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# What shapes tourists' visit intention in different stages of public health crises? The influence of destination image, information-literacy self-efficacy, and motivations

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## ABSTRACT

This empirical study aims to identify the components of destination image and tourist motivation that help explain tourist visit intention during different stages of a major public health crisis. It also seeks to determine how tourists' information-literacy self-efficacy influences that image. The research focuses on two stages of the COVID-19 pandemic: 1) tourist behavior *before* the alleviating effect of a public vaccination program is felt among the general public and 2) tourist behavior *after* the alleviating effect has reached most individuals. The results show that, in stage 1, visit intention is shaped by a "safe and secure" destination image, affective image, and tourists' stimulus-avoidance motivation. In stage 2, visit intention is influenced by both cognitive and affective image and by intellectual, social, competence, and stimulus-avoidance motivations. Information-literacy self-efficacy influences destination image in both stages. These findings enable tourism managers to develop mechanisms to lessen the adverse effects of health crises.

## 1. Introduction

The tourism sector was severely affected by the global public health crisis caused by the COVID-19 pandemic in 2020—widely considered the most influential and destructive event of the 21st Century for the tourism industry (WTTC, 2020). International arrivals alone fell by 74% (UNWTO, 2021). However, according to statistics from UNWTO's World Tourism Barometer in 2022, international tourism is starting to recover: in the first seven months of 2022, arrivals achieved 57% of pre-pandemic levels (UNWTO, 2022).

But the tourism sector, in recent decades, has gone through a number of crises. Regardless of whether these were human or natural in origin, or their scope (regional or global), this is a sector whose evolution is strongly influenced by external factors. Furthermore, despite the fact that the tourism sector stands out for its ability to recover (Ritchie, Crofts, Zehrer, & Volsky, 2014), every crisis brings tourism to a momentary standstill and leaves its mark, affecting tourist perceptions and decision-making (Ritchie & Jiang, 2019).

Having a sound understanding of consumer behavioral intentions is crucial for the tourism industry if it is to be resilient during these

challenging times (Sigala, 2020). One of the main theories used to explain behavioral intention is the Theory of Planned Behavior (TPB) (Ajzen, 1991). However, there is limited research that has applied this model to select a travel destination (Bianchi, Milberg, & Cúneo, 2017) and even fewer studies in a health crisis context (Liu, Shi, Li, & Amin, 2021). The initial formulation of the TPB has been expanded by various authors who have integrated additional variables, including travel motivation (Hsu & Huang, 2012; Soliman, 2021) and destination image (Soliman, 2021). The present study examines these two concepts, which are scarcely discussed in the literature in the context of public health crises. The application of the TPB can be helpful in terms of achieving a better understanding of theoretical frameworks and increasing their predictive power in a specific field (Ajzen, 1991; Han & Kim, 2010).

Regarding destination image, a major crisis in this sector can cause changes that can affect both image-formation and its effect on tourist decisions (Jiang, Qin, Gao, & Gossage, 2022; Susanti, Hermanto, & Suwito, 2023). Crises related to health, to terrorism and armed conflicts, or even to nature provoke uncertainty in the tourist. This means that safety, security, and protection are important determinants in the traveler's decision to visit a particular place (Beirman, 2003), becoming a

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key factor in explaining their behavior (Irvine & Anderson, 2006; Mitchell & Vasso, 1997). The importance of the perception of safety, security, and protection in the context of a crisis in tourism renders it necessary to isolate this component from the cognitive image of the destination (Gartner, 1994) to analyze it in its own right.

In the formation of this “safe and secure” image, the information that tourists receive about a crisis and the way in which it is managed are both key to reducing uncertainty (Jonas & Mansfeld, 2017). However, not all individuals have the same ability to process this information. It is for this reason, following the global health crisis caused by COVID-19, that different risk-information-processing models began to include the tourist’s own information literacy self-efficacy (Peco et al., 2021a,b). This variable is important because consumers with greater information literacy self-efficacy will be more likely to have the appropriate tools to choose the relevant information (Yang & Nair, 2014) and select the products and services that interest them most (Lee, Lee, & Lee-Geiller, 2020). Hence, in addition to safety perceptions, it may also influence the tourist’s cognitive and affective image of a destination.

Furthermore, according to the evolutionary theory proposed by Senbeto and Hon (2020), depending on the stage of an unfolding tourism crisis, the affective, cognitive, and safety/security components of destination image may play a more (or less) important role when it comes to explaining the tourist’s behavior. If we look at destination image under the effects of the COVID-19 pandemic, the evidence has shown that the alleviating effect of the public vaccination program has been decisive in the overall reactivation of tourism (Moreno-González, León, & Fernández-Hernández, 2020; Sánchez-Cañizares, Cabeza-Ramírez, Muñoz-Fernández, & Fuentes-García, 2021; Wang, Kunasekaran, & Rasoolimanesh, 2021). In this regard, two clear stages can be distinguished in the evolution of this particular crisis: before and after the majority of the population was vaccinated. To date, we have not been able to identify any empirical studies that show how the perception of risk and uncertainty in different stages of the evolution of a tourism crisis may affect the relevance of the affective, cognitive, and safety/security components of destination image.

Regarding tourist motivation, there are many studies that analyze this variable (e.g., Harrill & Potts, 2002; Pearce & Lee, 2005) but few that do so within a crisis context (Kusumaningrum et al., 2020) and none, to date, that has analyzed how motivation in the leisure context evolves over different stages of a crisis. Addressing this lacuna, the present research seeks to verify the tourist motivations that were activated before vs. after the majority of the population had been vaccinated, taking the case of Spain.

The overarching objectives of this research are therefore to identify the components of destination image and tourist motivation that are relevant in explaining the tourist’s visit intention during each of the two broad stages of a crisis—taking the example of the public health crisis caused by COVID-19—and to study how tourist information literacy self-efficacy shapes that perceived image. The two stages in question are: 1) before the majority of the population had been vaccinated against COVID-19 (hereafter: the low vaccination rate stage); and 2) after the majority of the population had been vaccinated (hereafter: the high vaccination rate stage). The results are relevant in assisting destination managers and tourism policymakers to address future tourism crises, through an understanding of the elements that will contribute to the resilience of the sector at different points in the evolution of the crisis in question.

## 2. Literature review

### 2.1. Tourist destination image and its effect on visit intention during the evolution of a major public health crisis

Destination image can be defined as “an individual’s diverse cognitive and affective associations relating to a destination” (Kock, Josiasen, & Assaf, 2016, p. 32). Three components can be differentiated

within the image: cognitive, affective, and conative (Gartner, 1994). The cognitive component is concerned with the beliefs held by an individual about a given destination, combined with the prior knowledge they have acquired about it and the attributes it offers. These elements come together to form a mental image of the place in the mind of the consumer (Baloglu & McCleary, 1999; Pike, 2004). The affective component explains the emotional responses and feelings of the individual toward a destination (Baloglu & Brinberg, 1997; King, Chen, & Funk, 2015). Finally, the conative component of destination image comprises the action taken—that is, the actual behavior of the individual or their genuine intention to revisit and recommend the destination to others (Bigné, Sánchez, & Sánchez, 2001; Gartner, 1993; Konecnik & Gartner, 2007; Pike & Ryan, 2004; Tasci and Gartner, 2007; Tasci, Gartner, & Cavusgil, 2007).

Among the studies dealing with this topic, there are those that highlight the composite and formative nature of destination image, referring to it as an “overall” image (Styliadis, Belhassen, & Shani, 2017) and integrating its different facets into a single component (Papadimitriou, Apostolopoulou, & Kaplanidou, 2015; Stylos, Bellou, Andronikidi, & Vassiliadis, 2017). However, some scholars recommend analyzing its components separately. For example, Lin, Morais, Kerstetter, and Hou (2007) argued that the importance of the cognitive and affective dimensions of image varied across different destinations and that these should be studied individually when investigating destination image (Styliadis et al., 2017). Other extant research suggests that images can change over time (Zenker & Kock, 2020). However, in addition to time, changes in image can also be triggered by events—such as large-scale crises—which alter normal tourism behavior and trends (Floyd, Gibson, Pennington-Gray, & Thapa, 2003) because of the uncertainty, disruption, and risk that they generate.

Crisis-related changes in a destination’s image can affect both how that image is formed and also its effect on tourist behavior. First, with regard to image-formation, a public health crisis requires an additional dimension to be added to the mix, since travelers’ perceptions of safety and protection constitute a major determinant in their decision to visit a given place (Beirman, 2003). Mitchell and Vasso (1997) and Irvine and Anderson (2006) found that it is the *perception* of risk—rather than the actual facts or circumstances of any real risk—that influences the behavior of tourists when avoiding or canceling a trip to a particular destination. On this basis, given that perceptions vary widely, it has also been verified that the Coronavirus pandemic affected different countries in different ways and that they also managed the resulting crisis differently. In particular, some destinations (such as Italy and Spain) suffered high infection rates, and this may have altered the image attributed to them by potential tourists (Afshardoost & Sadegh, 2020). The image dimensions that have potentially been influenced by the pandemic include perceptions of health infrastructure, safety, or associations otherwise undermined by COVID-19, such as nightlife, mass tourism events, or perceptions of overcrowding (Zenker & Kock, 2020). In light of the particular importance of tourist perceptions of safety and protection in travel decision-making in the context of a public health crisis, the present study includes an additional component to those proposed by other authors (Gartner, 1994), namely an image of safety at the destination.

Second, such a large-scale health crisis may also moderate the effect of the different dimensions of destination image on visit intention. Relevant to this issue are evolutionary theories that offer a comprehensive understanding of tourism behavior and related patterns with regard to a multi-stage crisis (Senbeto & Hon, 2020), because they “provide ultimate explanations in terms of when and why a behavior may have emerged in a species’ evolutionary past” (Mesoudi, 2009, p. 933). Thus, the present study focuses on the evolution of tourist behavior across the two aforementioned key stages of a global public health crisis, examining the effect of destination image on visit intention during the COVID-19 pandemic. Crucially, vaccination against COVID-19 has been one of the key factors in the reactivation of tourism

activity worldwide (Moreno-González et al., 2020; Sánchez-Cañizares et al., 2021; Wang et al., 2021).

In the first stage of the pandemic, when only a minority of the population (primarily, healthcare professionals and other keyworkers) has been vaccinated, risk and uncertainty—around the effects that the disease might cause—predominate. This stage represents the actual change brought about by the crisis because tourists tend not to want to travel during such scenarios (although not everyone reacts in the same way—indeed, research indicates that some tourists do travel *regardless* of the crisis) (Hajibaba, Gretzel, Leisch, & Dolnicar, 2015). Information about the crisis and tourists' interpretation of it influence how their perception changes (Senbeto and Hon, 2018), while risk and uncertainty are major issues associated with people's perceptions of crises (Senbeto and Hon, 2018). According to expected utility theory, decisions are based on a relative position between certainty and uncertainty (Pettigrew, 2015). Similarly, prospect theory suggests that risk and uncertainty influence tourists' decision to travel (or not) (Xu, Zhou, & Xu, 2011). Research on how to avoid uncertainty reveals that the decision to travel during a crisis depends mainly on tourists' perceptions of risk and uncertainty, which affect everything from pre-visit planning to the choice of amenities at the destination (Kozak, Crotts, & Law, 2007). Therefore, during the period when a crisis is not yet under control, a direct relationship can be proposed between an image of safety and visit intention. The following research hypothesis is therefore proposed.

**H1.** During a public health crisis, a “safe destination” image has a positive and significant effect on visit intention when only a minority of the population has been vaccinated.

The literature demonstrates the nature of, and the role played by, the emotions that tourists attribute to a specific destination and experience around it (Kock et al., 2016), such as their affect for the destination (ibid.), the affective descriptors of destinations (Baloglu & Brinberg, 1997), or visitors' affinity for the destination (Josiassen, Kock, & Norfelt, 2020). Josiassen, Assaf, Woo, and Kock (2016) note that affective predispositions are important determinants of destination choice. In a similar vein, Karl, Ritchie, and Gauss (2021) conducted an exploratory study in which they verified how affective forecasting can help mitigate the negative impacts of a pandemic on the tourism industry by altering the psychological processes to which tourists are subject during such crises—such as developing perceptions of travel risk that affect travel decision-making. However, despite the importance of emotions, affective forecasting in situations relating to health crises has been under-explored in the tourism literature to date (Karl et al., 2021)—with the exception of Herrero, San Martín, Collado, and García-de-Los-Salmones (2022), which tests the effect of affective image on tourist loyalty—despite the clear role played by emotions in developing resilience when the sector undergoes challenging times. The following hypothesis is therefore proposed.

**H2.** During a public health crisis, affective destination image has a positive and significant effect on visit intention when only a minority of the population has been vaccinated.

In the second stage of the crisis, by which time the majority of the population has been vaccinated and are experiencing the alleviating effect of the vaccination program, it is important to acknowledge that, as crises and disasters are unpredictable, they can trigger consternation and stress at the destination. These reactions may, in turn, be conveyed to visitors, whose perceptions then fall under the influence of fear, uncertainty, and anxiety (Senbeto and Hon, 2018). Earlier studies indicate that such uncertainty-driven anxieties may undermine consumer visit intention or even make people reluctant to travel to the destination at all (Hon, Bloom, & Crant, 2014). Tourists' responses may vary greatly, however, following a crisis, and not all consumers will find their behaviors curtailed by anxiety. The assessment that tourists make, post-crisis, can therefore be understood as the combined result of their perceptions of change and the behaviors that are prompted by

alleviating factors or by simply choosing to ignore disruptive events at the destination (Senbeto and Hon, 2018).

Thus, the alleviating effect of vaccine availability may be such that, just as in times of normality (non-crisis) for the tourism sector, it is the affective and cognitive dimensions of destination image that exert an effect on travel intention. Based on the above, the following research hypotheses are proposed.

**H3.** During a public health crisis, cognitive destination image has a positive and significant effect on visit intention when the majority of the population has been vaccinated.

**H4.** During a public health crisis, affective destination image has a positive and significant effect on visit intention when the majority of the population has been vaccinated.

### 2.1.1. *The consumer's information literacy self-efficacy as an antecedent of destination image during an unfolding public health crisis*

There are several studies that affirm that information sources are an antecedent of destination image (Beerli and Martin, 2004a; Josiassen et al., 2016; Frías, Rodríguez, & Castañeda, 2008) and that tourists use different sources in their decision-making (Sparks & Pan, 2009).

During major health crises, it is common for the volume of information conveyed via different channels to increase considerably as destinations seek to reduce uncertainty in the tourist decision-making process and encourage consumers to perceive that it is safe to travel (Jonas & Mansfeld, 2017). When tourists lack information, the media plays an important role in shaping the perceived risk associated with destinations directly affected by the crisis in question—as well as those that are unaffected, due to the domino effect (Cavlek, 2002). Media coverage and “word of mouth” information about epidemics and terrorism in tourist destinations, for instance, shift and shape consumer perceptions of risk. Due to their high degree of credibility and their ability to reach large audiences in a short period of time, the media are particularly influential in changing people's perception of a destination (Tasci and Gartner, 2007). For example, they can modify the image of a place in the wake of an international event or incident by conveying images that heighten or diminish the perceived risk of visiting the destination in question (Hall & O'Sullivan, 1996).

Indeed, in times of crisis, such is the intensity of the media's role that consumers find themselves having to process vast volumes of information and images relating to the destination. Hence, the literature underlines the idea that consumers' *information literacy self-efficacy*—their self-perception of how able they are to locate, process, and apply the right information (Yan et al., 2017)—also plays a critical role. Information literacy self-efficacy, which derives from self-efficacy theory (Bandura, 1997), is especially pertinent to risk-information-processing models (Peco et al., 2021). However, most theoretical frameworks involving this variable do not deal with risk-related information-processing in the tourism context but with the management of health-risk and epidemics. Rare exceptions include the study by Peco et al. (2021), which examines the role of information literacy self-efficacy in hotel perceived safety in the aftermath of the COVID-19 pandemic. The other work dealing with this variable in the tourism context is that of Aliperti and Cruz (2019), which applies the RISP model. These authors analyze tourists' information-search about tsunami risk in Japan and demonstrate the impact of information literacy self-efficacy on knowledge about risk and intention to seek risk-related information. In view of this paucity of studies, Aliperti and Cruz (2018) and Aliperti and Cruz (2019) call for the continued examination of information literacy self-efficacy in the tourism context.

The present paper responds to this call and adopts the RISP model, which acknowledges that people's level of ability plays an important role when they want to search for and process information because, even when they are motivated to search for information about risks, they must first evaluate the different sources available and select the most

appropriate (Yang & Nair, 2014). Thus, they require the ability to pinpoint the right information and manage it correctly, as well as confidence in that ability (Yang & Nair, 2014), which, in turn, will enable them to enjoy better knowledge and understanding of risk (Aliperti & Cruz, 2019).

In short, information literacy self-efficacy is highly relevant to the customer's process of obtaining information about risk, and, therefore, to the level of safety they perceive (which is also influenced by the content of the information they obtain) (e.g., Zou and Meng, 2020). Therefore, in line with the RISP model, it follows that information literacy self-efficacy influences the image of a "safe destination" perceived by the visitor. Similarly, consumers with greater information literacy self-efficacy will have the appropriate tools to select the relevant information from the large volume available (Yang & Nair, 2014) and identify the products and services that interest them the most (Lee et al., 2020). Thus, in turn, it can also affect the cognitive and affective images the individual holds of a destination. Despite the literature having highlighted the need to achieve a better understanding of information literacy self-efficacy in the context of tourism crises specifically (Aliperti et al., 2018; Aliperti & Cruz, 2019), it has yet to provide empirical evidence of the effects of this variable on the "safe", affective, and cognitive dimensions of image that the consumer perceives about a tourist destination at different stages of a major public health crisis. The following hypothesis is therefore proposed.

**H5.** Consumer information literacy-self-efficacy has a positive and significant effect on "safe," affective, and cognitive destination image regardless of which stage the public health crisis has reached.

## 2.2. Travel motivation during the evolution of a public health crisis

Within tourism research, travel motivation has been widely debated (Harril and Potts, 2002; Pearce & Lee, 2005), with academics and professionals alike discussing the motivation to travel as one of the main determinants of tourist behavior (Crompton, 1979). However, little research has been conducted, to date, into tourist motivation during a public health crisis (Kusumaningrum et al., 2020), although previous studies have shown that, in the wake of some type of disaster or other, tourists' decision-making can be influenced by their motivations (Biran, Liu, Li, & Eichhorn, 2014; Rittichainuwat, Qu, & Mongkhonvanit, 2008; among others).

The present study, then, seeks to contribute to the literature by analyzing the effect of motivations on destination visit intention in two stages of an evolving public health crisis (the COVID-19 pandemic): (i) before most of the general population has been vaccinated and (ii) once the public vaccination program has been fully rolled-out. A motivation scale derived from the work of Masiero, Nicolau, and Law (2015) was used—specifically, the Leisure Motivations scale proposed by Beard and Ragheb (1983). These authors interpret "leisure" as synonymous with recreation and the quest for personal self-expansion (Baldwin & Tinsley, 1988; Smith & Godbey, 1991; Tinsley & Tinsley, 1986).

The study by Beard and Ragheb (1983) identifies four dimensions of leisure motivation that closely correspond to those proposed by Kozak (2002) (culture, pleasure-seeking, relaxation, and physical): intellectual, social, competence/mastery, and stimulus-avoidance—which have subsequently been applied and validated in the tourism sector (eg. Yusof and Mohd Shah, 2008; Prebensen, Woo, Chen, & Uysal, 2013; Albayrak & Caber, 2017). More specifically, the four dimensions of leisure motivation proposed by Beard and Ragheb (1983) are.

1. Intellectual motivation relates to "the extent to which individuals are motivated to engage in leisure activities that involve mental activities such as learning, exploring, discovering, thought or imagining."
2. Social motivation concerns "the extent to which individuals engage in leisure activities for social reasons. This component includes two basic needs, the need for friendship and interpersonal relationships [and] the need for the esteem of others."
3. Motivation arising out of a desire to reach the level of competence or mastery, which involves the impulse to "achieve, master, challenge, and compete."
4. Stimulus-avoidance motivation is about "the drive to escape and get away from over-stimulating life situations. It is the need for some individuals to avoid social contacts, to seek solitude and calm conditions; and for others is to seek rest and to unwind themselves."

In the context of a major public health crisis, when faced with the sudden widespread outbreak of a disease, people's motivation to travel may decrease, while their concerns over protecting themselves may likely increase (Zheng, Luo, & Ritchie, 2021). The health crisis provoked by COVID-19 awakened a greater desire for safety among the general public (Rettie & Daniels, 2020). This led individuals to take various measures to protect themselves—from avoiding leaving the house altogether, to only visiting nearby places where there was a low risk of infection, to actively traveling to different locations where social contact would be minimal (Zheng et al., 2021). Therefore, the very drive to avoid catching a disease (and the protective measures that it entails, such as curfews and local lockdowns) can become a motivation to travel (Kock, Nørfelt, Josiassen, Assaf, & Tsonas, 2020), to look for uncrowded destinations, and to avoid the heightened stresses of daily life. Hence, it would seem logical that, in this context, intellectual, social, and competence motivations take a backseat and that the search for a minimal degree of social contact, beyond the confines of one's home, may, itself, become the motivation that determines the intention to visit a certain destination during the first stage of a public health crisis, when vaccination is not yet widely available. Of the aforementioned dimensions of leisure motivation, then, stimulus-avoidance may be considered the one that determines tourist visit intention during this stage, while intellectual, social, and competence motivations exert little influence on intention. On this premise, the following hypothesis is proposed.

**H6.** During a public health crisis, the stimulus-avoidance motivation—but not the intellectual, social, or competence motivations—has a significant and positive effect on visit intention when only a minority of the population has been vaccinated.

However, in the second stage of the health crisis identified here, when effective control mechanisms were in place (and most of the general public had been vaccinated against COVID-19), the tourism sector made an observable recovery (UNTWO, 2022). Indeed, tourism activity has reactivated to a degree that is comparable to pre-pandemic performance—that is, now that the pandemic is in decline, tourism has returned to near-normality. In this situation, visit intention for a tourist destination is arguably influenced by all four motivations that the literature has associated with leisure (intellectual, social, competence/mastery, and stimulus-avoidance) (Prebensen et al., 2013) and that have been found to drive a tourist to visit a destination. Therefore, the following hypothesis is proposed.

**H7.** During a public health crisis, the four dimensions of motivation (intellectual, social, competence, and stimulus-avoidance) all have a significant and positive effect on visit intention when the majority of the population has been vaccinated (see Fig. 1).



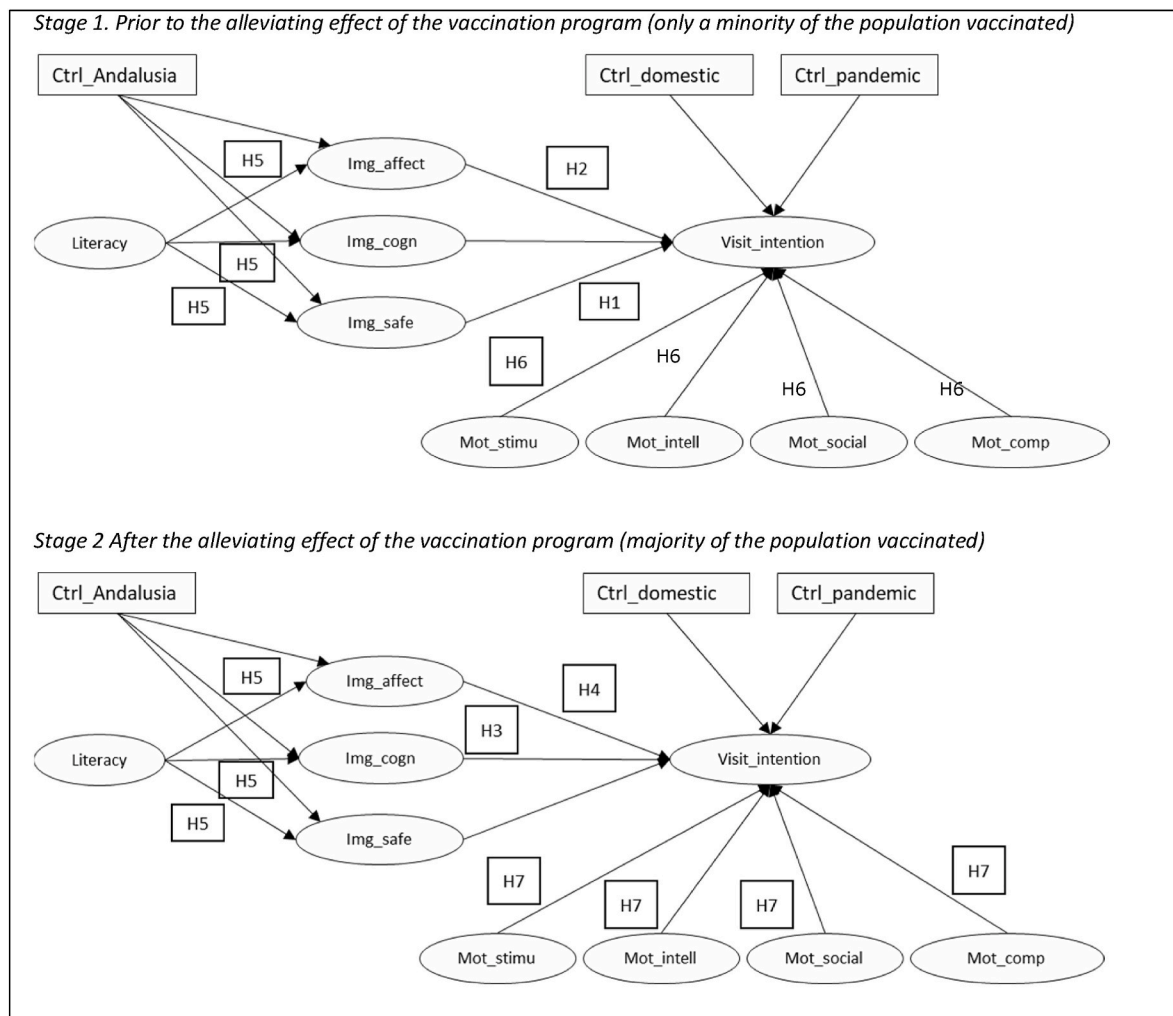


Fig. 1. Proposed research model.

### 3. Methodology

#### 3.1. Sample and sampling procedure

The present study seeks to determine how tourist behavior evolves in the face of an unfolding public health crisis. To fulfill this objective, it centers on the crisis triggered by the COVID-19 pandemic and, specifically, on the case of Andalusia (Spain) as a tourist destination, this being the Autonomous Community that received the most domestic tourists in Spain prior to the pandemic (INE, 2022). The economic impact of this crisis on the tourism sector globally was profound, particularly during its first two years, and was felt especially in the leading world destinations, including Spain (Vena-Oya, Castañeda-García, & Rodríguez-Molina, 2022), where tourism accounts for 15% of GDP (UNWTO, 2019).

When a public health crisis arises, it is scientists who determine the milestone marking the point at which the situation can be considered “under control.” In the case of COVID-19, the literature is unanimous—and the data confirm this—that vaccination was the key to curbing the pandemic. According to Whatson et al. (2022), the available data suggest that COVID-19 vaccination has prevented 14.4 million deaths worldwide. However, at the time, not all of the population was willing to be vaccinated or had access to the vaccine. Therefore, there reference point taken for the present study was that of herd immunity (e. g., DeRoo, Pudalov, & Fu, 2020; Fontanet & Cauchemez, 2020; Randolph & Barreiro, 2020). Herd immunity refers to the phenomenon

whereby, when enough of the population is immune to a given contagious disease, those individuals who are *not* immune (for instance, because they are not vaccinated) are less likely to become infected, and, overall, the virulence of the disease begins to decline. Although scholars do not completely agree on the precise percentage of the population that must be vaccinated in order for herd immunity to be reached (among other reasons, because it depends on the effectiveness of the vaccine in question—Hess et al., 2022), all studies speak in terms of a *majority* of the population needing to be immunized (e.g., Graham, 2020; McLaughlin, Khan, Pugh, Swerdlow, & Jodar, 2022). The studies conducted in the earliest days of the pandemic predicted that herd immunity might be achieved by vaccinating approximately 60%–70% of the population, whereas later studies subsequently revised this figure upward, to 70%–80%.

For this reason, the present research captures data gathered during two stages of the health crisis caused by the COVID-19 pandemic in Spain: (i) when only a minority of the population had been vaccinated; and (ii) when most of the population had been vaccinated. Stage 1 was conducted between April 15 and May 15, 2021, when the pandemic was yet to be brought fully under control and before individuals had begun to experience the alleviating effect caused by the extensive availability of a vaccination program. During this stage, just 9.9% of the population had completed the entire vaccination schedule (Spanish Ministry of Health, 2022). This was the point at which tourist activity in Spain began to recover. The second data-collection point was the period October 15–November 15, 2021, by which time most individuals were

experiencing the alleviating effect of the broad availability of the vaccine, with 78.81% of the population having completed the scheduled vaccination program by then (Spanish Ministry of Health, 2022).

In both stages, the same data-collection procedure was followed. A questionnaire-based telephone survey was conducted (using both landline and mobile telephone numbers), with a balanced distribution by gender and age groups and proportional to the territory according to the origin of the travelers who visited Andalusia in 2019 (Junta de Andalucía, 2019).

The questionnaire was the same for both data-collection points, beginning with questions that enabled respondents to be classified, and including a question that enabled individuals who do not usually engage in tourism to be eliminated from the survey. Next, a set of questions were asked that served as a control for the subsequent analysis, such as the number of domestic tourism trips typically taken each year, the frequency with which domestic tourism to Andalusia was undertaken, or the number of tourism trips taken during the pandemic. The core set of questions enquired about the variables of interest in this research—namely, information literacy self-efficacy, tourist motivations, the different components of destination image (affective, cognitive, and safety-related), and the intention to travel to Andalusia. The final set of questions was geared toward the sociodemographic classification of respondents.

The fieldwork was carried out by the specialist research company M&H Marketing (<https://mhmarketing.es/>). The average time taken to complete the survey was approximately 20 min for both collection-points. The surveys were audio-recorded for quality control purposes: from the beginning of the fieldwork until 10% of the total sample was reached, quality control was carried out on 100% of the completed surveys. From that point on, the control was carried out on 20% of the completed surveys. Once the control process was finished, following the recommendations of ESOMAR (2007), the recordings were destroyed and all personal identification data (such as the phone number called) were removed from the response database.

For both collection points, the objective was set at 500 surveys, which allowed for a sampling error of below 5% (4.38 for an infinite population and  $p = q = 0.5$ ) and provided a test power of almost 1, which ensured that any significant relationships would be identified.

Table 1 shows the comparison between the two samples. It can be observed that there are no significant differences in any of the sociodemographic characteristics across the two data-collection points.

### 3.2. Measurement scales

Scales that are commonly used in the literature were used to measure the different constructs (Table 2). For information literacy self-efficacy, the three-item scale of Yan et al. (2017) was employed. For motivations, the four-dimensional scale (Intellectual, Social, Competence–Mastery, and Stimulus-Avoidance) with 18 items developed by Beard and Ragheb (1983) was used. This was originally constructed to reflect leisure motivations but is frequently used in tourism studies (eg. Yusof and Mohd Shah, 2008; Prebensen et al., 2013; Albayrak & Caber, 2017). For affective and cognitive image, 4 and 5 items were used, respectively, derived from Rodríguez, Frías, and Castañeda (2013). For visit intention, two items (taken from BrunerII & G.C, 2009) were used to measure short-term intention (referring to the participants’ next holidays), given the uncertainty associated with the pandemic, which would undermine any results obtained for longer-term visit intention.

Regarding the “safe and secure image” scale, the inclusion of safety as a component of destination image is less common. The literature distinguishes two strands of research that include the “safe and secure” image of the destination in models to explain tourist behavior (Zou & Yu, 2022). The first seeks to reflect the stable and orderly conditions at the destination (e.g., Millar, Collins, & Jones, 2017; Sönmez & Sirakaya, 2002; Yen, Tsaour, & Tsai, 2021), while the second is related to specific crises that significantly affect the tourism sector, such as the 9/11

**Table 1**  
Comparison of the two samples.

Characteristics	Categories	Minority of population vaccinated	Majority of population vaccinated	Chi-squared (p-value)
<b>Gender</b>	Male	48.40%	48.80%	0.02 (0.899)
	Female	51.60%	51.20%	
<b>Age</b>	18–40	40.60%	40.20%	0.02 (0.991)
	41–60	38.60%	38.80%	
	>60	20.80%	21.00%	
<b>Autonomous Community of origin</b>	Andalusia	44.80%	44.80%	0.00 (1.000)
	C. Valenciana	5.20%	5.20%	
	Castilla y León	4.20%	4.20%	
	Castilla-La	3.60%	3.60%	
	Mancha	6.00%	6.00%	
	Catalonia	3.20%	3.20%	
	Extremadura	2.2%	2.2%	
	Galicia	17.8%	17.8%	
	Madrid	2.60%	2.60%	
	Murcia	3.00%	3.00%	
<b>Occupation</b>	Basque Country	4.80%	4.80%	4.480 (0.106)
	Rest of peninsula	2.60%	2.60%	
	Rest of islands			
	Self-employed	13.0%	12.8%	
	Employed	45.2%	51.5%	
	Not in paid work	41.8%	35.7%	
<b>Education</b>	No studies	1.0%	1.2%	0.102 (0.992)
	Compulsory education	16.2%	16.0%	
	Further education	43.0%	42.8%	
	University education	39.8%	40.0%	
<b>Annual family income</b>	Less than €15,000	27.6%	23.2%	4.578 (0.599)
	€15,000–€29,999	36.0%	39.2%	
	€30,000–€39,999	15.8%	18.2%	
	€40,000–€49,999	7.0%	6.2%	
	€50,000–€80,000	5.0%	4.0%	
	More than €80,000	1.0%	1.4%	
	No response	7.6%	7.8%	
<b>Has your financial situation worsened as a result of the pandemic?</b>	Yes	35.3%	35.2%	0.001 (0.981)
	No	64.7%	64.8%	

terrorist attacks (e.g., Rossi, 2012) or, more recently, the COVID-19 pandemic (e.g., Lu & Atadil, 2021). It is this latter perspective that the proposed “safe and secure image” scale adopts, based on 5 items, to capture: perceptions of the adequacy of public healthcare infrastructures in terms of their capacity to care for patients; the reassuring sense of safety and security provided by the healthcare system; the destination’s capacity to control and monitor infections; the communication work carried out by the destination about the pandemic; and the transparency of information provision. All items were adapted from Rassolimanesh et al. (2021).

A confirmatory factor analysis was performed to assess construct validity—that is, the degree to which the instrument reflects the theory of the construct to be measured (De Yébenes Prous, Salvanés, and Ortells, 2009). The assumption of multivariate normality was also tested, using the HZ test (Henze & Zirkler, 1990), showing non-compliance with this assumption for the 35 items on the different measurement scales (HZ = 1.308; p-value <0.01). Therefore, both the confirmatory factor model and the subsequent analysis using a structural equation model were estimated using the maximum likelihood mean adjusted (MLM) estimator, which is an appropriately robust procedure for analyzing non-normal data (Rossee, 2012).

The item loadings were employed to assess construct validity. Loadings of 0.50 or greater are considered “significant” (Hair, Anderson,

**Table 2**  
Indices and factor loadings for the latent constructs.

Construct/Item <sup>a</sup>	Loadings	p-value	α	ω	AVE
<b>INFORMATION LITERACY SELF-EFFICACY (LITERACY)</b>	Std_all		0.8	0.8	0.6
I can obtain the useful information that I need.	0.824	<0.01			
I'm sure that I could obtain the useful information that I need.	0.914	<0.01			
I'm sure I could obtain useful information, even if there is nobody to hand who can show me how to do it.	0.670	<0.01			
<b>STIMULUS MOTIVATION (MOT_STIMU)</b>			0.9	0.9	0.7
To mentally relax	0.778	<0.01			
To avoid the hustle and bustle of everyday life	0.814	<0.01			
For physical relaxation	0.869	<0.01			
To be in a calm environment	0.880	<0.01			
To avoid busy areas	0.709	<0.01			
<b>INTELLECTUAL MOTIVATION (MOT_INTELL)</b>			0.9	0.9	0.7
To satisfy my curiosity	0.743	<0.01			
To discover new places	0.961	<0.01			
To get to know new things	0.938	<0.01			
To stimulate my imagination	0.708	<0.01			
<b>SOCIAL MOTIVATION (MOT_SOCIAL)</b>			0.9	0.9	0.6
To develop a sense of belonging with my travel group	0.694	<0.01			
To have a good time with friends	0.691	<0.01			
To spend time with other people	0.802	<0.01			
To make new friends	0.887	<0.01			
To build close friendships	0.852	<0.01			
<b>COMPETENCE MOTIVATION (MOT_COMP)</b>			0.9	0.9	0.7
To challenge my skills	0.852	<0.01			
To put my physical and sporting skills into practice	0.826	<0.01			
To improve my skills and capacities in the activities I will undertake during my stay	0.873	<0.01			
To feel fulfilled	0.804	<0.01			
<b>AFFECTIVE IMAGE (IMG_AFFECT)</b>			0.8	0.8	0.5
Boring–Stimulating	0.770	<0.01			
Unpleasant–Pleasant	0.796	<0.01			
Sad–Uplifting	0.781	<0.01			
Stressful–Relaxing	0.591	<0.01			
<b>COGNITIVE IMAGE (IMG_COGN)</b>			0.7	0.7	0.4
The beaches are of high quality	0.570	<0.01			
It boasts some important historical heritage	0.639	<0.01			
It offers a variety of cultural activities	0.656	<0.01			
It has good infrastructure to support tourism	0.702	<0.01			
The people who live there are friendly	0.552	<0.01			
<b>SAFE AND SECURE IMAGE (IMG_SAFE)</b>			0.8	0.8	0.5
It has the appropriate healthcare infrastructure to address the needs of patients	0.614	<0.01			
It swiftly handles new outbreaks of COVID-19	0.719	<0.01			
It has sufficient capacity to guarantee tourist safety	0.724	<0.01			
It has handled pandemic-related communications effectively	0.700	<0.01			
It makes it easy for me to obtain the information I need about the pandemic	0.685	<0.01			
<b>INTENTION TO VISIT ANDALUSIA ON THE NEXT HOLIDAY (VISIT_INTENTION)</b>			0.8	0.8	0.7
Very low—Very high	0.852	<0.01			
Very unlikely—Very likely	0.838	<0.01			

<sup>a</sup> The translation of the items was verified using back-translation.

Tatham, & Black, 1998, p. 111). Cronbach's alpha (α), McDonald's omega (ω) coefficient, convergent validity, and discriminant validity were all measured. Cronbach's alpha and omega (ω) were used to determine reliability. Following a Cronbach's alpha test, all scales should show acceptable levels of reliability, equal to or exceeding the 0.70 level. Composite reliability (CR), which represents the degree to which the measurement model is accurate in its measurement of the intended latent construct, presented a value of 0.70. The values for both Cronbach's α and CR were considered adequate.

Convergent validity was verified by computing the average variance extracted (AVE) for every construct. To be considered acceptable, the AVE value should ≥0.40 with CR above the cut-off limit, which indicates acceptable convergent validity (Fornell & Larcker, 1981). Discriminant validity assessment has become a generally accepted prerequisite for analyzing associations between latent variables. The heterotrait–monotrait (HTMT) ratio of correlations concentrates on the multitrait-multimethod matrix to estimate discriminant validity, with values greater than 0.9 being considered acceptable (Henseler, Ringle, & Sarstedt, 2015).

A confirmatory factor analysis was conducted on the information literacy self-efficacy construct, the four dimensions of tourism motivation, the three image components (safe, affective, and cognitive), and intention to visit Andalusia (the reference destination). The model fitted the data reasonably well ( $\chi^2_{scaled}/df = 1315.594/558 = 2.358$ ; RMSEA. Robust = 0.037; CFI. Robust = 0.917; TLI. Robust = 0.906).

Table 2 shows the factor loadings and the indices for the latent constructs. Cronbach's α values are higher than the threshold value for all the latent variables, which indicates internal consistency of the scales. McDonald's omega values are also higher than 0.70 for all the latent variables, indicating excellent CR. AVE is acceptable (in the range of 0.43–0.71), which suggests good convergent validity. Finally, the highest HTMT value is found between mot\_social and mot\_comp (0.746); but, being far from 0.9, this indicated acceptable discriminant validity (Table 3).

Additionally, given that the study focused on domestic tourism under pandemic conditions and that Andalusia was taken as the reference destination, certain control variables were also included. These were: the number of trips taken for domestic tourism purposes by the participant in a typical pre-pandemic year (ctrl\_domestic); the frequency of holiday trips to Andalusia, pre-pandemic (ctrl\_andalusia); and the number of tourism trips taken under the pandemic situation (ctrl\_pandemic).

#### 4. Results

Once the measurement scales had been evaluated, covariance-based structural equation modeling (CB-SEM) was conducted using the Lavaan library 0.6–11 (Rosseel, 2012) and R software (version 4.1.0), together with MLM estimation, to test the hypotheses.

Since the study sought to analyze the relationships proposed in this model at two different points in time during the evolution of the public health crisis caused by the COVID-19 pandemic, it was necessary to test the factorial invariance in the measurement model between the two data-collection points. Table 4 shows that invariance was not achieved for either the loadings, the intercepts, or the means. Therefore, for multigroup analysis in the absence of invariance, the literature suggests that at least the invariance for the loadings be fixed, which was duly addressed in the present analysis (Vandenberg & Lance, 2000).

The model fit indices indicated that the data fitted well and could be used for hypothesis testing ( $\chi^2_{scaled}/df = 2909.002/1381 = 2.106$ ; RMSEA. Robust = 0.047; CFI. Robust = 0.89; TLI. Robust = 0.88). The estimated coefficients and their corresponding p-values are shown in Table 5 for the two stages of the crisis under analysis.

Comparison of the results of the model for the two stages of the pandemic suggests that there are differences in the components that affect tourists' travel decision-making. On the one hand, during the first

**Table 3**

Discriminant validity.

	Literacy	Mot_stimu	Mot_intell	Mot_social	Mot_comp	Img_affect	Img_cogn	Img_safe	Visit_intention
<b>Literacy</b>	1.000								
<b>Mot_stimu</b>	0.070	1.000							
<b>Mot_intell</b>	0.132	0.494	1.000						
<b>Mot_social</b>	0.062	0.579	0.701	1.000					
<b>Mot_comp</b>	0.070	0.542	0.601	0.746	1.000				
<b>Img_affect</b>	0.206	0.303	0.310	0.347	0.298	1.000			
<b>Img_cogn</b>	0.152	0.459	0.361	0.461	0.395	0.787	1.000		
<b>Img_safe</b>	0.216	0.286	0.276	0.382	0.318	0.559	0.402	1.000	
<b>Visit_intention</b>	0.179	0.415	0.341	0.422	0.359	0.345	0.376	0.293	1.000

**Table 4**

Invariance for loadings, intercepts, and means.

	Df	AIC	BIC	Chisq	Chisq diff	Df diff	Pr (>Chisq)
fit.loadings	1381	100,634	101,807	4088	51.9	27	0.0027
fit.intercepts	1408	100,626	101,667	4135	46.7	27	0.0107
fit.means	1417	100,653	101,649	4180	44.6	9	0.0000011

**Table 5**

Estimated coefficients and p-values.

Relationship	Stage 1 Before the alleviating effect of the public vaccination program became widespread (only a minority of the population vaccinated)		Stage 2 After the alleviating effect of the public vaccination program became widespread (majority of the population vaccinated)	
	Coefficient	p-value	Coefficient	p-value
Literacy- > Img_affect	<b>0.069</b>	0.002	<b>0.072</b>	0.002
Literacy- > Img_cogn	<b>0.107</b>	0.000	<b>0.094</b>	0.001
Literacy- > Img_safe	<b>0.189</b>	0.000	<b>0.175</b>	0.000
Ctrl_Andalusia- > Img_affect	<b>0.085</b>	0.000	<b>0.044</b>	0.002
Ctrl_Andalusia- > Img_cogn	<b>0.083</b>	0.000	<b>0.027</b>	0.020
Ctrl_Andalusia- > Img_safe	<b>0.034</b>	0.037	0.006	ns
Img_affect- > Visit_intention	<b>0.356</b>	0.001	<b>0.309</b>	0.002
Img_cogn- > Visit_intention	0.195	ns	<b>0.279</b>	0.016
Img_safe- > Visit_intention	<b>0.285</b>	0.002	-0.010	ns
Mot_stimu- > Visit_intention	<b>0.351</b>	0.001	<b>0.141</b>	0.033
Mot_Intell- > Visit_intention	-0.078	ns	<b>0.195</b>	0.017
Mot_social- > Visit_intention	0.105	ns	<b>0.175</b>	0.026
Mot_comp- > Visit_intention	0.049	ns	<b>0.136</b>	0.025
Ctrl_domestic- > Visit_intention	<b>0.114</b>	0.003	<b>0.058</b>	0.041
Ctrl_pandemic- > Visit_intention	<b>0.226</b>	0.000	<b>0.080</b>	0.007

stage of the crisis, domestic tourists' visit intention is explained by the destination's affective image (H2) and its "safe and secure" image (H1). However, the cognitive image (based on the main attractions of the destination) ceases to influence the tourist's decision about their visit intention. Furthermore, at this point in the evolution of the pandemic, only the motivations related to the need to escape from day-to-day concerns and stresses (stimulus-avoidance) contribute to increasing this image, thus confirming H6 (Table 6).

On the other hand, during the second stage—when the crisis situation has evolved even further—once again, the decision to visit the destination (or not) relies on the classic factors captured previously by the literature. Thus, among the components of destination image, the affective component (H4) remains significant. In addition, the cognitive component (relating to the main attractions of the destination) (H3) becomes significant once more. Regarding motivations, given that this stage of the crisis is relatively stable and thus similar to "normality"—the new normal—all four motivations are once again relevant in explaining visit intention (H7) (Table 6).

Finally, in relation to tourists' information literacy self-efficacy, this

proved to be a highly relevant variable for the traveler to be able to face crisis situations, since it maintained its explanatory capacity in the formation of the image in its three dimensions in both stages of the pandemic (H5) (Table 6).

## 5. Discussions and Conclusion

The aim of the present study was to provide greater knowledge about the most relevant components of destination image and tourist visit motivations in explaining visit intention at different stages of a large-scale crisis (in this case, that caused by COVID-19) and to study how tourist information literacy self-efficacy shapes that image. Given that this was a global health crisis lasting more than two years, the study examined the two primary stages of the pandemic: 1) the low vaccination rate stage and 2) the high vaccination rate stage.

In this regard, [Taecharungroj and Pattaratanakun \(2023\)](#), analyze the Twitter communication strategy of 113 DMOs in different countries, empirically demonstrating that there was a change in the pattern of Twitter use before versus during the COVID-19 pandemic. More specifically, the authors identify 19 topics covered in Tweets during the pandemic and five trends, which they categorized as "falling", "rebounding", "maintaining", "relapsing", and "rising". While "rebounding" topics—which related to news about the tourism industry and upcoming festivals, presenting generic informative content—declined significantly at the beginning of the pandemic, they appeared to start bouncing back as of 2022 (p. 6). In contrast, "relapsing" topics were those that witnessed a significant increase early in the pandemic but fell back in 2022, once the pandemic had peaked (ibid.). Such topics included: *day* (the celebration of a special date in the calendar, specifically in the case of Russia); *view* (relating to affective image, encouraging users to enjoy beautiful photographs of the area); and information about travel *protocol* (relevant to the "safe and secure" destination image). Regarding affective image, [Pachucki, Grohs, and Scholl-Grissmann \(2022\)](#) find that there was an increase in social media communications containing emotional content from destinations during the COVID-19 crisis.

This communication behavior among DMOs is consistent with what tourists value in the two stages of the pandemic analyzed in the present study. In the first stage, the tourist forms their visit intention based on the destination's "safe and secure" image and its affective image. It is only in the "high vaccination rate" stage that the traveler returns to the cognitive image as an element of some value in forming their visit intention. This finding supports previous studies that indicate that tourist behavior is influenced by alleviating factors—such that, if these provide sufficient guarantees, travelers will ignore events at the



**Table 6**  
Results of hypothesis-testing.

Stage 1		Stage 2	
Hypothesis	Empirical support?	Hypothesis	Empirical support?
H1. A “safe destination” image has a positive and significant effect on visit intention when only a minority of the population has been vaccinated.	YES		
H2. Affective destination image has a positive and significant effect on visit intention when only a minority of the population has been vaccinated	YES		
		H3. Cognitive destination image has a positive and significant effect on visit intention when the majority of the population has been vaccinated.	YES
		H4. Affective destination image has a positive and significant effect on visit intention when the majority of the population has been vaccinated.	YES
H5. Consumer information literacy-self-efficacy has a positive and significant effect on safe, affective, and cognitive destination image regardless of which stage the public health crisis has reached.	YES	H5. Consumer information literacy-self-efficacy has a positive and significant effect on safe, affective, and cognitive destination image regardless of which stage the public health crisis has reached.	YES
H6. Stimulus-avoidance motivation has a significant and positive effect on visit intention when only a minority of the population has been vaccinated.	YES		
		H7. The four dimensions of motivation (intellectual, social, competence, and stimulus-avoidance) all have a significant and positive effect on visit intention when the majority of the population has been vaccinated.	YES

destination (Senbeto and Hon, 2018). In this sense, visit intention is, once again, affected by the classic dimensions of destination image (cognitive and affective), showing that the post-crisis “new normal” resembles the original concept of “normal”, pre-crisis (Afshardoost & Sadegh, 2020).

In relation to the motivations for undertaking tourism, in the initial stage immediately following the outbreak of a public health crisis, the present results show that the motivation to escape from day-to-day worries and stresses prompts visit intention. This may explain the increase in communications related to nature parks and mountain tourism reflected in the data on Tweets from DMOs during the first few months after the outbreak of the pandemic, as observed by Taecharungroj and

Pattaratanakun (2023). The shift of emphasis toward more nature-related topics also speaks to the sustainability discourse and to social responsibility, “which represents a model of ‘better tourism’” (ibid., p. 13; Pop, Marian-Potra, Hognogi, & Puiu, 2024).

Finally, a further result of the present study points to the relevance of the tourist’s information-literacy self-efficacy when it comes to forming their destination image, regardless of which stage of the pandemic is being analyzed. This finding expands the existing literature—which had linked tourist information-literacy self-efficacy with the selection of safe tourist accommodation services when the COVID-19 pandemic was still ongoing (Peco-Torres, Polo-Peña, & Frías-Jamilena, 2021a, 2021b)—toward a higher-level choice, namely which destination to visit.

5.1. Conceptual and practical implications

The results of the study make several contributions to the literature, starting with the finding that a “safe and secure” destination image can be considered a relevant antecedent of tourist destination visit intention. This result constitutes a valuable contribution to the literature as this is an unusual dimension to include in studies dealing with destination image (Afshardoost & Sadegh, 2020). Although scholars argue that risk and uncertainty affect everything from pre-visit planning to the choice of amenities at the destination (Kozak et al., 2007), there are no empirical studies demonstrating how the perception of risk and uncertainty that a destination generates as a result of how it deals with a major crisis may affect tourists’ destination image and their resulting visit intention.

Second, a further contribution to the scholarship is the study’s verification of the significant positive effect of affective destination image on visit intention during the two main stages of a major public health crisis. The present results are in line with those obtained by Karl et al. (2021), in their exploratory work, which demonstrated how affective forecasting can alleviate the negative impacts of a pandemic on the tourism industry—altering the psychological processes to which tourists are subject during a pandemic, such as travel-risk perceptions—and thus positively influence travel decision-making.

Third, based on the importance of information sources for generating destination image (Beerli and Martin, 2004b; Josiassen et al., 2016; Frías et al., 2008) and the greater volume of information that is made available in times of crisis in order to reduce tourists’ uncertainty in the decision-making process and encourage them to perceive that it is safe to travel (Jonas & Mansfeld, 2017), this research has highlighted the role of information literacy self-efficiency in the processing of tourist information. Specifically, the present study verifies the significant positive effect of information literacy self-efficacy on affective, cognitive, and “safe and secure” image, regardless of the stage of the crisis. These results respond to the existing call in the literature for more in-depth study of information literacy self-efficacy in the field of tourism crises (Aliperti et al., 2018; Aliperti & Cruz, 2019), providing new evidence regarding existing studies (Aliperti & Cruz, 2019 and Peco et al., 2021) on the importance of this variable in the processing of risk-information applied to the tourism field.

Finally, the effect of tourist motivations in the two stages of the health crisis analyzed in this research has been verified. It has been shown that, in the first stage, only the stimulus-avoidance motivation exerts a significant positive effect on visit intention, while, in the second stage, all four classic dimensions of tourism motivation (intellectual, social, competence, and stimulus-avoidance) exert a significant positive effect on visit intention. This research represents an advancement in the literature on tourist motivations, since there is little research related to tourist motivation during health crises (Kusumaningrum et al., 2020) albeit previous studies have verified that tourist behavior during trips that take place following some type of disaster can alter travel motivations (Biran et al., 2014; Rittichainuwat et al., 2008; among others). In addition, given that the present research was carried out during two stages of the crisis under study, it was possible to verify that individuals

who are faced with risk situations (in this case, where most of the population is not yet vaccinated against a virus) tend to travel to areas where social contact is likely to be minimal, avoid crowded places, and endeavor to escape from the stresses of daily life caused by the disease and the control measures implemented to halt it (that is, stimulus-avoidance motivation). In contrast, in the second stage of the crisis, the conditions perceived by the tourist are very similar to those prior to the pandemic. Hence, they perceive near-normality, and their visit intention for a tourist destination is therefore shaped by all four motivations (intellectual, social, competence, and stimulus-avoidance). It follows, then, that the classical framing of tourism motivation should be confined to contexts of “normality”, requiring new understandings to be proposed for exceptional scenarios such as that of public health crises.

Turning to managerial implications, given that crises on a scale comparable to the COVID-19 pandemic are expected to arise more frequently in the future (Arévalo-Ipanaque, 2020), the results obtained in this study can help the managers of tourist destinations when making decisions intended to mitigate the effects of major public health crises on the tourism sector.

Specifically, the results demonstrate that (i) during the unfolding process of a public health crisis, the formation of a tourist destination's image and its effect on visit intention can change, and (ii) the information literacy self-efficacy of the tourist plays an important role in the image of the destination that they form. Hence, with these insights, destination managers will be better placed to understand what information must be provided to tourists in order to encourage them to visit, taking into account the stage of the health crisis in question. In the first stage, where most of the population is yet to feel the alleviating effect of a generalized vaccination program, communication efforts will achieve better results if they focus on generating a favorable affective image and “safe and secure” image. The safety of the destination can be shown, for example, by reporting on the capacity of the healthcare infrastructure to care for patients, the safety provided by that system, and the destination's ability to control and monitor infections. To support its affective image, the destination should endeavor to show the sensations that it can provide for visitors, emphasizing those sensations that people look for and want to experience when in the midst of a health crisis where stress, sadness, or boredom may accompany mobility restrictions and lockdowns.

In the second stage, when most individuals are experiencing the alleviating effect of the vaccine, communication efforts must be directed toward enhancing the destination's cognitive and affective image. To address the former, the richness of the tourist destination—in terms of natural resources, cultural heritage, customs, gastronomy, and so on—must be communicated.

Motivations are also an important determinant in destination visit intention (Crompton, 1979), and the present results show that motivations vary depending on the stage to which the crisis has evolved. Hence, it is important for destination managers to align their communication efforts with the tourist's requirements at all times. In the first stage of the crisis, given that the tourist's motivation to visit a destination is to avoid certain stimuli, all the destination's communications must concentrate on demonstrating how it can provide relaxation, tranquility, a break from routine, and uncrowded locations. In the second stage of the crisis, since all four motivations can affect visit intention, communication efforts, too, must be geared toward stimulating them all. The information that is transmitted by the destination should therefore stimulate *intellectual* motivation by offering new activities and experiences or with subtle allusions that stimulate the imagination; and it should trigger the *social* motivation by pointing out the opportunities that a trip offers to share experiences with other people or to make new friends. With regard to tapping into the *competence* motivation, the information should show the challenges enjoyed by those who visit the destination, for example, relating to the physical practices and sporting activities that tourists can experience or improve there.

Finally, given that during health crises the volume of available information increases (Jonas & Mansfeld, 2017) and that tourists' risk perception is affected by mass media (Cavlek, 2002), it is important to take their information literacy self-efficacy into account as this affects how they process information. When providing information, then, destination managers must be mindful that the information that is ultimately absorbed by tourists will depend on their capacity to obtain and process it, since the latter's information literacy self-efficacy will affect the image that is generated, regardless of which stage the health crisis has reached.

## 5.2. Limitations and future lines of research

Like all academic research, this study has certain limitations that can point to potential lines of research for the future. For this study, Spain was selected as the tourist destination under analysis—specifically, the Autonomous Community of Andalusia—meaning that the generalization of the results to other countries or cultures must be approached with caution. A future line of research would be to replicate the study in other geographical areas where the culture may differ.

Meanwhile, the use of different samples in the two stages of the pandemic renders it impossible to eliminate intersubject variation from the analyses. However, a balanced distribution by gender and age groups was maintained, and proportional to the territory, in an effort to achieve two samples that were representative of the same population.

Another proposed avenue for potential future research is to include other determinants of visit intention in the research model, along with other personal characteristics of the tourist that may affect the formation of tourist destination image. The possible indirect relationships between motivations and visit intention could also be considered.

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## CRedit authorship contribution statement

**Carmen M. Sabiote-Ortiz:** Conceptualization, Formal analysis, Investigation, Supervision, Writing – original draft, Writing – review & editing, Data curation. **J. Alberto Castañeda-García:** Conceptualization, Formal analysis, Investigation, Methodology, Supervision, Writing – original draft, Project administration. **Dolores M. Frías-Jamilena:** Conceptualization, Formal analysis, Investigation, Supervision, Writing – original draft, Writing – review & editing.

## Data availability

Data will be made available on request.

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