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The importance and maintenance of the Clean & Safe seal in the travel decision-making of residents in Portugal in the post-COVID-19-pandemic period

<https://doi.org/10.2478/ejthr-2025-0014>

received May 20, 2024, accepted June 23, 2025

Abstract: This study analyses the impact of the Clean & Safe Seal – implemented by Turismo de Portugal – on Portuguese tourists’ travel decisions in two post-pandemic periods, using 370 questionnaires: 207 administered between December 2021 and January 2022, and 163 between December 2022 and February 2023. In the first time interval, the perception of risk was decisive, with the Clean & Safe Seal strongly influencing choices made due to hygiene considerations. In the second time interval, the seal’s influence decreased significantly, as did concern for its maintenance. There was a greater preference for rural and local accommodation in the first period – two to three times higher than in the second. Young people predominated amongst the respondents, limiting the age representation despite the otherwise robust sample. The study’s quantitative method excluded subjective questions, suggesting that future studies could include open-ended interviews to explore tourists’ needs and frustrations. Tourism managers and businesses should study risk perception to make informed decisions and avoid unnecessary costs. This is the first study to compare the influence of the Clean & Safe Seal at two different points in time, highlighting how risk perception affects tourist behaviour.

Keywords: Risk perception; Travel behaviour; Clean & Safe Seal; Covid-19.

1 Introduction

In 2020, we witnessed the biggest global lockdown that has ever existed, precipitated by the infectious disease Covid-19, which is a strain of the coronavirus. The pandemic began in a market in Wuhan, China, in 2019, and quickly expanded worldwide. The first cases of Covid-19 in Europe appeared in January 2020. The Lombardy region in Italy was the first region in Europe to face an outbreak of Covid-19, but it quickly spread to countries such as Spain, Germany, France and the United Kingdom. This led the World Health Organization to declare Europe as the epicentre of the pandemic due to the very high number of infections and deaths. In Portugal, the first case was detected on March 2, 2020, in a man who had returned from a trip to Italy. The number of infections quickly began to increase across the country, leading the Portuguese government to announce the closure of schools, impose restrictions on the operation of commercial activities not considered essential, and cancel public events. On March 18, 2020, a state of emergency was declared in Portugal through the Decree No. 14-A/2020 (Diário da República, 1st Series, No. 55, of 18th March 2020).

Most European countries have implemented various restrictions on movement, resorting to *lockdowns* – defined as the blocking or closure of most economic activities and all other activities inherent to the normal functioning of societies – as well as border closures and other restrictions and measures related to the hygiene and safety of the population, such as the mandatory use of masks and social distancing. However, these constraints were not sufficient to impede the congestion of countries’ health services or inhibit the high number of deaths that resulted from the high contagion of the disease, as well as its economic and social impact on thousands of people.

Tourism activity was heavily affected by this pandemic, having closed completely after the government

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announced the state of emergency. However, as the situation stabilised, some restrictions were relaxed, albeit gradually, and some tourist activities were once again able to operate — sometimes limiting schedules, daily attendance numbers, or even the number of people who could remain inside various establishments. Taking advantage of these eased of restrictions on activity, Turismo de Portugal, involving several partners, including Confederation of Tourism of Portugal and several associations in the sector, implemented the Clean & Safe seal in April 2020. Clean & Safe recognises compliance with a set of health standards and recommendations from the Directorate-General for Health necessary for the prevention and control of Covid-19, and was considered essential for promoting public confidence in Portugal as a tourist destination.¹ Any tourist company registered in the National Registry of Tourist Companies (RNET), in the National Registry of Tourist Entertainment (RNAT), or in the National Registry of Travel and Tourism Agencies (RNAVT) may apply for this seal.

2 Literature review

2.1 The perception of risk and the influence on tourism activity

The theory of perceived risk was proposed by American psychologist Paul Slovic in 1980. The theory is based on the idea that the perception of risk is influenced both by the objective nature of the hazard and by the subjectivity of the individual who evaluates it.

Slovic proposed that perceived risk is composed of three factors: the perception of the danger itself; the uncertainty associated with the danger; and the degree of control one has over exposure to the danger. These factors influence how people perceive and evaluate risk, and how they make decisions around it.

The theory of perceived risk has been applied in several areas, including environmental risk management, occupational safety, and public health. Understanding risk perception can help identify the most important concerns for people regarding a given hazard, and how communication and risk management strategies can be adapted to address these concerns effectively.

Slovic et al. (1982) explained that people, in most cases, use their intuitive judgment to assess risk situations, and this is commonly referred to as risk perception. The theory of perceived risk is based on two distinct

assessments carried out by the individual. The first evaluation is related to the severity of the negative result that would result from the action, and the second is related to the probability of this negative result occurring (Rayner & Cantor, 1987). In this context, Slovic (1987) states that individuals tend to be more sensitive and apprehensive the more unknown the risks that may occur.

The perception of risk is also influenced by the trust that individuals have in the authorities that play preponderant roles in these contexts; by familiarity with said contexts; by the feeling of control that individuals think they have of the situation (Slovic et al., 1981); and by their confidence in their innate abilities to circumvent risk (Slovic et al., 1978). Regarding self-control, Brun (1994) found that less risk is perceived in situations in which the individual believes they have personal control. In this sense, Weinstein et al. (2020) also considers how an individual's perception of risk may determine their behaviour.

Tourists' risk perception consists of their assessment of the risk when making decisions about travelling to a particular tourist destination (Neuburger & Egger, 2021). Tourism activity is very sensitive to the perception of safety for tourists (Yozcu & Cetin, 2019). According to Sönmez and Graefe (1998), tourists avoid destinations and contexts when they detect a perceived risk in relation to them. In the same sense, Loureiro and Jesus (2019) and Quan et al. (2022) found that the perception of risk by tourists in relation to a tourist destination will also negatively affect the demand for that destination. In the same vein, Joo et al. (2020); Kongoley-MIH (2015); and Wilder-Smith (2006) found that when there are travel restrictions to a tourist destination, the demand for that destination is affected.

There are several categories of perceived risk in tourism. Sönmez (1998) classifies them as financial, psychological, satisfaction-related, and time-related. More specifically, Maser and Weiermair (1998) address natural disasters, civil unrest, and violent crime. In addition, Richter (2003) highlights the importance of considering issues related to hygiene, diseases and health issues in general.

Regarding this last factor, outbreaks of infectious diseases often lead tourists to curb their impulses and opt for other destinations, to the detriment of those who are involved in any of the risk situations mentioned. In this context, Roselló et al. (2017) argue that infectious diseases are one of the perceived risks with the greatest impact on tourists' decisions to travel. The World Health Organization lists the following disease outbreaks from 2000 to the present day: the West Nile Virus, between 1999 and 2002; anthrax in 2001; SARS-CoV in 2003; mumps in 2006; e. coli and salmonella, also in 2006; H1N1 virus (swine flu) in 2009; whooping cough in 2012; MERS-CoV, also in 2012;

¹ <https://portugalcleanandsafe.com/pt-pt>

Ebola in 2014; Zika virus in 2016; Ebola again, from 2018-2020, when it reappeared in the conflict-stricken Democratic Republic of the Congo; and COVID-19 in 2020.

The pandemic caused by Covid-19, with its negative repercussions and effects across the world, is an example of how an infectious disease can jeopardise the functioning of a large proportion of the economic activities in the world — namely, tourism.

Risk perceptions are the factor with the greatest observed conditioning effect on tourists' decisions to travel (Teeroovengadum et al., 2021). Carr (2001) and Seddighi et al. (2001), however, believe that a tourist's perception of risk is likely to change according to their individual and demographic characteristics. Cultural aspects and past experiences, as well as external factors — such as information sources, and the various groups of belonging and influence of which the individual is a part — become important aspects to be taken into account, according to Lepp & Gibson (2003) and Sönmez (1998). Pennington-Gray et al. (2011) add that psychographic data and knowledge also have an effect.

In the same sense, Adam (2015) finds that a tourist's level of personal knowledge and their degree of exposure to risk, as well as their level of risk acceptance, are all factors that will influence the way they understand the risk in question. Reisinger and Mavondo (2006), Turnšek et al. (2020) and Ragbir et al. (2018) also point to nationality, religion, culture, and psychographic characteristics as predictors of how tourists face risk.

Another external factor that may influence an individual's perception of risk is information in the media. Beyond the actual probability of an individual contracting a disease, McKercher and Chon (2004) found that an individual's perception of risk is influenced by the media and by public opinion in general.

The theory of protective motivation, developed by Rogers (1975), describes how individuals are motivated in contexts or situations that threaten their health or that actually represent a danger to life. This theory has been applied to disease prevention, occupational safety, and environmental sustainability. According to this theory, an individual protects themselves based on their perception of the seriousness of the threat and the probability of it occurring; their perception of whether said protection strategies will or will not be effective; and the cost of adopting these same strategies.

According to Kozak et al. (2007), on the basis of the information they have collected, tourists try to mitigate the perceived risks that impact the realization of their trips. In the context of a pandemic, information regarding the destination is often decisive for whether or not the

trip is completed (Leggat et al., 2010). Hassan and Salem (2021) report that when tourists anticipate a high perceived risk, they either give up the trip or tend to adopt adaptation strategies, which might include altering consumption behaviour to reduce the impact of this perceived risk, and the collection of data and information that aims to minimise the risk (Adam, 2015).

To address the collection of information as a strategy used by individuals, Anderson (1981) developed Information Integration Theory, which establishes that an individual evaluates information from different sources; that both the relevance and the reliability of these sources are evaluated; and that they are later integrated into a set of information accepted as correct. Among other conceptions of adaptation strategies, Uncertainty Prevention Theory has also emerged, which suggests that in situations of uncertainty, individuals seek reliable information and perform a selective search for information that tends to meet their beliefs and preexisting ideas (Williams & Baláz, 2015).

The perceived risk in tourism activities leads tourists to adopt overprotective behaviours, and this prevents them from meeting their needs, exploring new markets, and making the most of intense and varied new experiences. Thus, tourism companies have shown increasing interest in understanding how perceived risk is formed and determined, with the hope of more specifically addressing consumer anxieties through their marketing.

This process of understanding allows companies to identify tourists' main concerns and perceived risks and formulate appropriate responses and strategies aimed at mitigating them. In this way, companies can build feelings of trust in consumers through the transparent provision of information, effective security measures, and solutions that meet individuals' concerns. This procedure on the part of companies tends to reduce perceived risk and increase the likelihood that tourists will feel safer and less worried when choosing their activities.

2.2 Health and safety certificates: evolution and impacts on the management of the COVID-19 crisis

Over the years, there have been several public health crises that have stimulated important advances in the public health system, and with these have come inherent transformations in education and social practices and procedures (Foss, 2020). The milestone that paved the way for health certifications was the first vaccine, which was developed by Edward Jenner in 1796. Vaccines have

allowed for countless public health breakthroughs, such as the eradication of smallpox around 1980.

The World Health Organization, which was founded in 1948, developed the International Classification of Diseases (ICD), a standardised system for diagnosing and monitoring diseases. The ICD has become extremely relevant for health certifications during public health emergencies (Edgar et al., 2020).

Health certification policies are of particular importance in the management of public health crises. They ensure that the prevention measures and the implementation of responses are effective. In addition, access to robust and reliable data systems is also crucial to tracking the spread of diseases, identifying critical points, and efficiently distributing resources (Parsons et al., 2023).

Health certifications have played a key role in managing the public health crisis caused by the Covid-19 pandemic. As reactivating tourism activity became a priority, it was essential that tourists felt safe. To reestablish tourists' confidence, protocols were created and adopted by political and public health authorities in several countries and regions that integrated hygiene and safety guidelines, the adoption of which can be certified with safety seals. These seals attest to the sanitary compliance of hotels, accommodations, and other tourist infrastructures. Terms such as "clean," "safe," and "responsible," among others, appear on these stamps, with the aim of conveying positive messages to reestablish tourists' confidence and safety.

According to Wojcieszak-Zbierska et al. (2020) and Hu and Cheng (2022), these certifications assume crucial functions, including conveying trust to the public, especially regarding public indoor spaces; establishing guidelines in accordance with certified standards, which help ensure that companies comply with health and safety requirements; promoting health practices and encouraging their implementation and maintenance; and supporting economic recovery by restoring public confidence in the demand for tourism activities and allowing for a "new normal."

This "new normal," in turn, will contribute to the relaunch of economic activity and enhanced worker productivity. Implementing effective health and safety measures not only promotes the return of tourists; it also ensures a safe working environment for employees, which will lead to an increase in their motivation, and thus a likely increase in their productivity (Sudiarno et al., 2021).

In this regard, the implementation of guidelines for certifying hygiene and safety standards was promoted by various responsible authorities around the world as an important step toward strengthening public trust. For example, Singapore's authorities wasted no time in

launching a scheme to audit hotels across the country and give them a health safety certificate — "SG Clean." If the hygiene and safety standards determined by the authorities were met at a given establishment, the "SG Clean" label would be displayed prominently to provide "peace of mind" for patrons (Ramli & Zawawi, 2021).

Similarly, the Safe Tourism Certificate was implemented in Turkey by the Ministry of Culture and Tourism together with the Ministry of Health. Protection, hygiene, and safety guidelines dictated that the practices be applied to accommodation facilities with more than 50 rooms. The Safe Tourism Certificate attests to an entity's compliance with 166 high-level health and hygiene conditions, and the certificate symbol is put in a prominent place with a QR code so that customers can check the details of the inspections (Çetin & Coşkuner, 2021).

For its part, in Brazil, the Ministry of Tourism has implemented the Responsible Tourism seal, which aims to reestablish the confidence of consumers while traveling. The seal defines best practices in safety and hygiene for organizations and entities in the tourism sector and signifies that a given place has complied with the guidelines enumerated in the Program.

To increase the confidence of tourists, the Swiss Tourism organization launched the "Clean and Safe" seal. This certificate is intended for companies in the tourism segment that comply with the hygiene and safety guidelines established by the responsible entities. By the end of 2020, around 4,000 companies in the tourism sector had already signed up for the "Clean and Safe" label (Hu & Cheng, 2022).

In Malaysia, the Malaysian Hotel Association, together with the government and the Ministry of Tourism, Arts and Culture, created the "Clean & Safe Malaysia" seal, which aimed to certify hotels and resorts that met the hygiene and safety requirements determined by authorities (Hu & Cheng, 2022).

All these certifications had as their main objective that tourists should feel safe when using tourist establishments, infrastructures, equipment, and means of transport, as well as when engaging in any other related activities.

In this context, the first research question of this study arises: Did the Clean & Safe seal, so widely used in Turismo de Portugal's marketing campaigns, fulfil its purpose of reducing the risk perceived by tourists, and did it positively influence travel decisions, as well as the choice of establishments, equipment and services? Our first research question was the following:

Question 1: Does the fact that we are in P (2021-22) or PP (2022-23) cause the Clean & Safe certification to influence tourists' choices of establishments, equipment, and services?

Regarding the first research question, the following hypotheses emerged and were tested:

H0: There is no association between the different time periods in the face of the development of the pandemic (P and PP) and the influence of the Clean & Safe seal on consumers' choice of establishments, equipment, and services.

H1: There is an association between the different periods during the development of the pandemic (P and PP) and the influence of the certification by the Clean & Safe seal on consumers' choice of establishments, equipment, and services.

2.3 Hygiene and safety (the Clean & Safe seal) as an influence on the decision to travel

Since it was implemented by Turismo de Portugal, the Clean & Safe seal has been awarded to more than 22,200 hotels, restaurants, travel agencies, and entertainment companies in the tourism sector. The seal is awarded based on a self-declaration by companies that they are acting on specific measures recommended by health authorities to prevent the spread of the Covid-19 disease, thus protecting the health of customers and employees. These measures include the implementation of more demanding hygiene protocols, such as disinfection of materials, equipment and spaces; the provision of personal protective equipment; adequate training for employees on hygiene and safety protocols; and adequate space, services and equipment to ensure proper social distancing amongst customers and employees.² In May of 2021, the Clean & Safe seal was updated to reflect the requirements and guidelines of the General Directorate of Health as they evolved with the pandemic's course in Portugal.

Also in May 2021, the European Tourism Covid-19 Safety Seal, which was created by the European Committee for Standardization in partnership with the European Commission, appeared, and accepted tourism companies adhering to the Clean & Safe seal as also meeting its requirements.

On a global level, in May 2020, the World Travel and Tourism Council (WTTC, 2021), with the support of the World Tourism Organization and in cooperation with governments, health professionals and associations, launched the "Safe Travels" seal to reestablish standards of safety and hygiene in destinations and tourism companies in an effort to combat the Covid-19 pandemic. "Safe Travels" also aims to recognise companies and tourist destinations that advocate the implementation of the hygiene

and safety protocols established by the World Health Organization (WHO) and the Centers for Disease Control and Prevention (CDC) in the fight against the Covid-19 pandemic (WTTC, 2021). In a similar manner to the European Tourism Covid-19 Safety Seal, companies that are recognised by the Clean & Safe seal in Portugal will also be recognised by the Safe Travels seal.

In a post-Covid-19 context, after observing the tremendous impact of the pandemic on tourist activity, it is to be expected that hygiene and disinfection procedures, as well as the reliability of and quality of the health system, are now the subject of great scrutiny in tourist destinations. These factors will be prioritised by individuals when choosing destinations, as they seek a sense of security and to reduce their risk of contracting infectious diseases.

Several studies have verified changes in the behaviour of tourists as it relates to hygiene procedures and measures at various destinations. In the study developed by Ivanova et al. (2020), it was found that Bulgarian tourists value hygiene, disinfection, and the existence of a reliable health system, into their level of comfort and feeling less at risk.

Kourgiantakis et al. (2021) were also able to verify significant changes in travellers' behaviour patterns. The authors found that Greek tourists showed a preference for hotel units where issues related to privacy and security — specifically, security issues related to hygiene standards that aim to combat the Covid-19 pandemic and minimise the risks of contagion of the disease — are addressed. Travellers are increasingly demanding that they be assured of the strict enforcement of these hygiene standards of good hygiene and safety practices adopted at the unit in question, a procedure that came to weigh heavily on travel decisions in the period after the pandemic outbreak.

Regarding air transport, Hassan and Salem (2021) found that even though tourists using aircraft have scientific data on the contagion methods of Covid-19, as well as on the procedures and ways of acting about how to avoid it, it is still crucial to analyse how tourists see the possibility of travelling by plane again. The perception of the effectiveness of safety measures in air travel will directly influence the choices they will make. The authors emphasise that it is important for air passenger tourists to recognise airlines' efforts to avoid contagion — whether it is through the use of masks, temperature measurement, presentation of negative test results before the flight, social distancing, and filtration and air renewal systems, among other methods of reducing tourists' risk of contracting the virus.

Recent studies of different populations in the Middle East have shown that the existence of effective infection control measures and a reliable health system at the

² <https://portugalcleanandsafe.pt/pt-pt/timeline>

destination, as well as the use of hand sanitisers and face masks, were the most significant factors affecting travellers' decisions.

Changes in tourists' travel behaviour in the wake of the Covid-19 pandemic has been verified by many authors (Ivanova et al., 2020; Hassan & Salem, 2021; Kourgiantakis et al., 2021). However, these studies were carried with very little temporal distance from the epicentre of the effects caused by the Covid-19 disease. Our study aims to understand whether the (greater) temporal distance from the peak of the events caused by Covid-19 works as a mitigating factor in relation to the perception of risk, or if in fact tourists consider it important to continue the hygiene and safety measures adopted during the period of the pandemic.

Faced with this uncertainty, our second research question arises:

Question 2: Does the time period in question, P (2020-2021) or PP (2022-2023), influence the decision to maintain the Clean & Safe label?

Regarding the second research question, the following hypotheses emerged and were tested:

H0: There is no association between the different of the development of the pandemic (P and PP) and the decision to maintain the Clean & Safe seal.

H1: There is an association between the different periods of the development of the pandemic (P and PP) and the decision to maintain the Clean & Safe seal.

3 Methodology

3.1 Research and data collection tool

The objective of our study is to understand the travel behaviour of Portuguese tourists at two different times in the post-pandemic period. Our questionnaires were applied to understand the importance of the Clean & Safe seal in tourists' decision to travel, as well as authorities' decision to maintain the seal over time.

The online questionnaire prepared in the Google Forms application and distributed through social networks, Instagram, Facebook and Whatsapp during two different time periods to Portuguese tourists who had travelled since the beginning of the Covid-19 pandemic. The first time period was from December 2020 to January 2021, and the second time period was from December 2022 to February 2023. A total of 393 questionnaires were collected, with 23 excluded because they were incomplete,

leaving us with a total of 370, with 207 valid questionnaires from the first time period and 163 from the second.

The questionnaire was divided into three parts: part A – characteristics of the trip – was composed of 10 questions, one of which had 21 items for possible answers; part B – the importance of the Clean & Safe seal – consisted of four questions, one of which was evaluated using a five-point Likert scale, in which 1 indicated “not at all relevant” and 5 indicated “extremely relevant” (Eutsler and Lang, 2015); and part C – demographic characteristics – which consisted of five questions related to the respondent.

Initially, before circulating the questionnaire, a pilot test was conducted for a limited number of participants to gauge any inconsistencies and necessary adjustments.

3.2 Data analysis

The data collected were processed using the Statistical Package for Social Science (SPSS) software (version 28.0). The first phase of processing analysed the respondents' demographic characteristics.

In the second phase, the Chi-Square test was used to determine the significance of the differences found between the two time periods analysed (2020-2021 and 2022-2023) with regard to the reported influence that the Clean & Safe seal had on respondents' decisions to travel.

Later, the Chi-Square test was used to determine the significance of the differences in behaviour found between the two time periods analysed (2020-2021 and 2022-2023), with regard to the decision to maintain the aforementioned seal after the Covid-19 restrictions were lifted.

4 Results

4.1 Demographics of the participants

The demographic characteristics of the individuals are presented in Table 1. Most of the respondents (33%) were between 18 and 24 years old, and 72% of the study's participants were women.

Almost half (42.2%) of the participants had a Bachelor's degree, and slightly more than half were employees (52%). Most participants (25%) earned an income of up to €760, with the next highest percentage (24.3%) earning an income between €760 and €1000.

Regarding qualitative travel characteristics, there was a predominance of equal responses to visiting family and friends in period 1. There was also a significant dif-

Table 1: Frequency of variables

| Variables | Groups | Frequency | Percent (%) |
|---------------------------|---------------------------|-----------|-------------|
| Gender | Female | 266 | 71.9% |
| | Male | 104 | 28.1% |
| Age | Under 18 | 6 | 1.6% |
| | From 18 to 24 | 122 | 33.0% |
| | From 25 to 34 | 57 | 15.4% |
| | From 35 to 44 | 58 | 15.7% |
| | From 45 to 54 | 83 | 22.4% |
| | From 55 to 64 | 25 | 6.8% |
| | 65 years and older | 19 | 5.1% |
| Education status | 1st cycle | 3 | 0.8% |
| | 2nd cycle | 10 | 2.7% |
| | 3rd cycle | 14 | 3.8% |
| | Secondary | 49 | 13.2% |
| | Bachelor's degree | 8 | 2.2% |
| | Undergraduate degree | 156 | 42.2% |
| Work status | Master's degree | 117 | 31.6% |
| | Doctorate | 13 | 3.5% |
| | Student | 105 | 28.4% |
| | Self-employed | 30 | 8.1% |
| | Employed by others | 192 | 51.9% |
| | Part-time employed | 1 | 0.3% |
| Monthly Income | Retired | 23 | 6.2% |
| | Unemployed | 19 | 5.1% |
| | No income | 50 | 13.5% |
| | Up to 760€ | 93 | 25.1% |
| | Between 761€ and 1,000€ | 90 | 24.3% |
| | Between 1,001€ and 1,500€ | 67 | 18.1% |
| | Between 1,501€ and 2,000€ | 32 | 8.6% |
| | Between 2,001€ and 2,500€ | 28 | 7.6% |
| Between 2,501€ and 3,000€ | 5 | 1.4% | |
| More than 3,001€ | 5 | 1.4% | |

ference in travel company between period 1 and period 2, with more of a predominance of trips with spouses and children in period 1 and traveling with friends and family in period 2. Regarding the type of accommodation, it was found that the hotel was the most popular option chosen for accommodation both periods. However, it should be noted that in the 2020-21 period, three types of accommodation — Rural Tourism (TER), Local Accommodation (AL) Apartment, and Local Accommodation (AL) House — were chosen two or three times more often than in the 2022-2023 period. It was also found that the time period in question — P or PP — significantly influenced the frequency of catering services. Thus, while only 18% of

respondents in period P reported having used these services, 96% did so in in period PP.

4.2 The influence and need to maintain the Clean & Safe Seal

4.2.1 The influence of the Clean & Safe seal on tourists' decisions to travel at different times during the development of the COVID-19 pandemic

A hypothesis test was carried out regarding the first research question:

Question 1: Does the fact that we are in Pandemic (P) (2021-2022) or Post-pandemic (PP) (2022-2023) cause the Clean & Safe certification to influence tourists' choices of establishments, equipment, and services?

H0: There is no association between the different periods of the development of the pandemic (P and PP) and the influence of the Clean & Safe seal of establishments, equipment, and services on consumers' choice.

H1: There is an association between the different periods of the development of the pandemic (P and PP) and the influence of the Clean & Safe seal of establishments, equipment, and services on consumers' choice.

The analysis of Question 1 through Table 2 yields a p-value of $< .001$. This very low value leads us to reject the null hypothesis (H0) and accept the alternative hypothesis (H1), which is to say that there is a significant association between the period in question and the influence of the Clean & Safe seal on the decision to travel — $X^2=22.82$, $p = .001$. In the 2020-21 period, the majority (67.1%) of individuals reported that the Clean & Safe seal influenced their decision to travel, while in the 2022-23 period, the majority of participants (57.7%) reported that the Clean & Safe seal did not influence their decision to travel.

4.2.2 The decision to maintain the Clean & Safe seal at different times during the development of the Covid-19 pandemic

A hypothesis test was carried out regarding the first research question:

Question 2: Does the time period in question, P (2020-2021) or PP (2022-2023), influence the decision to maintain the Clean & Safe label?

H0: There is no association between the different periods given the development of the pandemic (P and PP) and the decision to maintain the Clean & Safe seal.

H1: There is an association between the different periods given the development of the pandemic (P and PP) and the decision to maintain the Clean & Safe seal.

Concerning Question 2, the analysis of Table 3 yields a small p-value of < 0.001 , which leads us to reject the null hypothesis (H0) and accept the alternative hypothesis (H1). This is the same as saying that there is an association between the period in question and the decision to maintain the Clean & Safe seal — $X^2 = 140.286$, $p = .001$ over time — in tourist establishments, equipment and services. Thus, while in the 2020-21 period the majority of individuals (95.7%) said that the Clean & Safe seal should be maintained over time in tourist establishments, equipment and services, in the 2022-23 period, the majority of participants (60.7%) of reported that it was not necessary to maintain the seal.

5 Discussion

Our goal was to explore the changes in the travel behaviour of Portuguese tourists between the P period (December 2020 to January 2021) and the PP period (December 2022 to February 2023).

In this sense, we examined the influence of the Clean & Safe seal on the decision to travel, and on Portuguese tourists' choice of establishments, equipment and tourist services, as well as the influence that each of these time periods (P and PP) had on the decision to maintain the seal.

Table 2: The development phase of the Covid-19 pandemic and the Influence of the Clean & Safe seal on travel decisions

| Hypotheses: | | Value of Chi - Square | P - Value |
|--------------------------------|---|-----------------------|-----------|
| H0: There is no association... | (...) between the different periods and the influence that the certification of the Clean & Safe seal has had on consumer choices | 22.82 | $< .001$ |
| H1: There is an association... | | | |

Table 3: The development phase of the Covid-19 pandemic and the decision to maintain the Clean & Safe seal

| Hypotheses: | | Value of Chi - Square | P - Value |
|--------------------------------|--|-----------------------|-----------|
| H0: There is no association... | (...) between the development of the COVID-19 pandemic and the decision to keep the Clean & Safe seal. | 140.286 | $< .001$ |
| H1: There is an association... | | | |

Although some studies have found a change in international tourists' behaviour, with a greater demand for compliance with measures related to hygiene and safety in all tourist activities, in our study, we found that this behavioural change was only visible during the first time period (2020-2021), in which the majority (67.1%) of individuals stated that the Clean & Safe seal had influenced their travel decision. This result reflects the impact of the high perception of risk from the pandemic. The fact that the majority (67%) of tourists say that the Clean & Safe label influenced their decision to travel is in line with the observation of Slovic et al. (1982) that unknown and uncontrollable risks lead to more cautious behaviours on the part of individuals.

As we have already mentioned, the behavioural change was notorious in the second time period (2022-2023), and there was a contrast in the trend of responses that demonstrates the relaxation about the requirement of these measures that prevented or mitigated the infection of Covid-19 through contagion, in favour of Portuguese tourists, that is, in this second moment (2022/23) the majority (57.7%) of the participants reported that the Clean & Safe seal does not influence their decision to travel. This behaviour indicates decreased perception of risk – either due to familiarity with the pandemic situation, or because restrictions had eased, and the tourists' perceived confidence in their ability to keep the pandemic under control.

Another important conclusion about the change in the behaviour of Portuguese tourists in the two periods under analysis was the fact that there were opposing response behaviours between the two time periods (P and PP) concerning the maintenance of the Clean & Safe seal. At first (2020-21), the majority of individuals (95.7%) stated that the Clean & Safe seal should be maintained over time in tourist establishments, equipment and services. By 2022-23, however, the majority of participants (60.7%) felt that it was not necessary to maintain the Clean & Safe seal.

This change in tourists' attitudes from one period (2020/21) to the other (2022/23) can be explained by the fact that the first period of the study took place during a phase of high perceived risk, while the second period already comprised a phase of lower perceived risk. This supports the idea that risk perception is dynamic and likely to change due to external factors. This change in attitudes about the seal can be explained using the mitigating factors discussed by Hassan and Salem (2021), who consider that tourists are looking for ways to minimise their perceived risk as time progresses.

It was also found that the accommodations TER, apartment AL, and house AL were the most frequently

chosen during the first time period (2020-21). This conclusion is in line with data from Statistics Portugal (2021), which pointed to a growth in demand for accommodation in rural areas during the pandemic period. AL apartments and houses were also in high demand during this period, as they allowed people to maintain social distancing.

Looking at the use of tourist services and facilities in the two time periods analysed, the change observed in the use of restaurants stands out, reaching a response rate of 96% in the PP period. It should be noted that this finding contradicts the result of the survey carried out by GURSOY and CHI (2020), which found that a third of the consumers surveyed did not intend to travel nor frequenting hotels and restaurants, in the coming months.

6 Conclusions

The results of this study demonstrate that the theory of perceived risk applies to tourism activity during the pandemic. Tourists' perception of risk evolved between the two time periods P and PP, directly influencing their attitudes and choices. This change in tourists' behaviour was influenced either by their degree of threat perception, by their increased familiarity with the pandemic, or by the trust that the tourists had placed in the responsible authorities.

This analysis reinforces that risk perception is dynamic and influences tourists' behaviours and motivations, which has direct implications for the tourism sector.

Thus, it is essential that tourist establishments closely monitor trends in tourist demand and adapt their marketing and communication strategies to the prevailing perception of risk, thus assuring tourists of a safe, reliable, and harmonious environment.

Limitations and Future Investigations

One limitation of this study concerns the selection of participants. Although the sample size for this study was generous, one demographic limitation was the age of the interviewees, which skewed very young.

This study also used a quantitative method that did not address more subjective questions related to the influence of the pandemic on people's lives. Thus, it is suggested that, in future studies, interviews with open answers be carried out, where it is possible for the interviewees to

explain their needs, desires, and frustrations related to participation in tourism following the pandemic.

It is important to say that managers of tourism activities and those responsible for their marketing must equip themselves with several studies and interpret and analyse the variables around the perception of risk so that they can avoid the costs of hasty decisions.

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