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# The effect of music to encourage responsible health-related behaviours among reluctant tourists: analysis of high – and low-context cultures

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**ABSTRACT**

The tourism sector is known to suffer significant volatility associated with safety issues. Among the factors that influence tourists' decisions in this regard are health-related concerns about the destination country. However, when it comes to taking responsibility for their own health, there is a gap in the literature regarding effective communication strategies for motivating tourists who are reluctant to perform desirable health-related behaviours, such as getting vaccinated. This study aims to examine the effectiveness of music in communicating implicit messages about such responsible behaviours to reluctant tourists. To this end, two factors are experimentally manipulated: the type of communication stimulus (verbal/musical) and the cultural context of the tourist (high/low). The main findings are that: music exerts a greater effect on reluctant tourists than 'average' tourists; music is capable of conveying referential as well as emotional messages; and music's effectiveness in this kind of communication is greater in high-context cultures.

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**KEYWORDS**
Cultural context; communication; music effectiveness; desirable health-related behaviour

## 1. Introduction

In recent years, the tourism sector has been characterised by a continuous growth curve (UNWTO, 2020). However, it is also a sector that suffers significant volatility associated with safety and security issues – factors that greatly affect consumers when making travel decisions (Reisinger & Mavondo, 2005). Among the many factors that influence their decisions are health-related concerns about the destination country (Adongo et al., 2021).

The literature that analyzes destinations' strategies for communicating with visitors about how to minimise health risks finds that visual aids can be effective, transparent, and ethically desirable tools with which to reduce risk behaviours, especially in the case of certain audiences with poor numerical skills or even for older people (García-Retamero & Cokely, 2013). However, there is a gap in the literature regarding effective communication strategies for visitors who lack the motivation to perform a given desirable health-related behaviour, such as getting vaccinated (Cappola & Cohen, in press).

When it comes to this profile of public – travellers with a low predisposition toward adopting responsible behaviour – communication is usually not as effective (MacInnis et al., 1991). Therefore, destinations need to identify specific communication resources that are more likely to reach these

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reluctant audiences with the health-related message. On this point, previous studies have determined that music used in advertising is especially effective for achieving implicit learning outcomes in audiences with low levels of motivation (Alexomanolaki et al., 2007). Many of these studies frame music as an element that is capable of altering the mood of the recipient (e.g. Juslin & Sloboda, 2010), usually when it accompanies the *explicit* verbal message (written or oral). However, as has been demonstrated previously, music is also effective when the objective is to convey an implicit meaning, which, according to Zhu and Meyers-Levy (2005), can be *embodied* or *referential*. While the former is context-independent, in the case of a referential meaning, the context is crucial when it comes to interpreting the message, and this is determined by culture. Depending on whether the culture is high – or low-context, there will be a natural inclination toward more implicit or explicit communication styles (Hall, 1976). According to this latter author, context refers to the nature of how meaning is constructed differently in cultures, using different proportions of context and information. Thus, cultures that use context to a greater extent use it to compensate for imprecision in verbal information.

Taking into account the foregoing considerations, the aim of the present study is to identify effective communication strategies for promoting responsible vaccination behaviours among reluctant tourists. To this end, two factors will be experimentally manipulated: the type of communication stimulus, differentiating between explicit (verbal) and implicit (musical) main stimuli; and the cultural context. This will be achieved by conducting the experiment on a sample of tourists from a high-context culture (France) and then reproducing it on a low-context one (United Kingdom). The findings should contribute to advancing the literature in three directions: (1) by identifying whether a communication strategy that is effective for an 'average' tourist (that is, one who is not reluctant to get vaccinated) is also effective for one who *is* reluctant to perform this particular health-related behaviour; (2) by providing insights into the role of music as a primary communication resource in its own right, as opposed to a complement to the verbal message; and (3) by evaluating the moderating role of cultural context in the effectiveness of music as a communication resource.

## 2. Literature review

### *2.1. Risk, motivations, and travel intention*

Research on tourism safety is closely related to the literature on tourism risk. When travelling, health-related risk has two components: the possibility of facing physical danger during the trip (which equates to an objective assessment of a palpable risk); and the unease or uncertainty experienced by the tourist when contemplating more intangible or invisible threats, such as the possibility of catching a virus by interacting with the tourism-service staff or other tourists (which is a more subjective assessment of risk) (Peco-Torres et al., 2021). Both of these two kinds of tourism risk are relevant in the context of viruses that can be immunised against by getting vaccinated (Brewer & Hallman, 2006).

Tourist vaccination intention has been examined in previous studies (Gursoy & Chi, 2021), which find that it can be generated by a **self-preservation motivation expressed as a desire to care for one's health** (Adongo et al., 2021), an **altruistic motivation** (Camerini et al., 2019), or due to **social pressure** (Kock et al., 2020). Self-Determination Theory speaks to these drivers, proposing that intrinsic motivation (self-preservation and altruism) and the self-regulation of extrinsic motivation (social pressure) are significantly associated with maintaining healthy behaviours (Deci & Ryan, 2000).

On the topic of individuals' intention to get vaccinated as a result of a health-related **self-preservation motivation**, the literature has addressed this issue via different theories. According to the protection motivation theory (Rogers, 1975), individuals adopt protective measures if they consider the risk posed by *not* taking them to be high. Also relevant here is prospect theory (also known as perspective theory), which holds that people are loss-averse – that is, they are more willing to take a risk to avoid a loss than to obtain a benefit (MacLean & Ziemba, 2013). Therefore, those tourists who

present a greater aversion to (a stronger desire to avoid) the losses associated with health-related problems will demonstrate a stronger intention to get vaccinated. In contrast, when tourist perceived risk is low, this intention rarely arises (Huang et al., 2020), which can cause travellers to be reluctant to get vaccinated if they perceive the benefit of doing so to be greater than the cost, be it financial, psychological, or in terms of time lost. Of these, the psychological costs are the most influential when it comes to getting vaccinated (Lammert et al., 2017).

Turning to **altruistic motivation** in the vaccination context, the literature concludes that when parents decide to have their children vaccinated, this is both for their protection and for the rest of society (Camerini et al., 2019). In the case of flu jabs, Shim et al. (2012) identify that altruistic motivations are as relevant as self-preservation motivations and were even *more* relevant during the COVID-19 pandemic (Rieger, 2020). On this issue, Cucciniello et al. (2022) demonstrated that official public messages focused on altruism increased vaccination intention in the fight against COVID-19.

Finally, **the pressure exerted by society** on the unvaccinated individual may present informally, through public opinion (Pires & Crokidakis, 2017), or more formally, through regulations (Graeber et al., 2021). In the former scenario, the information conveyed by the media when a public health crisis arises can lead to so-called 'tourist xenophobia,' driven by a fear of the unknown when undertaking tourism, which can prompt tourists to get vaccinated, for instance, in a bid to combat the risk of contamination (Kock et al., 2020). In the second scenario, governments' imposition of a mandatory vaccination passport for anyone wanting to travel abroad exemplifies the kind of regulatory pressure that forces tourists who wish to travel to get vaccinated (Pavli & Maltezou, 2021).

In light of these findings from the literature, all three types of motivations – driven **by health-related self-preservation**, **altruism**, and **social pressure** – can lead tourists to get vaccinated, which will result in an objective reduction in the risk of contracting a disease when travelling (Steffen et al., 2015). However, Irvine and Anderson (2006) discovered that **perceived risk** also influences tourists' behaviour, as a subjective factor that can prompt them to avoid or cancel a trip to a specific destination. Studies dealing with how people attempt to avoid uncertainty reveal that a tourist's decision to travel during a major public health crisis depends on their perceptions of risk and uncertainty, which affect the entire decision process, from pre-visit planning to choice of services at the destination (Kozak et al., 2007).

### *2.2. Communication in an intercultural context*

Hall (1976) developed the concept of high – and low-context communication, introducing the idea that individuals combine pre-programmed elements (culture-specific context) and information to create meaning and that this context varies from culture to culture. According to this author, in a high-context (HC) culture, most interpersonal communication is based more on the physical context or is internalised in the person, while the verbal part of the message – such as words, phrases, and grammar – contains less information. Communication between members of such cultures is more implicit and indirect, and message recipients rely largely on the context to interpret it (Meyer, 2014). For example, in Latin cultures, non-verbal communication is very common. In contrast, in a low-context (LC) culture, messages tend to be more context-free. The important factor here is *what* is said, not how it is said or the environment in which it is expressed. People do not need to know the underlying context to understand what is being said, as communication between members of such cultures tends to be more explicit and direct (Meyer, 2014). For example, in English-speaking countries, interpersonal communication is mainly verbal, featuring clear and precise arguments.

### *2.3. The effectiveness of music as a communication resource in different cultural contexts*

Turning to the effectiveness of explicit versus implicit communication, in recent years, many studies have demonstrated the difficulty of understanding explicit verbal messages, and have endeavoured

to identify different communication alternatives (Höllerer et al., 2018b). Music has been found to be one such useful alternative when it comes to conveying emotions, feelings, or subtle messages that are being targeted at a given population to encourage them to accept, adhere to, or perform certain recommended behaviours (Juslin & Sloboda, 2010). In this vein, Rohrmeier and Rebuschat (2012) find that implicit knowledge governs the acquisition and perception of music among both musicians and non-musicians. Therefore, unlike the case of a non-native language, it is not necessary for a person to learn the relationship between sounds and meaning in order to interpret a musical message (Ettlinger et al., 2011).

Music, then, has multiple properties that render it a promising tool for enhancing the communication process, being universally recognised as a communicative medium that transcends culture and language barriers (Mehr et al., 2018). It also has an extraordinary unifying capacity, generating new or stronger links between individuals and communities (Tarr et al., 2014), reinforcing a sense of solidarity, and appealing to even the most diverse communities to achieve common objectives (Fetchenhauer et al., 2006). Unlike explicit verbal messages, music generates *implicit* learning (Alexomanolaki et al., 2007). However, its interpretation is shaped by the individual's culture (Stevens, 2012). Therefore, it is necessary to better understand how message *type* interacts with the cultural context. According to Meyer (2014), the degree of message implicitness is one of the differentiating characteristics in the communication process between individuals from different cultural contexts. Specifically, in the context under analysis in the present study – promoting public acceptance of vaccination processes – it has also been found that the kind of language used in the message must be adapted to the target audience (Lawes-Wickwar et al., 2021).

Combining both factors, cultural context and type of message, it seems that, in HC cultures, communication based on implicit codes, such as musical code, can be more effective than communication based on explicit codes, such as verbal code, when attempting to get a message across and, more specifically, when it comes to prompting changes in behaviour. As we saw earlier, Zhu and Meyers-Levy (2005) proposed that music carries two messages, the intrinsic, related to emotion and hedonism, and the referential, which requires context to be decoded. Therefore, it is anticipated that music will work well as a communication resource for conveying health-related messages in HC cultures (Hall, 1976; Meyer, 2014). By contrast, in LC cultures, individuals expect to interpret all of the message content by decoding the explicit part of it (Liu, 2016). Given that communication between members of such cultures tends to be more explicit and direct (Meyer, 2014), it is resources that carry an explicit message, such as verbal utterings, that can enhance the effectiveness of communication in terms of learning, shaping attitudes, motivations, or perceptions, or influencing behavioural change.

Therefore, in the context of interest to us here – encouraging reluctant tourists to engage with a pro-vaccination message – and taking into account both the motivations for vaccination (self-preservation, altruistic, and social pressure) as well as the reluctant population's travel-related perceived health risk, the following research hypotheses are proposed:

$H^{\boldsymbol{LC}}_{\boldsymbol{MOT}}$: For tourists with a low level of motivation to get vaccinated, the verbal message-type will increase self-preservation motivation ($H^{LC}_{MOT-SP}$), altruistic motivation ($H^{LC}_{MOT-ALT}$), and social-pressure motivation ($H^{LC}_{MOT-SOCPRESS}$) when the individual is from an LC culture.

$H^{\boldsymbol{HC}}_{\boldsymbol{MOT}}$: For tourists with a low level of motivation to get vaccinated, the musical message-type will increase self-preservation motivation ($H^{HC}_{MOT-SP}$), altruistic motivation ($H^{\boldsymbol{HC}}_{\boldsymbol{MOT-ALT}}$), and social-pressure motivation ($H^{HC}_{MOT-SOCPRESS}$) when the individual is from a HC culture.

$H^{\boldsymbol{LC}}_{\boldsymbol{RISK}}$: For tourists with high travel-related perceived health risk, the verbal message-type will reduce this perception when the individual is from an LC culture.

$H^{\boldsymbol{HC}}_{\boldsymbol{RISK}}$: For tourists with high travel-related perceived health risk, the musical message-type will reduce this perception when the individual is from a HC culture.

## 3. Methodology

### 3.1. Sample and sampling procedure

The fieldwork was conducted in August 2022. A survey was issued simultaneously in the United Kingdom (UK) and France (FR), representing LC and HC cultures, respectively. An online survey panel comprising tourists was used (administered by a private company, Dynata Inc.). All participants were of legal age, and all had to undertake at least one holiday stay per year. Each participant was asked to click on an email link and enter a web survey environment created via the Le Sphinx online IQ2 survey platform.[1]

The data-collection process began by sending participation invites by email to a random selection of panelists in each country. Access to the different versions of the questionnaire was controlled by sending a different link to each panelist at random. Before starting the final fieldwork, a pre-test was conducted on 106 individuals, to ensure that there were no reliability problems with the different scales or with the visualisation of the stimuli. The final sample comprised 319 cases (78 UK + Verbal; 79 FR + Verbal; 81 UK + Musical; 81 FR + Musical). Table 1 presents their characteristics.

### 3.2. Experimental factors

For this study, the health-related risk was taken to be the COVID-19 pandemic, and the destination under study was Andalusia. This part of Spain is one of the regions that receives among the highest volumes of incoming tourists in Europe, with more than 10 million tourists per year (INE, 2023). The **basic experimental stimulus** consisted of a video in which a family of animated characters appeared in different scenes conveying the message that this region was safe to visit. This was also captured in the closing slogan: '***Andalusia – a safe destination. It's everyone's responsibility to keep it that way***.' The video portrayed three points in time during the evolution of the COVID-19 pandemic: the first few months, when people were generally confined to their homes; the arrival of the vaccine; and the possibility of travelling again thanks to the roll-out of the national vaccination programme. The video lasted 74 s.

**Table 1.** Sociodemographic characteristics of the samples.

| Sociodemographic | Categories | |
|---|---|---|
| Sex | Man | 48.59% |
| | Woman | 51.41% |
| Age | 18–29 | 5.96% |
| | 30–44 | 25.08% |
| | 45–64 | 45.77% |
| | ≥ 65 | 23.19% |
| Living arrangement | Lives with parents | 2.82% |
| | Lives alone | 19.75% |
| | Lives with their partner | 44.83% |
| | Lives with their partner and dependent children | 26.02% |
| | Other situations | 6.58% |
| Educational level[a] | Non-university | 42.63% |
| | University | 57.37% |
| Annual household income[b] | Less than €15,000 | 5.64% |
| | €15,000 – €29,999 | 16.61% |
| | €30,000 – €39,999 | 18.81% |
| | €40,000 – €49,999 | 16.93% |
| | €50,000 – €80,000 | 22.26% |
| | More than €80,000 | 12.23% |
| | N/A / no reply | 7.52% |

[a]Given that educational levels are not homogeneous for the United Kingdom and France, we simply distinguished between those with a university education and those without.
[b]For the United Kingdom, equivalent intervals in Pounds Sterling were used, taking into account the exchange rate.

Participants were given precise instructions explaining that they were going to be shown a video, for which they had to switch on the sound on their device, and that they had to watch the video from beginning to end (skipping parts of the video was not permitted). As an *a posteriori* control, the individuals were asked to put three scenes in the right order, based on the three main parts of the video story that they were required to have watched.

In relation to the **cultural context**, the cultural framework that is most closely linked to the effectiveness of different communication formats is the aforementioned low – versus high-context culture (Hall, 1976). In studies where the individual's culture is used as an experimental factor, the most common procedure is to use the country of residence and origin to define the value for that factor (Taras et al., 2009).

To select appropriate countries that would present clear differences between HC and LC, first of all, they needed to be source markets for the destination of Andalusia. The two main sending markets for Andalusia, both before and after the pandemic, were the UK and France FR (Junta de Andalucía, 2021). Taking Meyer's (2014) classification, the UK is considered an LC country, and France, a HC country, these being widely validated distinctions (e.g. Tabata & Vrij, 2023). However, given that there remains a lack of consensus regarding the precise classification of countries as HC versus LC (Kittler et al., 2011), and to verify that the present classification was valid, the scale proposed by Ohashi (2000) was used which measures the communication context (that is, low vs. high) (Appendix 1). Thus, in the final sample, tourists from the UK presented an average of 4.46 (on a scale from 1 to 7), while French tourists reached 4.83, with significant differences between the two averages ($p$-value = 0.01).

Turning to the type of **communication resource (explicit vs. implicit)**, a direct verbal message with no narrative elements was used as the explicit resource, in line with recent experiments in the advertising field, such as that of Ryoo et al. (2021). Instrumental music was used as the implicit resource, as also used in the work of Alexomanolaki et al. (2007). Both verbal and musical messages can be effective in improving learning or adherence to a desired behaviour, especially when combined with images (Shehan, 1981). Thus, to manipulate the claim, two versions of the aforementioned video were created, one involving an utterance (verbal stimulus) and another that used a fragment of instrumental musical in place of the verbal component (musical stimulus).

The procedure for creating both stimuli involved five tasks. First, the group of researchers participating in this project debated and agreed on the message that was to be communicated. Second, a conceptual outline of the video was laid out using a storyboard, and the words to be spoken in the voice-over that accompanied the images (verbal stimulus) were finalised. Third, the video animation and editing were developed by a specialist external advertising communication company. The voice-over, in the case of the verbal stimulus, was carried out by professionals in each of the languages (English and French), selecting speakers of the same gender and first conducting a voice casting to ensure they presented a similar timbre. In addition, these professionals were given clear instructions to follow to help them achieve the desired tone and intensity of the expression in each of the video scenes. Fourth, both the voice-over text and the video served as sources of inspiration for a professional musician to select an appropriate fragment of instrumental music. This orchestra conductor, with 25 years' experience, chose a piece that would help convey the right message (musical stimulus). As with the voice-over artists, additional instructions were given to the musician regarding what needed to be conveyed in each part of the videos. The music that was chosen (a combination of different fragments from the 'Concerto d'Amore' by Jacob de Haan) combines several styles, as the composer himself observed,[2] which would help ensure that it would appeal to publics with different musical tastes. Once the final selection of music had been made, the reproduction rights were acquired. Finally, the definitive stimuli were constructed, which required the two voiceovers in English and French. The script was translated from Spanish into both languages following the usual two-way translation process and carried out by different professionals for each stage. By way of example, links to the videos in their English version can be consulted.[3]

To check whether the proposed manipulation had been effective, two complementary checks were performed. On the one hand, it was essential to check that the musical message was perceived, as intended, as more implicit than the verbal one, given that this was the facet that we planned to interact with the cultural context. Using the message implicitness scale from Chow and Luk (2006), we obtained the mean value, given that the scale presented adequate psychometric properties (Appendix 1). The mean for the final sample on a scale of 1 (explicit) to 7 (implicit) was 3.08 for the verbal stimulus and 3.47 for the musical stimulus, with significant differences being found between the two means ($p$-value = 0.02). We could therefore conclude that the musical stimulus was perceived as more implicit than the verbal.

On the other hand, via the visual part of the video and in the process of creating the stimuli, every effort was made to control the level of emotion generated by the different stimuli, to ensure evenness and avoid potential confusion bias. This was essential because music has the potential to trigger emotion to a greater extent than words (Tan et al., 2013). Furthermore, using the Ellen and Bone (1998) scale, the level of emotion generated by each of the two resources was measured (Appendix 1). In the final sample, the mean value for emotion in the case of the verbal video was 5.45, and 5.24 in the case of the musical version, with no significant differences identified between the two formats ($p$-value = 0.93). The experimental stimuli, then, can be deemed to differ in their degree of implicitness, but to be equivalent in the level of emotion they both generate. This suggests that the manipulation was effective.

Regarding the **experiment design,** a complete factorial design was used, with four experimental groups (2 stimuli x 2 contexts).

### *3.3. Dependent variables*

Given that the aim of this study was to identify effective communication strategies for promoting responsible behaviour among reluctant tourists regarding vaccination against infectious diseases, such as COVID-19, as well as the three types of motivations (self-preservation, altruistic, and social pressure) (Schmitz et al., 2022), travel-related perceived health risk also needed to be analyzed (Shin et al., 2021).

To measure self-preservation motivation, three items adapted from the work of Camerini et al. (2019) and Dodd et al. (2021) were used; for altruistic motivation, four items from Dodd et al. (2021) and Suess et al. (2022) were adopted; and social-pressure motivation was measured with three items taken from Godin et al. (2007) and Dodd et al. (2021). The travel-related perceived health risk scale had six items taken from Liu-Lastres et al. (2019) and Jog and Mekoth (2017). In all cases, given the reliability and validity indicators, the average scale for each variable could be calculated (Appendix 1).

### *3.4. Control of selection bias and cultural response*

Based on the distribution of sociodemographic characteristics by country, an analysis was conducted using the Chi-square association test (Table 2) to determine whether there was a balanced distribution of individuals between the experimental groups (Yanovitzky et al., 2005). The absence of

**Table 2.** Chi-square to test the association between sociodemographic variables and experimental groups.

| Sociodemographic variable | Country (UK vs. France) | Video (Musical vs. Verbal) |
|---|---|---|
| Sex | 0.15 (df1; $p = 0.70$) | 0.03 (df1; $p = 0.87$) |
| Age | 6.76 (gl3; $p = 0.08$) | 4.86 (gl3; $p = 0.18$) |
| Living arrangement | 4.72 (gl4; $p = 0.32$) | 6.16 (gl4; $p = 0.19$) |
| Education | 3.46 (df1; $p = 0.06$) | 0.00 (df1; $p = 0.99$) |
| Household income | 11.83 (gl6; $p = 0.07$) | 9.52 (gl6; $p = 0.15$) |

**Table 3.** Invariance test for the dependent variables in safe tourism.

| Model | Degrees of freedom (df) | AIC | BIC | Chi-squared | Chi-squared difference | df for the difference | *p*-value for the difference |
|---|---|---|---|---|---|---|---|
| Model 1 | 196 | 14546 | 14953 | 750 | – | – | – |
| Model 2 | 208 | 14535 | 14896 | 763 | 11.5 | 12 | 0.49 |
| Model 3 | 220 | 14534 | 14850 | 786 | 28.1 | 12 | 0.01 |

any association across all the sociodemographic characteristics indicated that selection bias could be ruled out.

Another potential issue that needs to be controlled when comparing responses from different countries is cultural response bias (Fischer, 2004). To test the equivalence of a measurement scale between cultures, a procedure can be used that involves estimating different nested models that are progressively restricted, giving rise to different degrees of invariance (Fischer & Fontaine, 2011). The first level of invariance is configural, followed by metric and scalar invariance (Table 3). In the present study, a confirmatory factor analysis including the measurement scales of the dependent variables was performed, verifying that configural invariance was achieved for both countries (model fit 1: $\chi^2_{SB}/df = 3.01$; CFI = 0.88; TLI = 0.85; SRMR = 0.08). Scalar invariance was also achieved, as the difference between the fit of model 1 and that of model 2 was not significant (*p*-value = 0.49). Finally, differences observed when comparing model 2 and model 3 (*p*-value = 0.01), meaning that metric invariance was not fulfilled and thus indicating the possible presence of cultural bias in the response. This needed to be controlled through a process of intra-subject standardisation (ipsatization or standardisation based on the mean and standard deviation in the responses of each subject). The bias was thus eliminated while the variance that is substantive to each culture was retained (Leung & Bond, 1989). This represents the most common standardisation in this type of work (Fischer, 2004).

## 4. Results

### *4.1. Data analysis technique*

Quantile regression was selected for this research (Koenker, 2017) because, given that the overarching aim is to improve motivations and perceptions among audiences who are notably reluctant to carry out practices related to safe tourism, this procedure is well-suited to the analysis of the proposed model for any quantile of the dependent variable, using the entire available sample. Its use also dispenses with the need for assumptions of normality of residuals and homogeneity of variances between groups (Koenker & Bassett, 1978). In this regard, quantile regression is especially useful when focusing on the population groups that occupy some of the tails of the distribution (Konstantopoulos et al., 2019), thus attaining more robust and comprehensible experimental results (Assaf & Tsionas, 2018). In the quantile under analysis, the results were based on the total sample, with weightings assigned to the residuals, so that the sum of these equalled 0 (Hao & Naiman, 2007).

Regarding the selection of the quantile to analyze, in economics, the Pareto Principle is typically validated in different phenomena (Bo & Meyer, 1986). This principle has been used to explain the spread of COVID-19 and the role that vaccines play (Shervani et al., 2020). Indeed, a study carried out in 23 countries showed that 79.1% of the population accepts the vaccine, while the remaining 20.9% are dubious about it (Lazarus et al., 2023). Therefore, we selected the 0.20 quantile for our study, although a robustness analysis of the results was also performed by estimating the model for the 0.15 and 0.25 quantiles. The results were compared to those obtained for the median individual (0.50 quantile).

To reduce model specification bias, covariates were included for each dependent variable. On the one hand, covariates help increase the accuracy of effects-estimation in randomised experiments (as

in the present treatment of the communication stimulus, which is manipulated through a 'video') (Lin, 2013), and they are especially necessary when it is not possible to randomise a factor (as in this case, where the cultural context is manipulated through the 'country' of origin) (Stuart & Rubin, 2007). When the self-preservation motivation was analyzed, a dichotomous variable (CovidMe) was included in the model to capture whether the individual had had COVID-19 (1) or not (0). In the case of altruistic motivation, the same variable was used but this time to indicate whether any of the people with whom the respondent lived had had the virus ('CovidFamily'). For social-pressure motivation, a dichotomous variable was used to measure whether any of the people with whom the respondent lived were vaccinated (1) or not (0) ('VacccineFamily'). Finally, travel-related perceived health risk at the reference destination (Andalusia – Spain) would be influenced, in addition to the experimental factors, by the perception held by the individual regarding the capacity of that destination to control the pandemic and its consequences ('CovidManagement'). For this last control variable, an average scale was used with nine items adapted from Rasoolimanesh et al. (2021) (Supplementary Materials 1). Therefore, the theoretical models that will be tested in the study on safe tourism will be:

$$\begin{aligned}\text{Mot}_{\text{self-preservation}}\text{i} = &\beta 0_{0.20} + \beta 1_{0.20}\text{Video}_\text{i} + \beta 2_{0.20}\text{Country}_\text{i} + \beta 3_{0.20}\text{Video}_\text{i}*\text{Country}_\text{i} \\ &+ \beta 4_{0.20}\text{CovidMe}_\text{i} + \varepsilon\text{i}\end{aligned}$$

$$\begin{aligned}\text{Mot}_{\text{altruistic}}\text{i} = &\beta 0_{0.20} + \beta 1_{0.20}\text{Video}_\text{i} + \beta 2_{0.20}\text{Country}_\text{i} + \beta 3_{0.20}\text{Video}_\text{i}*\text{Country}_\text{i} \\ &+ \beta 4_{0.20}\text{CovidFamily}_\text{i} + \varepsilon\text{i}\end{aligned}$$

$$\begin{aligned}\text{Mot}_{\text{social-pressure}}\text{i} = &\beta 0_{0.20} + \beta 1_{0.20}\text{Video}_\text{i} + \beta 2_{0.20}\text{Country}_\text{i} + \beta 3_{0.20}\text{Video}_\text{i}*\text{Country}_\text{i} \\ &+ \beta 4_{0.20}\text{VaccineFamily}_\text{i} + \varepsilon\text{i}\end{aligned}$$

$$\begin{aligned}\text{Risk}_{\text{travel}}\text{i} = &\beta 0_{0.80} + \beta 1_{0.80}\text{Video}_\text{i} + \beta 2_{0.80}\text{Country}_\text{i} + \beta 3_{0.80}\text{Video}_\text{i}*\text{Country}_\text{i} \\ &+ \beta 4_{0.80}\text{CovidManagement}_\text{i} + \varepsilon\text{i}\end{aligned}$$

The effects of the communication strategy on motivation to get vaccinated were analyzed among the most reluctant 20% of the sample (i.e. 0.20 quantile). However, we must recall that the underlying objective was to sustain tourism activity, so the perceived travel risk also needed to be reduced among those with the greatest perceived risk. Hence, as the scale ranged from 1 (lowest perceived risk) to 7 (highest perceived risk), the 20% of individuals in the sample presenting the highest travel-related perceived health risk were analyzed (0.80 quantile).

### *4.2. The musical message as a strategy for promoting safe tourism in different cultural contexts*

To analyze the results, the 'quantreg for R' package was used (Koenker et al., 2023). The estimation of the standard error was performed with bootstrapping, using 1,000 replications. More specifically, as recommended by Feng et al. (2011), the 'wild' bootstrapping procedure is more suitable than the 'xy' bootstrap for inference with fixed design points, as per the case of the 'Video' factor where two fixed, non-random communication stimuli are taken (verbal vs. musical). For model fit, the Barrondale and Roberts algorithm is very efficient, even with several thousand observations, and is the one used by default in both free software (e.g. quantreg) and commercial versions (e.g. SPSS).

The results of the estimations of the different models are shown in Table 4. both for the target quantile of the study (q = 0.20) and for the median individual as a comparison point (q = 0.50). This table also includes the pseudo-$R^2$ suggested by Koenker and Machado (1999) as a fit indicator for the proposed models. Except in the case of self-preservation motivation, in the rest of the regressions, the explained-variance values can be classified as average (0.08 for altruism and

**Table 4.** Estimated coefficient for the target quantile and the median quantile in safe tourism.

| | Intercept | | | Target | Average | | Target | Average | | Target | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dependent Variable | q = 0.20 | q = 0.50 | Control Variable | q = 0.20 | q = 0.50 | Main Effect | q = 0.20 | q = 0.50 | Interaction Effect | q = 0.20 | q = 0.50 |
| $Mot_{selfpreservation}$ | $-0.22^{ns}$ | $0.46^{***}$ | CovidMe | $-0.17^{ns}$ | $-0.13^{ns}$ | Country (1 = France[a]) | $-0.45^{***}$ | $-0.51^{***}$ | Country x Video (1 = France&Musical[c]) | $0.20^{ns}$ | $0.18^{ns}$ |
| $R^2_{0.20} = 0.04$ | | | | | | Video (1 = Musical[b]) | $0.07^{ns}$ | $0.05^{ns}$ | | | |
| $R^2_{0.50} = 0.04$ | | | | | | | | | | | |
| $Mot_{altruistic}$ | $0.49^{***}$ | $0.75^{***}$ | CovidFamily | $-0.16^{ns}$ | $-0.01^{ns}$ | Country (1 = France[a]) | $-0.87^{***}$ | $-0.40^{**}$ | Country x Video (1 = France&Musical[c]) | $0.60^{**}$ | $0.27^{ns}$ |
| $R^2_{0.20} = 0.08$ | | | | | | Video (1 = Musical[b]) | $-0.16^{ns}$ | $-0.03^{ns}$ | | | |
| $R^2_{0.50} = 0.03$ | | | | | | | | | | | |
| $Mot_{socialpressure}$ | $-0.62^{***}$ | $0.17^{ns}$ | VaccineFamily | $1.22^{***}$ | $0.79^{***}$ | Country (1 = France[a]) | $-0.64^{***}$ | $-0.38^{***}$ | Country x Video (1 = France&Musical[c]) | $0.51^{**}$ | $0.07^{ns}$ |
| $R^2_{0.20} = 0.19$ | | | | | | Video (1 = Musical[b]) | $-0.10^{ns}$ | $0.01^{ns}$ | | | |
| $R^2_{0.50} = 0.13$ | | | | | | | | | | | |
| | Intercept | | | Target | Average | | Target | Average | | Target | Average |
| Dependent Variable | q = 0.80 | q = 0.50 | Control Variable | q = 0.80 | q = 0.50 | Main Effect | q = 0.80 | q = 0.50 | Interaction Effect | q = 0.80 | q = 0.50 |
| $Risk_{travel}$ | $-0.69^{***}$ | $-1.16^{***}$ | CovidManagement | $-0.67^{***}$ | $-0.67^{***}$ | Country (1 = France[a]) | $0.43^{***}$ | $0.32^{***}$ | Country x Video (1 = France&Musical[c]) | $-0.76^{***}$ | $-0.54^{***}$ |
| $R^2_{0.50} = 0.12$ | | | | | | Video (1 = Musical[b]) | $0.40^{**}$ | $0.29^{***}$ | | | |
| $R^2_{0.80} = 0.08$ | | | | | | | | | | | |

[ns]Not significant; *$p$-value ≤ 0,10; ** $p$-value ≤ 0,05; ***$p$-value ≤ 0,01

[a]France represents a high-context culture. United Kingdom is the reference category, with value 0.

[b]Musical represents the implicit Communication stimulus. Verbal is the reference category, with value 0.

[c]The Country x Video interaction will have a value of 1 only in the case of the combination of a high context culture and musical stimulus. All remaining combinations will have a value of 0.

0.12 for perceived risk) or high for social-pressure motivation (0.19), these being in line with the ranges established by Sink and Mvududu (2010).

Turning to the control variables in each regression, note that the variable relating to having had COVID-19 or not (either the respondent themselves or a family member with whom they lived) exerted no effect on the respective motivations. This was because very few individuals in the sample had suffered serious consequences from this virus. Specifically, among those surveyed, just 0.9% of the sample reported having required hospitalisation, while 4.4% indicated that a close family member had required hospitalisation or had died as a result of COVID-19. The rest of the control variables had the expected effect. Thus, the fact that the people with whom the respondent lived had been vaccinated increased the social-pressure motivation. Finally, regarding the perceived health risk of travelling to Andalusia, the image that the tourist held of the destination, in terms of its ability to effectively manage the pandemic and its consequences, affected perceived risk. The more positive the destination image the individual had, the lower the level of risk they perceived.

As indicated in the literature review, no hypotheses are proposed regarding the direct effect of country (culture) on the dependent variables. Rather the interest in this variable lies in its relationship to the communication stimulus used, to enable the coherence between cultural context and musical vs. verbal message. However, the results did show a lower level of motivation among French tourists compared to British ones, regardless of whether the quantile was low (q = 0.20) or medium (q = 0.50) or the type of motivation considered. This result is consistent with the slower roll-out of the nationwide vaccination programme for the French population compared to the British population in the period under analysis Figure 1.

Turning to the communication resource, among the British tourists, characterised by their LC culture, the effect of resource type on motivations was statistically equivalent for verbal message vs. musical message, be it in self-preservation motivation ($\beta = 0.07$; $p$-value = 0.69), altruistic motivation ($\beta = -0.16$; $p$-value = 0.21), or social-pressure motivation ($\beta = -0.10$; $p$-value = 0.51) ($H^{LC}_{MOT}$ must therefore be rejected). This result, noted for the individual with low motivation, was also reproduced in the average individual in the population. Although implicit, music-based messages are not a natural fit with the typical form of communication in LC cultures, in the particular case of the pandemic that people lived through – and especially during the phase when the public were confined to their homes – music proved to be a useful tool for reducing stress levels among the British population (Henry et al., 2021) and for generating well-being through nostalgia in that culture (Gibbs & Egermann, 2021). Therefore, these positive associations surrounding music in the pandemic may have been compensating for the general lack of compatibility of an implicit communication format with individuals from an LC culture.

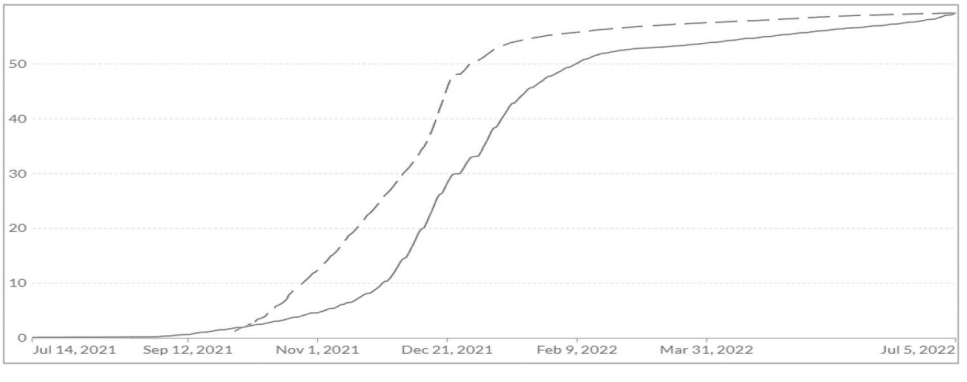


**Figure 1.** Evolution in France (continuous line) and the UK (dotted line) of the availability of the vaccination required to obtain the COVID certificate in the European Union. Source: Figure generated by Our World in Data (https://ourworldindata.org/covid-vaccinations)[5]

In the case of the HC culture in this study, French tourists presented significant differences in motivation levels when exposed to messages with different degrees of implicitness. In particular, among those less motivated to get vaccinated, the musical message increased the level of altruistic motivation compared to the verbal message, producing significant differences in the values under comparison ($\chi_1$ = 3.82; *p*-value = 0.05) ($H^{HC}_{MOT-ALT}$) thus obtains empirical support – see Figure 2. This effect was not observed in the average French tourist, which is consistent with the literature review because music is found to be a particularly useful tool among individuals who pay little attention to a certain message, either deliberately (Alexomanolaki et al., 2007) or involuntarily (Shehan, 1981) (see Appendix 2 for comparison between the estimate for deciles in the interval 0.20–0.80 and OLS).

To check the robustness of the results obtained in terms of the choice of quantile under study (q = 0.20), the model was estimated for the 0.15 and 0.25 quantiles (Appendix 3). The conclusions remained unchanged compared to those derived for the 0.20 quantile, indicating that the results are generalisable for tourists who present a low level of altruistic motivation to get vaccinated.

In the case of the French tourists (LC communication preference), significant differences in social-pressure motivation were also identified when participants were exposed to a message conveyed via the musical stimulus rather than the verbal one, with significant differences between the predicted values ($\chi_1$ = 5.57; *p*-value = 0.02) ($H^{HC}_{MOT-SOCPRESS}$) therefore obtains empirical support – see Figure 3. Again, the effect was only observed in tourists with low motivation (Appendix 2), the effect being robust if quantiles close to 20% of the population were selected (Appendix 3).

Regarding self-preservation motivation, the type of communication resource presented no significant differences between tourists from the two different cultural contexts. This result is consistent for quantiles 0.2 and 0.5 ($H^{HC}_{MOT-SP}$ must therefore be rejected), and can be explained by the low relevance of self-preservation motivation for the sample analyzed here. In absolute terms, the ipsatized mean of this variable was 0.18, while altruistic motivation and social-pressure motivation presented means of 0.48 and 0.64, respectively. In short, the effect of a treatment on a variable that is unimportant to the individual is very likely to be nil.

Finally, analyzing the effect of the communication resource used on travel-related perceived health risk relative to the destination in question, among individuals with a high perceived risk (q = 0.80), the *verbal* message reduced perceived risk for British tourists ($\chi_1$ = 3.05; *p*-value = 0.08),[4] while the *musical* message did so for the French ($\chi_1$ = 4.37; *p*-value = 0.04) ($H^{LC}_{RISK}$and $H^{HC}_{RISK}$) thus both obtain empirical

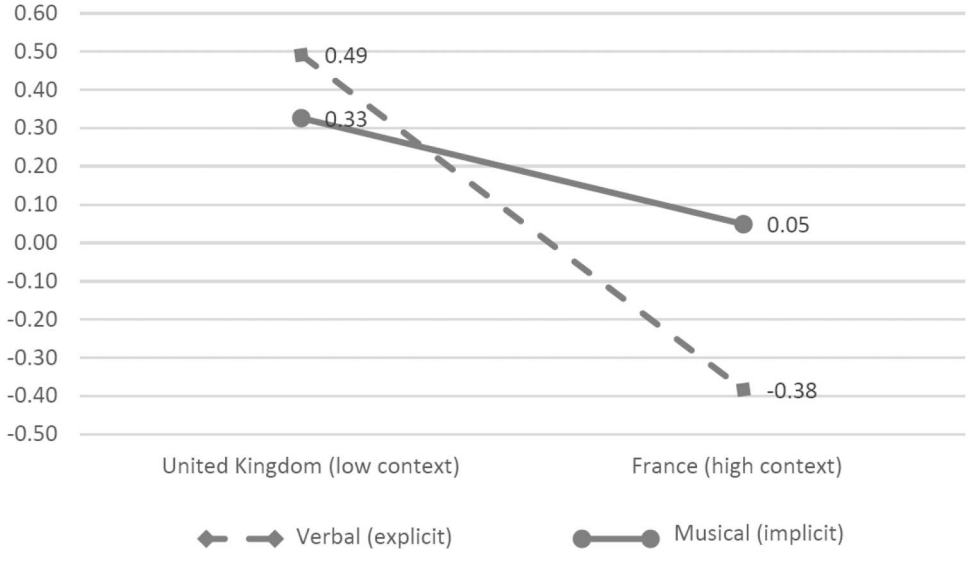


**Figure 2.** Predicted values for altruistic motivation, by culture and for different communication stimuli.

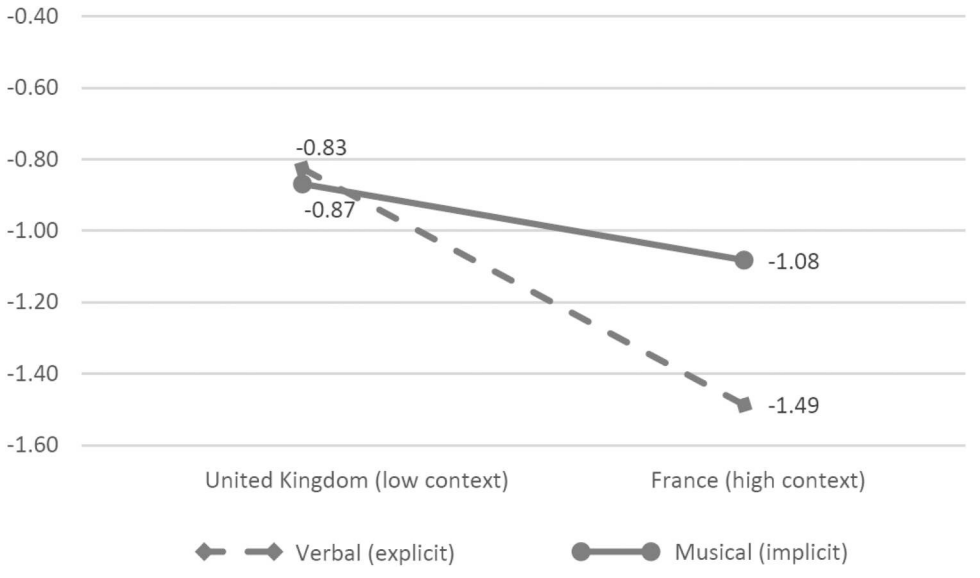


**Figure 3.** Predicted values for social-pressure motivation, by culture and for different communication stimuli.

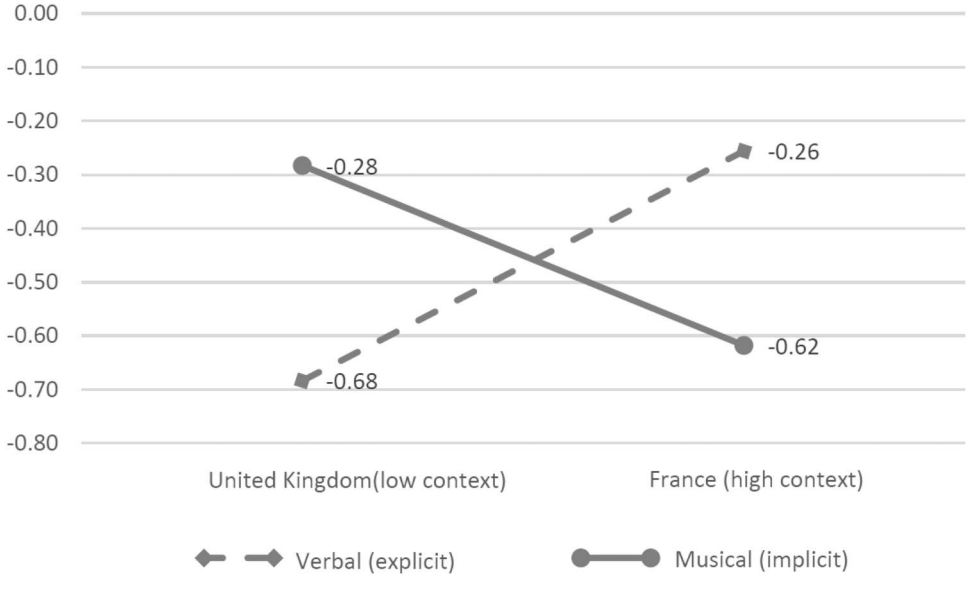


**Figure 4.** Predicted values for travel-related perceived health risk, by culture and for different communication stimuli.

support – see Figure 4. Appendix 2 presents an analysis of the effect of the experimental factors in the quantile range 0.20–0.80, and Appendix 3 shows the robustness analysis of the results.

## 5. Discussion of results

How destinations perform when it comes to providing a safe, healthy environment is a major determining factor in their competitiveness (Zou & Yu, 2022). Therefore, the question of how to effectively communicate with tourists to encourage them to act responsibly in health-related matters and how

to motivate visitors to adhere to desirable healthy practices is a crucial challenge for destination managers to address. The results of the present study contribute to approaching this challenge, from three perspectives.

The first aspect to consider when endeavouring to produce an effective health communications strategy is that the majority of tourists have a positive predisposition toward adopting responsible practices (Lazarus et al., 2023). Consequently, it is those travellers who are the most reluctant to adopt healthy behaviours that potentially generate the most problems and require more attention in any public communications effort (Shervani et al., 2020). The results of this research confirm that, when designing communication activities, their effectiveness will differ for individuals from different percentiles of the population distribution, rendering it necessary to design specific messages for the target audience (Tölkes, 2018). This is because their basic predisposition toward processing the information contained in the communication will influence the effectiveness of the resources used in conveying it (MacInnis et al., 1991).

The second aspect of this challenge is that most of the research on communication has focused on written and oral messages (e.g. Maitlis & Christianson, 2014). However, several authors argue that purely verbal discourse is both a myth and a fallacy in contemporary society, where people's attention is dispersed across several multimedia channels and formats (e.g. Bell & Davison, 2013; Höllerer et al., 2018a). This reality increasingly calls into question the effectiveness of verbal communication (García-Retamero & Cokely, 2011; Höllerer et al., 2018b). Against this backdrop, the literature has generally looked to communication with images as an alternative means (e.g. García-Retamero & Cokely, 2013; Juslin & Sloboda, 2010), but there is very little research dealing with music as the main vehicle for the message (as opposed to a complement to verbal communication). This study shows that, apart from the implicit message carried by music, related to emotional and hedonic aspects, it is also capable of getting a referential message across to the audience. This finding offers additional support to the conclusions of Zhu and Meyers-Levy (2005). In this sense, music-based communication offers important advantages over other formats because it has the power to generate strong social links between individuals and communities (Tarr et al., 2014), which encourages them to contribute to achieving the common goal (Fetchenhauer et al., 2006). Another of the advantages of musical communication previously identified in the literature is that it transcends language and cultural barriers (Mehr et al., 2018). This finding, however, needs qualifying according to the results of our study, which brings us to the third challenge.

The third aspect of the challenge of producing an effective health communications strategy is how to identify the most appropriate communication resource for the target audience to which the communication is to be directed. In this study, which takes into account both HC and LC cultures (Hall, 1976), the results clearly show that music is more effective in HC cultures, both for increasing motivation and for reducing perceived risk. However, these results must be interpreted in the context of audiences who are reluctant to carry out responsible health-related behaviours, which is where this effect is significant. In the case of LC cultures, more caution is required when disseminating messages via music, given that individuals from such cultures do not have, or do not apply, the contextual codes that enable the referential message of the music to be deciphered (Meyer, 2014).

In short, this research represents an advance in the current state of knowledge on how to encourage responsible health-related behaviours among tourists, providing evidence and findings that address three of the challenges that must be faced.

## 6. Conclusions and limitations

This research sought to identify effective communication strategies for promoting responsible vaccination behaviours among tourists reluctant to get vaccinated – that is, the segment that presents the *least* responsible behaviours and therefore the one that requires the most urgent attention when a pandemic arises. An experiment was conducted, taking into account the type of communication

resource used (verbal vs. musical) and the cultural context of the tourist (UK vs. France), which enables us to draw the following conclusions:

(1) An explicit stimulus (verbal) is equivalent to an implicit stimulus (musical) in its potential to increase vaccination motivation among reluctant tourists from LC countries (in our case, the UK).
(2) An explicit stimulus (verbal) is capable of increasing altruistic and social-pressure motivations among the most vaccination-averse tourists from HC countries (in our case, France).
(3) To reduce travel-related perceived health risk among individuals who present a high level in this variable, it is advisable to target them using a stimulus that is more naturally aligned with their culture – that is, explicit messages for LC tourists and implicit messages for HC tourists.
(4) Vaccination-averse travellers do not respond to communication stimuli in the same way as the 'average' individual in the population. This distinction is particularly marked in the case of altruistic and social pressure motivations, according to the results shown in the evolution charts by decile.

The results of the study hold a number of practical implications. First, the findings point to the possibility of employing *music as a primary resource* in commercial communications designed to convey a given message. To date, the academic literature has used music mainly as a complementary element to support the main verbal resource, essentially for the purpose of generating emotions. It is important to explore the referential message that music can convey.

Second, in tourism, messages continually need to be adapted to suit different cultural contexts, due to the inherently multicultural nature of tourism activity. Therefore, attention needs to be paid to achieving coherence between the message format and the tourist's cultural context. In turn, using the appropriate resources to transmit the message – that is, resources for which the tourist has the necessary communication codes to be able to interpret – is an essential aspect of managing an effective communication process. With regard to music as a resource, it has been shown here that, although it can be enjoyed hedonically by different cultures, regardless of context, it is only tourists from HC cultures who are able to adequately decipher the referential part of the message – so much so that the musical resource surpasses the verbal one in communicative effectiveness for such tourists.

A third implication of the present findings is concerned with the need to analyze target audiences separately, given that their baseline predisposition to process the information about the need to get vaccinated will influence the effectiveness of whatever resources are used to convey it (MacInnis et al., 1991). Hence, wherever possible, the contribution of data-analysis professionals will be of great value in introducing data-analysis techniques that enable destinations to identify the heterogeneous behaviour of different audiences. One such technique is quantile regression.

When interpreting the present results, however, certain limitations need to be taken into account. First, just two stimuli are considered (verbal and musical). Images are another resource typically used in communication but, in this case, the image was taken to be the base stimulus (video). In future studies, it would be of interest to analyze the effectiveness of these three communication resources separately, as well as combinations between them.

Second, a comparison is made between two countries; however, according to one of the main arguments presented here, it is insufficient to analyze discrete values of the distribution: the behaviour of the relationships tested throughout the entire period needs to be considered. In this sense, working with a broad set of countries distributed along the continuum between HC and LC cultures would offer more comprehensive results regarding the capacity of the musical resource to convey a message effectively.

Finally, the specific musical preferences of the participants from the two different cultures were not measured in this research. However, we mitigated this by selecting a piece of music that combined several different styles, as mentioned in the Methodology, to ensure a broad appeal. Furthermore, as Stevens (2012) notes in her study of perceptions of music in different cultures: 'The rapidly

spreading monoculture of the West is eradicating the diversity of musical minds' (p. 663). This suggests that, even considering the fact that the sample comprised individuals from different cultures, it was not critic to control for musical preferences.

## Notes

1. www.lesphinx.es/?lang=en
2. https://www.jacobdehaan.com/en/node/39.
3. Verbal video: https://tinyurl.com/5n7t598w; Musical video: https://tinyurl.com/3m4xnpvn
4. This result must be read with caution, as the difference between the predicted points for the dependent variable was only significant at 10%. However, a t-test based on wild bootstrap indicated significant differences in verbal vs. musical resources among British tourists for all deciles between 0.5 and 0.8:
   $t_{0.5} = 2.69,\ p = 0.01;\ t_{0.6} = 3,00,\ p = 0.003;\ t_{0.7} = 2.24,\ p = 0.03;\ t_{0.8} = 2.02,\ p = 0.04$
5. *Data for the United Kingdom from* https://coronavirus.data.gov.uk/details/vaccinations. *Data for France from* https://www.data.gouv.fr/fr/datasets/donnees-relatives-aux-personnes-vaccinees-contre-la-covid-19-1.

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# Appendices

## *Appendix 1*

**Measurement scales**

| Variable | Item | Alpha | Omega | AVE |
|---|---|---|---|---|
| **Manipulation checks** | | | | |
| **Cultural context**<br>In the context of a conversation with another person … | • When I communicate with someone, I expect them to readily understand what I mean, even without the need for me to say everything I intended to say.<br>• I expect the other person to understand what I mean, even if I don't express my intention clearly. | 0.76 | 0.76 | 0.61 |
| **Explicitness vs. implicitness of the message**<br>The message you just saw seems … | • Direct–Indirect<br>• Specific–Generic<br>• Explicit–Implicit<br>• Detailed–Brief | 0.83 | 0.83 | 0.55 |
| **Emotion**<br>The message to which you have just been exposed makes you feel … | • Pessimistic-Optimistic<br>• Unhappy–Happy<br>• Lethargic–Alert<br>• Unstimulated–Stimulated<br>• Annoyed–Content | 0.91 | 0.91 | 0.68 |
| **Self-preservation motivation**<br>Please indicate your degree of agreement with the following statements about your motivation to get vaccinated. | • The negative impact of COVID-19 on my health could be very severe.<br>• COVID-19 can be a life-threatening disease.<br>• COVID-19 is a serious illness for someone like me.<br>• The side-effects of the COVID-19 vaccine would not interfere with my usual activities. | 0.77 | 0.82 | 0.62 |
| **Altruistic motivation**<br>Please indicate your degree of agreement with the following statements about your motivation to get vaccinated. | • A vaccine is the only way to eradicate the virus and therefore reduce the threat to humans.<br>• It is my responsibility to get vaccinated to protect others from contracting COVID-19.<br>• It is everyone's responsibility to get vaccinated to protect others from COVID-19.<br>• Getting vaccinated is a socially responsible act. | 0.91 | 0.92 | 0.73 |
| **Social-pressure motivation**<br>Please indicate your degree of agreement with the following statements about your motivation to get vaccinated. | • Most people who matter to me think I should get vaccinated.<br>• I think most of the people who matter to me will get vaccinated.<br>• If getting vaccinated means I can travel internationally, I will get vaccinated. | 0.87 | 0.87 | 0.69 |

(*Continued*)

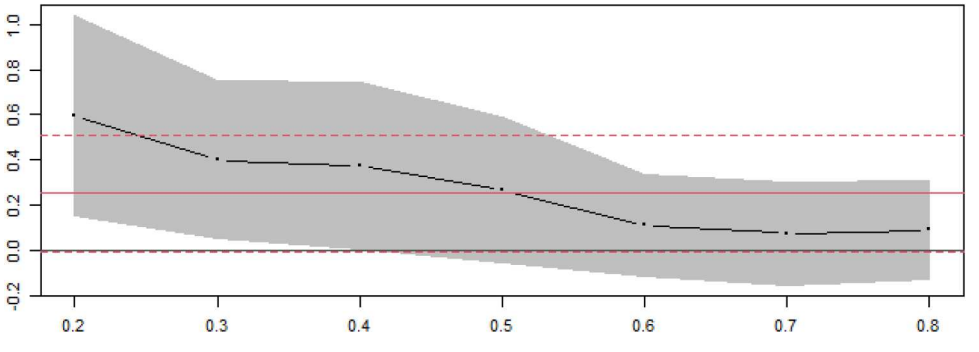
Continued.

| Variable | Item | Alpha | Omega | AVE |
|---|---|---|---|---|
| **Travel-related perceived health risk**<br>In the case of travelling while COVID – 19 is present … | • The possibility of contracting COVID-19 during the stay would be high.<br>• I would be at risk of contracting COVID-19 during my stay.<br>• I would be likely to contract COVID-19 during my stay.<br>• I would be worried that, overall, I would not have a good experience during my stay.<br>• I would be worried about not feeling pleased about my stay.<br>• I would be worried about feeling stressed for most of my stay due to COVID-19. | 0.92 | 0.92 | 0.66 |
| **Pandemic-management capacity**<br>Please indicate your degree of agreement with the following statements about Andalusia (Spain) as a tourist destination. | • The destination has sufficient capacity to manage the pandemic effectively.<br>• It has the appropriate infrastructure to address the needs of patients.<br>• It has health professionals with the necessary training to address the needs of COVID-19 patients.<br>• As a destination, the services it offers to COVID-19 patients are similar to those where I come from<br>• It is a destination that brings any infections quickly under control.<br>• It is a destination with sufficient capacity to guarantee tourist safety.<br>• The impact of the pandemic has been relatively light there.<br>• It has handled pandemic-related communications effectively.<br>• It is a destination that makes it easy for me to obtain the information I need about the pandemic. | 0.92 | 0.93 | 0.58 |

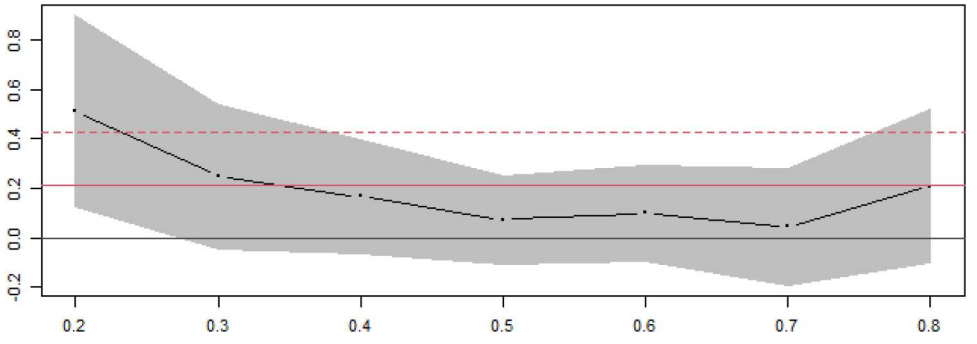
## *Appendix 2*

**Effect of the stimulus and context variables for all deciles in the range 0.20-0.80 of the dependent variables**

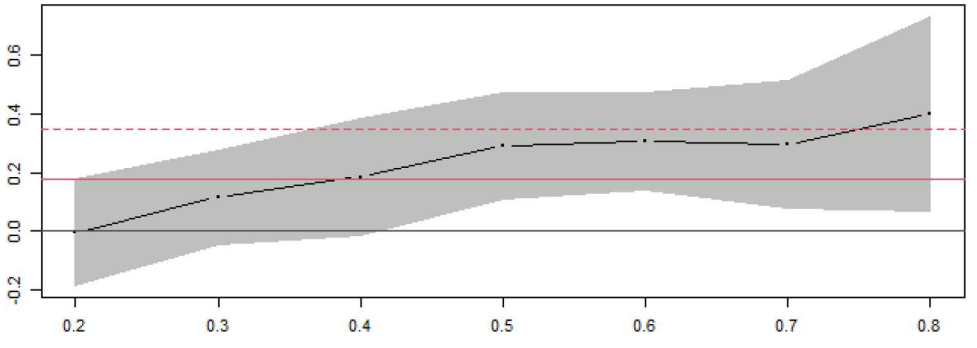
*Appendix 2.1 Estimated effect of musical stimulation on French tourists, and its confidence interval (90%), using quantile regression (black) and OLS regression (red), for deciles between 0.2–0.8 for altruistic motivation*



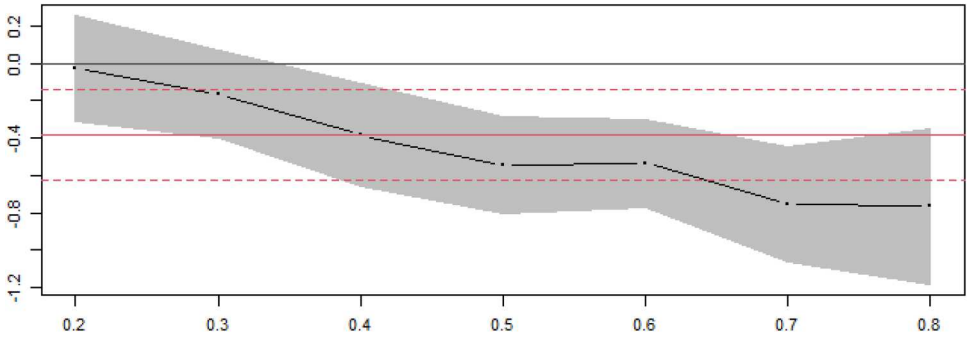
*Appendix 2.2. Estimated effect of musical stimulation on French tourists, and its confidence interval (90%), using quantile regression (black) and OLS regression (red), for deciles between 0.2–0.8 for social pressure motivation*




*Appendix 2.3. Estimated effect of musical stimulation on British tourists, and its confidence interval (90%), using quantile regression (black) and OLS regression (red), for deciles between 0.2–0.8 for travel-related perceived health risk*




*Appendix 2.4. Estimated effect of musical stimulation on French tourists, and its confidence interval (90%), using quantile regression (black) and OLS regression (red), for deciles between 0.2–0.8 for travel-related perceived health risk*



## *Appendix 3*

**Robustness analysis of the results obtained: Quantiles 0.15 and 0.25**

| | Intercept | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dependent Variable | q=0.15 | q=0.25 | Control Variable | q=0.15 | q=0.25 | Main Effect | q=0.15 | q=0.25 | Interaction Effect | q=0.15 | q=0.25 |
| $Mot_{selfpreservation}$ | -0.50*** | -0.11$^{ns}$ | CovidMe | -0.16$^{ns}$ | -0.25$^{ns}$ | Country (1=France[a]) | -0.24$^{ns}$ | -0.45** | Country x Video | 0.04$^{ns}$ | 0.11$^{ns}$ |
| | | | | | | Video (1=Musical[b]) | 0.17$^{ns}$ | 0.17$^{ns}$ | (1=France&Musical[c] | | |
| $R^2_{0.15}$ = 0.03 | | | | | | | | | | | |
| $R^2_{0.25}$ = 0.05 | | | | | | | | | | | |
| $Mot_{altruistic}$ | 0.38*** | 0.43*** | CovidFamily | -0.34** | -0.02$^{ns}$ | Country (1=France[a]) | -0.99*** | -0.79*** | Country x Video | 0.65** | 0.54** |
| | | | | | | Video (1=Musical[b]) | -0.05$^{ns}$ | -0.05$^{ns}$ | (1=France&Musical[c]) | | |
| $R^2_{0.15}$ = 0.07 | | | | | | | | | | | |
| $R^2_{0.25}$ = 0.08 | | | | | | | | | | | |
| $Mot_{socialpressure}$ | -0.68*** | -0.55*** | VaccineFamily | 1.20*** | 1.26*** | Country (1=France[a]) | -0.68*** | -0.59*** | Country x Video | 0.53** | 0.34** |
| | | | | | | Video (1=Musical[b]) | -0.20$^{ns}$ | 0.04$^{ns}$ | (1=France&Musical[c] | | |
| $R^2_{0.15}$ = 0.21 | | | | | | | | | | | |
| $R^2_{0.25}$ = 0.18 | | | | | | | | | | | |
| | Intercept | | | | | | | | | | |
| Dependent Variable | q=0.75 | q=0.85 | Control Variable | q=0.75 | q=0.85 | Main Effect | q=0.75 | q=0.85 | Interaction Effect | q=0.75 | q=0.85 |
| $Risk_{travel}$ | -0.76*** | -0.49** | CovidManagement | -0.84*** | -0.76*** | Country (1=France[a]) | 0.44*** | 0.50** | Country x Video | -0.72*** | -0.92*** |
| | | | | | | Video (1=Musical[b]) | 0.29** | 0.41* | (1=France&Musical[c]) | | |
| $R^2_{0.75}$ = 0.11 | | | | | | | | | | | |
| $R^2_{0.85}$ = 0.06 | | | | | | | | | | | |

[ns]Not significant; *$p$-value≤0.10; ** $p$- value ≤0.05; ***$p$- value ≤0.01

[a]France represents a high-context culture. United Kingdom is the reference category. with value 0.

[b]Musical represents the implicit Communication stimulus. Verbal is the reference category. with value 0.

[c]The Country x Video interaction will have a value of 1 only in the case of the combination of a high context culture and musical stimulus. All remaining combinations will have a value of 0.