



The influence of communication in destination imagery during COVID-19[☆]

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ABSTRACT

A little over a year after the pandemic and ensuing state-of-emergency were officially declared, it seems timid signs of budding recovery are finally appearing. This paper presents empirical evidence related with a destination recovery during the COVID-19 pandemic. Data were collected during the early reopening of tourism in Spain (Easter break). This research evaluates the links between communication -both DMO (destination marketing organization) and tourist-generated communication- and destination awareness, imagery and perceived health safety. We also analyzed the impact of travel frequency on the entire construct set, as well as its role as potential moderator in the causal model. Results allow us to put forth a series of recommendations for tourist destination managers, aimed at meeting the challenges of progressively opening up tourism and mobility as the COVID-19 pandemic reality continues to evolve.

1. Introduction

Tourism crises are diverse. Health crises (e.g., epidemics), terrorist attacks (e.g., September 11, 2001 in NY or March 11, 2004 in Madrid), natural disasters (e.g., 2004 Indian Ocean tsunami, 2015 Nepal earthquake) and political instability (e.g., coup d'état in Burma) all have a direct impact on traveler decision-making. From an economic, social and healthcare perspective, the COVID-19 pandemic has had a disruptive impact around the world (Yu et al., 2021). The tourism sector has felt the brunt of this more than most due to city lockdowns and restrictions on domestic and international mobility imposed by governments globally (J. Kim et al., 2021; Rastegar et al., 2021). Such restrictions have had their greatest impact in destinations like Italy, Spain, New York or parts of China (Zenker and Kock, 2020).

For instance, in Spain, tourism is the cornerstone of the economy: 2020 Spanish National Statistics Institute (INE) data show the total tourism-sector contribution to GDP in 2019 was near 180€ billion (real prices); figures to which spending by foreign tourists contributed significantly (upwards of 90€ billion). In 2019 alone, Spain welcomed

83.5 million tourists—ranking 2nd in the world (Statista, 2021). Just one year later, inbound tourism had fallen by 71%; a mere 19 million tourists graced Spain's GDP in 2020, according to the same source. Clearly, the COVID-19 pandemic has had a sweeping, historic impact on the Spanish economy, with more impact in leader regions such as Catalonia, the Canary Islands, Andalusia, the Balearic Islands and Madrid.

However, it seems the worst of the epidemic is behind us, with somewhat more promising figures on the radar for 2021. According to this year's *World Hotel Index* published by SiteMinder—a guest recruitment platform serving 35,000 hotels and linked to more than 400 worldwide booking channels—reservations have risen considerably, reaching 39.4% of the 2019 figures. This is a significant bounce-back with regard to the worst mid-pandemic numbers and positive evolution of this sort is a clear sign that people are eager to travel. Domestic tourism continues to outshine inbound tourism, accounting for approximately 80% of all revenue—most movement remaining within regional borders due to ongoing pandemic-related restrictions on mobility between regions. However, it seems foreign tourists are willing to return to Spain as well; almost 60% of expected hotel arrivals in

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summer 2021 will come from abroad ([SiteMinder World Hotel Index, 2021](#)). All this reflects travelers' growing confidence in tourism recovery in Spain—and in the health and safety guarantees the country offers.

The literature recognizes the relevance of destination image (e.g., [Zhang et al., 2021](#); [Chi et al., 2020](#); [Marinao-Artigas et al., 2015](#); [Cordente et al., 2010](#)) and imagery ([Josiassen et al., 2016](#); [Kock et al., 2016](#)) in traveler decisions. However, the current complex environment defined by COVID-19 seems to suggest the use of imagery rather than image as reference. As noted below in [Section 2](#), imagery helps consumers transfer information from long-term memory to working memory, as well as to manage the cues from stimuli to connect themselves with their preexisting information and experiences stored in memory to think about products/situations ([MacInnis and Price, 1987](#)). That is, imagery considers incoming stimuli and prior knowledge, and informs consumer responses to products/services ([Cowan et al., 2021](#); [Silva et al., 2021](#)). Consumers may perceive experiences indirectly through the idea of imagery, which may reduce consumers/travelers' concerns about their lack of ability to live experiences ex-ante. Thus, imagery can play an important role in a COVID-19 tourist destination recovery context. As [Maier and Dost \(2018\)](#) comment, consumers mentally simulate usage experiences. For instance, consumers may envision themselves at a vacation destination before arriving there.

Moreover, in a tourism recovery context of this sort, the research highlights the importance of understanding which factors impact tourist travel and destination choices ([Ahmad et al., 2020](#)). Ample evidence also points to the key role communication plays in tourist decision-making. Thus, in today's social media-steeped world, grasping how consumers perceive and generate communication is increasingly essential for a better understanding of decision-making models and behaviors. Given the enormous amount of pandemic-related information tourists receive through official media channels and/or online and via social media ([Bermes, 2021](#)), we deem it essential to know how and to what extent different types of communication influence travelers' perceptions and decisions. Besides, authors such as [Untaru and Han \(2021\)](#) indicate the need of considering potential moderating effects in consumer behavior during COVID-19. In the specific context of tourist experiences and destination management, [Vada et al. \(2019\)](#) highlighted the relevance of travel frequency as moderator. However, we did not find any evidence of research exploring the impact of different types of communication -i.e., Destination marketing organization (DMO) controlled and tourist-generated- on destination imagery during the pandemic, being pioneers in this field.

Additionally, given heightened health concerns due to current pandemic conditions, we believe there is yet another variable that may significantly impact both decision to travel and destination choice: perceived health safety. In this vein, authors like [Novelli et al. \(2018, p. 76\)](#) highlight the role of "personal and physical safety perceptions ... often fueled by media imagery of destinations." Crises impact directly and immediately on tourist decisions. Sudden, widespread fear causes many people to scramble to return home immediately; regaining normalcy and confidence, on the contrary, is a slow, costly process—and a challenging hurdle for the tourism sector to overcome.

Hence, based on these arguments, we propose the following research questions:

RQ1. What impact has communication (DMO-generated/visitor-controlled) on destination awareness, imagery and perceived health safety?

RQ2. Does travel frequency impact tourists' perceptions?

RQ3. Does travel frequency moderate the impact DMO-generated vs. visitor-controlled communication have on destination awareness, imagery and perceived health safety?

To this end, based on the premises of crisis management literature (e.g., [Novelli et al., 2018](#)) and Information Richness Theory ([Daft and Lengel, 1986](#)), we carried out an analysis of a sample of travelers visiting

Madrid (Spain) over the 2021 spring break/Easter holidays. Our findings allow us to identify a number of trends of interest for DMOs. The theoretical background and development of hypotheses are presented in the following section. The third section details key study characteristics and our principal findings. Finally, we discuss the results and provide a series of recommendations aimed at enhancing tourist destination imagery, awareness and health safety perception in the post-COVID-19 world.

2. Conceptual background

2.1. -destination recovery during COVID-19

Destination management has a critical impact on tourism outcomes. Yet, achieving positive perceptions of destination branding is no easy task. [Huerta-Álvarez et al. \(2020\)](#) explain how DMOs strive to add value to tourist destination brands by way of place branding, i.e. applying product brand management strategies to destination marketing efforts. Strategies and actions of this sort focus on bettering tourist perceptions, enhancing destination imagery, attracting potential visitors and fostering destination loyalty—and are key factors determining income and revenue flow.

Past experiences show that, more often than not, travel will recommence once enough time has passed from a crisis episode for tourists to forget about it ([Farmaki, 2021](#)). Nevertheless, implementing successful strategies and actions are complex, due to the nature of the tourist sector, political, social, cultural and economic contexts of locations as well as the unique characteristics and durations of each crisis ([Liu-Lastres et al., 2020](#); [Speakman and Sharpley, 2012](#)). For these authors crisis management must ensure the safety of tourists, workers, and the local community while encouraging the rebuilding of the sector. In this context, government policies and effective positive communication can be useful in restoring tourists' perception about a destination ([Rasoolimanesh et al., 2021](#)).

To this end, optimizing communication efforts is essential, and advances in information and communication technology (ICT) (e.g., social media) call for taking both company-generated information and user-generated information (UG) into account by using traditional and digital communication channels ([Huerta-Álvarez et al., 2020](#)). While in the former, communication channels and content are controlled by the DMO, in the latter, tourists themselves publish/share positive and negative perceptions via a variety of channels, exercising free expression and exchange of ideas. The general literature suggests that visitor-generated content is considered much more reliable than destination-controlled content (which may be biased or limited in scope), often serving as motivation for travel ([Diwanji, and Cortese, 2020](#); [Keller et al., 2011](#)). This is so because it is users themselves—not a company or official entity—who share information and opinions out of a genuine, unselfish desire to help their peers.

Several authors (e.g., [Rasoolimanesh et al., 2021](#); [Frías et al., 2008](#)) have taken destination image as a reference for analyzing tourist perceptions. Destination image is defined as an overall impression, or sum of impressions, with regard to a tourist destination ([Gartner, 1986](#)). However, [Kotler et al. \(1993\)](#) indicate that destination image represents a synopsis of a large number of associations and pieces of information connected with a place. In other words, the image held by any given individual is the sum of imagery or associations drawn from said individual's memory. Such associations are linked to a wide range of cognitions and feelings springing from previous actions, experiences, opinions, intentions, visualizations, etc. Associations are drawn from the individual's memory, and the most significant parts may vary depending on the situation and the tourist's aim. In line with [Josiassen et al. \(2016\)](#) and [Kock et al. \(2016\)](#), we refer to such associations as *destination imagery*, defined as "an individual's diverse associations relating to a destination." As suggested by prior research (i.e., [Lutz and Lutz, 1978](#); [MacInnis and Price, 1987](#)), destination imagery is based on the general

idea of imagery. More specifically, this concept is defined as a process by which sensory information is represented in working memory and/or as a mental event involving visualization of a concept or relationship, thereby establishing the associations between the newly received information and the long-term stored memory. Imagery influences consumer attitudes in general and product attitudes in particular (Babin and Burns, 1997; Miller and Stoica, 2003). Imagery considers both prior knowledge and incoming stimuli, and informs consumer responses to products (Cowan et al., 2021). Hence, as already indicated in Section 1 and given the complexity of the current COVID-19 context—and the number/variety of associations tourists may make with regard to a destination—we use destination imagery as our construct of reference.

Proper destination imagery assessment and management can have a significant, positive impact on key tourist behaviors (e.g., M. Kim et al., 2021; Walter et al., 2007; Miller and Stoica, 2003), such as recommending and returning to the destination. Brand awareness is another key concept in tourist destination management—coming into play once tourists have begun the learning process and acquired knowledge about the brand (e.g., Huerta-Álvarez et al., 2020). More specifically, (Konecnik and Gartner 2007, p. 403) indicate that “what someone knows or thinks they know about a destination” defines destination awareness. That is, destination awareness is triggered only once the learning process has begun and, thus, the potential tourist has already acquired knowledge about the destination.

In a health crisis scenario, perceived safety at destination is also extremely relevant. Hence, factors like safety measures and regulations aimed at preventing the spread of a disease and/or authorize return to normal activity—or the existence/lack of adequate healthcare infrastructures can impact destination imagery (Novelli et al., 2018). Therefore, we may expect positive effects of communication, controlled and non-controlled, in destination imagery, awareness and health safety perception.

2.2. Hypotheses development

Information Richness Theory (Daft and Lengel, 1986) postulates that different types of communication provide different degrees of information richness. Information richness, in turn, contributes to moderating recipients’ understanding and perception of what is communicated. Hence, detailed, timely information regarding the message or the source is at the core of information richness (Levy and Gvili, 2015). Content richness can be enhanced, depending on the type of information and media used (Daft and Lengel, 1986). This is essential if more effective, appealing communication capable of influencing customer perceptions is to be achieved (Kucukusta et al., 2019). Thus, this approach has been widely adopted in the travel and tourism literature to examine communication strategies (e.g., Kucukusta et al., 2019; Su et al., 2015). In recent years, aspects like communication efforts, content, format and tourist response have been the focus of a number of empirical studies (Gálvez-Rodríguez et al., 2020; Lee et al., 2021). Moreover, the marketing literature has also used this framework to assess the information source—especially with regard to credibility (Levy and Gvili, 2015). This is especially relevant considering the key role external information sources (e.g., other tourists) play in determining customer perceptions (Villamediana et al., 2020; Ye et al., 2011).

One purpose of communication is to clarify potential doubts and reduce ambiguity and uncertainty (Gálvez-Rodríguez et al., 2020). From an information richness standpoint, this plays a major role in shaping tourist perceptions given the extent to which the COVID-19 pandemic has fueled travel-related suspicion, concern and fear (Zheng et al., 2021). Hence, based on Information Richness Theory, we propose a conceptual model (Fig. 1) assessing the potential impact of communication on tourist perceptions. As the degree of information richness varies depending on the type of communication, this can moderate understanding and perception of the communication process (Daft and Lengel, 1986). We draw from this theoretical background, then, to

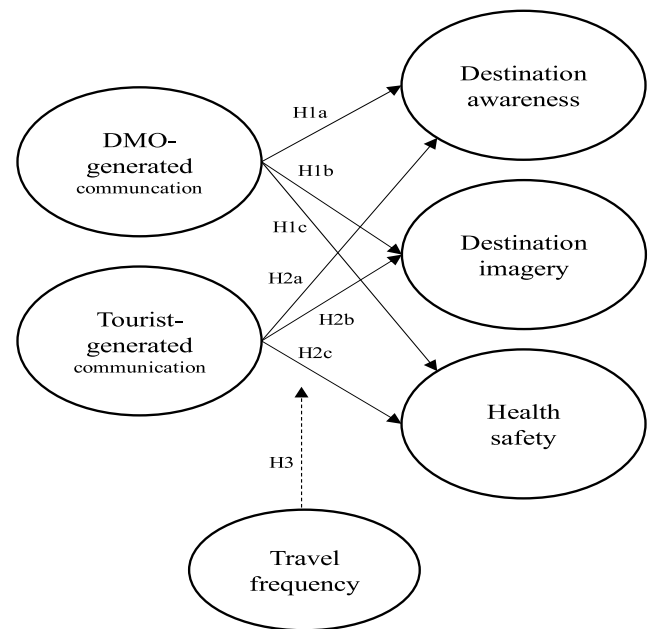


Fig. 1. Model of reference.

support our conceptual framework—since both the source of the information and the message itself are crucial for developing effective communication that contributes to shaping tourist perceptions (Kucukusta et al., 2019).

In this context, we distinguish between two relevant types of communication based on source—DMO-generated vs. tourist-generated communication—and examine how each type impacts tourist perceptions in terms of destination awareness, imagery and perceived health safety. Both types of communication present distinct advantages for potential tourists, given varying degrees of information richness and media types (Daft and Lengel, 1986; Levy and Gvili, 2015). Moreover, recent years have witnessed a proliferation of information sources and available contact channels, together with growing contact between potential tourists, current tourists and destination management (Lemon and Verhoef, 2016; Shawky et al., 2020). Hence, exploring both types of information has become vital to accurately determining the impact of communication on tourist perceptions.

Our study forges new paths by exploring perceived health safety as a key factor, given the current unstable scenario. The marketing literature recognizes health safety as a destination-based tourist perception, which gains relevance during the travel planning process (Tuclea et al., 2020). In the context of the COVID-19 pandemic, health safety perceptions have become increasingly relevant for determining tourism outcomes (Dube et al., 2021). The drastic decline in tourism during the pandemic was driven, on one hand, by government restrictions—but also by a fear of travelling fueled by health safety concerns (Zheng et al., 2021). Hence, considering perceived health safety is vital when seeking to better understand destination recovery in the aftermath of the COVID-19 pandemic.

Communication is one of the pillars of the customer-firm relationship (Verma et al., 2016). In tourism and hospitality settings, communication represents one of the most essential interactions—having a lasting impact on customer perceptions (Cambra-Fierro et al., 2021). Yet, today’s customers are increasingly exposed to an ever-broader range of information sources and contact channels. The proliferation of new information sources, contact channels and technologies has driven a communication strategy revolution in the tourism sector (Law et al., 2019; Villamediana et al., 2019). In this context, two key

constructs—information source and communication control—present both challenges and opportunities for tourism and hospitality firms (Llodrà-Riera et al., 2015). Existing research confirms that other customers are a chief external information source (Lemon and Verhoef, 2016); in fact, their influence is vital in shaping perceptions and driving desirable responses and behaviors (So and King, 2010). This is especially true for the travel and tourism sector—where information acquired prior to travelling is essential to shoring up a positive experience (Lin et al., 2018).

As recognized extensively in the literature, when potential visitors access information or receive communication regarding a destination, it tends to come in two forms: DMO-generated communication and tourist-generated communication (Huerta-Álvarez et al., 2020). DMO-generated communication refers to all information provided by destination management. Traditional media and new technologies alike provide organizations with countless opportunities for interaction with potential customers (Shawky et al., 2020). Firm-generated communication is extremely relevant in providing direct information to current and potential customers (Labanauskaitė et al., 2020). The literature has corroborated the significant impact DMO-generated communication has on a number of tourist perceptions, including destination awareness and destination image (Huerta-Álvarez et al., 2020). Information provided via this type of communication is considered highly reliable as it comes from official sources (Mínguez-González and Fernández-Cavia, 2015). This is especially significant during turbulent times like the present COVID-19 pandemic, when uncertainty is amplified and tourists need to rely on certified information to evaluate potential health safety (Yu et al., 2020). Consequently, DMO-generated communication will likely shape potential tourist perceptions regarding the destination.

Tourist-generated communication, on the other hand, refers to all information assimilated by a potential tourist through communication delivered by other tourists (Huerta-Álvarez et al., 2020). This type of communication has become progressively more relevant in determining tourist perceptions and behaviors (Han et al., 2018). Increasing use of new communication channels (e.g., social media) and tourism-specific platforms (e.g., TripAdvisor) has multiplied the opportunities for interaction between tourists (Okazaki et al., 2017). A considerable number of studies have examined tourist-generated communication and its impact on tourist perceptions (e.g., Mauri and Minazzi, 2013)—revealing this form of communication to be a key concern for practitioners, as potential tourists are greatly influenced by the perceptions and recommendations of other tourists (Huerta-Álvarez et al., 2020). Tourist-generated communication is considered trustworthy, as information receivers identify intensely with the source—fostering a sense of closeness (Dubois et al., 2016). Moreover, this type of communication comes directly from individuals who have had first-hand experiences with the destination; hence, it is regarded as more genuine as it reveals both positive and negative aspects (Litvin et al., 2008). Tourist-generated communication, then, can be considered a relevant driver of destination awareness and destination imagery. Lastly, as the information is constantly updated, it is generally relevant and recent—essential in unstable, volatile scenarios (Filieri and McLeay, 2014); this last feature means tourist-generated, like DMO-generated communication, can have a decisive impact on perceived health safety and shape potential tourist perceptions regarding the destination.

Considering all of the above, we propose the following hypotheses:

H1. *DMO-generated communication has a positive impact on (a) destination awareness, (b) destination imagery, and (c) perceived health safety.*

H2. *Tourist-generated communication has a positive impact on (a) destination awareness, (b) destination imagery, and (c) perceived health safety.*

Moreover, authors like Chark et al. (2021), Karl et al. (2020) and Losada et al. (2016) highlight the relevance of travel frequency in terms of impacting traveler perceptions and behaviors. More specifically, Farmaki (2021) and Neuburger and Egger (2021) indicate that—for tourism recovery processes—travel frequency must be considered an

essential modelling factor. Yet, as we did not find any specific evidence indicating how travel frequency might moderate the causal relationships that define our model, we will only propose the following general hypothesis:

H3. *Travel frequency moderates the intensity of links between i) DMO-generated and ii) tourist-generated communication with a) destination awareness, b) destination imagery, and c) perceived health safety.*

3. Method

According to recent data from Spain's National Institute of Statistics (INE, 2021), an increase in the number of foreign inbound visitors has been observed since January 2021: 434,363 in January and 198,176 in February. These numbers seem high in the context of paralyzed or restricted mobility due to COVID-19; however, they represent a drop of 89.49% and 92.74%, respectively, compared to January/February 2020, just prior to worldwide outbreak of the pandemic. Moreover, such figures may seem contradictory in a country where domestic mobility has been prohibited yet where no impediments exist—except for a negative PCR result—to international tourism. This can be explained, however, by gaps and loopholes in controls at Spanish airports and train stations which, de facto, have allowed some internal mobility.

This reality made it possible to assemble a small sample of travelers who had visited Madrid—Spain's administrative and economic capital—over the 2021 spring break/Easter holiday period (March 30–April 4). Madrid is a well-known tourist destination worldwide; it has very good communication infrastructures and, moreover, has not decreed hotel industry closure. The Spanish health system also enjoys a good reputation. All this—coupled with the vibrant cultural and architectural scene Madrid has on offer—make the city a very attractive destination for pandemic-weary tourism recovery pioneers.

To carry out our research, we had the collaboration of a team of surveyors—duly identified and equipped with PPE—outside the departure areas at Madrid's Adolfo Suárez airport and Atocha high-speed rail terminal. Travelers were asked to participate in the study and their reasons for visiting Madrid. They were then shown a QR code to download the survey to their smartphone for completion; in this way, personal contact was minimized and the use of paper was avoided. Worth noting here: more than 500 individuals interacted with the questionnaire, for a final sample of 209 valid surveys (66% female; 34% male; $M_{age} = 30.8$; $SD = 12.2$ years; 81% domestic tourists; 19% foreign tourists). 47.8% of respondents consider themselves infrequent travelers (once a year) while 52.2% travel several times a year. Despite its small size, the study's timing—coupled with its exploratory nature—facilitate key findings for tourist destination management in the current early post-pandemic environment.

Our survey includes measurement scales for main construct analysis used in Huerta-Álvarez et al. (2020) and Moliner-Velázquez et al. (2019). Due to the importance of perceived health safety, we adapted items from Simpson et al. (2016) to measure this construct. All scales were analyzed using a 7-point Likert scale. A first-order measurement model was carried out to assess the reliability and the validity of the measurement scales using EQS6.2 software ($\chi^2_{Sat-B}/df = 163.33/142 = 1.15$, $p\text{-value} = 0.106$; $RMSEA = 0.037$; $CFI = 0.980$; $BB\text{-}NNFI = 0.976$). The constructs showed adequate levels of internal consistency (composed reliability > 0.7 and $AVE > 0.5$) as Table 1 shows. Convergent validity was verified since all the standardized loadings were over 0.6 and significant at the 0.01 level ($t\text{-Stats} > 2.58$) (see Appendix A).

Discriminant validity was analyzed through the correlations between latent constructs, which were lower than the square root of AVE (see Table 1). Furthermore, the difference test showed a statistic $\chi^2(df = 10) = 25.97$ significant at 99% ($p\text{-value} = 0.003779$).

Potential common method bias problems were checked based on Harman's one-factor method. According to Podsakoff et al. (2003), a measurement model was performed where all items loaded on one latent

Table 1
Scale correlations.

	1.	2.	3.	4.	5.
1. DMO-generated communication	0.834				
2. Tourist-generated communication	0.218	0.792			
3. Destination awareness	0.483	0.114	0.836		
4. Destination imagery	0.531	0.300	0.467	0.803	
5. Perceived Health safety	0.164	0.105	0.050	0.309	0.907

Note: Values along the main diagonal, in bold, correspond to the square root of the AVE. Values below the diagonal represent the correlations between latent constructs.

factor. The obtained fit indices ($\chi^2_{\text{Sat-B}}/\text{df} = 807.45/152 = 5.31$, $p\text{-value} < 0.000$; $\text{RMSEA} = 0.201$; $\text{CFI} = 0.400$; $\text{BB-NNFI} = 0.325$) showed that this single-factor estimation achieved a clearly poorer fit than the estimation with five latent constructs.

Worth noting here is that our study differentiates between tourists who travel once a year (low-frequency) versus those who travel several times (high-frequency) to analyze the effects of communication (DMO-generated vs. tourist-generated) on destination awareness and imagery and perceived health safety. Before estimating these effects, descriptive statistics of main constructs were studied based on travel frequency (see Table 2 and Fig. 2).

Descriptive data reveal differences in tourist perceptions depending on travel frequency. High-frequency travelers seem to show higher perceptions of destination awareness and imagery, while low-frequency travelers show higher values in perceived health safety. In terms of communication, while high-frequency travelers have a higher valuation of DMO-generated communication, low-frequency travelers have a higher valuation of tourist-generated communication. However, to value the significance of these perceptions we have also performed a *t*-test. The *t*-test results indicated that the higher the frequency, the significantly greater the perception of destination awareness (*t*-Stat = -3.35^{***} ; $p\text{-value} = 0.001$) and imagery (*t*-Stat = -2.53^{**} ; $p\text{-value} = 0.013$) while there are not significant differences in the perceptions of the other constructs (i.e., safety, DMO-generated communication, tourist-generated communication). These data allow us to respond RQ1, partially confirming that travel frequency impacts tourist perceptions in destination recovery periods.

Measurement model invariance was assessed across the two samples based on travel frequency in line with Steenkamp and Baumgartner's (1998) approach. We compare the estimations between a multigroup measurement model ($\chi^2_{\text{Sat-B}}/\text{df} = 401.74/284 = 1.41$; $\text{RMSEA} = 0.078$; $\text{CFI} = 0.901$; $\text{BB-NNFI} = 0.891$) and the restricted multigroup confirmatory analysis imposing equality on the factor loadings ($\chi^2_{\text{Sat-B}}/\text{df} = 409.44/298 = 1.37$; $\text{RMSEA} = 0.074$; $\text{CFI} = 0.907$; $\text{BB-NNFI} = 0.893$).

Table 2
Descriptive statistics.

CONSTRUCT	M (SD)	M (SD)
		DESTINATION FREQUENCY
DMO-generated Communication	4.75 (±1.3)	Low: 4.62 (±1.3)
		High: 4.87 (±1.2)
Tourist-generated Communication	5.07 (±1.1)	Low: 5.23 (±1.1)
		High: 4.92 (±1.1)
Destination Awareness	4.93 (±1.4)	Low: 4.49 (±1.4)
		High: 5.33*** (±1.2)
Destination Image	4.42 (±1.2)	Low: 4.11 (±1.3)
		High: 4.71** (±1.1)
Perceived Health Safety	4.04 (±1.6)	Low: 4.15 (±1.7)
		High: 3.94** (±1.5)

Note: ** $p < 0.005$; *** $p < 0.001$.

Low (frequency): Travel once a year; High (frequency): Travel several times a year.

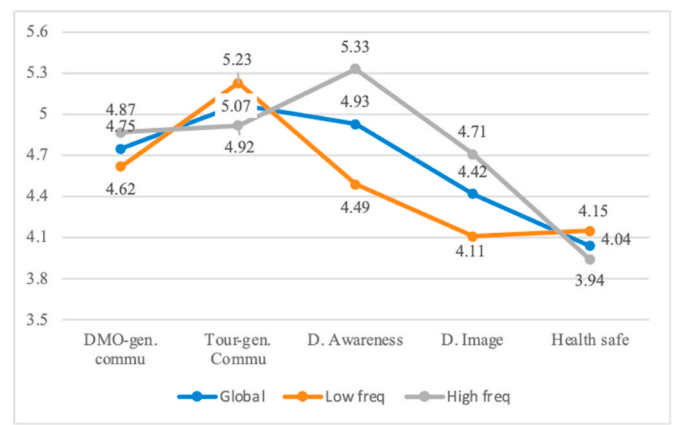


Fig. 2. Tourist perceptions based on travel frequency.

The difference between CFI indexes (0.006) was lower than the maximum of 0.01 (Chen, 2007) and $\Delta\chi^2$ ($\text{df} = 14$) = 8.32 was not significant ($p\text{-value} = 0.872$).

4. Results

The structural equation model including the moderating impact of travel frequency was estimated by means of a multigroup analysis for the two groups of tourists. The comparison between the causal model estimation without structural weight restrictions ($\chi^2_{\text{Sat-B}}/\text{df} = 416.22/290 = 1.43$; $\text{RMSEA} = 0.08$; $\text{CFI} = 0.910$; $\text{BB-NNFI} = 0.892$) with the restricted model estimation ($\chi^2_{\text{Sat-B}}/\text{df} = 425.57/296 = 1.44$; $\text{RMSEA} = 0.091$; $\text{CFI} = 0.891$; $\text{BB-NNFI} = 0.875$) indicated that the last model yielded worse fit indexes than the first model ($\Delta\chi^2$ ($\text{df} = 6$) = 20.50*** significant at 0.01 level ($p\text{-value} = 0.002249$)). Based on this global result, Lagrangian multiplier (LM) analysis indicated the causal relationships that were significantly different between groups. Table 3 shows the causal relationships estimations for each group of tourists, together with the LM tests.

Data allow us to respond RQ2, showing that DMO-generated and tourist-generated communication influence in destination imagery, awareness and perceived health safety. More specifically, for high-frequency travelers DMO-generated communication impacts on all the constructs, while tourist-generated communication only impacts on destination imagery. For low-frequency travelers, data reveal that DMO-generated communication only influences in destination imagery and awareness, but not in perceived health safety; while there is no effect of tourist-generated communication on the dependent variables.

More, the results indicate the positive and significant effect of DMO-generated communication on destination awareness ($\gamma_{\text{high-freq}} = 0.599^{***}$ and $\gamma_{\text{low-freq}} = 0.333^{**}$) in both groups, being stronger among the tourists who travel with higher frequency. In the same way, the significant impact of this type of communication on destination imagery is stronger among tourists with high travel frequency ($\gamma_{\text{high-freq}} = 0.556^{***}$ and $\gamma_{\text{low-freq}} = 0.394^{***}$). In terms of perceived health safety, this construct shows a positive and significant influence of DMO-generated communication ($\gamma_{\text{high-freq}} = 0.307^*$) among the tourists who travel with higher frequency, but not among the tourists who travel with lower frequency ($\gamma_{\text{low-freq}} = 0.022$). Finally, tourist-generated communication only exerts a positive and significant effect on destination imagery among the group of high frequency travelers ($\gamma_{\text{high-freq}} = 0.300^{**}$). These data allow us respond RQ3 and confirm that travel frequency partially moderates the relationships between communication and destination imagery, awareness and perceived health safety.

5. Discussion and conclusions

Tourism destination perception and imagery are key factors driving

Table 3
Effects of communications based on travel frequency.

Relationships	Pooled		Low-frequency		High-frequency		$\Delta\chi^2$ (df = 1)(p-value)
	St. Coef	t-Stat	St. Coef	t-Stat	St. Coef	t-Stat	
DMO-C→ D. awareness (H _{1A})	0.494***	4.29	0.333**	2.006	0.599***	3.850	1.494 (0.222)
DMO-C→ D. imagery (H _{1B})	0.505***	5.52	0.394***	2.757	0.556***	4.785	0.542 (0.461)
DMO-C→ P. Health safety (H _{1C})	0.159	n.s.	0.022	n.s.	0.307*	1.852	0.564 (0.453)
TGC→ D. awareness (H _{2A})	0.011	n.s.	0.134	n.s.	0.203	n.s.	3.275* (0.070)
TGC→ D. imagery (H _{2B})	0.192*	1.64	0.193	n.s.	0.300**	2.304	0.272 (0.602)
TGC→ P. Health safety (H _{2C})	0.075	n.s.	0.214	n.s.	0.116	n.s.	1.824 (0.177)

St.Coeff: Standard Coefficient.

*: p-value<0.1; **:p-value<0.05; ***: p-value<0.01.

destination positioning and overall industry success. Hence, how a destination can leverage resources to foster positive brand imagery—with a view to distinguish itself and out-position competitors—becomes a critical issue for tourism decision-makers (Zhang et al., 2021). In line with the crisis management literature (e.g., Novelli et al., 2018) and Information Richness Theory (Daft and Lengel, 1986; Kucukusta et al., 2019), our data show that, during early recovery stages, DMO-generated communication impacts destination imagery and awareness. In contrast, our findings indicate communication in general has a positive yet non-significant impact on perceived health safety. The descriptive data shows sufficient but low values for perceived health safety; this may mean that pioneering tourists are very likely to exhibit low risk aversion, basing travel decisions on other stimuli like promotions. That said, our findings vary depending on how often tourists travel (travel-frequency).

Our descriptive data also suggest that travelers value tourist-generated communication over DMO-generated communication. Surprisingly, however, our causality test revealed that tourist-generated communication only affected destination imagery in the high-frequency traveler segment—not seeming to affect model outcomes. DMO-generated communication is the type that had a real impact on destination awareness, destination imagery and perceived health safety. These findings do not corroborate the widespread scholarly assumption that user-generated communication is more influential (e.g., Schivinski and Dabrowski, 2016).

In such a context, we believe that—while travelers and tourists increasingly turn to social networks and alternative channels for information—during early travel recovery stages, travelers seem to value destination-controlled communication over information coming from other travelers. This may be due, as Bermes (2021) has so clearly indicated recently, to fake news via social networks during the COVID-19 pandemic, becoming a key concern for retailers and service providers and consumers alike—often fueling hysteria, panic-buying and erroneous precautionary measures. The increasing spread of misinformation and widespread information overload, then, are major challenges in the pandemic age. Moreover, the combined effect of mobility restrictions, scarcity of reliable peer-generated information and a lack of familiarity with the daily situation at destination, has driven travelers to increasingly seek guidance and updates via more official channels. All told, the evidence shows the pandemic’s impact on how tourists perceive and value communication, with important implications for management—leaving DMOs little choice but to offer comprehensive, up-to-date information in real time on issues that are not normally part of the message they transmit.

Hence, our findings have important implications for tourist destination management and DMOs alike. The main challenge for tourist destinations is to generate added value aimed at attracting visitors. Both in crisis contexts and early post-crisis recovery periods, added value may be linked to communication regarding health safety, mobility regulations/restrictions and pertinent recommendations, among other aspects. From this standpoint, we could foresee that communication will affect tourist perceptions of destination imagery, awareness and health safety, as proposed in RQ1. Yet, while the literature indicates travelers deem

tourist-generated communication much more reliable than DMO-generated content (e.g., Keller et al., 2011), our data seem to suggest that—in early tourism recovery scenarios—DMO-generated communication has a more significant impact on tourists’ destination awareness, imagery and perceived health safety. Moreover, travel frequency, among other factors, also have a significant impact on tourist perceptions, as proposed in RQ2—partially moderating the impact of both DMO-generated and tourist-generated communication on destination awareness, imagery and perceived health safety (RQ3).

Our findings also show that high-frequency travelers place more value on destination imagery and awareness than low-frequency tourists do. This may be due to promotional efforts aimed at reactivating tourism—initially targeting strategic tourist segments—which appear to be yielding positive results. Hence, from a management standpoint, communication and promotional actions of this sort should continue. Also worth noting is that tourists who travel more frequently seem to be more sensitive to such promotional efforts of this sort.

Another surprising finding is the data indicating that, regardless of traveler profile, perceived health safety is not the most important factor. Low values in both segments seem to indicate that pioneering tourists—aware they are not complying with all mobility restrictions—are very likely to exhibit low risk aversion. These travelers, we believe, are stimulated by other factors: special offers, discounts on tickets/accommodation and the chance to enjoy normally crowded destinations and venues all to themselves, for instance. This unexpected result may be explained by the Spanish sanitary system’s positive reputation. In any case, our data also confirm that, to some extent, communication regarding health safety is essential—initially via official DMO channels.

We can conclude, then, that while travelers generally place high value on information from other travelers, the data clearly indicate that—in early tourism recovery scenarios—DMO-generated communication has a significant impact on tourist perceptions; in other words, DMO-generated communication is still essential as it helps shore up perceived health safety—so valued in these times of COVID-19. Generated and controlled content of this sort through official channels can bring images of tranquility and normality to mind, shore up a sense of safety and, consequently, reduce perceived risk. While tourists may be keen to know other travelers’ opinions, hear their personal experiences at destination and receive recommendations—considering this a rich alternative information source and decision-making tool—in very early reopening stages, this type of information can be scarce. Hence, DMOs should invest in communication with a view to manage information flows effectively, impact final travel plans and attract potential new tourists.

To this end, DMOs should harness the full potential of technology. Advances in ICT make it possible to transmit information and interact with current/potential visitors in real time—while keeping a close eye on what is being said about the destination on social media; the objective being, obviously, to shore up destination imagery, awareness and perceived safety. While the social web empowers users—delivering quick, easy, affordable access to information and content creation/sharing—Web 2.0 also equips destination marketers with powerful tools

for interacting with travelers, a two-way communication flow which DMOs should use to gather intelligence on target audience attitudes/ behaviors and positively impact tourist perceptions. Moreover, DMOs should wield the power of big data to make the most of tourist opinions/ perceptions regarding the destination harvested from social networks. We also recommend using Social CRM and Natural Language Processing (NLP) for effective integration with advanced technologies like machine and deep learning, and artificial intelligence (AI).

Despite the relevance of our findings, several limitations should be noted. First, our results are for one specific tourist destination; hence, we must be cautious when extrapolating our findings across destinations. Second, we used questionnaires to survey traveler opinions and perceptions at one given point in time. In this regard, we must recognize the potential for common method bias (CMB)—i.e. proportion of variance of the variables in relation to the measurement method (Podsakoff et al., 2003). Podsakoff et al. (2003) recommend using procedural strategies and/or statistics to address potential CMB. With respect to procedure, we guaranteed participant anonymity, clarified that there were no right or wrong answers, used previously validated scales, and eliminated possible ambiguities in scale items wording by carrying out pretests with

different reference groups—ensuring simplicity, specificity, and conciseness. In terms of statistical strategies, no single factor explaining variance of all items was identified in our factorial analysis, suggesting it is unlikely bias arose due to using a single method (see Section 3).

Finally, with regard to potential lines for future research, studies exploring additional consumer profile variables—e.g., age, gender, employment, origin—as moderating the structural model would be of interest for academics and practitioners alike. Finally, further research replicating our analysis in different tourism destinations would be valuable in terms of extrapolating results.

Declaration of competing interest

None.

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Appendix A. Measurement model estimation

Construct	Item	SL (t-value)
DMO-generated communication (CR = 0.901; AVE = 0.696)	<i>I am satisfied with the communication generating by Madrid as a tourist destination</i>	0.847
	<i>The level of communication generated by Madrid as a tourist destination meets my expectations</i>	0.761** (7.37)
	<i>The communication generated by Madrid as a tourist destination are very attractive</i>	0.889** (11.91)
	<i>Compared with the communication of other destinations, I think that the communication generated by Madrid as a tourist destination is well done</i>	0.834** (10.70)
Tourist-generated communication (CR = 0.893; AVE = 0.628)	<i>The level of generated content about Madrid on social media platforms by other travelers meets my expectations.</i>	0.855
	<i>The generated content by other travelers on social media platforms about Madrid is very attractive.</i>	0.854** (8.56)
	<i>The generated content by other travelers about Madrid provides me with different ideas about this destination</i>	0.614** (6.89)
	<i>I find positive comments about Madrid on social media</i>	0.837** (10.38)
	<i>I find recommendations related with Madrid as destination from other travelers on social media platforms</i>	0.774** (11.47)
Destination awareness (CR = 0.873; AVE = 0.698)	<i>I can imagine what Madrid is like a tourist destination</i>	0.850
	<i>I can recognize the Madrid brand among other destinations</i>	0.923** (11.07)
	<i>I am aware of Madrid</i>	0.723** (6.18)
Destination imagery (CR = 0.879; AVE = 0.645)	<i>I can visualize several characteristics of Madrid as a tourist destination</i>	0.809
	<i>Madrid stands out from other destinations</i>	0.810** (13.12)
	<i>Madrid, as a destination is very different from others</i>	0.855** (15.11)
	<i>I know what Madrid is</i>	0.734** (10.64)
Perceived Health Safety (CR = 0.933; AVE = 0.822)	<i>I feel safe visiting Madrid at the present time despite the pandemic</i>	0.876
	<i>Madrid is a safe destination</i>	0.951** (13.91)
	<i>The risk of travelling to Madrid is low</i>	0.891** (13.02)

SL: Standardized loadings; CR: composite reliability; AVE: average variance extracted.

** : p-value < 0.001.

CONSTRUCT	M (SD)	M (SD)
		DESTINATION FREQUENCY
DMO-generated Communication	4.75 (±1.3)	Low: 4.62 (±1.3) High: 4.87 (±1.2)
Tourist-generated Communication	5.07 (±1.1)	Low: 5.23 (±1.1) High: 4.92 (±1.1)
Destination Awareness	4.93 (±1.4)	Low: 4.49 (±1.4) High: 5.33*** (±1.2)
Destination Image	4.42 (±1.2)	Low: 4.11 (±1.3)

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(continued)

CONSTRUCT	M (SD)	M (SD)
		DESTINATION FREQUENCY
Perceived Health Safety	4.04 (±1.6)	High: 4.71** (±1.1)
		Low: 4.15 (±1.7)
		High: 3.94** (±1.5)

Note: **p < 0.005; ***p < 0.001.

Low (frequency): Travel once a year; High (frequency): Travel several times a year.

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