

The sensory dimension of the tourist experience in mountain destinations: The case of Serra da Estrela Natural Park

A **dimensão sensorial** da experiência turística nos **destinos de montanha**: O caso do Parque Natural da Serra da Estrela

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Abstract | This paper examines the tourism experience lived by visitors in mountain destinations, particularly focusing on the sensory dimension of the tourist experience. This study aims to understand the importance of the five senses in the experience lived by visitors in the Serra da Estrela Natural Park. Primary data was collected through a questionnaire-based survey, answered by 241 visitors of the Serra da Estrela Natural Park, during the summer of 2015. The results of the study suggest that all senses are important, but not all have the same importance in the tourist experience.

Keywords | Mountain tourism, tourist experience, sensory dimension, sensory marketing, Serra da Estrela Natural Park

Resumo | O presente artigo analisa a experiência turística vivida pelos visitantes nos destinos de montanha, focando particularmente a dimensão sensorial da experiência turística. O objetivo deste artigo é entender a importância dos cinco sentidos na experiência vivida pelos visitantes do Parque Natural da Serra da Estrela. Recolheram-se dados primários, via inquérito por questionário, dirigido a 241 visitantes do Parque Natural da Serra da Estrela, durante o verão de 2015. Os resultados sugerem que todos os sentidos são importantes, mas nem todos têm a mesma importância na experiência turística.

Palavras-chave | Turismo de montanha, experiência turística, dimensão sensorial, marketing sensorial, Parque Natural da Serra da Estrela

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1. Introduction

In the mid-twentieth century, it began clear the need to create alternatives to mass and over-standardized tourism formats to satisfy the needs of new visitors and the changing desires of “old”, increasingly experienced, ones. As a matter of fact, several changes have been registered in tourism demand revealing a quest for new tourist experiences, valuing personalization, small scale, direct contact with the local population and appreciating unique and authentic natural and cultural resources, a quest particularly visible in the rural and nature tourism context (Kastenholz, Carneiro, & Marques, 2012a). Mountain tourism can be considered as one of these new tourism modalities (Fennell, 1999), since this type of tourism is located in mountainous areas that, due to their unique characteristics and meanings (Pomfret, 2006; Silva, Kastenholz, & Abrantes, 2011), may be the ideal environments for developing/ co-creating unique, authentic, customized and involving experiences (Haven-Tang & Jones, 2010). It should be emphasized that these aspects are highly appreciated and valued by the post-modern tourist (Swarbrooke & Horner, 2007).

However, considering that the tourism sector is an increasingly competitive field with a growing number of destinations, there is also a growing need for differentiation. It is, thus, paramount that those responsible for the development and promotion of tourist destinations are familiar with new developments, trends and challenges arising in modern society (World Tourism Organization, 1997). In this context, it is also critical to understand the role of the tourist experience as central to a destination’s attractiveness and competitiveness (Mossberg, 2007; Kastenholz et al., 2012a). The sensorial dimension of this experience has lately deserved increasing attention (Agapito Valle & Mendes, 2012; Ballantyne, Packer, & Sutherland, 2011; Carneiro, Kastenholz, & Marques,

2014; Tussyadiah & Zach, 2012), given the impact of an appealing multi-sensory experience on experience quality and memorability. The literature review on sensory experience research conducted in tourism suggests that this is a still understudied subject, with a gap visible in terms of research applied to mountain destinations and others destination types. The literature review conducted for this study showed that the five senses had been analysed for the tourist experience in rural context (Carneiro et al., 2014; Markwell, 2001), rural costal context (Agapito et al., 2012; Agapito, Valle, & Mendes, 2014), wildlife (Ballantyne et al., 2011), historic (Stancioiu, Ditoiu, Teodorescu & Onisor, 2014) and urban and nature (Pan & Ryan, 2009) destinations.

The present article aims at contributing to understanding the importance of the five senses in the tourist experience lived in mountain destinations. To achieve the objective of this study, the article is divided into three sections. The first presents the literature related to the tourist experience and the sensory dimension of the tourist experience. The second part reports results of the empirical study, presenting a brief characterization of the experience-context, the methodology and the results of a survey and its analysis in the Serra da Estrela Natural Park. The last part shows conclusions and discusses implications of the present study.

2. Conceptual framework

Nowadays, the consumption experience is recognized as the most relevant factor of value-creation because, over the past decades, there have been substantial changes in the market and consumer behaviour (Hultén, Broweus, & Dijk, 2009; Krishna, 2010; Lindstrom, 2005), even leading to a new economic paradigm designed as “experience economy” (Pine & Gilmore,

1998). Now, consumers want, apart from well-functioning products and efficient services, unique and memorable experiences (Hultén et al., 2009; Pine & Gilmore, 1998; Schmitt, 1999; Tynan & McKechnie, 2009; Walls, Okumus, Wang, & Kwun, 2011) and this is even more visible in the tourism sector, where previous research – particularly on socio-psychological drivers of tourism – has since long identified the desire to live unique, authentic, diverse, high quality and memorable experiences in special places, away from home as a central ingredient of the tourism phenomenon (e.g. Cohen, 1979; Dann, 1977). Recently, several authors have entered the debate, also from a marketing perspective and addressing the phenomenon with a concern of permitting an assessment and analysis of the tourist experience, similar to research being undertaken in the field of general consumer behaviour. Nonetheless, there is no consensual definition for the term "tourist experience" yet, nor a consensus on what dimensions or items it integrates, i.e. without any clear operationalization of the concept, making any research in this important domain a challenge.

According to Andersson (2007), Hujibens (2012), Kastenholz, Eusébio, Figueiredo and Lima (2014), Kim, Ritchie and McCormick (2010), Oh, Fiore and Jeoung (2007), Pettersson and Getz (2009), Sharpley and Stone (2011), Tung and Ritchie (2011), Volo (2010), Zakrisson and Zillinger (2012), the tourist experience should be understood as a complex, multidimensional, dynamic and highly subjective phenomenon, that results from the combination of various tangible and intangible elements, which include a set of experiences before, during and after the visit, and the particular events that add diverse emotional, behavioural, social and sensory aspects to the overall destination experience. All these subjectively lived experience dimensions are influenced by the socio-cultural characteristics of the visitor, his/ her travel context and also by the features of the environment in which the experi-

ence occurs.

As a consequence of the described market changes, those responsible for the development and promotion of a tourist destination, as well as the different destination stakeholders integrated in the supply system should develop adequate conditions for co-creating experiences, engaging and establishing personalized contact between visitors and destination agents that could be perceived as authentic and meaningful by the visitor (Pine & Gilmore, 1999). One must note that the visitors can be involved with the destination at an emotional, physical, intellectual, or spiritual level, and this is achieved through stimulation of different senses during the interaction with the products/services/experiences (Pine & Gilmore, 1998). This perspective highlights the need to incorporate a sensory dimension of the tourist experience, when analyzing and attempting to provide quality consumption experience opportunities (Schmitt, 1999).

Despite the importance of the sensory dimension of the tourist experience, currently, this topic is still little studied, being a recent area of research (Agapito, Mendes, & Valle, 2013; Carneiro et al., 2014). In this context, the number of studies on the sensory dimension of the tourism experience is reduced. If we analyse the studies of Agapito et al. (2012), Agapito et al. (2014a), Ballantyne et al. (2011), Carneiro et al. (2014), Gretzel and Fesenmaier (2004), Markwell (2001), Pan and Ryan (2009), Stancioiu et al. (2014), and Tussyadiah and Zach (2012), it can be observed that they used various methodologies to analyze this experience dimension and that some authors did not analyze all senses in their study.

Within this line of thought, it should be noted that all senses have been and are important for the human behaviour, because they allow to establish the relationship with the external environment and contribute to generation of meaning, in other words, diverse sensory stimuli generate perceptions and create mental images re-

lated to experiences that are lived by the individual (Lindstrom, 2005). However, the literature review shows that most senses have been strongly neglected for several decades, both regarding consumer behaviour and marketing research and marketing practice, and only have received attention in the new millennium (Gretzel & Fesenmaier, 2003; Hultén et al., 2009; Krishna, 2010; Lindstrom, 2005).

When analysing the tourism marketing context, it is also noticeable the scarcity of studies about the sensory dimension of the tourist experience. The majority of them emerged since 2010. However, each of the senses helps the visitor to give a meaning to the destination and, therefore, to understand the place in which it takes place (Markwell, 2001). Mountainous areas contain a strong set of sensory stimuli (Pomfret, 2006), suggesting that these stimuli have a great importance in the mountain tourism experience (Markwell, 2001; Pan & Ryan, 2009), since the visitors tend to be physically active, engage with particular attention with the mountain surroundings and nature, making mountain tourism experiences stand out as particularly intense (Markwell, 2001). This shows an increasingly recognized need to understand the multi-sensory experience and to also use this knowledge to intensify and make the tourist experience lived at a destination more memorable. Agapito et al. (2014) suggest, in this respect, to include sensory stimuli in the development of an appealing and involving destination environment, thereby contributing to the destination's competitiveness and sustainability.

3. Research Methodology

This research work focuses on the sensory dimension of the tourist experience lived by the visitors of the Serra da Estrela Natural Park. In

the next two sections some information about the context of the tourist experience, instruments and data collected is presented.

3.1. The context of the tourist experience: Serra da Estrela Natural Park

Serra da Estrela Natural Park is located in the central region of Portugal, integrating the sub-regions of the Serra da Estrela, the Interior Norte and the Cova da Beira, and it is distributed across six municipalities (INE, 2014). This park is one of the 13 Natural Parks that exist in Portugal and it is the largest protected area in the country. Serra da Estrela Natural Park has the highest elevation in Portugal and has a set of national and international awards (CISE – Município de Seia, 2011; Turismo de Portugal, 2015). According to the available statistical data, this destination has 138.688 inhabitants, not proportionally distributed in all municipalities (INE, 2014). It was also found that, from 2005 to 2013, there was a decrease in the number of inhabitants in all municipalities. Over the past decade, the tertiary sector has a greater number of workers regardless of the municipality.

Serra da Estrela Natural Park has an incredible diversity of natural and built resources that transform this destination in an exceptional destination. In terms of natural resources, it is possible to highlight the landscape diversity (CISE, 2012a). Additionally, the park is also characterized by abundant water resources and a wide variety of fauna and flora. In addition to natural resources, Serra da Estrela Natural Park has monuments – mostly religious (e.g. Shrine of Nossa Senhora do Desterro) – and museums, which showcase the region's production processes (e.g., bread making) (CISE, 2012b). It is also possible to find a variety of handmade (e.g. wool slippers) and food products (e.g. Serra da Estrela cheese) that are relevant to develop tourist

products in the destination (Liga de Amigos de Conimbriga, 2008).

Serra da Estrela Natural Park, in 2013, had a total hotel capacity of around 3.400 beds, and received about 304.648 guests, which represented more than 490,000 overnight stays (INE, 2014). Domestic tourism contributed largely to the occupancy rate of hotels, as well as international tourism, with Spain, France, Germany and the United Kingdom being the main foreign markets (INE, 2014). Finally, another important aspect is the average length of stay, which differs greatly according to municipality. The overall length of stay of the region was satisfactory (1.58 nights), being relatively close to the one registered in the Central Region of Portugal (1.79 nights) (INE, 2014).

3.2. Data collection and analysis methods

Fieldwork was undertaken in the summer of 2015 to analyse the sensory dimension of the tourism experience at Serra da Estrela Natural Park. A survey was taken of 248 people aged over 18 who lived a tourist experience in this destination. Furthermore, the data collection was based on a mix of two approaches, non-probability sampling for convenience with an approach to probability sampling for clusters defined in space and time. The researcher divided the region in sub-regions (criterion: municipalities that are part of the Serra da Estrela Natural Park) in order to obtain a diverse sample in terms of visitors (national and foreign visitors) and places (the main places of interest that attract visitors). In relation to the time, the researcher had decided to apply questionnaires on different days during July and August. It is important to clarify that these aspects were crucial to make an approach to probability sampling. However, the results are not statistically representative of the population

The group of questions used in this specific

study included one open-ended question and two closed questions in order to capture the five senses impressions regarding to the tourist experience in the destination. Considering the tourist demand of the Serra da Estrela Natural Park, the questionnaire was drawn up in Portuguese and later translated into Spanish, French and English.

A pre-test was conducted over three days in Picos de Europa Natural Park. The researcher interviewed 50 individuals who were visiting this destination. Then, the investigation took place in Serra da Estrela Natural Park, in the summer of 2015, during the low season of mountain destinations, over all days of the week. The questionnaires were applied in two different ways/methods, personally and by intermediaries (the employees of various establishments – such as hotels, museums, camping sites, tourism offices – showed interest to assist in the study). Data was collected from a total of 241 valid questionnaires, 46% was obtained directly and 54% by intermediaries.

According to the structure of the questionnaire, the data were compiled and analysed using the IBM SPSS software, version 20. A univariate analysis was performed (using descriptive statistics) to characterize the socio-demographic profile of the sample, the travel behavioural and the travel context.

4. Analysis and discussion of results

4.1. Profile of the sample and travel behaviour

The sample showed a slight predominance of female visitors (55.6%). An examination of the age distribution of respondents clearly demonstrates that the majority of the visitors were under 44 years, with those between 25 and 44 years accounting for 65% of all respondents. Further-

more, most of the respondents lived in the city, and had finished the high school and/or a higher level of studies (bachelor degree). 71.8% of the respondents are employed and 8.4% are studying. The overwhelming majority of respondents were Portuguese. The second most frequent nationality was Spanish. The respondents of France and Germany were the third and fourth most important groups, respectively.

Most of the respondents considered the Serra da Estrela Natural Park as the main destination of their trip (45%) and a large majority of the

respondents had visited the Serra da Estrela Natural Park at least once before (79.5%) (Table 1). The main information source used to prepare the visit to this destination was “recommendation of family and/or friends” (43.2%). In addition, the main motivations were the contact with nature (72.2%) and the need to relax (59.8%). The large majority of the respondents travelled in groups, such as family (60.8%) or with a partner (21.3%). Hotels or similar accommodations were the first option for staying in the destination (50%).

Table 1 | Constructos, dimensões e variáveis do consumo dos souvenirs como produto turístico

Travel behaviour and travel context	
Length of stay	2,89 days (average)
Motivations	Looking for contact with nature (72.27%) Need to relax (59.8%) Cultural motivations (25.7%) Visiting relatives and friends (22.8%) Leisure / holiday (18.7%) Social interaction (12.4%) Sporting activities (12%) Health (4.6%) Business / professional reasons (2.1%) Shopping (1.7%) Status / prestige (-1.2%)
Information sources	Recommendation of family and/or friends (43.2%) Destination site -(35.7%) Social networks (18.7%) Tourist destination guide (16.2%) Flyers / brochures (15.4%) Other sites (5.4%) Radio / TV / newspapers (3.7%) Travel agent (2.1%)
Accommodation	Hotel or similar (50.0%) Camping / motorhome (24.4%) Family house (12.8%) 2nd residence (4.7%) Friend's house (3.4%)
Relevance of destination	The Serra da Estrela is the main destination (45,0%) The Serra da Estrela is an important destination, but not the main one (39,6%) The Serra da Estrela is just a passage destination (15,4%)
Travel group	Couple with children older than 6 (25,4%) Family (22,1%) Couple without children (21,3%) Friends (15,0%) Couple with children under the age of 6 (13,3%) Alone (7,9%) Package travel (2,1%) Other (3,3%)

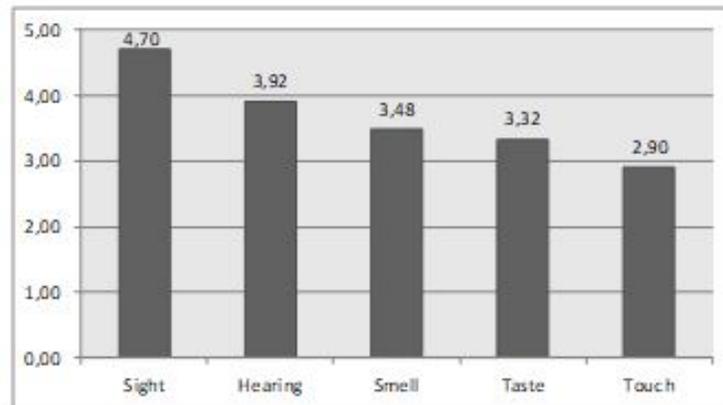
Source: Own elaboration

4.2. Sensory dimension of the tourist experience

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When asked about the importance of the senses in the experience lived in Serra da Estrela, the respondents considered, in a 5-point Likert-type

scale, that the visual sense was the most important in their experience, followed by hearing (Figure 1).

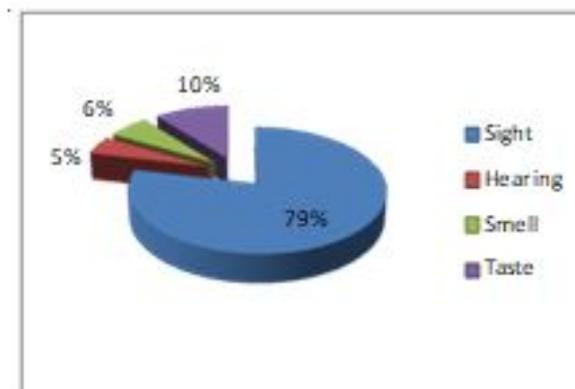


Source: Own elaboration

Figure 1 | Importance of the senses in the experience lived in the Serra da Estrela Natural Park

On the other hand, when asked about the sense that the visitor associate most with the Serra da Estrela Natural Park, in a multiple-choice question, 79% of the respondents considered the visual sense the most important, followed by taste (10% of the respondents) (Figure 2). It

is worth of notice that the sense of touch was not mentioned by any respondent and that the relatively outstanding importance of sight and much lower importance levels of the other senses contradicts the above-presented results.



Source: Own elaboration

Figure 2 | The sense that visitors associated with greater intensity to the Serra da Estrela Natural Park

The results of the content analysis of the open-ended questions, where the tourists spontaneously referred some elements that they associate with the Serra da Estrela Natural Park (n=1262), the visual sense stands out with 25% referrals, as in the previous results. Hearing is the second most mentioned sense (23%), followed by taste (16%), touch (16%) and smell (15%). Based on table 2, it can be concluded that the first three visual elements that visitors associated with the tourist experience lived in Serra da Estrela Natural Park were 'landscape', 'nature', and 'mountain'. Related to the hearing sense respondents mentioned predominantly 'animals', followed by 'river/water', and 'nature sounds'. The taste experience meant 'cheese' for most, but also 'sausages' and 'traditional food' were frequently referred to. Concerning the sense

of smell, 'nature smells' stand out, particularly 'trees', but also 'food' was mentioned again, now related to another sense. Finally, the respondents referred mostly to 'rocks' and 'water' for describing the touch-scape experience dimension, followed by 'plants'.

With these results we can conclude that the senses – sight, hearing, taste, smell and touch – are strongly associated with the landscape, nature and geographic features of the destination visited, but also with a particular cultural element – its local gastronomy products. Some of these elements are particularly rich in stimulating several senses simultaneously, like nature associated to vision, smell, hearing and touch, but also local food referred to in the smell and taste-scape, and water for hearing and touching, while animals stand out for the hearing experience.

Table 2 | Sensory elements that compose the tourist experience in Serra da Estrela Natural Park

	Sight elements		Hearing elements		Taste elements		Touch elements		Smell elements						
	N	%	N	%	N	%	N	%	N	%					
1	Landscape	59	28,78	Animals	105	60,34	Cheese	114	66,67	Rocks	59	46,09	Nature smells	44	29,33
2	Nature	42	20,49	River/ Water	47	27,01	Traditional Food	34	19,88	Water	50	39,06	Trees	29	19,33
3	Mountain	36	17,56	Nature sounds	44	25,29	Sausage	36	21,05	Plants	17	13,28	Food	23	15,33
4	Green	19	9,27	Trees	29	16,67	Bread	23	13,45	Trees	11	8,59	Air	16	10,67
5	Saw	15	7,32	Silence	21	12,07	Meat	21	12,28	Flowers	10	7,81	Plants	13	8,67
6	River	12	5,85	Wind	21	12,07	Fruit	7	4,09	Food	9	7,03	Flowers	13	8,67
7	Animals	12	5,85	People	6	3,45	Honey	7	4,09	Vegetation	9	7,03	Land	10	6,67
8	Rocks	10	4,88	Music	4	2,30	Fish	6	3,51	Grass	8	6,25	Burned	10	6,67
9	Trees	10	4,88	Cars	2	1,15	Vegetables	5	2,92	Land	8	6,25	Herd	9	6,00
10	Sky/ Clouds	9	4,39	Bells	2	1,15	Sweets	5	2,92	Wool	6	4,69	Fireplace smoke	5	3,33
11	Other elements	90	43,90	Other elements	4	2,30	Other elements	18	10,53	Other elements	9	7,03	Other elements	19	12,67
Total		314			285			276			196			191	

Source: Own elaboration

Hierarchically, it can be seen that the results in the different analyses show a similar hierarchical response regarding to the five senses. The highest position is clearly represented by the visual sense. The results show the importance of the visual sense in the perception of tourist destinations, confirming what Urry (2002) called the

'tourist gaze'. In contrast, the touch sense corresponds to the lowest position, while relative importance levels slightly change as a consequence of the type of question asked.

5. Conclusion and implications

The results obtained from this research helped to clarify the importance of the different elements in the tourist experience. It was possible to verify that some senses are more important than others. This idea was confirmed in other study areas (Hultén et al., 2009; Krishna, 2010; Lindstrom, 2005), but also in tourism (Agapito et al., 2012, Kastenholz et al., 2012; Stancioiu et al., 2014; Urry, 2002).

This study highlights that all the senses were associated with the Serra da Estrela Natural Park destination. In addition, it can be concluded that the five senses were important in the tourist experience, but not everyone attached the same level of importance to them. This is because, the mountain experience is naturally shaped by the Serra da Estrela's particular rural destination context, with shepherding and traditional cheese production, suggesting particular sensorial experience opportunities, while nature, with its rocks, vegetation and watercourses, also inspires memorable sensorial experiences.

Furthermore, the visual sense produces the highest sensory impressions, while touch represents the least sensory impression. These results conform the results of other studies that showed that the visual sense was the most important sense in the tourist experience in a rural and nature context (Agapito et al., 2012, Kastenholz et al., 2012). Regarding to the touch sense, results may be linked to either a lack of touch experience opportunities or to a lack of conscious perception of this sense, which may be, however, stimulated through corresponding experience proposals.

Probably the most relevant results may be retrieved from the open-ended question, where tourists spontaneously referred to their sensorial experience and corresponding concrete meanings. This question triggered the actual experience as opposed to an abstract evaluation of the importance of each sense, which may not always be

conscious or typically verbalized, leading to a relative ignorance of some less evident sensorial experiences.

The conclusions suggest several actions that those responsible for the development and promotion of Serra da Estrela Natural Park destination should develop to improve the sustainability of the destination and its competitiveness. The following aspects are worth highlighting:

- The destination marketers should adapt the sensory marketing to the characteristics and resources of the Serra da Estrela Natural Park, developing environments to create positive, unique and memorable experiences sustained in a multisensory experience provided by contact with fauna, flora, and local gastronomy;
- The responsible for developing and promoting the destination, as well as the stakeholders of the destination, should develop environments enabling to create multisensory experiences that explore the unique characteristics of the destination, in order to develop a coherent and attractive supply and also to contribute to affirm the identity and brand of the destination;
- Complementary supply in the destination should be developed, focusing on products (preferably endogenous) and also on services related to the sensory dimension of the experience.

The limitations of this study are associated with the intangible, geographic, temporal and hypothetical nature of this research. The intangibility and subjectivity of some elements that have been considered in this study – senses –, which could not have a precise measurement, could have limited the study. The research has only been conducted in the Serra da Estrela Natural Park and the empirical study has been produced in a short period of time (only in July and August). This limits the conclusions that can be

drawn from it. The fact that studies about the sensory tourist experience, sensory marketing and the use of a sensory stimulus are scarce (Agapito et al., 2012), it limited the definition of goals that could be grounded by a solid theoretical framework.

Therefore, in this respect, this study underpins the need for more research in the sensory dimension of the tourist experience and the importance of sensory marketing in mountain destinations in the future. Consequently, further research should extend the research timespan, in order to assess how important is the sensory dimension of the experience throughout the year. In addition, further research could target residents and local stakeholders in the destination, in order to understand how the sensory dimension of the tourist experience is understood by them, so as to identify possible disagreements and raise awareness among stakeholders on how the experience is perceived by the market segment that they want to attract and satisfy. To this, research could identify differences between various tourist markets within sensory tourist experiences and extend the spectrum of the research to other mountain destinations, in order to find patterns assignable to different destinations.

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