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Do SARS-CoV-2 safety measures affect visitors experience of traditional gastronomy, destination image and loyalty to a World Heritage City?

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ABSTRACT

SARS-CoV-2 paralyzed tourism, which only began to recover after the vaccine roll-out. This study investigates loyalty to a city based on the perception of COVID safety measures in traditional restaurants. To test eight hypotheses, the PLS-SEM method was applied to a sample of 154 tourists who visited Córdoba (Spain) for the traditional cuisine. Results show that visitors’ perception of restaurants’ COVID safety measures affects their satisfaction with the restaurant and local cuisine, their general image of this World Heritage city, and their loyalty to it. Thus, appropriate coronavirus risk management can help ensure that visitors recommend and revisit the city.

1. Introduction

On March 11, 2020, COVID-19 (caused by the SARS-CoV-2 virus) was declared a global pandemic by the WHO, following the initial outbreak in 2019 and subsequent rapid spread (Tison et al., 2020). The speed of transmission and high death rate posed a significant challenge to health systems around the world, making the quick and effective development of a vaccine essential (Mattioli et al., 2020). The WHO recommended global travel and mobility restrictions to try to curb the spread. The restrictions on international travel also affected the operation of restaurants in key tourist destinations, and World Heritage Cities were no exception. In 2020, they received virtually no international tourist visits, with the recovery of these tourist attractions only beginning in 2021. The ongoing recovery in 2022 requires different management to the pre-coronavirus environment (Bulchand-Gidumal, 2022).

In World Heritage Cities, gastronomy is a source of attraction and complementary to the main appeal of the destination. (Ramires et al., 2018). In certain World Heritage Sites, it is associated with quality products or raw materials, as has been shown in studies of cheese in Vall del Boi (Fusté-Forné, 2015) or truffles in the Uzes region of France (Therville et al., 2013). In addition, it helps in rural areas by providing complementary income in sites listed as World Heritage of Humanity (Bessière, 1998). Due to its complementarity and importance in visits to World Heritage Cities (Hernández-Rojas and Huete-Alcocer, 2021), it is worth examining the implication of the measures taken in restaurants to prevent the spread of COVID-19, as well as their effect on the gastronomy and image of such a destination, and visitors’ subsequent loyalty to the destination.

A vaccine has now been developed and rolled out, but different strains of the virus persist. In this context, it is necessary to determine how the coronavirus influences loyalty to destinations and to examine visitors’ perception of protection against the virus in restaurants. This is a subject that has received very little attention in the academic literature. Some authors (e.g., Hakim et al., 2021) found that trust in the restaurant and the brand was the strongest predictor of intention to visit a restaurant during the COVID-19 pandemic. Lakshmi and Shareena (2020) concluded that restaurants are concerned about the safety and health of tourists during the pandemic and that taking measures to stop the spread can compensate for the losses suffered during the shut-down. These measures could include taking the temperature of the client, hygiene or disinfection Siddiqi et al. (2022). In light of the above, this research makes a contribution to the literature by examining other safety measures in restaurants, such as the distance between diners, access requirements and the need to show a coronavirus passport.

Given the need for tourist destinations to differentiate themselves...
from one another (Widayati et al., 2020), elements such as technology (Ivars-Baidal et al., 2019), gastronomy (Stone et al., 2018; Antón et al., 2019) and new visitor experiences help boost the competitiveness of a destination. In this respect, gastronomy is a factor that can sway the visitor’s choice of a World Heritage City, adding to the reasons for visiting a particular city. The creation of a solid, high-quality brand can distinguish a destination and create a unique sales proposition, which will lead to success in the international market (Gajdos; Ik et al., 2015). Being a World Heritage City means that the city center is included on the World Heritage List (Ferreira Roders and van Oers, 2011). Against this backdrop, the present study analyzes the impact of coronavirus safety measures on destinations—specifically heritage destinations—as well as identifying possible improvements in pandemic management that can be useful for the sector.

The impact of the novel coronavirus on dining (lunch or dinner) in restaurants in World Heritage Cities seems to have given rise to a new phase in the management of tourist destinations. Given the losses, these types of establishments have suffered due to COVID and the urgent need for them to make an economic recovery, this article aims to analyze the extent to which this new scenario relies on anti-COVID measures, such as those implemented in traditional restaurants, and examines related characteristics in a pandemic and post-pandemic environment. There is still very little literature on heritage cities in the context of the coronavirus and SARS-CoV-2 safety measures. This research thus contributes to the literature by measuring the variable “SARS-CoV-2 safety measures in traditional restaurants”. The results of this study can help enhance the image of a World Heritage City, to achieve benefits such as attracting potential tourists, encouraging recommendations of the city as a tourist destination for its traditional food and ensuring intention to revisit it.

To achieve the proposed objectives, the rest of this document is structured as follows: we first present a review of the literature on SARS-CoV-2 with respect to tourist destinations, satisfaction in restaurants, gastronomy, and destination image. And on the other hand, the review of how all of the above can affect loyalty to a city is presented. There is a notable lack of academic studies analyzing the effect of the pandemic on these elements in 2021, and the COVID-19 safety measures aimed at visitors adopted in restaurants. It was used a questionnaire, yielding a final sample of 154 tourists. Subsequently, partial least squares structural equation modeling (PLS-SEM) is used to analyze the connection between the following variables: safety measures against SARS-CoV-2 in restaurants and the diner’s fulfillment with the restaurants service, and the restaurants gastronomy along with the reputation the destination has, along with the influence that these variables have on loyalty to a World Heritage destination; namely, Cordoba (Spain). The results obtained represent a theoretical contribution to the literature since the COVID safety measures taken into account, such as the distance between diners and the request for the COVID passport, are novel in this area of study. At the same time, the results provide a practical contribution in that they identify the fundamental elements needed in the new management scenario for restaurants in this type of World Heritage destination, which should be taken into account by restaurant managers to attract customers.

2. Theoretical background

2.1. The impact of SARS-CoV-2 on tourist destinations

SARS-CoV-2 initially paralyzed all tourist or visitor arrivals. Recent academic studies on the pandemic and its economic effects show us how it affected almost all sectors and countries of the world, being comparable to the devastation produced by the Second World War (Nicola et al., 2020). While both the primary and secondary sectors were affected, the service sector was the hardest hit due to its dependency on human interaction and relationships as well as the flow of people between countries (Menchero-Sánchez, 2020). Even after the start of the vaccination campaigns, the number of international tourists remained very low compared to pre-pandemic levels.

For Spain, the contribution of tourism to its economy is significant. Following the World Tourism Organization (2021), the tourism direct gorous domestic product in 2018 was 93.9 USD billion per year, ranking sixth in monetary income of all countries. In addition, within the country’s own economy, it represented a contribution to its gross domestic product of 12.3% of the national GDP. This contribution has evolved very positively in recent years before the arrival of the coronavirus, with a growth rate in the period 2015–2018 of 25.3% in income and 11.8% in percentage of national GDP (INE, 2019). In 2022, still in the recovery phase and doubling the figure of the year 2021 in international tourist arrivals. However, arrivals were still 43% below 2019 levels in Europe (World Tourism Organization, 2022). Consequently, this study is of importance because it yields knowledge in the improvement of satisfaction through the experience in traditional restaurants, subsequent loyalty of the visitor to world heritage cities of humanity. This is relevant to analyze, because with the pandemic the client has become more demanding when it comes to cleaning or safety distance between tables. Taking care of these services so that the customer has greater satisfaction and tends to change their subsequent behavior, in returning to visit and recommend it, can be good not only for restaurants but for the city.

However, there are still relatively few academic studies on the management strategies implemented in tourist cities during and after the pandemic. In terms of post-COVID studies, Pisano (2020) identified three factors that appear to be particularly relevant in defining a potential framework to design and evaluate strategies for post-COVID cities, while improving their quality, equity and resilience: decentralization of facilities, hierarchy of the transport system and public services, and redundancy of public and semi-public functions. Such post-pandemic urban strategies have been implemented in cities such as Milan or Paris, although more research is needed to develop a coherent and comprehensive framework for post-COVID cities (Pisano, 2020). However, there is no literature that marks clear and fixed strategies in restaurants regarding antiviral measures, which is why this investigation is proposed.

Others focus on heritage sites such as Angkor Wat (Alvarez-Sousa and Paniza Prados, 2020), Malta (Caruana et al., 2021), Cairo (Elgammal and Refaat, 2021) or Mount Athos, Macedonia (Tsiropis et al., 2021). These studies focus on management strategies aimed at addressing the new pandemic scenario. Although they mainly focus on conventional marketing strategies for promoting the product or service, they also consider public health strategies, where the percentage of the population that is vaccinated is one of the factors to take into account when promoting safety against the virus. A common finding in these studies is the need to know the carrying capacity of the heritage offer in cities in order to be able to react appropriately to future restrictions in a post-coronavirus environment. However, although the literature review carried out demonstrates the academic interest in identifying the factors that affect the good management of city destinations, it also underlines the scarcity of such studies, particularly on coronavirus measures in World Heritage Cities. Therefore, this research makes a useful contribution to the literature.

2.2. The impact of SARS-CoV-2 on restaurant satisfaction, gastronomic experience and overall image

Research on the effect of the perception of restaurants’ pandemic response and related safety measures on satisfaction with restaurants, gastronomic experience and overall destination image is still an emerging field.

Other studies were conducted during the pandemic, such as the one by Lakshmi and Shareena (2020), who concluded that there is evidence of restaurants showing greater concern for the health and safety of their customers, simply by taking measures such as measuring the temperature of the customer, more hygiene or disinfection of the restaurant.
The present study draws on the work of these authors (Lakshmi and Shareena, 2020) to create a variable capturing safety measures taken against SARS-CoV-2. This variable accounts for novel items including the distance between diners and restaurant entry requirements such as the COVID passport, which became essential in the coronavirus context to ensure satisfaction with the restaurant and thus build customer loyalty. In the same vein, Brewer and Sebby (2021) showed that to safely respond to consumers’ desire for food during the pandemic, restaurants opted for online service with visually attractive menus, the main objective of which was to increase consumer satisfaction. However, other research concluded that the COVID prevention measures implemented by restaurants have their own ethical and symbolic value translated through the safety of customers (Shokhsanam and Ahn, 2021). These measures, however few there may be, are aimed at strengthening safety in the gastronomic environment, thus generating customer satisfaction. Traditional gastronomy is a key element of a destination’s cultural identity and heritage; failure to look after it can cause an expectation gap that has a major impact on tourists’ cultural and sensory experience. Regarding the safety perceived by the visitor in a destination due to pandemic protection measures, and its influence on the overall image of the destination, the study by Lu and Atadil (2021) focused on US travelers’ perceptions of China as an international destination after China became the first epicenter of the COVID-19 pandemic. The authors identified safety and security at the destination as the main dimension influencing the image. The study thus adds to the literature on the effect of coronavirus on destinations. The concept of destination image is widely recognized as a relevant phenomenon that influences tourists’ decision-making, destination choice, post-trip evaluation, and future behaviors (Qu et al., 2011; Dolnicar and Grün, 2013; Baloglu and McCleary, 1999).

The scarcity of literature on the influence of COVID safety measures on diner satisfaction, which can affect the gastronomic experience and the image of a city or destination, supports the need for the present research. The study also responds to destination managers’ interest in this variable and the question of how to improve COVID-19 management strategies following the vaccine roll-out, which has restarted international movements of tourists (Shih-Shuo Yeh, 2021).

On the other hand, the second variable, the concept of satisfaction, has developed over time (Rousta and Jamshidi, 2020). However, different studies on satisfaction have shared a central idea: a psychological notion about the emotional evaluation of the consumer or the degree of pleasure obtained with the experience associated with specific products or services (Saleem and Raja, 2014; Giebelhausen et al., 2016; Mohammed and Rashid, 2018).

In the tourism literature, attention has been focused on the link between local cuisine and satisfaction, specifically relating to the experience of the traditional restaurant. However, the influence of the culinary image on the traveler destination, particularly in the case of a World Heritage destination, has not been thoroughly explored (Hashemi et al., 2021). The pleasure generated by gastronomy and therefore the satisfaction with restaurants has been studied by Kim et al. (2018), while other authors found that if the gastronomy is deemed appealing after a visit to a destination (Chang et al., 2010) it adds value to the destination, boosting its image and popularity (Rousta and Jamshidi, 2020). In short, the literature review confirms the relationship between happiness with the traditional restaurant, gastronomy and destination image.

Other studies focus on the importance of restaurants where the taste and quality of the food turn out to be the attributes that most affect visitor satisfaction (Carvache-Franco et al., 2021). In this context, there are few studies that address satisfaction with traditional restaurants, and a notable lack of scientific studies focused on satisfaction with traditional cuisine restaurants in World Heritage cities as a factor of attraction. This study represents a contribution to the literature in this regard. This review has allowed us to propose the first four hypotheses of this research:

**Hypothesis H1.** SARS-CoV-2 safety measures in traditional restaurants positively and significantly influence tourist satisfaction with traditional restaurants.

**Hypothesis H2.** SARS-CoV-2 safety measures in traditional restaurants positively and significantly influence the image of the city.

**Hypothesis H3.** SARS-CoV-2 safety measures in traditional restaurants positively and significantly influence tourists’ gastronomic experience of the city.

**Hypothesis H4.** In the presence of SARS-CoV-2 and its variants, tourists’ satisfaction with traditional restaurants positively and significantly influences their gastronomic experience of the city.

2.3. The influence of satisfaction with the restaurant, the gastronomic experience, and the general image of the destination on loyalty

The work of Oppermann (2000) suggested that studies on loyalty should reveal the behavioral approach of tourists and the final benefits that a loyal tourist can bring to a tourist destination. Studies (e.g., Chi and Qu, 2008; Prayag and Ryan, 2012) consider that the variables most used to attract more visitors to a given place, according to the behavior of tourists, have been the intention to revisit the destination and the intention of recommending it to others (Stylidis et al., 2015). These behavioral intentions can offer tourism destination managers the opportunity to improve their image (Zhang et al., 2020).

Some works such as that of Maghsoodi Tilaki et al. (2016) highlighted how tourist image and satisfaction influence loyalty to a UNESCO World Heritage-listed destination (Maghsoodi Tilaki et al., 2016). Similarly, also the study by Prayag et al. (2017) showed that the emotional experiences of tourists (measured in three dimensions such as joy, positive surprise or love) influence the perception of the image of a destination, and that the evaluation of said image influences its perception time in satisfaction and in the intention to recommend.

The link between satisfaction with restaurants and loyalty has not been well studied in the scientific literature. However, there are studies that explore the variables that promote satisfaction with the restaurant factors such as price (Cakici et al., 2019), the sommelier (Lau et al., 2019) or gastronomy in the broad sense of food, drink, service and atmosphere (Hernández-Rojas and Huete-Alcocer, 2021). While the link between overall destination satisfaction and loyalty has been more extensively studied over the years (Chi and Qu, 2008; Rajesh, 2013; Alrawadieh et al., 2019a), fewer studies have focused specifically on concepts such as satisfaction with restaurants and the influence it exerts on loyalty to a destination, particularly in the context of World Heritage Sites. Regarding the relationship between gastronomy and destination loyalty, academia has confirmed the relevance of the former variable. Previous studies have explored gastronomy on cruise ships (Ruiz et al., 2018), relating to restaurant brand (Hernandez-Rojas et al., 2021) on culinary tourism routes (Folgado-Fernández et al., 2017) or traditional gastronomy (Hernández-Rojas and Huete-Alcocer, 2021).

As for the relationship between the general destination image and loyalty, Chiu et al. (2012) highlighted that factors essential for loyalty are increasingly important in an ever more competitive market. Song et al. (2019) studied the associations between image, brand and loyalty. Similarly, the relationship between the overall image of the destination and variables capturing loyalty has also been confirmed in the lodging sector (Palacios-Florencio et al., 2018), in destinations for Muslim tourists that offer halal (Al-Ansi and Han, 2019) or in destinations where tourist agglomerations and pressure on tourists to make a purchase affect loyalty to the destination (Alrawadieh et al., 2019).

On the other hand, in terms of a city’s gastronomic image, the more favorable it is, the greater the tourists’ consumption intention, meaning that the gastronomic experience in the destination is considered a fundamental tourist attraction (Hashemi et al., 2021). Therefore, the probability that tourists will consume more local food is greater if the
The review of the literature in this section about what influences the loyalty of a destination, has allowed us to propose the hypotheses H5, H6, H7 and H8 of this research:

**Hypothesis H5.** In the presence of SARS-CoV-2 and its variants, tourists’ satisfaction with traditional restaurants positively and significantly influences loyalty to the destination.

**Hypothesis H6.** In the presence of SARS-CoV-2 and its variants, tourists’ gastronomic experience of the city positively and significantly influences the general image of the city.

**Hypothesis H7.** In the presence of SARS-CoV-2 and its variants, the general image of the city positively and significantly influences loyalty to the destination.

**Hypothesis H8.** In the presence of SARS-CoV-2 and its variants, tourists’ gastronomic experience of the city positively and significantly influences loyalty to the destination.

### 2.4. Conceptual model with the hypotheses raised

Considering and analyzing the authors who have studied on the main variables used in this research, such as safety measures, loyalty and some of its antecedents, we present a reflective conceptual model (Jarvis et al., 2003; Hair et al., 2020). In this respect, the construction of the model is based on previous studies such as that by Hernández-Rojas and Huete-Alcocer (2021, but the inclusion of an additional variable brings a novelty to the literature: specifically, the new variable captures measures taken against the coronavirus (SARS-CoV-2) in traditional restaurants. And how this influences the satisfaction of the diner, in the gastronomic experience of the city, on tourists’ perceived image of the place and loyalty in terms of their intention to recommend or revisit the World Heritage destination. Therefore, the following conceptual model is proposed (Fig. 1) with the eight hypotheses raised above, after reviewing the literature:

### 3. Materials and methods

#### 3.1. Subject: data collection along with coding approach

The place chosen to carry out the fieldwork in this research was one of the 15 Spanish cities listed as a World Heritage Site, the city of Cordoba. In 2021, international tourists in Cordoba represented 40.33% of the total in 2019, with the remaining 59.67% being domestic tourists. World Heritage Cities offer important tourist attractions along with traditional restaurants that reflect their underlying cultures. Cordoba’s outstanding heritage is thanks to the different cultures (Roman, Arab, Jewish, and Christian) that have intermingled in the city over time. As a result, it offers a remarkable traditional gastronomy, which in 2013 was recognized by UNESCO as Intangible Cultural Heritage. The traditional restaurants of the city mostly lie in the historic center. For this study, information was collected from a total of eight restaurants located in the historic area of the city, targeting tourists (non-residents) whose reason for visiting the city was to enjoy a traditional gastronomic experience. The information was obtained by asking the diners to answer a questionnaire electronically with a QR code at the end of their lunch, while the interviewers were present. A total of 180 questionnaires were filled out, but the eventual valid sample was 154 surveys collected during the month of November 2021. At that time, the incidence of coronavirus was relatively low in Spanish World Heritage Cities, but the new Omicron variant was emerging (Karim and Karim, 2021).

The questions, which were based on the previous literature review (Ozdemir et al., 2012; Farooq et al., 2019), were grouped into six blocks. The first five were intended for the measurement of the variables (Table 1). The first block included questions about the measures taken in restaurants to protect against coronavirus; the second contained questions about local food; the third about the general image of the city; the fourth about the diner’s enjoyment of the traditional restaurant; and the fifth about visitors’ loyalty to Cordoba, in terms of whether they would recommend it to family and friends or return to the city. A total of 28 questions were included in the first five blocks. These items used a five-point Likert scale, with one indicating total disagreement and five

### Table 1 Measurement of variables

| Factor | Indicator | Items |
|--------|-----------|-------|
| SARS-CoV-2 Safety | SCOV1 | COVID-related hygiene measures in the restaurant |
| Lakshmi and Shareena (2020) | SCOV2 | COVID-related cleanliness in the restaurant |
| | SCOV3 | The feeling of confidence and safety that the restaurant transmits in relation to COVID |
| Prayag and Ryan (2012); Pizam, Shapoval and T. Ellis (2016); Rajput and Gahloor (2020); Chen et al. (2020); Huete-Alcocer and Hernandez-Rojas (2022) | SCOV4 | How you would assess the COVID passport requirement |
| Local Gastronomy | GTR1 | Cordoba is gastronomy |
| Prayag and Ryan (2012); Pizam, Shapoval and T. Ellis (2016); Rajput and Gahloor (2020); Chen et al. (2020); Huete-Alcocer and Hernandez-Rojas (2022) | GTR2 | Cordoba is tangible heritage |
| | GTR3 | The local gastronomy is good value for money |
| Overall image of the destination | GTR4 | The restaurants are good value for money |
| Dolnicar and Grün (2013); Qu et al. (2011); Baloglu and McGeary (1999); Cha and Borchgrevink (2019); Liu and Tse (2018); DiPietro and Levitt (2019); Huete-Alcocer and Hernandez-Rojas (2022) | OV11 | The overall image is very good |
| Restaurant satisfaction | OV12 | It is worth coming to Cordoba |
| Cha and Borchgrevink (2019); Liu and Tse (2018); DiPietro and Levitt (2019); Huete-Alcocer and Hernandez-Rojas (2022) | OV13 | I like the city to visit |
| | OV14 | The city has a good reputation |
| | RST1 | Renown (Known abroad) |
| | RST2 | Tradition and roots in the local population |
| | RST3 | Restaurant place |
| | RST4 | Organization |
| | RST5 | Power of attraction |
| | RST6 | Engagement with tourists and/or visitors |
| | RST7 | Cuisine tasted |
| | RST8 | Restaurant Service |
| | RST9 | Ambience in the restaurant |
| Loyalty to destination | LD1 | I will visit Cordoba again |
| Akama and Kieti (2003); Hernández-Rojas and Huete-Alcocer (2021); Dolnicar and Grün (2013); Qu et al. (2011) | LD2 | I will recommend the city to family and friends because in general the food is good and I think that they should come to these traditional restaurants |
| | LD3 | I will visit Cordoba again |
| | LD4 | I will recommend a visit to Cordoba to family and friends |

Fig. 1. Conceptual model.
total agreement.

The sixth and last block included questions about sociodemographic characteristics. The results are shown in Table 2, revealing that the tourists were predominantly women, middle-aged and university educated. They mostly come from other provinces of Andalusia (49.4%), followed by other provinces of the Valencian Community (4.5%), Madrid (3.9%) and Extremadura (3.9%). This suggests that the tourists do not stay very long if they live close to the city of Cordoba.

Before starting the questionnaire, respondents were informed of the objective of the research and the anonymity of the answers given. The data obtained for the research were tabulated and cleaned up using SPSS Statistics 28 software and then SmartPLS 3.3.7 was used for the subsequent analysis.

3.2. Methodology description

First, a confirmatory factor analysis was performed. The model is considered a reflective measurement model (Hair et al., 2020), with the latent variables being SARS-CoV-2 safety measures, pleasure with traditional restaurants, the general image of the destination, food experience and loyalty to the city. A series of hypotheses have previously been proposed for the analysis of how the safety measures taken by the restaurants to protect against coronavirus influence the aforementioned variables. These hypotheses have been tested using PLS-SEM, because we consider that it was the most appropriate as it had a small sample. CB-SEM, a more confirmatory technique, could also have been used; however, a more predictive PLS-SEM analysis was chosen.

4. Results

First, the descriptive statistics (mean, median, and standard deviation) of the variables were calculated. Results are shown in Table 3, and it should be borne in mind that the maximum and minimum values of the sample were 5 and 1, respectively.

Subsequently, the measurement model was assessed and then the research hypotheses proposed were tested by analyzing the structural model. The significance of the parameters in the latter was calculated by bootstrapping, confirming the precision of the PLS estimates (Hair et al., 2011).

SmartPLS 3.3.7 software was used to run the abovementioned analyses.

4.1. Evaluation of the measurement model: validity and reliability

To evaluate the measurement model with PLS the individual reliability of the items, the reliability of the scale, the convergent validity and the discriminant validity were analyzed (Barclay et al., 1995). Regarding the individual reliability of the indicators or items for each of the variables (Fig. 2), the PLS algorithm was calculated and those with factor loadings greater than or equal to 0.707 were confirmed (Carmines and Zeller, 1979).

Table 3

| Factor | Indicator | Mean | Median | Standard deviation |
|--------|-----------|------|--------|--------------------|
| SARS-CoV-2 Safety | SCOV1 | 4.097 | 4 | 1.074 |
| | SCOV2 | 4.123 | 4 | 0.914 |
| | SCOV3 | 3.825 | 4 | 1.020 |
| | SCOV4 | 3.948 | 4 | 1.056 |
| | SCOV5 | 3.630 | 4 | 1.455 |
| Local Gastronomy | GTR1 | 4.338 | 5 | 0.847 |
| | GTR2 | 4.617 | 5 | 0.695 |
| | GTR3 | 4.078 | 4 | 0.842 |
| | GTR4 | 4.201 | 4 | 0.914 |
| Overall image of the destination | OV1 | 4.403 | 5 | 0.841 |
| | OV2 | 4.403 | 5 | 0.887 |
| | OV3 | 4.552 | 5 | 0.712 |
| | OV4 | 4.396 | 5 | 0.801 |
| Restaurant satisfaction | RST1 | 3.682 | 4 | 1.257 |
| | RST2 | 3.987 | 4 | 1.038 |
| | RST3 | 4.234 | 4 | 0.917 |
| | RST4 | 4.071 | 4 | 0.920 |
| | RST5 | 4.123 | 4 | 0.906 |
| | RST6 | 4.357 | 4 | 0.850 |
| | RST7 | 4.279 | 4 | 0.818 |
| | RST8 | 4.240 | 4 | 0.905 |
| | RST9 | 4.06 | 4 | 1.192 |
| Loyalty to destination | LD1 | 4.188 | 4 | 0.952 |
| | LD2 | 4.299 | 5 | 1.123 |
| | LD3 | 4.513 | 5 | 0.766 |

Conducted the composite reliability study. This indicator measures the construct assigned whether correct or not. Composite reliability was also calculated to check if the indicators satisfactorily measure the construct to which they are assigned. This analysis was performed with Cronbach's Alpha (Cronbach, 1951), the values of which must be over 0.7. Table 4 shows how all the constructs meet the requirement of reliability. On the other hand, following the indications of Fornell and Larcker (1981), it was found that the measurement model also met the criterion of convergent validity (Table 4) according to the average variance extracted (AVE) of each of the constructs. In addition, other important reliability measures for PLS were calculated, such as Rho A (Fornell and Larcker, 1981; Dijkstra and Henseler, 2015). This Rho A reliability coefficient is considered to be an intermediate measure between Cronbach’s alpha (more conservative) and composite reliability (more liberal) (Hair et al., 2011).

Furthermore, the discriminant validity of the measurement model was calculated (Table 5). First, by applying the Fornell and Larcker (1981) criterion it was possible to verify that the correlations between the constructs are lower than the square root of the AVE (diagonal of the matrix of Table 5), which indicates that each construct is different from the others (Barclay et al., 1995). Another measure that demonstrates discriminant validity is the Heterotrait-Monotrait (HTMT) ratio. According to Gold et al. (2001), this ratio should be below 0.9 to indicate discriminant validity; that is, that the correlations between the indicators measuring the same construct are greater than the correlations between the indicators measuring different constructs. In this case, the values obtained for the HTMT ratio also confirm the discriminant validity of the model (Table 5).

Finally, the discriminant validity of the model was also checked through the cross-loadings according to the criterion of Barclay et al. (1995), which holds that the factor loading between an item and the variable to which it is assigned (data in bold in Table 6) should be greater than with the other variables that are evaluated in the model.

4.2. Assessment of the structural model

After the validation of the measurement model, the results of the structural analysis are presented in Table 7, where bootstrapping (Hair et al., 2020) was conducted to check the significance of the estimated parameters.
et al., 2011), has been used. This has made it possible to evaluate the relevance of the relationships between constructs through the path coefficients (β) (Dash and Paul, 2021), which are almost all statistically significant at 99%. The structural model was also assessed by examining the variance inflation factor (VIF); the results are below the recommended cut-off value of 3.3.

Based on the results obtained in the testing of the hypotheses (Table 7), all hypotheses were supported, mostly with a significance of **p < .01. At this level, of all eight hypotheses, the strongest effect was found for H1 (β = 0.536), meaning that COVID safety was the factor that most influenced the satisfaction of the diner in traditional restaurants. This adds a novel finding to the literature. Next strongest was the effect of Restaurant Satisfaction on Local Gastronomy (H4; β = 0.493), followed by Local Gastronomy on the Overall Image of the Destination (H6; β = 0.541), Satisfaction with Traditional Restaurants on Loyalty to Destination (H5; β = 0.404) and Local Gastronomy on Loyalty (H8; β = 0.251). The weakest effect was found for H7 (β = 0.219), in this case for a significance level of **p < .01, as well as hypotheses H2 (β = 0.244) and H3 (β = 0.228).

Furthermore, to assess the predictive relevance of the model (Table 8), we follow the recommendation of Falk and Miller (1992), who suggest that the explained variance of endogenous variables (R²) should be greater than or equal to 0.1. Another alternative assessment used is the criterion proposed by Stone (1974) called Q². According to Chin (1998), Q² is a measure of goodness of prediction, where the observed values are reconstructed by the model and its parameters in such a way that if Q² takes values greater than zero, the model has predictive relevance, and if these values are less than or equal to zero, it lacks it. In this respect, the results obtained in this study indicate the goodness of the model (Table 8).

The fit of the global model was also calculated using the value of the standardized root mean square residual (SRMR) (Henseler et al., 2015), which consists of comparing the difference between the observed correlation and the predicted correlation. Values below 0.08 are considered acceptable: the proposed model has a value of 0.079.

Finally, the structural model is depicted graphically in Fig. 3:

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Table 4
Composite reliability and convergent validity.

| Factor                     | Cronbach’s Alpha | Composite reliability | AVE   | Rho,A |
|---------------------------|------------------|-----------------------|-------|-------|
| (SCOV) SARS-CoV-2         | 0.894            | 0.922                 | 0.705 | 0.903 |
| COVID Safety              |                  |                       |       |       |
| (GTR) Local Gastronomy    | 0.772            | 0.851                 | 0.589 | 0.801 |
| (OVI) Overall Image of the Destination | 0.876 | 0.915 | 0.730 | 0.881 |
| (RST) Restaurant satisfaction | 0.918 | 0.932 | 0.604 | 0.923 |
| (LD) Loyalty to Destination | 0.817 | 0.879 | 0.645 | 0.821 |

Table 5
Discriminant validity (Fornell-Larcker).

|                      | COVID Safety | Local Gastronomy | Overall Image of the Destination | Restaurant Satisfaction | Loyalty to destination |
|----------------------|--------------|------------------|----------------------------------|--------------------------|-------------------------|
| COVID Safety         | 0.840        | 0.562            | 0.571                            | 0.576                    | 0.608                   |
| Local Gastronomy     | 0.492        | 0.767            | 0.770                            | 0.702                    | 0.770                   |
| Overall Image of the Destination | 0.511 | 0.662 | 0.854 | 0.845 | 0.816 |
| Restaurant Satisfaction | 0.536 | 0.615 | 0.764 | 0.777 | 0.823 |
| Loyalty to Destination | 0.527 | 0.643 | 0.692 | 0.724 | 0.803 |

Note: The data on the diagonal in bold are the square root of the AVE. The data at the top of the matrix diagonal are the HTMT values and those located at the bottom are the correlations between the constructs.
5. Discussion

PLS-SEM was used in this study to investigate the loyalty of visitors and tourists to a World Heritage City after a gastronomic experience in the current context of the coronavirus pandemic, considering the safety measures implemented by traditional restaurants in response. The overall aim was to analyze whether these influences satisfaction and ultimately loyalty to heritage sites (Senarath and Ranasinghe, 2019).

The methodology applied in this study was able to confirm the eight hypotheses raised. The first hypothesis (H1) states that there is a significant and positive influence of SARS-CoV-2 safety measures on tourists’ satisfaction with traditional restaurants. That is, when the diner perceives the hygiene and safety measures in the restaurant, their satisfaction with the restaurant increases. This discovery represents a contribution to academic studies since this link had not previously been investigated. In addition, the results show that this element had the strongest effect of all eight proposed hypotheses; as such, managers should opt for professionalization in distance, hygiene and cleaning measures against coronavirus, and should ensure they are visible to the client. This finding is applicable to the managers of other restaurants where quality improvement is essential for tourist satisfaction. While there are studies relating the cleanliness of the dining room, kitchen, etc. with customer satisfaction in restaurants (Choi et al., 2010; Alhaimmeed, 2017), there are none to date that examine this relationship with reference to COVID.

Regarding the results for H2, they show how SARS-CoV-2 safety measures in traditional restaurants have a significant and positive influence on the general image of the city. For practical purposes, this is a wake-up call for city destination managers to monitor the measures taken by restaurants in the city, since it influences the general image that tourists may have of the destination and is a decisive factor in destination choice (De la Hoz-Correa and Munoz-Leiva, 2019; Pham and Khanh, 2020). The results are in line with those of Hernández-Rojas and Huet-Aloccer (2021), who show the effects of satisfaction with traditional restaurants on the general image of a city. However, there are no related studies to date that examine the measures taken by restaurants to stop the spread of the pandemic and thus make the diner feel safe, again indicating the novelty of this research. Under this hypothesis, the management of the traditional restaurant bears some responsibility for the overall image of the city. Consequently, managers will have to follow rules that go beyond the mandatory anti-covid measures.

In addition, the results support H3, showing that the measures against coronavirus in traditional restaurants positively and significantly influence the gastronomic experience of the city. That is, they shape tourists’ opinion of the gastronomy of a destination. This hypothesis had not previously been tested in the literature. According to the model proposed and tested here, a good experience in a traditional restaurant has a direct influence in two directions: it improves the image of local gastronomy and builds loyalty to that destination. Studies such as those by Wu and Cheng (2018), Hernández-Mogollon et al. (2020) and Huet-Aloccer and Hernandez-Rojas (2021) confirm these relationships. Among the practical implications, it is worth noting that the manager should not focus exclusively on food and service, but should also be concerned about a series of factors connected to gastronomy that can increase satisfaction with the experience in the traditional restaurant.

As for the fourth hypothesis (H4), it is shown that there is a positive and significant influence of tourists’ satisfaction with their experience in traditional restaurants in the context of the coronavirus pandemic on the gastronomic experience enjoyed in the city of Cordoba. This relationship between satisfaction with restaurants and gastronomy coincides with the findings of studies by authors such as Ab Karim and Chi (2010), Min (2016), Kala (2020), Hernández-Rojas and Huet-Aloccer (2021) and Huet-Aloccer and Hernandez-Rojas (2022). However, there are no studies to date that include the factor of safety measures against the coronavirus. Managers of traditional restaurants must seek to preserve gastronomic traditions, ensuring that traditional food endures over time; in this way, the traditional restaurants themselves become a channel for passing down ancestral recipes.

Table 6

| Hypothesis | Structural Relationship | Standardized Path Coefficient (β) | t Value Bootstrap | VIF | Result |
|------------|------------------------|------------------------------------|------------------|-----|--------|
| H1         | Local Gastronomy       | 0.536                              | 7.664***         | 1.000 | SUPPORTED |
| H2         | Overall image of the destination | 0.244                         | 3.030**          | 1.320 | SUPPORTED |
| H3         | Local Gastronomy       | 0.228                              | 2.939***         | 1.403 | SUPPORTED |
| H4         | Restaurant Satisfaction | 0.493                             | 6.664***         | 1.403 | SUPPORTED |
| H5         | Loyalty to Destination | 0.403                             | 3.521***         | 1.230 | SUPPORTED |
| H6         | Local Gastronomy       | 0.541                             | 6.579***         | 1.230 | SUPPORTED |
| H7         | Overall image of the Destination | 0.219                        | 1.942**          | 2.798 | SUPPORTED |
| H8         | Loyalty to Destination | 0.251                             | 3.469***         | 1.875 | SUPPORTED |

Table 7

| Hypothesis | Structural Relationship | Standardized Path Coefficient (β) | t Value Bootstrap | VIF | Result |
|------------|------------------------|------------------------------------|------------------|-----|--------|
| H1         | SARS-CoV-2 Safety > Restaurant Satisfaction | 0.536                              | 7.664***         | 1.000 | SUPPORTED |
| H2         | SARS-CoV-2 Safety > Overall image of the destination | 0.244                         | 3.030**          | 1.320 | SUPPORTED |
| H3         | COVID Safety > Local Gastronomy | 0.228                              | 2.939***         | 1.403 | SUPPORTED |
| H4         | Restaurant Satisfaction > Loyalty to Destination | 0.493                             | 6.664***         | 1.403 | SUPPORTED |
| H5         | Local Gastronomy > Overall image of the Destination | 0.541                             | 6.579***         | 1.230 | SUPPORTED |
| H7         | Overall image of the Destination > Loyalty to Destination | 0.219                             | 1.942**          | 2.798 | SUPPORTED |
| H8         | Local Gastronomy > Loyalty to Destination | 0.251                             | 3.469***         | 1.875 | SUPPORTED |
The results for H5 reveal a significant and positive influence of the tourist’s satisfaction with traditional restaurants, considering the safety in the establishment, on loyalty to the city. For practical purposes, this underscores the importance of traditional restaurants in the tourist visit; that is, ensuring satisfaction with traditional local restaurants generates support for the destination. This finding supports the work of Nam and Lee (2011) Hernández-Rojas and Huete-Alcocer (2021); Huete-Alcocer and Hernandez-Rojas (2022). Similarly, in line with previous studies (Su et al., 2017; Alrawadieh et al., 2019a,b) the results indicate that gratification in general has a positive influence on loyalty to the destination, which encourages the tourist to revisit the destination in the future, and to recommend it upon returning home.

In addition, results support H6: in the context of the pandemic, the local gastronomy has a significant and positive influence on the general image of the city. As such, it is important for both public and private entities to ensure that SARS-CoV-2 safety measures are implemented, as they can contribute to improving the image of the city. The support for this hypothesis is in accordance with the study of Folgado-Fernández et al. (2017).

Finally, H7 and H8 are also supported: in an environment marked by the coronavirus, the general image and local gastronomy, respectively, positively and significantly influence the loyalty to a World Heritage destination. While these relationships represent a novel finding in the context of a pandemic, there are authors who have demonstrated this effect a pre-coronavirus environment (e.g., Prayag et al., 2017; Chen and Hernandez-Rojas, 2022).

6. Conclusions and limitations

The study carried out confirms that satisfaction with gastronomy is a factor in tourists’ recommendation of and intention to revisit destinations. However, the coronavirus pandemic now plays a role in the choice of travel destination. The recovery of tourist activities shut down by the COVID crisis began in early 2022, but this restart has required a management different from that of the pre-coronavirus environment. World Heritage Cities in Spain face the challenges of opening up to international markets, with traditional gastronomy being one of the factors influencing the choice and subsequent recommendation of destinations.

In this sense, this research reveals, on the one hand, that, in practice, there is a new factor that was not a destination management issue in the pre-coronavirus era or in the field of gastronomy: security measures against spread of coronavirus (SARS-CoV-2). And on the other, this study shows how these measures had not been taken into account in the scientific literature when trying to analyze the management of the pandemic.

Studies show that management measures can affect restaurant or retail revenue by managing customer satisfaction (Gomez et al., 2004). The study presented is applicable to improving customer satisfaction in traditional restaurants, being consistent, it will help improve both own income and loyalty in restaurant and/or city visitors.

The study of the management of the novel coronavirus and subsequent variants, such as the recent Omicron strain, represents a novelty in the related scientific literature. Analyzing the pandemic protection measures in traditional restaurants in the city of Cordoba, this study shows how visitors’ satisfaction with the traditional restaurant influences the image of the destination, gastronomy, and loyalty to the city.

The results show that the measures taken against the spread of the coronavirus influence satisfaction with the restaurant, the gastronomic experience and the image of the destination, and foster the loyalty of those who visit it. These findings are relevant since they represent a contribution to the scientific literature, in that the indicators analyzed have not been considered in previous studies, like for example the one they did Sánchez-Cañizares and López-Guzmán (2012). These indicators—which have become essential in a new post-coronavirus context in order to gain the loyalty of the visitor—are hygiene and cleaning measures in the restaurant (e.g., Siddigi et al., 2022), the distance between diners, and the access restrictions such as the COVID passport requirement. These measures should be taken into account by restaurant managers and owners.

The gastronomy in World Heritage Cities together with the quality perceived after the visit are recognized attributes for those travelers seeking to discover the local culture through the existing tangible heritage. Consequently, the finding of this study can help guide restaurant and destination managers to improve satisfaction and subsequent loyalty (e.g., Durmaz et al., 2022; Khoshkam et al., 2022; Meneguel et al., 2022).

World Heritage Cities are a key motivation for visiting a destination. In Spain in 2019 (pre-coronavirus), the 15 cities listed as World Heritage Sites accounted for a total of more than 5.6 million visits, with foreign tourists representing 48.2% of overnight stays (Grupo Ciudades Patrimonio de la Humanidad de España, 2020). However, recent data
(November 2021) reveal that the pandemic has impacted the influx of foreign tourists: 49.4% were from Andalusia, close to the city of Cordoba, indicating an emphasis on domestic tourism. The improvement of measures against the spread of coronavirus in traditional restaurants is a proven value for visitors. In addition, it is concluded that the image of the destination and the satisfaction obtained are influenced by the measures used to prevent possible infections in traditional restaurants; therefore, the managers of traditional restaurants should implement safeguards against the virus, as well as focusing on elements of established importance such as the food, service or ambience (Hernandez-Rojas and Huete-Alcocer, 2021).

A limitation of this work is related to the selection of the variables included in the proposed model, since some that were initially wanted were not included. Some of them were the components of the general image of the destination, such as the cognitive, affective and conative image. Another limitation of this study relates to the sample used. The data were obtained from a single World Heritage City and tourists who visited it in order to taste the traditional gastronomy. It would be interesting to study a larger sample that includes other heritage cities in Spain and other countries. In order to generalize and compare results, it can also be seen that the results of this study only relate to a particular moment in time. For more far-reaching findings, a longitudinal study could be implemented to collect visitor feedback over time, thus allowing an analysis of the evolution of the opinions and feelings of visitors.

As for future lines of research, we recommend the inclusion of other variables related to protection against the coronavirus and in activities such as visits to tangible heritage (e.g., Tsoniris et al., 2021), archaeological sites (e.g., Geser, 2021; Magnani et al., 2021), or museums (e.g., Bernardi, 2021; Cecilia, 2021). Moreover, a more in-depth study is needed of the relationship between destination, heritage and loyalty in this context.

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