Is visitors’ future loyalty influenced by on-site experience intensity? Examining the mediating role of destination image and the moderating effect of visitors’ origin

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Abstract

Few studies have examined the influence of the intensity of visitors’ on-site experience on the formation of in situ destination image or its effects on destination loyalty; however, none appear to have simultaneously examined a mediation (cognitive and affective images) and moderation effect (visitors’ origin; domestic or international) on these relationships. Building upon the mere exposure theory (MET), the aim of the current study is to test the influence of the intensity of visitors’ on-site experience of coastal and maritime cultural heritage (CMCH) attractions on image and loyalty. MET suggests a positive stimulus-attitude effect after repeated exposition to it. Survey data was collected from both domestic (n = 305) and international (n = 181) visitors to the city of Aveiro in Portugal during their on-site experiences. Findings indicate that the intensity of on-site heritage experience is a significant predictor of loyalty and that image partially mediates the effect of on-site experience intensity on loyalty through cognitive image, which is conditioned by visitors’ origin. Interestingly, affective image did not present significant results in the model. Diversifying activities and including local workers are proposed, so that visitors can get to know coastal communities' heritage better, stay longer, and develop bonds.

Keywords: on-site experience intensity; heritage; cognitive image, affective image, destination loyalty, mere exposure theory


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1. Introduction

Tourism destinations face increasing challenges in having differentiating their offer and remaining competitive in the tourism market (Truong et al., 2018). The image of coastal areas is mainly associated with sun, sand, and sea (3S) destinations, which puts them in a highly replaceable position in the competitive tourism market. Thus, assessing the reasons for visitor loyalty is crucial for destination managers, so that marketing strategies can be determined (Hasan et al., 2021).

Heritage attractions can be a useful tool to promote the diversification of tourism in destinations (Atasoy & Eren, 2023; Ramkisson et al., 2011), as they contribute to attractiveness (Weidenfeld et al., 2016) and are consequently one of the main reasons for destination selection (Stylidis et al., 2022). According to Park (2014), heritage tourism is gaining importance in countries or regions associated with 3S destinations as heritage attractions are important assets for destination image formation (Qu et al., 2011; Stylidis et al., 2022) and consequently increase destination loyalty, since image is one of its determinants (Chen & Tsai, 2007; Pratt & Sparks, 2014). Image plays an important role in visitors’ decision to select a destination (Gallarza et al., 2002). Furthermore, the importance of visiting destinations that offer activities that allows visitors to learn about the heritage and the stories associated with it has been demonstrated to have a positive effect on the image of such destinations (Poria et al., 2004), a critical factor in the case of coastal destinations. Heritage presents a dual benefit for these destinations since it allows a strategy to be defined for its differentiation when compared to other destinations (Lacher et al., 2013; Pafi et al., 2020), while it also drives the preservation of heritage assets and the landscapes or seascapes that host them (Carvache-Franco et al., 2021).

Coastal and maritime cultural heritage (CMCH) still unknown to most visitors is defined as “a set of tangibles and intangibles linked to human activities and interactions taking place within coastal and marine (geographical or cultural) areas in the past, the present and imagined futures” (Ounanian et al., 2021, p.2). Examples of tangible CMCH are boats, lighthouses, unique houses, salt pans (Ferreira da Silva et al., 2022) and intangible aspects associated with the identity of the places and coastal communities (Urquhart & Acott, 2013). Although this heritage is common to coastal areas, each area has local CMCH assets and associated intangible aspects, which also have different stages of preservation and promotion. Thus, coastal areas that have well-preserved CMCH and that offer a set of experiences related to this heritage present a competitive advantage when compared to others. From the visitors’ standpoint, they can move from a mere observation of heritage to experiencing it (Su et al., 2020). In their definition of tourist experience, several authors refer to the importance of on-site interaction between visitors and destinations’ resources (e.g. heritage assets) and local people (Domínguez-Quintero et al., 2019; Stylidis et al., 2022).

The influence of destination experience on destination image formation has been studied in previous research, mostly considering previous visits (Iordanova & Stylidis, 2019b). However, several authors have identified a research gap regarding analysing destination experience in real time (Iordanova & Stylidis, 2019b, 2019a; Jafar et al., 2022) by assessing the level of intensity of the on-site experience (Martin-Santana et al., 2017; Smith et al., 2015; Vogt & Andereck, 2003) and its influence on in situ destination image highlighting the importance of the “participation stage” on image formation (Iordanova & Stylidis, 2019b, p. 845), and indirectly on destination loyalty.

Image created in situ is more differentiated (Beerli & Martin, 2004) and precise (Iordanova & Stylidis, 2019b) and experiences of heritage attractions play an important role in image formation (Stylidis et al., 2022). Thus, in this study, the aim is to examine an on-site experience behaviour model with which the relationship between the intensity of the experience of on-site CMCH attractions (i.e. the amount of experiences or visits) and future loyalty to a coastal tourism destination can be analysed, along with destination image. Additionally, these relationships are tested for domestic and internationals visitors.
due to the relevance of visitors’ cultural background regarding their behaviour (Iordanova & Stylidis, 2019a).

To accomplish the main aim, the intention of the study is to address the following objectives: 1) to establish a relationship between visitors’ degree of on-site experience with CMCH, destination image and future loyalty; 2) to identify the mediating effect of cognitive and affective image between the degree of visitors’ on-site experience with CMCH and future loyalty; and 3) to test the effect of the degree of such experience on destination loyalty (intention to return and intention to recommend).

The study is built upon Zajonc’s mere exposure theory (MET) (Zajonc, 1968) to suggest that increasing number of CMCH attractions visited or experienced will facilitate better destination images and more positive attitudinal loyalty. This theory argues that people have a better attitude and assessment to a stimulus (e.g. experience or visit) after repeated exposure to it. MET is adopted to expand existing frameworks regarding the relationship between destination image and destination loyalty by including a new antecedent of loyalty, the degree of experience that visitors have with destination heritage attractions (i.e. CMCH). Thus calls are answered for new antecedents (Ragb et al., 2020), as well as for more empirical research on the relevance of the intensity of the experience on these constructs’ relationship (Martín-Santana et al., 2017) and the relevance of CMCH attractions on destination image (Ferreira da Silva et al., 2022). By analysing these links, a better understanding can be gained of how more on-site experiences (in this case related to CMCH) could influence in situ destination image formation and loyalty to a coastal tourist destination.

Regarding theoretical contributions, this study attempts to extend the work of Iordanova and Stylidis (Iordanova & Stylidis, 2019b) and Stylidis et al. (2022) contributing to the existing body of knowledge by testing an integrated model about tourist on-site experience intensity and in situ destination image and then understand their role in contributing to future behavioural intentions. A new theoretical framework (MET) will also be applied in the study of this relationship in a particular context, that is a coastal destination that offers visitors a vast range of CMCH experiences representing the identity of their coastal communities. As far as we can ascertain no study has yet used this a theoretical framework within the tourism literature.

Loyalty is a relevant indicator to assess the importance of having diversified on-site heritage experiences so that coastal destinations can overcome the constraint of replaceability. By understanding visitors’ intentions to revisit and recommend a destination to others, tourist operators and destination planners can have in-depth knowledge with critical information to define more sustainable strategies (Andriotis, 2018) and programmes that include more CMCH experiences contributing to adding value to the destination.

Findings will not be limited to the strict boundaries of Aveiro or Portugal, as several countries have a vast coastal area that includes heritage assets representing the identity of their coastal communities.

2. Theoretical background and development of hypotheses

2.1. On-site CMCH experience, in situ destination image and mere exposure theory

Several previous works have established that the relationship between heritage attractions and visitors and the related image that visitors develop regarding the destination appear to be linked (Ramkissoon et al., 2011; Rasoolimanesh et al., 2021; Stylidis et al., 2022). Although not exclusively, this positive relationship is in part due to their level of exposure to heritage attractions (Stylidis et al., 2022). Stylidis and Terzidou define exposure as “the extent to which we encounter a stimulus” (Stylidis & Terzidou, 2023, pp. 187-188). Several authors have established a relationship between a more positive evaluation of a
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stimulus after experienced repeated exposures to that stimulus (Hekkert et al., 2013; Janiszewski, 1993; Van Dessel et al., 2019).

Zajonc (1968) developed MET, which explains how an individual’s attitude will be positive to an increasing stimulus as there is less uncertainty regarding the novel stimulus. Thus, repeated exposure to a stimulus leads to recognition and consequently familiarity and favourability (Montoya et al., 2017; Stylidis et al., 2022). Despite this positive cause-effect relationship, Stylidis et al. (2022) refer to a decreasing effect of the stimulus after a certain number of exposures, a conclusion that according to these authors is validated by the meta-analyses carried out by Bornstein and Craver-Lemley (Bornstein & Craver-Lemley, 2017), and Montoya et al. (2017) study. Not only is the inverted-U effect highlighted, but the risk of a negative effect related to overexposure to the stimulus, in line with Miller’s (1976) study.

This theory was empirically tested in different research fields such as marketing, education and psychology, demonstrating the positive effect of exposure to a stimulus as highlighted by some authors (Stylidis, 2022; Stylidis et al., 2022; Stylidis & Terzidou, 2023). According to these authors, several studies have established this relationship. Some point out that being repeatedly exposed to stimulus contributes to more intense emotions and evaluations due to enhanced enjoyment (Mrkva, 2020); others highlight that this positive cause-effect is related to increased exposure to an object (Flores et al., 2018; Tom et al., 2007), promoting familiarity with it, which in the case of exposure to brands contributes to attracting buyers (Tom et al., 2007).

In the context of tourism, MET has not yet been widely studied (Stylidis et al., 2022). Kim et al. (2019) observed a positive effect of exposure to agrotourism products and consumption patterns, Iordanova and Stylidis (2019b) found a positive relationship between visitors’ number of visits and events and their image of Linz, Austria and Stylidis et al. (2022) found a similarly positive relationship between visitors’ perceptions of attractions and image of a coastal city that include heritage attractions. In the context of tourism marketing, despite the merit of the study of Iordanova and Stylidis (2019b), they also considered intentions, which is not a guarantee of behaviour. Moreover, the authors did not analyse how the visitors’ intensity (i.e. number/amount) of heritage experiences in a coastal context influences image and loyalty. A relevant relationship, the interaction between visitors and coastal communities’ heritage (tangible and intangible) for shaping destination image, was not studied (Ferreira da Silva et al., 2022; Ounanian et al., 2021).

Supported by MET, a positive relationship is expected between the number of CMCH experiences, image and loyalty, in line with previous studies (Iordanova & Stylidis, 2019b). Accordingly, the following hypotheses are proposed:

H1. Visitors’ on-site CMCH experience intensity positively affects their cognitive image.
H2. Visitors’ on-site CMCH experience intensity positively affects their affective image.

2.2. On-site CMCH experience, destination loyalty and the mere exposure theory
Heritage resources and associated experiences are important factors mainly for those with specific interests, culture or history that relate to such attractions (Su et al., 2020). It can contribute to motivating them to stay longer and to return (Piper et al., 2022; Rasoolimanesh et al., 2021). This leads to promoting loyal tourists that spread positive word of mouth (WOM) and tend to participate in several cultural and social activities (Stylidis et al., 2020).

Since visitors have a wide range of destination alternatives, destination loyalty represents a positive attitude regarding the destination (Almeida-Santana & Moreno-Gil, 2018; Zhang et al., 2014). According to Zang (2014), destination loyalty can be assessed from three approaches: behavioural, attitudinal, or
composite. The behavioural approach implies a previous/actual visit or experience in a certain destination, which has been previously referred to as “past loyalty” by Correia et al. (2015). Attitudinal loyalty is connected to intention to revisit or intention to recommend (Zhang et al., 2014) which has been named “future loyalty” (Yoon & Uysal, 2005). The last approach, composite loyalty, combines both attitudinal and behavioural loyalty (Tasci, 2017; Zhang et al., 2014).

Research has been carried out to ascertain the influence of multiple factors on destination loyalty (e.g. Stylidis et al., 2020). The need to carry out additional empirical research has been pointed out by some researchers, as well as frameworks that take new antecedents of loyalty into account (Stylidis et al., 2020; Tasci et al., 2022), such as the intensity of on-site experiences (Martin-Santana et al., 2017; Smith et al., 2015), as having consecutive experiences in a destination can positively affect visitors’ attitude and represent higher levels of loyalty to the destination (Rodríguez Molina et al., 2012).

This study adopts future loyalty (i.e. attitudinal) (Tasci et al., 2022) measured by the intention to revisit the destination and recommend it to friends and relatives. According to some tourism researchers, adopting the attitudinal loyalty measure is a more acceptable approach because it permits assessment of the strength of loyalty (i.e. from very disloyal to very loyal) when compared to a behavioural approach (Leo et al., 2021; Suhartanto, et al., 2018). In line with MET the following hypotheses are proposed:

**H3. Visitors’ on-site CMCH experience intensity positively affects destination loyalty.**

### 2.3. Cognitive image, affective image, and destination loyalty

Destination image is a highly studied place-oriented concept and has been studied since the 1970s (Hunt, 1975), with different authors giving various definitions. Tasci et al. (2007) defined it as “an interactive system of thoughts, opinions, feelings, visualizations, and intentions toward a destination” (p. 200). Tourism researchers agree on the multidimensional structure of destination image, which includes cognitive, affective, and conative components. Cognitive image concerns knowledge of the destination and represents the impressions which people have of destination attributes (del Bosque & San Martin, 2008). Affective image is related to the feelings and emotions towards its features (Gartner, 1994). Finally, the conative image is considered the behavioural output, which several authors relate to loyalty (del Bosque & San Martin, 2008; Kim, 2018) and usually is measured by the intention to revisit and to recommend the destination to friends and relatives (Agapito et al., 2013; Stylidis et al., 2020). In studies that present other behavioural constructs such as destination loyalty or its dimensions, it will be redundant to include the conative component (Tasci et al., 2022).

Several authors agree on the multidimensional nature of destination image. Gartner’s model was the first to propose a cognitive-affective-conative interrelated structure of image components with a hierarchical relationship (Gartner, 1994), which several authors adopted and empirically tested in different contexts (Agapito et al., 2013; Stylidis et al., 2017; Woosnam et al., 2020). Also, previous studies agree that the two dimensions of image (i.e. cognitive and affective) interact (Woosnam et al., 2020). Although most state that the cognitive affects the affective (Ragb et al., 2020; Stylidis et al., 2022; Woosnam et al., 2020), there are some that argue the opposite (Rollero & De Piccoli, 2010). Most of the studies that have analysed the relationship between the two components of image have concluded that the affective component is influenced by the cognitive component, and argue that the knowledge of the destination is the first assessment, after which visitors create a feeling about the destination (Lin et al., 2007; Woosnam et al., 2020). As stated by Gartner (1994) and concluded by Zhang et al. (2014) in their study, both components of image (i.e. cognitive and affective) influence visitors’ behaviour. This study considers loyalty as a separate construct.
Adopting this line of thinking, this study employs a hierarchical structure of destination image to assess whether the cognitive component will have a positive effect on the affective component in the context of an on-site heritage experience and also whether both components of image positively influence destination loyalty.

In line with the above-mentioned, dominant line of thinking that considers that there is an interaction between cognition and affect, a relationship that is stated by psychology studies, it can be deduced that there is a positive relationship between cognitive and affective image, and that both will positively impact loyalty (Stylidis, 2022). Accordingly, the following hypotheses are proposed:

H4. Cognitive image has a positive effect on affective image.
H5. Cognitive image has a positive effect on destination loyalty.
H6. Affective image has a positive effect on destination loyalty.

2.4. The mediating role of destination image (cognitive and affective) between on-site heritage experience and loyalty
Even though destination image has been considered as being of key relevance to tourism literature and highly researched, the use of its components (i.e., cognitive and affective images) as a mediating factor between on-site experience and loyalty is still scarce. Destination image has, for example, been used as a mediator between information source and visit intention (Baloglu, 2000), brand awareness and tourist satisfaction (Liu & Fang, 2018), emotional solidarity and loyalty (Woosnam et al., 2020), place attachment and conative image (Woosnam et al., 2020), and between perceived risks and loyalty (Najar & Rather, 2022). In the relation between tourist experience and loyalty, previous works have examined the mediating role of destination image between experience quality and behavioural intentions (Piranmneyagam et al., 2020), but have failed to examine its mediating role between the intensity of on-site experience and future loyalty. However, literature has identified both direct and indirect influences of destination image on behavioural intentions (Chi & Qu, 2008; Prayag et al., 2017), and that the intensity of tourists’ on-site experience (see Iordanova & Stylidis, 2019b) and their perceptions of heritage attractions (see Stylidis et al., 2022) both have a direct positive impact on destination image. Based on these arguments we deduce that destination image could be a mediating variable in the relationship between the intensity of on-site CMCH experiences and future loyalty. Accordingly, the following hypotheses are proposed:

H7. Cognitive image mediates the effect of on-site CMCH experience intensity on destination loyalty.
H8. Affective image mediates the effect of on-site CMCH experience intensity on destination loyalty.

2.5. The moderating effect of visitors’ origin
Based on previous studies and arguments, visitor origin is expected to have the potential to influence the relationship between on-site CMCH experience intensity and destination loyalty. Past studies found visitor origin to be an important determinant for destination loyalty (Chang, 2017; Iordanova & Stylidis, 2019a; Kamath et al., 2021; Pantouvakis, 2013; Tasci et al., 2022; Wang et al., 2023) Iordanova and Stylidis (2019a) found significant differences in the way domestic and international visitors’ perceived Linz as a tourist destination both a priori and during the actual experience. They concluded that visitors’ cognitive and affective image formation is affected by their origin (domestic vs. international). Domestic and international visitors value different attributes, which provides orientation for destination managers regarding the marketing of Linz. Further, Kamath et al.’s (2021) study supported the relevance of the heterogeneity of visitors’ perspectives in a heritage context. They obtained different results for domestic and international visitors to the Kumbh Mela religious festival, concluding that nationality has a significant moderating effect, for example on the relationship between memorable experience and loyalty. They justify the fact that the relationships were not significant to domestic visitors by their closeness to
the destination and thus easily accessible for them, as opposed to international visitors who make a greater investment to come to Kumbh Mela. Based on the above studies, visitor origin is expected to moderate the relationship between CMCH experience and future loyalty, which means that the magnitude of this relationship might vary depending on visitor origin (i.e. domestic or international). Thus, the following hypothesis is postulated:

\[ H_9. \text{Visitors’ origin moderates the positive effect of on-site CMCH experience intensity on destination loyalty.} \]

Based on the above-mentioned literature review and hypotheses, a theoretical model is proposed indicating the relationship between the intensity of on-site CMCH experiences, cognitive image, affective image, and destination loyalty, assuming destination image components as mediators and visitor origin as a moderator (see Figure 1).

![Proposed model](image)

**Figure 1. Proposed model**

### 3. Research methodology

#### 3.1. Research site

The empirical analysis was conducted in the Centre region of Portugal, in the city of Aveiro, a coastal municipality (population 83,508, according to Instituto Nacional de Estatística (INE, 2022b). This district capital of the Ria de Aveiro region is one of its 11 municipalities (five of them being coastal). Aveiro was selected as study area due to the vast CMCH of the city and adjacent municipalities.

Aveiro was one of the four finalists in the European Capital of Culture 2027 and is the National Capital of Culture in 2024. It has a strategic 2030 programme for culture in which CMCH represents its identity. Some of its heritage assets have national recognition, e.g. the moliceiro boat is inscribed in the National Inventory of Intangible Cultural Heritage, and an application is being prepared for the saltpans to be a World Heritage Site.

This coastal area offers a variety of activities and experiences related to CMCH (e.g. moliceiro boats; saltpans; Costa Nova (CN) houses; lighthouse; seafood gastronomy). Thus, Aveiro is an attractive tourism destination, and is also close to the city of Porto. This proximity has contributed to an increase in tourism in recent years (INE, 2022a). A total of 221,304 overnight visitors stayed in Aveiro in 2022, which
represents an increase of ≈ 3% when compared to pre pandemic times (2019), as opposed to the national situation, which faced a decrease of ≈ 2% between these two years (INE, 2022a).

Pressures, mainly in the urban canals, have been noticed in the region, as well as challenges in managing tourism flows in the city centre and finding a balanced visitor–resident relation during peak seasons. Even during the pandemic, in 2021, the city had a lower decrease in visitors (i.e., –36%) compared to the national average (i.e., –50%) and to visitor numbers from 2019, before the pandemic situation (INE, 2022a).

3.2. Sample and data collection
Data were collected on-site using self-administered questionnaires from August to October 2019. The sample included visitors to Aveiro (aged 18 years and older), and a heterogeneous purposive sampling was used (Jennings, 2010) as this method provides heterogeneity and variance among visitors. A total of 734 questionnaires were answered, but only 486 were valid and usable; 248 were excluded (14 were incomplete and 270 were visitors who had not yet visited CMCH). Thus, 486 surveys were considered in the final analysis to assess the relationships between the on-site CMCH experience intensity and destination loyalty, and to examine the mediating role of Destination Image (DI) and the moderating effect of visitor origin. The final sample was composed of 305 domestic and 181 international responders.

The questionnaire was made available in Portuguese, Spanish, English and French, which are the most common languages spoken by visitors to Aveiro. It was applied by four trained postgraduate students with the supervision of the first author before data collection. Respondents were approached in the city centre, near the Aveiro canals, where most tourist experiences occur and this was thus deemed an appropriate place to collect their impressions regarding the constructs involved in the study.

To increase sample representativeness, the questionnaire was applied every day, at different times. The survey was anonymous and confidential, which assured data protection.

3.3. Research instrument
To design the questionnaire, two approaches were adopted: a) conducting an in-depth literature review regarding CMCH, destination image and destination loyalty; b) as regards to image and destination loyalty, basing it on an instrument applied by Stylidis et al. (2017) in Eilat, Israel.

The questionnaire survey comprises four sections: 1. visitors’ travel behaviour (e.g., the purpose of the visit and number of previous visits to Aveiro, from “none” to “4 or more”); 2. measurement of Aveiro’s image and destination loyalty; 3. evaluation of visitors’ CMCH experience and its intensity; and 4. sociodemographic questions. Due to the complexity and multifaceted characteristics of destination image and loyalty concepts (Beerli & Martín, 2004; Stylidis et al., 2017) a multi-item measure was adopted. Cognitive image and affective image were the two components used to measure destination image. Conative image was not included to avoid redundancy in the model (destination loyalty was the outcome variable). The rating was supported by a five-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree), for 14 cognitive attributes and for four affective attributes (i.e., distressing–relaxing, unpleasant–pleasant, boring–exciting, and sleepy–lively) (Baloglu & Mccleary, 1999; Beerli & Martín, 2004). Based on previous studies (Agapito et al., 2013; Stylidis et al., 2017), loyalty was measured with two items: planned intention to revisit (“How likely are you to visit Aveiro in the next two years?”) and intention to recommend (“How likely are you to recommend Aveiro to your friends and relatives?”). For on-site CMCH experience intensity, the question asked was if visitors had experienced or intended to experience each CMCH activity, and how many times they had experienced it. To measure this, responders should indicate the number of visits to each of the five CMCH activities (i.e. moliceiro boats; saltpans; Costa Nova (CN) houses; lighthouse; seafood gastronomy), answering on a four-point scale.
from “none” to “more than three”. Participants’ answers to the five CMCH experiences were then re-coded in three categories: no visit was scored as 0, one visit was scored as 1, and two to three and more than three were scored as 2. Afterwards, the sum of the scores to the five CMCH experiences was computed, with the total intensity score ranging between 1 and 10, with a higher score indicating a higher number of CMCH experiences or visits. The final part is related to the sociodemographic questions, such as gender, nationality, educational level, income, etc.

To ascertain if there were any incongruences or if the structure of the questionnaire was adequate, as well as to simplify the questions, if necessary, the instrument was analysed and validated before data collection by five academics with experience in survey design. Then, to test the final version of the questionnaire, a pilot test was carried out with 30 participants with a sample balanced between domestic and international visitors of different nationalities, which allowed the adequacy of the instrument to be assessed regarding the representation of Aveiro’s image as a tourist destination. The accuracy of the measurement scales used and their items (i.e., cognitive image, affective image, destination loyalty) was demonstrated. Also, it allowed the questionnaire to be validated in the four languages applied (i.e., six in Portuguese and eight in Spanish, French and English). In the end, the corrections were minor (some words were changed) and the transportation cognitive attribute was removed, since the city is walkable, and visitors do not require transport.

3.3. Data analysis
The data analyses were carried out in four stages using SPSS v.28 and AMOS v.28. Firstly, a confirmatory factor analysis (CFA) (maximum likelihood estimation) was conducted in order to assess the validity and reliability of the constructs in the model (measurement model). Next, the hypothesized direct relationships predicted in the model were tested using structural equation modelling (CB-SEM) (maximum likelihood method). Subsequently, to test the mediation role of cognitive and affective image on the relationship between on-site experience intensity and destination loyalty, PROCESS macro (Hayes, 2018) model 4 was used. Finally, PROCESS macro model 5 was used to test the moderation effect of visitors’ origin on the direct relationship between on-site experience intensity and destination loyalty. Before carrying out the CFA, the common method bias was examined using Harman’s single factor test and using the full collinearity VIF (variance inflation factor) approach (Hayes, 2018). The results obtained satisfy Harman’s single-factor test, since the total variance of a single factor (31.84%) was under the cut-off value of 50% (Podsakoff, MacKenzie, Lee, 2003), evidencing the absence of common method bias. Moreover, the results showed that VIF values for all constructs were lower than 3.3 (Kock, 2015), also indicating the non-existence of common method bias issues for the data collected.

Four composite variables were first computed, based on the mean scores of the four cognitive image factors (natural environment, accessibility and amenities, local attractions, and local social environment) and were applied in the subsequent structural equation modelling analysis as indicators to measure the construct “cognitive image” (Chi & Qu, 2008; Qu et al., 2011; Stylidis et al., 2014). Several authors suggest this option in structural equation modelling to reduce possible multicollinearity among indicators and model complexity, which could undermine its goodness of fit (e.g. Bollen, 1989; Chen & Phou, 2013; Hair et al. 2014). Reliability was assessed by computing the composite reliability (CR) for the three constructs (cognitive image, affective image, and destination loyalty), and considering the cut-off value of 0.70 (Fornell, & Larcker, 1981; Hair et al. 2019). Factor loadings and average variance extracted (AVE) estimates were used to analyse convergent validity, considering the recommended threshold of 0.50 (Hair et al., 2014). Discriminant validity was analysed using two approaches: the Fornell-Larcker criterion, according to which the square root of AVE of each construct should be greater than the correlation with any other constructs; and the heterotrait-monotrait (HTMT) ratio value, which should be lower than 0.85 (Henseler et al., 2015).
As goodness-of-fit indices, the $\chi^2$/df (ratio of chi-squared to degrees of freedom), the GFI (goodness of fit index), the CFI (comparative fit index), the TLI (Tucker-Lewis index), the RMSEA (root mean square error of approximation) and the adjusted goodness of fit index (AGFI) were used. The fit of the model was considered good when $\chi^2$/df was between 1 and 3 (Bollen, 1989), the CFI, TLI, AGFI and GFI values were above 0.90 (Blunch, 2008; Kline, 2011) and RMSEA values were below 0.08 (Hair et al., 2014). Mediating and moderating effects were analysed by carrying out a bootstrap analysis with 5000 samples and with 95% bias-corrected confidence intervals (CIs) (Preacher & Hayes, 2004).

4. Findings
4.1. Respondents profile
The sample included respondents aged over 18 years old. Most came from European countries – Spain, France and Germany – but also from Brazil, which is in line with official statistics for tourism in the Ria de Aveiro region (Deloitte consultores, 2019). Respondents came from 31 countries, 75% European, and the remainder from the rest of the world. Most of the visitors were female (60%), younger than 34 (38%), repeat visitors (66%) and planning to stay in the city for a day (57%).

Table 1. Visitors’ details and trip behaviour

<table>
<thead>
<tr>
<th>Variables (%)</th>
<th>Domestic visitors (n = 305)</th>
<th>International visitors (n = 181)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58.6</td>
<td>61.3</td>
</tr>
<tr>
<td>Male</td>
<td>41.4</td>
<td>38.7</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18–34</td>
<td>40.8</td>
<td>33.1</td>
</tr>
<tr>
<td>35–54</td>
<td>28.6</td>
<td>43.1</td>
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<td>55+</td>
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<td><strong>Educational degree</strong></td>
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<tr>
<td>High school or lower</td>
<td>33.9</td>
<td>39.8</td>
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<tr>
<td>College graduate</td>
<td>17.1</td>
<td>18.8</td>
</tr>
<tr>
<td>Master’s or PhD</td>
<td>49.0</td>
<td>41.4</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single, divorced, widowed</td>
<td>54.9</td>
<td>49.7</td>
</tr>
<tr>
<td>Married, common-law marriage</td>
<td>45.1</td>
<td>50.3</td>
</tr>
<tr>
<td><strong>Nationality (continents)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>European</td>
<td>100</td>
<td>74.5</td>
</tr>
<tr>
<td>American</td>
<td>0</td>
<td>21.0</td>
</tr>
<tr>
<td>African</td>
<td>0</td>
<td>0.6</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td>3.3</td>
</tr>
<tr>
<td>Ocean</td>
<td>0</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Employment situation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed</td>
<td>50.0</td>
<td>59.7</td>
</tr>
<tr>
<td>Self-employed</td>
<td>9.5</td>
<td>11.6</td>
</tr>
<tr>
<td>Unemployed</td>
<td>6.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Retired</td>
<td>17.4</td>
<td>12.2</td>
</tr>
<tr>
<td>Student</td>
<td>14.8</td>
<td>11.0</td>
</tr>
<tr>
<td>Other</td>
<td>1.7</td>
<td>1.6</td>
</tr>
<tr>
<td><strong>Planning to visit other cities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 day</td>
<td>62.0</td>
<td>48.6</td>
</tr>
<tr>
<td>2–3 days</td>
<td>24.3</td>
<td>27.6</td>
</tr>
<tr>
<td>More than 3 days</td>
<td>13.7</td>
<td>23.8</td>
</tr>
<tr>
<td><strong>Stay in the city</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10
Domestic respondents were mainly repeat visitors (84%) and international respondents were first-time visitors (65%). Both groups were dominated by females, although they were more prevalent in the international group (61.3%). (Detailed information in Table 1).

4.2. Descriptive statistics
Both domestic and international visitors rated destination components (i.e. cognitive and affective image) positively. Both types of visitors rated the natural environment (M = 4.18; M = 4.20 respectively) and social environment (M = 4.10; 4.28) more favourably. Affective image was described by both visitor types as pleasant (M = 4.54; 4.66). Destination loyalty was also positive for both domestic and international visitors, who said they intended to recommend the destination to others (M = 4.67; M = 4.54 respectively). As concerns the intention to revisit Aveiro in the next two years, a significant difference was observed, with domestic visitors rating it as M = 4.60 and international M = 3.41, p < 0.001.

Significant differences were observed in the intensity of on-site heritage experiences between the two groups, with domestic visitors scoring M = 4.30 and international visitors M = 3.05; p < 0.001. Regarding the diversity of activities or visits, it was observed that most participants (n = 279; 57.4%) experienced the five considered options (i.e. moliceiro boats; saltpans; Costa Nova (CN) houses; lighthouse; seafood gastronomy), while only 9.9% (n = 48) experienced only one of the activities. A similar pattern was observed for both domestic and international visitors.

4.3. Measurement model
CFA results for the total sample showed an acceptable model fit: χ² (32) = 178.94, p < .001, CMIN/degrees of freedom (df) = 5.59, CFI = 0.853, GFI = 0.928, AGFI = 0.877, RMSEA = 0.097 and TLI = 0.793. However, considering that the CMIN/degrees of freedom and RMSEA were higher and the CFI and TLI were lower than the recommended cut-offs, and that one indicator of affective image (“relaxing”) was shown to worsen the model fit, a revised model without this item was run. Results showed an improvement in model fit, χ² (25) = 56.03, p = 0.001, CMIN/degrees of freedom (df) = 2.24, CFI = 0.963, GFI = 0.975, AGFI = 0.956, RMSEA = 0.051 and TLI = 0.947. Factor loadings were all statistically significant, ranging between 0.388 and 0.864 (Table 2).

<table>
<thead>
<tr>
<th>Constructs/ Indicators</th>
<th>Standardized estimates</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local social environment</td>
<td>0.605</td>
<td></td>
</tr>
<tr>
<td>Local attractions</td>
<td>0.673</td>
<td>10.03***</td>
</tr>
<tr>
<td>Accessibility and amenities</td>
<td>0.635</td>
<td>9.75***</td>
</tr>
<tr>
<td>Natural environment</td>
<td>0.629</td>
<td>9.70***</td>
</tr>
<tr>
<td><strong>Affective</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lively</td>
<td>0.713</td>
<td></td>
</tr>
<tr>
<td>Exciting</td>
<td>0.832</td>
<td>9.65***</td>
</tr>
<tr>
<td>Pleasant</td>
<td>0.388</td>
<td>7.31***</td>
</tr>
<tr>
<td><strong>Loyalty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intention to recommend</td>
<td>0.864</td>
<td>16.62***</td>
</tr>
<tr>
<td>Intention to revisit</td>
<td>0.451</td>
<td>16.62***</td>
</tr>
</tbody>
</table>

Table 2. Results of the measurement model for the total sample (N = 486)

Table 3 presents the descriptive statistics and discriminant validity regarding the three constructs under study, for the total sample. The composite reliability (CR) exceeded 0.70 for the cognitive image, and was close for the affective image, suggesting reliable measures (Hair et al., 2014). Loyalty showed lower reliability with a CR of 0.62. As for convergent validity, all standardized coefficients were above the
recommended mark of 0.50 and significant at the 0.01 level (see Table 2), except for one attribute of affective image (pleasant) and one indicator of loyalty (intention to revisit). The AVE values were lower than the suggested threshold of 0.5 (Hair et al., 2014) for all components, but since CR was higher than 0.6, their convergent validity is still adequate (Fornell & Larcker, 1981). Concerning discriminant validity, all constructs had square root of AVE values higher than the correlations among the independent variables, thus providing evidence for discriminant validity (Anderson & Gerbing, 1988). Additionally, the (HTMT) ratio correlation criteria corroborated the good discriminant validity results, with values for the correlations between loyalty and the affective and cognitive components being lower than 0.85 (Henseler et al., 2015) (0.42 and 0.44 respectively), and 0.37 for the correlation between the affective and cognitive components.

Table 3. Descriptive statistics and discriminant validity for the total sample (N = 486)

<table>
<thead>
<tr>
<th>Construct</th>
<th>M (SD)</th>
<th>CR</th>
<th>AVE</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cognitive</td>
<td>4.05 (0.36)</td>
<td>0.73</td>
<td>0.40</td>
<td>0.63</td>
<td>0.36</td>
<td>0.42</td>
</tr>
<tr>
<td>2. Affective</td>
<td>4.15 (0.59)</td>
<td>0.69</td>
<td>0.45</td>
<td>0.67</td>
<td>0.39</td>
<td>0.39</td>
</tr>
<tr>
<td>3. Loyalty</td>
<td>4.39 (0.75)</td>
<td>0.62</td>
<td>0.47</td>
<td>0.69</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The bold elements diagonal matrix are the square roots of the average variance extracted; inter-construct correlations are shown off-diagonal. All correlations are significant at the p < 0.001 level. SD = standard deviation; CR = composite reliability; AVE = average variance extracted.

4.4. Structural model

Next, the structural model was examined for the total sample (Table 4). The results confirmed the fit of the baseline model: $\chi^2 (30) = 102.38$, $p < 0.001$, CMIN/df = 3.41, CFI = 0.920, GFI = 0.960, AGFI = 0.926, RMSEA = 0.071 and TLI = 0.879. All six relationships were statistically significant and in the expected direction, except for the relationship between on-site experience intensity and affective image (H2), which was not significant ($p = 0.908$). Cognitive image was positively related to on-site experience intensity (H1), and on-site experience intensity evidenced a positive association with destination loyalty (H3). Additionally, cognitive and affective images positively affected destination loyalty (H5; H6).

Table 4. Structural model: Hypothesis test results of the structural equation model

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardized estimates</th>
<th>t value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 On-site experience intensity -&gt; Cognitive</td>
<td>0.134</td>
<td>2.50**</td>
<td>Supported</td>
</tr>
<tr>
<td>H2 On-site experience intensity -&gt; Affective</td>
<td>-0.006</td>
<td>-0.12</td>
<td>Not supported</td>
</tr>
<tr>
<td>H3 Cognitive -&gt; Affective</td>
<td>0.360</td>
<td>5.22***</td>
<td>Supported</td>
</tr>
<tr>
<td>H4 On-site experience intensity -&gt; Loyalty</td>
<td>0.242</td>
<td>4.40***</td>
<td>Supported</td>
</tr>
<tr>
<td>H5 Cognitive -&gt; Loyalty</td>
<td>0.309</td>
<td>4.14***</td>
<td>Supported</td>
</tr>
<tr>
<td>H6 Affective -&gt; Loyalty</td>
<td>0.293</td>
<td>4.16***</td>
<td>Supported</td>
</tr>
</tbody>
</table>

*p < 0.05; ** p < 0.01; *** p < 0.001

4.5. Mediating effect

Mediation analysis was then conducted, examining whether cognitive and affective image mediate the existing relationship between on-site CMCH experience intensity and destination loyalty (Table 5). A bias-corrected bootstrap analysis with 5000 samples was thus employed, using PROCESS macro Model 4 (Hayes, 2018) to test whether the indirect effect was significantly different from zero (Preacher, 2008). The results show that cognitive image was a significant mediator of the relation between on-site CMCH experience intensity and destination loyalty, since the CI for the mediating effect does not contain zero (95% CI [0.0015, 0.0329]). Given that the direct effect between on-site CMCH experience intensity and destination loyalty continued to be statistically significant ($p < 0.001$), cognitive image is a partial me-
mediator of this relationship. On the other hand, affective image was not significant mediator of the relationship between on-site CMCH experience intensity and destination loyalty, since the CI for the mediating effect contains zero (95% CI [-0.0116, 0.0211]).

Table 5. The mediation effect of Destination image on the relationship between on-site experience intensity and destination loyalty

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Standardized Effect</th>
<th>Bootstrapped 95% CI</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H7 On-site experience intensity -&gt; Cognitive -&gt; Loyalty</td>
<td>0.01</td>
<td>0.0015, 0.0329</td>
<td>Supported</td>
</tr>
<tr>
<td>H8 On-site experience intensity -&gt; Affective -&gt; Loyalty</td>
<td>0.00</td>
<td>- 0.0116, 0.0211</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

4.6. Testing the moderation effect

PROCESS Macro model 5 was used to analyse the moderating role of visitor origin on the direct relationship between on-site CMCH experience intensity and destination loyalty. The interaction term between on-site CMCH experience intensity and visitor origin had a significant effect on destination loyalty (p < 0.001), indicating that visitors’ origin moderates the association between on-site CMCH experience intensity and destination loyalty, thus supporting H9. Results (Figure 2) showed that higher intensity is associated with greater destination loyalty and this relationship was stronger for international than for domestic visitors (B = 0.1294, p < 0.001 and B = 0.0290, p = 0.030, respectively).

Figure 2. The moderating role of visitor origin between on-site experience intensity and destination loyalty

5. Discussion and implications

In this study, the intention was to demonstrate how the intensity of CMCH activities, along with cognitive and affective image, explain future loyalty in the context of domestic and international visitors to a coastal destination. Drawing on MET and based on previous studies that have either conceptually studied the importance of the intensity of on-site experience on destination image formation or the important role of attractions in such interactions (Iordanova & Stylidis, 2019b; Stylidis et al., 2022). This is an exploratory study that relies on a novel approach to the dynamic relation between visitors and heritage by adding a relevant determinant of destination image, the intensity of on-site experience (in this case related to heritage attractions in a coastal context), which has not been sufficiently studied (Smith et al., 2015), and its importance for visitors’ future loyalty. By exclusively using actual behaviour
Is visitors’ future loyalty influenced by on-site experience intensity? Examining the mediating role of destination image and the moderating effect of visitors’ origin

and not intentions, this study provides a more accurate assessment of visitors’ behaviour, as intentions are not a guarantee of behaviour (Carneiro et al., 2021). Also, the study measures image in real time, which is more accurate and realistic (Beerli & Martin, 2004; Iordanova & Stylidis, 2019b).

The findings, based on the data collected in the coastal city of Aveiro, Portugal (i.e. 486 questionnaires from visitors), show that of the nine hypotheses, only two were not supported, H2 (i.e. visitors’ on-site CMCH experience intensity positively affects their affective image) and H8 (i.e. affective image mediates the effect of on-site CMCH experience intensity on destination loyalty). The relationship between the intensity of CMCH experience and both components of image, although positive, only showed a significant effect on cognitive image (H1). This finding contradicts some previous studies that found both components are affected by the intensity of the experience (Iordanova & Stylidis, 2019b). Further, the role of affective image in some of the relationships provides unexpected findings. Affective image is not significantly related to the intensity of the experience (H2) and does not play a significant role as a mediator to future loyalty (H8). Although this is surprising, as most previous studies concluded that both components of image influence loyalty (Stylidis et al., 2022; Woosnam et al., 2020), there are several plausible explanations. One could be that affective image is not adequately measured by structured and quantitative analysis (Smith et al., 2015; Tasci et al., 2007) with some researchers arguing the use of qualitative methods and the adoption of unstructured tools to capture “free and individualistic responses” that best represent visitors’ affective image (Smith et al., 2015, p.114). Another explanation could be that by participating in several activities (e.g. like excursions or mass tourism), visitors do not have the time to develop bonds (Stylidis & Terzidou, 2023). Some of them arrive in Aveiro from Porto only for a one-day visit (i.e. 62% domestic and 48.6% international), with aim of experiencing as much as they can, and then return. Although this type of interaction with CMCH contributes to promoting visitors’ knowledge of the destination, it fails to create significant emotional bonds. These results are contrary to most heritage tourism studies, which found stronger relationships between heritage experience and emotions (e.g. Rasoolimanesh & Lu, 2023; Szubert et al., 2021). Most of these studies were not carried out in a coastal context during the peak season, where overtourism is a problem, and do not measure the impact of the intensity of the visit or experience, but the quality of the experience.

Findings also show that on-site CMCH experience intensity exerts a positive influence on destination loyalty (H3), which is in line with the study by Stylidis et al. (2022), which demonstrates the relevance of visitors’ interactions with heritage attractions to their future behavioural intentions. Furthermore, it shows the influence of the cognitive image on the affective image (H4), a result that confirms the hierarchical character of destination image components. This interrelationship was first proposed by Gartner (1994) in the context of the tourism field and then validated by several researchers (e.g. Stylidis et al., 2022; Woosnam et al., 2020). However, these findings are contrary to those of Stylos and Bellou (2019), which use a single structure for destination image, as they advocate that conative image is at the same level of conceptualization as the other two components of image (Stylidis et al., 2022). According to Stylidis (2022, p.196) these findings contribute to current discussions regarding destination image structure, along with both “the order and supremacy of the cognitive and affective image in predicting each other and the conative image” or loyalty.

Cognitive and affective image predicts future loyalty (H5 and H6), this result is in line with previous studies providing ample empirical support to the positive relationship between image components and future behavioural intentions (Li et al., 2010; Stylidis et al., 2022; Woosnam et al., 2020). Also, cognitive image is a mediator to future loyalty (H7), a result that is in line with those of Tasci et al. (2022), who confirms the relevance of cognitive image (i.e. destination attributes) in influencing future loyalty.

In line with what was proposed and deduced, the study also sheds light on the magnitude of the relationships between CMCH experience and future loyalty, which might vary depending on visitor origin.
(i.e. domestic and international) (H9) (Iordanova & Stylidis, 2019b), and which is stronger for international visitors. Although this result may seem surprising, it could make sense, with multiple plausible explanations, one of them being that international visitors are more interested in knowing about local heritage due to novelty as opposed to domestic visitors (Kamath et al., 2021); it is more surprising for them, and in the case of intensity (also diversity) it is logical that it increases their intentional behaviours. Also, their effort to do the visit is higher when compared to domestic visitors, as they are travelling from other countries with the aim of having different cultural experiences. Thus the interaction with this heritage has a higher importance, which affects how strong the relationship between the intensity of the experience and their behavioural intentions is (Kamath et al., 2021). For domestic visitors, this heritage is more accessible and not so surprising, and this is even more justified because this group is made up mostly of repeat visitors (84%), contrary to the international visitors, of whom only 35% are repeaters.

5.1. Theoretical implications and contributions
Research on heritage in the context of coastal destinations remains limited. By exploring the effects of exposition to a particular type of heritage attractions (i.e. CMCH) on image and loyalty in a coastal context, through the intensity of the experience of such heritage, the findings of this study form a robust theoretical foundation for a more thorough understanding of visitor–heritage encounters and indicate paths for future research. Relationships between the constructs under analysis could vary depending on the study context. Overall, the study presents three main theoretical implications.

First, it is an exploratory study and one of the few that capture visitors’ interaction with heritage attractions and assesses the effect of the intensity of these interactions, along with the cognitive and affective in situ image, on future loyalty. Previous heritage studies have conceptualized heritage on-site experience–destination image–loyalty interactions through the quality (Rasoolimanesh et al., 2021) rather than the intensity of interaction, with researchers calling for further studies on the role of the intensity of such interactions (Martín-Santana et al., 2017; Smith et al., 2015). It provides clear support for MET in tourism marketing studies and provides another factor of the visitors’ heritage interactions, which is an underexplored theme. Increasing visits or experiences to heritage attractions provides additional exposure and opportunities for interactions between these assets and visitors, facilitating better knowledge about destinations’ tangible and intangible heritage and appreciation of it. This interaction contributes to developing a positive image and increasing future behavioural intentions. Consequently, these findings give credence to MET by validating the fact that frequent exposure to heritage experiences contributes to more favourite evaluations, thereby expanding the application of this theory to the tourism field. Further, it gives empirical support and extends previous frameworks (Iordanova & Stylidis, 2019b; Stylidis et al., 2022).

Second, this study also expands our understanding of the way in which the components of destination image mediate the relationship between the intensity of heritage experience and intentional behaviours (Stylidis et al., 2022), demonstrating the supremacy of cognitive image as mediator, as compared to affective image (Tasci et al., 2022). This finding is in line with some previous research that concluded that “place-oriented concepts are better predictors of destination loyalty than people-oriented factors” (Tasci et al., 2022, p.448). It confirms the role that touristic attributes as central elements (i.e. knowledge factors) play in influencing destination loyalty, principally future loyalty, as opposed to affective image, which is seen as a peripheral element (see Tasci et al., 2022).

Lastly the interrelationship between image components and future loyalty, as well as the hierarchical structure of destination image in an integrative model, contributes to current discussions regarding both the structure and the hierarchical relationship among image components (Stylidis et al., 2022). Further, despite the capacity of the model to explain the overall behaviour of all visitors, the model
shows a stronger relation between the intensity of heritage experience and visitors’ future loyalty for international visitors as opposed to domestic visitors. This is a relevant contribution for the tourism literature and further echoes what others have found (Kamath et al., 2021) regarding heterogeneous perspectives for domestic and international visitors in the visitor–heritage interactions, but in a particular context (i.e. a coastal area).

5.2. Implications for industry and management
The findings of the study provide tourism planners and operators of coastal destinations with information that allows them to take advantage of CMCH attractions for promoting coastal destinations, as these assets contribute to differentiating the destination in a competitive tourism market. Destinations that attract both domestic and international visitors need to define appropriate marketing strategies, as the results of the study indicate that coastal and maritime cultural heritage is an important resource for coastal areas to attract visitors, leading to improved image perception and future loyalty. The results show that on-site heritage experiences could be an important asset for attracting both domestic and international visitors. Domestic visitors, who are closer to and more familiar with the destination, could be motivated by a more diverse offer of CMCH activities to continue to have new opportunities. International market segments could also be by new offers as they appreciate destinations with heritage attractions and activities that they feel are authentic (Kamath et al., 2021; Tasci et al., 2022).

This research provides several implications for DMO, destination managers and planners, the local tourism industry and tourism planners. It demonstrates the positive impact of the intensity of visitors on-site experience on future loyalty and this information is of key relevance, as the number and diversity of heritage experiences could reinforce tourists’ destination loyalty and positively impact destination image (Stylidis et al., 2022). Thus, coastal destinations such as Aveiro could take advantage of their heritage resources to adopt marketing strategies that enhance visitors’ perceived image and differentiate it from other 3S destinations (Domènech et al., 2023), for example by considering including workers from local coastal communities with knowledge of heritage that has been passed down the generations in the heritage activities (Ferreira da Silva et al., 2022). Although most of the visitors only stay for a day in the city, tourist operators should offer more diverse activities, simultaneously contributing to avoid the risk of decreasing effect of the stimulus (Stylidis et al., 2022), or even negative effect that overexposure to the same activities could have (Miller, 1976). This could contribute to longer stays in the region, which is one of its main constraints, and consequently offer visitors more time to create emotional bonds with the heritage and the region. Also, by including workers from local coastal communities still working in CMCH activities, the “human touch” can assume a more important role than the physical aspect of heritage with a positive effect on affective image and future loyalty (Tasci et al., 2022).

The findings also indicate that cognitive image mediates the relationship between on-site experience and future loyalty, so the intensity of heritage experience is positively related to cognitive image (e.g., quality of natural and cultural heritage resources), which has an indirect effect on increasing loyalty. Thus, it is of key importance for destination authorities to invest in protecting this heritage, not only because CMCH includes cultural and natural heritage that are indissociable, but also because some (e.g. traditional saltpans) are located in sensitive protected areas that are exposed to various environmental (e.g. flooding) and human-caused threats (e.g. tourism pressures) (Ferreira da Silva et al., 2022; Flannery et al., 2022). The region is mainly visited during peak season, causing pressures on CMCH assets.

Promoting CMCH allows 3S tourism and heritage tourism to be seen as complementary and represents new alternatives for coastal destinations, which are highly replaceable in the competitive tourism market (Carvache-Franco et al., 2021). For the Aveiro region, it represents an opportunity to develop more CMCH activities through integrated packages, simultaneously contributing to minimizing tourism pressures on the city centre and promoting planned degrowth and sustainable strategies (Andriotis,
2018) as some of the heritage attractions, not yet being explored for tourism, are located in adjacent low-density areas (e.g. the boat building industry). It could also be promoted with special conditions for low season, minimizing seasonality constraints and pressures during peak season, by motivating tourists to visit throughout the year, promoting sustainable flows among CMCH assets. Particularly for the city of Aveiro, the National Cultural Capital in 2024, it represents an opportunity to reinforce loyalty among repeaters and to attract new visitors.

6. Limitations and future directions
Despite the findings of this study providing several contributions, the research may be improved in the future. First, the generalizations of the results may be limited due to several factors. The study was carried out in one Portuguese coastal city, in an urban context, during the peak season with the effect of tourism pressure, and the results could be different in low season. Also, CMCH experiences and visitors’ cognitive and emotional perceptions may be different due to the geographical and cultural context. A better understanding of the effect of the intensity of on-site CMCH experience on image formation and future loyalty could be obtained if the study was replicated in other territorial contexts, such as a low-density coastal area in Portugal and other countries in Europe or on other continents with this particular type of heritage, as coastal communities’ tangible and intangible heritage has a local character. Also, it would be interesting to replicate it after the COVID-19 pandemic to assess whether the results reveal differences in all concepts of the model (Stylidis, 2022; Stylidis et al., 2022; Tasci et al., 2022). Further, adopting a longitudinal approach with different cultural samples could present the effects of COVID-19 on destination perceptions and attitudes in different regional contexts (Tasci et al., 2022).

Second, this study focuses only on the effect of the intensity of the experience on image and future loyalty. However, several studies demonstrate the importance of the quality of the experience to the formation of destination image and behavioural intentions. Consequently, future studies should consider measuring the quality of the experience related to this particular type of heritage in a coastal context as well.

Third, the study has some methodological shortcomings that future studies may overcome. The AVE for the three variables (i.e. cognitive image, affective image and loyalty) is low (under 0.50 as recommended), which may be related to the low number of items. Some attributes that were more adequate to the geographical context may not have been included, as the region studied is known for its CMCH. This limitation is also mentioned by Stylidis et al. (2017) in their study in Eliat. This reduced number of items in each construct also did not allow the exclusion of attributes in order to improve these values. Future research should consider extending the cognitive image measure to include additional attributes. Also, the destination loyalty variable only assesses the intention to revisit and the intention to recommend the destination to others, and the fact that the variable includes only two items limits statistical results, contributing to a low CR. Thus, items other than the ones used to measure loyalty and an additional question regarding the willingness to post on social media, an important behaviour to consider nowadays (Stylidis et al., 2022), should be added. Moreover, researchers should consider measuring composite loyalty by including past loyalty, as behaviour is a more accurate assessment (Tasci et al., 2022; Woosnam et al., 2020; Zhang et al., 2014). Further, future studies could consider adopting a mixed-methods approach, combining qualitative and quantitative methods, as suggested by several authors that considered combined research approaches to more accurately study the complexity of the phenomena in different destinations (Ragb et al., 2020; Stylidis & Terzidou, 2023).

Finally, a future model should include satisfaction, as several researchers suggest that experience precedes satisfaction and found a positive relation between these constructs (Kim, 2018; Melón et al., 2021). Also, previous studies found positive relationships between image, satisfaction, and destination loyalty.
Is visitors’ future loyalty influenced by on-site experience intensity? Examining the mediating role of destination image and the moderating effect of visitors’ origin (Chen & Tsai, 2007; Deb, 2021; Marine-Roig, 2021) and some also connect heritage travel motivation with satisfaction in a heritage destination context (Su et al., 2020)

References
Is visitors’ future loyalty influenced by on-site experience intensity? Examining the mediating role of destination image and the moderating effect of visitors’ origin


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