzi 2018). In fact, Italy has a highly developed gastronomic landscape, and it is internationally renowned as a tourist destination. According to Garibaldi and Pozzi (2018) in Italy food can be alternatively

Table 5 The questionnaire

Construct	Items	Mean	Standard Dev.
Motivation	To discover the flavour of the local gastronomy	7.2	1.2
	To offer a unique opportunity of understanding local culture	7.1	1.0
	To be able to transfer my experiences with the local food and local culture	7.0	1.4
	It allows me to enjoy pleasant moments with family and/or friends	6.0	1.9
	To advise other tourists about both local culture and local gastronomic experiences	7.5	1.0
	To be able to live my experience in relaxing atmosphere	6.4	1.1
	To visit an UNESCO World Heritage Site	7.2	1.2
Food/ Cuisine	Supplies a large variety of foods	7.1	1.0
	Supplies a good quality food	7.0	1.3
	Supplies regional food	7.3	1.2
	Supplies attractive food presentation	7.6	1.0
	Supplies delicious food	7.1	1.5
Knowledge	Read about local food prior to travel	7.9	1.3
	Aware of local eating customs	7.1	1.2
	Knowledgeable about local food	7.8	1.0
Past experiences	Pleasant	7.0	1.3
	Good quality services	7.1	1.2
	Learnt about the local food culture	7.2	1.0
	Improved travel experiences	7.1	1.3
Gastro- nomic experiences	Quality of the dishes	7.1	1.0
	Price	6.9	1.2
	Atmosphere of the establishment	6.0	1.0
	Innovation and new flavours of the dishes	7.0	1.1
	Service and hospitality	7.1	1.6
	Cleanliness	6.8	1.5
	Experience with the traditional gastronomy	7.7	1.2
Satisfaction with the destination	How crucial is local food for you as a destination choice when traveling?	8.0	1.3
	How significant are food experiences for you when you choose a place for your journey?	7.8	1.2
	How significant is food aspects for you in relation with the satisfaction of your journey?	7.7	1.3
	How crucial is UNESCO Sites brand for you as a destination choice when traveling?	7.9	1.4
	How important is UNESCO Sites brand for you when you choose a place for your voyage?	7.0	1.1
	How significant is UNESCO Sites brand for you in relation with the satisfaction of your journey?	7.0	1.1
Destination loyalty	I tend to repeat a visit to a tourist destination if I fall in love with it	8.0	1.4
	After an experience, I could recommend a specific destination for its gastronomy and local products	7.9	1.3
	After an experience, I think I could come back to specific destination to savour its gastronomy again	8.1	1.1
	After an experience, I could recommend a specific destination for its heritage monuments and buildings belonging to UNESCO world heritage sites	7.9	1.0
	After an experience, I think I could come back to specific place to visit a UNESCO world heritage site again	8.0	1.1

Note: The items are scored on a 1–10 Likert scale (1: totally disagree, to 10: totally agree)

Table 6 The model assessment

Path	RHs	Path coefficient	S.E.	t Statistics	p Value	Research hypotheses
Motivation → Destination loyalty	RH1	0.299	0.154	2.233	0.000	Supported
Motivation → Gastronomic experiences	RH2	0.287	0.123	2.188	0.000	Supported
Food/Cuisine → Gastronomic experiences	RH3	0.647	0.101	6.371	0.000	Supported
Knowledge → Gastronomic experiences	RH4	0.699	0.121	4.822	0.007	Supported
Past experiences → Gastronomic experiences	RH5	0.525	0.132	3.911	0.000	Supported
Knowledge → Past experiences	RH6	0.676	0.103	5.331	0.000	Supported
Gastronomic experiences → Satisfaction with the destination	RH7	0.660	0.105	6.148	0.003	Supported
Satisfaction with the destination → Destination loyalty	RH8	0.516	0.144	3.822	0.001	Supported
Gastronomic experiences → Destination loyalty	RH9	0.380	0.100	2.693	0.000	Supported

the main subject (e.g. food museums) or be combined with other cultural expression (e.g. music festivals inside wineries), and the choice depends on personal interest of tourist. In other words, gastronomy is the tourists' main motivation in the process of deciding their trip (Dixit, *n.d.*; Fields 2003). Thus, the motivations and experiences associated with gastronomy (food and/or cuisine) increasingly attract visitors to certain destinations (Ellis et al. 2018; Lee and Scott 2015). Similarly, in our case, supplied food/cuisine is linked with gastronomic experiences and the tourists' motivation influences both their perception regarding the gastronomic experiences and their destination loyalty. Thus, the desire to travel to a destination can be strongly influenced by gastronomic motives (Dixit, 2019; Fields 2003). Su et al. (2020) identified internal motives of potential food tourists and found taste of food, socialization and cultural experiences as push factors; while core food-tourism appeals, traditional food appeals and local destination appeals were the three pull factors. In fact, food can be used as a competitive tool and criterion for tourist attractions and destination loyalty (Carvache-Franco et al. 2020; Su et al. 2020; Ullah et al. 2022; Wondirad et al. 2021).

According to some authors (Sarkodie et al. 2022), gastronomy experiences are based on four main elements, which are intellectual, affective, behavioral, sensory, and effective. In particular, the intellectual aspect allows individuals to expand their knowledge about the destination by learning and gaining local-based information. Food experiences provide both the opportunity of communicating and interacting with other people—once they take part in common food activities (Lockwood 2008)—making them feel pleasure and enjoyment (Kovalenko et al. 2023). Moreover, gastronomy provides tourists with a chance to have a sensorial experience via tasting local cuisine (Dias et al. 2022). Thus, the degree of visitors' personal love for touristic activity is continually driven both by knowledge and by previous experiences (Kivela and Crofts 2006). In fact, as in our case happen, prior knowledge is linked with past experiences. According to some authors (Hjalager and Richards 2002) gastronomy experiences supply tourists an atmosphere that contributes to forming memorable experiences. In other words, past experiences and prior knowledge affect the gastronomy experience of people (Kovalenko et al. 2023). Similarly, in our case, the tourists' knowledge and their past experiences impact their gastronomic experiences.

There is no doubt that gastronomic experience is an effective path to exploring and experiencing a destination in a genuine way (Kovalenko et al. 2023). Some academics (Sio et al.

2024) claim that there has been an increase in tourists who travel specially to experience the gastronomic culture of a country. Tourists who visit a cultural destination, in addition to increasing their knowledge regarding its heritage, want to have sensorial experiences (Lima et al. 2024). Moreover, food experiences enhance the value of the destination as they represent the authenticity and identity of the local community (Kovalenko et al. 2023). Thus, gastronomy characteristics are considered as an enabler of tourist cultural experiences (Mak et al. 2012). In other words, gastronomy is a way for a destination to prosper by showcasing their local cuisine cultures and local products and contribute to the destination's brand image (Kovalenko et al. 2023). Considering that gastronomic experiences involve tourists in the process of the production and/or consumption of local dishes, this type of experience needs a direct interaction with the community's ecosystem (Kovalenko et al. 2023). This last aspect could be a gateway for tourists which receive an immersive experience both enhancing their satisfaction with the trip (Chang et al. 2011; Dias et al. 2022) and improving the destination loyalty (Ullah et al. 2022). In fact, the satisfaction from local foods, and excitement of destinations contribute to tourist loyalty toward specific destinations (Castro et al. 2007; Tung and Ritchie 2011). Similarly, in our case, gastronomic experiences influence both satisfaction with the destination and destination loyalty. Moreover, satisfaction with the destination impacts people's destination loyalty. In this sense, gastronomy is a key piece in the analysis of tourist destinations, especially those related to culture and heritage (López-Guzmán et al. 2017), being sometimes central to determine the choice for one destination over another (Pérez-Gálvez et al. 2021). In conclusion, given that Italy has a highly developed gastronomic landscape, it could further reinforce its international recognition a tourist destination thanks to successful food-based tourist attractions drink (Garibaldi and Pozzi 2018).

8 Conclusion

The paper aimed to study if gastronomic aspects determining the propensity of people to visit one out of seven UNESCO sites in Campania region, as the aqueduct Carolino. Our findings showed that people's motivation, supplied food, prior knowledge and past experiences influence the gastronomic experiences. The gastronomic experiences in turn affect both satisfaction with the destination and destination loyalty.

The practical/managerial implications of our study are relevant. First, our results provide some interesting insights and discussions. In fact, the confirmations of all hypotheses allow us to argue that people who have gastronomic experiences resulted to have stronger satisfaction with the destination and destination loyalty. Thus, gastronomic experiences should be useful path to support the tourism in a UNESCO site, as the aqueduct Carolino. In other words, when discussing issues related to the cultural heritage, the question arises as to how should enhance the cultural heritage for tourism reasons. The results of this research demonstrate that gastronomic experiences are imperative to the success of cultural heritage tourism. In fact, there is no doubt that gastronomic experience should be an effective path to exploring and experiencing the aqueduct Carolino in a genuine way. Second, the findings indicate that in the aqueduct Carolino, a one out of seven UNESCO sites in Campania region, gastronomy is a major motivational pull driver, proving the strong importance of gastronomy given by hypothetical tourists of the aqueduct Carolino. Also, findings show

that local gastronomy can be a useful tool to deepen socialization at the destination, also allowing for visitors to experience the destination's heritage through their senses, increasing the satisfaction and intensity of the lived experience. In this respect, our results should become central if firms belonging to tourism sector and local policymakers want to lead marketing strategies that are able to further nurture tourism in Campania region. In other words, the findings should be significant to local stakeholders which should develop their marketing strategies based on gastronomic experiences for influencing tourists' behaviour towards the aqueduct Carolino. Generally speaking, and as mentioned above, Italy has a highly developed gastronomic landscape and has the largest number of sites (59 monuments) inscribed on the UNESCO World Heritage List. Thus, Italy could further reinforce its international recognition a tourist destination thanks to successful food-based tourist attractions.

Given the recruitment method used, the study has an explorative character and thus the sample used is not representative of the whole Italian population. However, we think that the usefulness of an explorative study (as this one) carried out on little-known and visited monument, as the aqueduct Carolino, should not be dismissed so easily because we tried to propose some insights of discussion on topic. In fact, we believe this study gives the opportunity to add some new insights and to propose discussions on little-known issues concerning the topic of tourists' preferences and factors involved in people's willingness to visit the aqueduct Carolino. In other words, this study tried to aim at raising awareness into how UNESCO sites may, more effectively, explore beyond their implicit cultural material heritage attributes, contributing to their development as a tourism destination. Thus, this study hopefully contributes to improve the knowledge on a topic of current interest such as tourism experiences combining food and culture. We remind the readers that this is the first paper dealing with importance of gastronomy for UNESCO world heritage sites' tourist in Italy.

However, limitations are also opportunities for further research. In fact, more research should be needed, particularly future studies should focus on testing the proposed model and assessing its applicability for a representative Italian sample. In addition, comparative studies in other cities in the Mediterranean region should be carried out, to analyse whether the Mediterranean Diet can really act as a differentiating element for this kind of destination, or if the motivation is not directly the gastronomy but the desire to fulfil a particular personal feature (as the foodies versus gourmands). Regarding the latter aspect, there is also the potential for some factors to vary across among different personal features, which may suggest the need for changing the dimensions used in line with prevailing differences.

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Declarations

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