turyzm tourism

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turyzm tourism

33 | no. 2 2023

WYDAWNICTWO
UNIWERSYTETU
ŁÓDZKIEGO
Łódź 2023

COPE
Member since 2019
JM14487

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e-ISSN 2080-6922

Contents

Articles

DOI: https://doi.org/10.18778/0867-5856.33.2.01 e-ISSN 2080-6922, ISSN 0867-5856

Member since 2019
JM14487

Turyzm/Tourism
2023, 33/2

A novel framework for social life cycle assessment to achieve sustainable cultural tourism destinations

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How to cite (APA style): Javdan, M., Ghalehteimouri, K.J., Ghasemi, M., & Riazi, A. (2023). A novel framework for social life cycle assessment to achieve sustainable cultural tourism destinations. *Turyzm/Tourism, 33*(2), 7–18. https://doi.org/10.18778/0867-5856.33.2.01

ABSTRACT

Tourism has a significant multiplier effect on other socioeconomic sectors, leading to improved infrastructure and public services. Its environmental impact, however, remains a subject of concern and there has been a growing emphasis on increasing the sustainability of tourism attractions. Despite the global importance of sustainability evaluation, there are just a few widely accepted methodologies for evaluating it. The life cycle concept is utilised to assess environmental, economic and social impacts and one critical life cycle tool is social life cycle assessment (S-LCA). Tourism-associated activities are ideally suited for the elaboration of data related to social sustainability due to tourism-specific service specifications. As a result, the main question is how can S-LCA help to ensure the long-term viability of cultural tourism destinations. This paper investigates the theoretical evolution of both S-LCA and cultural tourism in order to answer this question. A new framework S-LCA for sustainable cultural tourist destinations is developed and examined, as are potential application gaps. The hypothesized S-LCA conceptual framework S-LCA can thus play an effective role in accomplishing the principles and objectives of sustainable tourism destination management by bringing all stakeholders' interests together.

KEYWORDS

social life cycle assessment, sustainable cultural tourism destinations, sustainable tourism destination management, novel framework S-LCA

ARTICLE INFORMATION DETAILS

Received:
24 June 2022
Accepted:
17 May 2023
Published:
4 October 2023

1. Introduction

The implementation of the sustainable development concept, which takes environmental, social and economic considerations into account, boosts a firm's worth in terms of credibility and image among corporate businesses and customers. As a result, sustainability is a prerequisite for all stakeholders, especially the local community, to integrate and compete (Chan & Lee, 2008; Ghalehteimouri et al., 2021). Despite the importance of global sustainability evaluation, there are only a few widely accepted methodologies for evaluating it (Hanley et al., 1999; Organisation for Economic Co-operation and Development [OECD], 2000), and they have never been successful at the local level (Tokede & Traverso, 2020). As a result, the life cycle concept is used to assess environmental, economic and societal consequences. Despite its infancy, the social life cycle assessment (S-LCA) is an essential life cycle instrument concerned with the social effects of life cycles; however, due to the novelty of this analytical approach, no worldwide common application tools have yet been produced (Arcese et al., 2013).

Tourism was expected to be the world's largest industry by 2020 and beyond. Tourism, on the other hand, has been one of the most vulnerable sectors to COVID-19 outbreaks, with a significant drop in visitor numbers (World Tourism Organization [UNWTO], 2020). This rapid expansion has had a substantial economic impact since it generates revenue, which leads to additional direct and indirect job opportunities (Chekole et al., 2021; Constantin & Mitrut, 2008). Furthermore, both travellers and local residents benefit socially, and the tourism business helps to promote cultural interchange (Zerva et al., 2019), while tourism can improve the quality of life through improving urban creativity (Ghalehteimouri et al., 2020). Tourism, in addition to improving infrastructure and public services, has a significant multiplier effect on other socioeconomic sectors (Cooper, 2008; Gibson et al., 2003). However, the environmental impact of tourism remains a source of concern.

Sustainable tourism is likely to be a method that can be used to increase the profitability of all types of tourism on economic, social and environmental levels. Tourism should be focused on resource management, which includes meeting all economic, social and aesthetic needs while also taking into account key ecological processes, cultural integrity and biological diversity (UNWTO, 2016). Cultural tourism is a sort of special interest travel in which the host country's culture plays an important role in drawing visitors to a location. The material (art, music, handicrafts, etc.) and non-material (hospitality, customs, history, religion, etc.) aspects of a host country's culture are highlighted. Many travellers are particularly eager to learn about cultures other than their own (Reisinger, 1994).

It has been established that perceptions affect societal repercussions in numerous ways and in order to improve the accuracy of results, S-LCA approaches must be customised for a particular community. An analysis that emphasizes the social impacts that are directly related to the processes that are part of the product system will not always lead in the same direction as an analysis that concentrates on the more widespread effects (Jørgensen et al., 2008). S-LCA is a useful tool for decision support when selling goods or services as products in tourist areas, either to compare or to improve the social consequences of a product's life cycle. Additionally, the findings from the case studies that were studied may have a significant influence on decision-makers (Petti et al., 2018). Despite the initial anticipations, there are worries about potential adverse social effects brought on by the circumstances present in feedstocks' production. The social life cycle evaluation methodology was employed in this study to evaluate the effects of these circumstances (Costa & Oliveira, 2022).

Tourism-related activities are ideally suited for the development of data pertinent to social sustainability because of the service criteria for the tourism industry. Therefore, the purpose of this study is to determine how S-LCA might help to ensure the long-term viability of cultural tourism destinations by examining the theoretical development of both S-LCA and cultural tourism. The presentation and discussion of an framework S-LCA for sustainable cultural tourism destinations includes an examination of any potential restrictions on its applicability.

This paper consists of three main parts which cover the method of life cycle impact criteria assessment. Then introduces different social life cycle criteria for assessment based on the recognition of The United Nations Environment Programme (UNEP) and Society of Environmental Toxicology and Chemistry (SETAC) recommendations. Finally, it introduces a framework S-LCA based on this assessment to achieve sustainable cultural tourism destinations.

2. Methods

Goal and scope definition, inventory analysis, impact assessment and interpretation are the four main steps of the methodology which is based on UNEP and SETAC recommendations for product social life-cycle evaluation. To change the framework for S-LCA in order to achieve the objective of material comparison, several special features are supplied (Hosseinijou et al., 2014). Primary research is the approach, and content analysis is the research methodology. Data were collected through extensive library research. This study used a relational literature analysis technique called qualitative content analysis to identify relevant and useful indicators for developing an framework for S-LCA sustainable cultural tourism destinations. In qualitative content analysis, categories are created inductively (from the data) and then applied to the data (Aghazamani et al., 2020; Lindgren et al., 2020).

In the literature, there is disagreement over the precise concept of qualitative content analysis; the disagreements centre on how the data is assessed after it has been categorised. According to some authors, qualitative content analysis always requires counting words or categories (or statistically analysing them if the sample size is large) to find patterns in the data, and then interpreting those patterns to determine what they imply. This study converted qualitative data into category data in order to objectively analyse differences in the types of responses provided. Without the use of counting or statistical methods, qualitative content analysis is a procedure that looks at content only qualitatively rather than statistically (van Zyl et al., 2021; Schreier et al., 2019). The following sections are: 2.1. Development of a novel framework S-LCA for attaining sustainable cultural tourism destinations; 3.1. Inventory indicators of S-LCA.

2.1. The development of a novel framework S-LCA for attaining sustainable cultural tourism destinations

The S-LCA method is advantageous for assessing the positive and negative social consequences of a product's life cycle (Benoît & Mazijn, 2009). Since its launch, there has been a surge in interest in this method, particularly for global supply chains. Significant

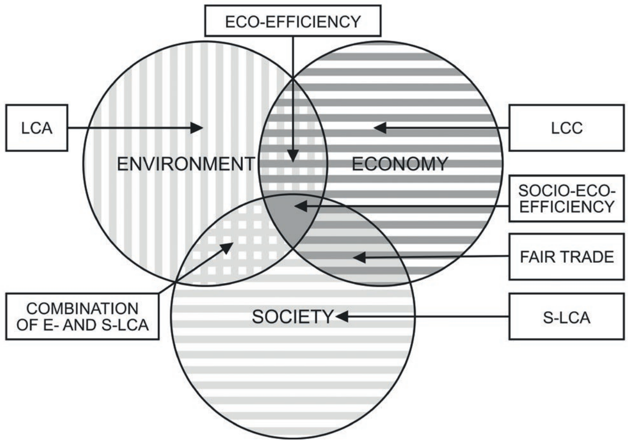

Figure 1. Different types of LCA and the status of S-LCA among them
Source: based on Ciroth and Franze (2011, p. 82)

limits to the methodology's comprehensive and theoretical application have been identified by Benoît Norris et al., 2013; Dreyer et al., 2010; Jørgensen et al., 2010; Hunkeler, 2006; Weidema, 2006; Movahed and Ghalehteimouri, 2020. As a result, the unique S-LCA conceptual framework for S-LCA proposed in Figure 1 for establishing sustainable cultural tourist destinations implies some theoretical underpinnings.

Table 1. The matrix of cultural tourism stakeholders' responsibility and collaboration

	Local community	Tour leaders	Tourism-related organizations	Tourists
Local community	–	Employment opportunity Employment stability Social support Social security	Social participation Social responsibility	Social trust Social security Social support Sharing local heritage
Tour leaders	Employment opportunity Employment stability Social trust Social equality	–	Local heritage conservation Economic capacity development	Social equality Social security Social trust Transparency Introducing local heritage
Tourism-related organizations	Transparency Economic capacity development Facilities and technical infrastructure development Employment opportunity Employment stability Social support Social security Social responsibility Social participation Protecting local heritage	Employment opportunity Employment stability Social support Transparency	–	Transparency Social trust Social security Facilities and technical infrastructure development
Tourists	Employment opportunity Employment stability Economic capacity development Promoting local heritage	Employment opportunity Employment stability	Economic-technical efficiency Directing facilities and technical infrastructure development	–

Source: authors.

This conceptual framework for S-LCA as depicted in a schematic matrix, specifies the roles and regions of collaboration amongst stakeholders within their effect categories and subcategories (Table 1).

According to Table 1 and Figure 2, if cultural tourism stakeholders successfully respond to their reciprocal obligations within the proposed framework S-LCA conceptual for cultural tourist destinations as sustainable cultural destinations will result. As a consequence of this detailed investigation, it is possible to conclude that S-LCA applies to places where the long-term viability of a tourism destination is investigated.

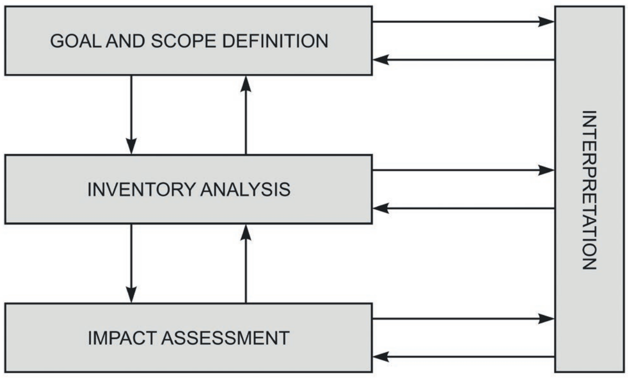

Figure 2. An overview of the LCA framework
Source: based on Valdivia and Lie Ugaya (2011)

2.2. Identification of effective indicators

2.2.1. Social life cycle assessment

According to the first SETAC Europe life cycle assessment (LCA) Symposium in Leiden, LCA is the same as environmental life cycle assessment (December 1991). It was emphasised that in order to conduct a full sustainability assessment, at least two more elements, economic and social, must be considered. This issue was finally resolved ten years later, at two United Nations international conventions (Rio de Janeiro and Johannesburg), adding to our "good old LCA" (Kloepffer, 2008). S-LCA is used in cost-benefit analysis (CBA), social impact assessment (SIA), social accounting, and other professions (Jørgensen et al., 2008). Tourism expansion benefits economic well-being and growth by increasing job opportunities associated with tourism-driven growth. However, the number of tourists and the level of environmental instability had a negative correlation with S-LCA, and this can affect tourism. The importance of employment stability and tourism growth in improving the S-LCA procedure in developing countries cannot be overstated (Karimi et al., 2022).

Over recent decades, various methodologies and tools (indicator-driven, product-driven and integrated) have been created around the concept of "sustainability assessment" (Singh et al., 2012). The "life cycle assessment" idea is one of the most important dynamic and evolving tools for analysing sustainability effects within the product-driven tool category, with the "social life cycle assessment" approach being one of the most prominent (Singh et al., 2012). This method allows for the analysis and evaluation of the social sustainability implications of a product throughout its life cycle (Russo & Perrini, 2010).

Typically, the social dimensions of sustainability are the least addressed of its three pillars including economic, and environmental elements. S-LCA was created as a mechanism for assessing a product's positive and negative social and socioeconomic impacts throughout its life cycle (Benoît & Mazijn, 2009). There are other methodologies for quantifying social repercussions; however, S-LCA stands out since it focuses on products and services and has a broad reach that encompasses the entire life cycle (Figure 1). Informing end users and retailers about the positive and negative social impacts of the special products they sell or buy, as well as preventing negative social impacts from being converted from one life cycle stage to another, or from one social issue to another, is part of adopting a life cycle perspective (Benoît et al., 2010). According to Jørgensen et al. (2012), there has been an increasing interest in developing and using S-LCA since 2004.

2.2.2. The strategic framework for S-LCA

S-LCA is ISO 14040 and ISO 14044 compliant, and it can be used alone or in conjunction with LCA. As a result, the S-LCA follows the four major stages of the LCA: goal and scope definition, inventory analysis, impact assessment and interpretation.

S-LCA and LCA work effectively together to enhance environmental sustainability issues. For example, Larsen et al. (2022) investigated existing knowledge and methodologies for combining life cycle thinking into life cycle sustainability assessment (LCSA), namely life cycle assessment (LCA), life cycle costing (LCC) and social life cycle assessment (S-LCA) (Figure 2).

2.2.3. The goal of S-LCA

The first step in the S-LCA approach is to establish a clear goal that will guide a study's execution. The study's purpose should be to answer questions such as "Why are we doing S-LCA?", "What will the LCAs be for community", "How are we going to persuade others to use our findings?". Based on previous research, two types of goal can be identified: a product, procedure or organisation correlation (Schmidt et al., 2004); or the identification of a product or procedure improvement possibility (Friot et al., 2005; Schmidt et al., 2004). For Flysjö and Ohlsson (2006), Dreyer et al. (2006), Grießhammer et al. (2006), and Gauthier (2005),

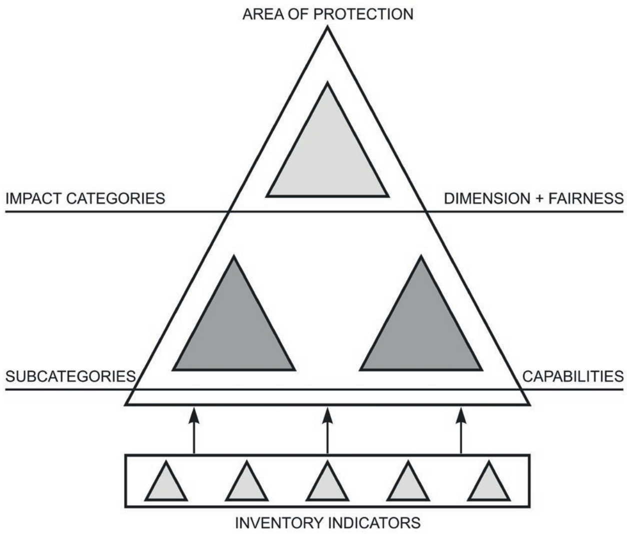

Figure 3. Normative S-LCA framework
Source: based on Reitinger et al. (2011, p. 386)

a key goal can be, "Which of two comparable products delivered by different methodologies or organisations has the least negative social effects or the greatest social benefits?". The second LCA goal is to provide answers to queries such as, "Are there any places or practices in the production chain that have a negative social impact or may be promoted?" (Paragahawewa et al., 2009).

The ultimate goal of S-LCA is to improve social conditions and, more broadly, the socioeconomic performance of a product for all stakeholders throughout its life cycle (Benoît & Mazijn, 2009) with human well-being at the centre (Ekener-Petersen & Finnveden, 2013). According to S-LCA recommendations, while examining the social consequences of products, well-being should be emphasised as the primary area of protection. Furthermore, in order to ensure a fair and ethical society, fairness and equality should be addressed in terms of social justice (Neugebauer et al., 2014). Furthermore, the effects of S-LCA are assessed in an area of protection (AOP), which is defined in the recommendations as human well-being. The ramifications of the AOP are evaluated by affected stakeholders and/or impact categories (Ekener-Petersen & Moberg, 2013). These interactions are depicted in Figure 3 within the context of a framework for S-LCA.

2.2.4. The scope of S-LCA

The primary purpose of the scope definition is to limit the investigation evaluation. As a result, it should demonstrate the product system under investigation as well as outline the scope and depth of the research. With this in mind, the function, or product utility, and its functional unit should be established for the S-LCA analysis. As a result, the purpose or utility of a thing is defined as its usage by consumers (Paragahawewa et al., 2009). Furthermore, (Benoît & Mazijn, 2009) states that the practical unit for making cross-product correlations should be capacity rather than product item. However, this argument may be more relevant to the product's consumption phase than its production, where a certain quantity of the product appears to be the most practical (Trumbic, 2017).

The scope should contain the impact categories, their indicators, data quality criteria, and any investigation suspicions and limitations. Because human dignity and well-being are the areas of protection (AOP) in S-LCA, stakeholder groups should be recognised whose dignity and well-being are to be influenced by the life cycle of a product or service (Paragahawewa et al., 2009). Benoît and Mazijn (2009) recognised and introduced five key stakeholder groups associated with S-LCA: local community, workers/employees, society (national and global), consumers and value chain actors.

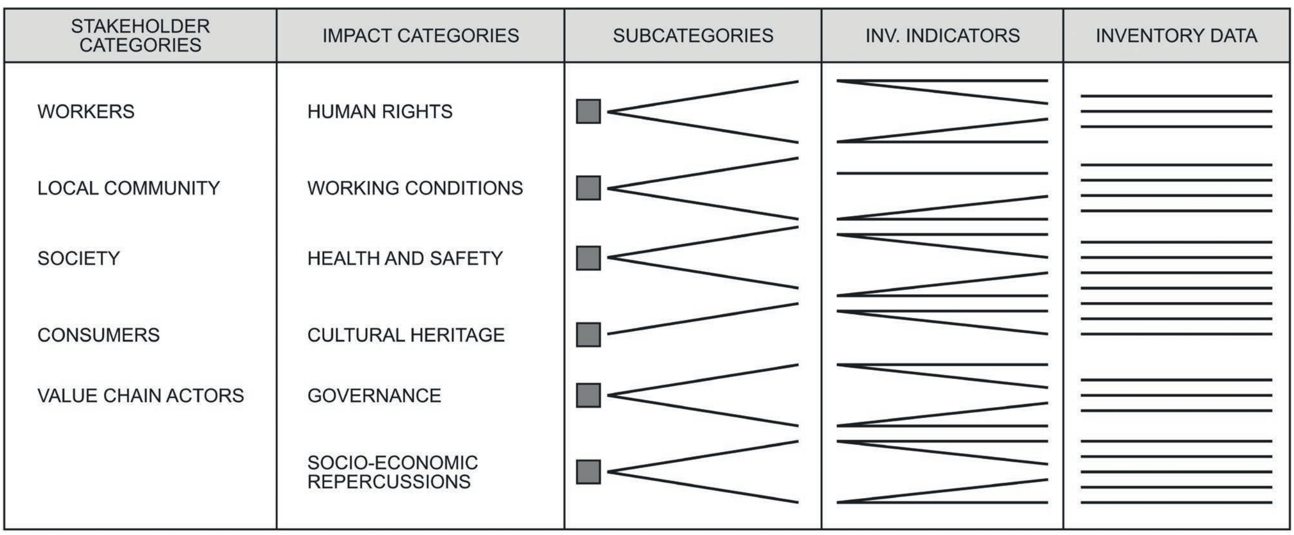

Figure 4. Assessment system from categories to the unit of measurement
Source: Benoît et al. (2007, p. 11)

2.2.5. The stakeholders of S-LCA

The goal of stakeholders influenced by local conditions is critical in the construction of a viable framework for S-LCA and monitoring the social life cycle (Lehmann et al., 2011). Stakeholders should be involved in the development of an S-LCA analysis, and this should be reflected in the impact analysis. They are classified into five categories, with macro classes tailored to each unique order of which represent the value and influence of place (see Figure 4 in the UNEP and SETAC Guidelines Stakeholders' classification) (Arcese et al., 2013).

3. The impact categories in S-LCA

According to UNEP (Benoît & Mazijn, 2009), impact categories are a logical categorization of S-LCA outcomes tied to social concerns of relevance to stakeholders and decision-makers. Someone may review a stakeholder classification and, as a result, classify the subcategories when selecting the goal and scope of a study. During the evaluation stage, the social and socioeconomic subcategories of effects may be grouped together, with the resulting list of subcategories arranged into a table where the first column representing stakeholder groups and the second column showing effect areas. Several stakeholder categories may be linked to a single effect category, but the first stakeholder category may itself be impacted by numerous categories Benoît and Mazijn (2009).

The principal goal of the classification of stakeholder groups is to ensure that the S-LCA analyses the greater part of the scenario and that it matches its goal and scope. Table 2 shows the stakeholder groups as well as the effect subcategories that are linked to them. It is vital to realise that stakeholders can differ not only between studies, but also between supply chain steps. Despite the fact that subcategories serve as the foundation for an S-LCA, we should strive to build useful indicators for analysing subcategories that are tailored to the specific situation while completing an S-LCA (Benoît & Mazijn, 2009).

3.1. The inventory indicators of S-LCA

Inventory indicators offer the most direct record of the conditions under examination and are extensive definitions of the required information. Inventory indicators can be classified based on their type (qualitative or quantitative) and unit of measurement. The methodology sheets, which may be obtained on the Life Cycle Initiative's website (Benoît & Mazijn,), present examples of inventory indicators for each subcategory.

Table 2. The stakeholder categories and the linked impact subcategories

Stakeholder categories	Subcategories
Consumer	1. Transparency 2. Feedback mechanism 3. Health and security 4. End of life responsibility 5. Consumer privacy
Employees	1. Social benefit / social security 2. Health and security 3. Forced labour 4. Fair salary 5. Equal opportunities / discrimination 6. Child labour 7. Working hours 8. Freedom of association and collective bargaining
Local community	1. Cultural heritage 2. Respect for indigenous rights 3. Communities engagement 4. Delocalization and migration 5. Access to material resources 6. Secure living conditions 7. Local employment 8. Safe and healthy living conditions 9. Access to immaterial resources
Value chain actors not including consumers	1. Promoting social responsibility 2. Respect for intellectual property rights 3. Fair competition 4. Supplier relationships
Society	1. Corruption 2. Prevention and mitigation of conflict 3. Contribution to economic development 4. Public commitments to sustainability issues 5. Technology development

Source: based on Benoît and Mazijn (2009).

3.2. Setting system boundaries in S-LCA

The process of deciding which unit processes should be included in the system under examination are referred to as "system boundaries". What the production system that will be examined is the question, and how will it be defined in an S-LCA (Benoît & Mazijn, 2009). According to Venditti (2004), the system boundary determines which unit processes are included in the LCA since they must be consistent with the goal, while elimination of a life cycle stage, process, input or output is only permitted if it does not significantly affect the overall findings (Figure 5).

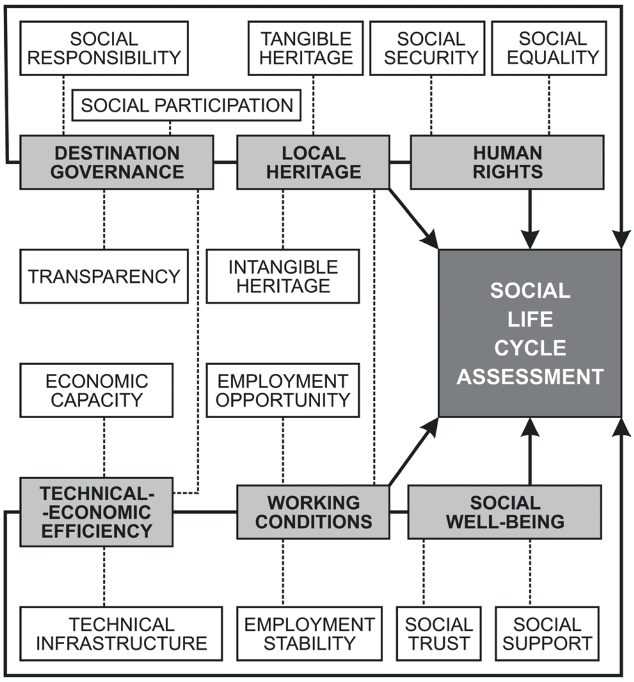

Figure 5. The proposed conceptual framework for S-LCA to attain sustainable cultural tourism destinations
Source: authors

3.3. Cultural tourism

Cultural tourism has a long history and was possibly the first sort of tourism having its roots in the Grand Tour. The majority of specialists agree that it has a bright future. Cultural tourism accounts for 37% of global tourism, and estimates show that this segment of the economy will grow at a 15% annual rate (UNWTO, 2019). These estimates are widely employed in market studies on cultural tourism (Bywater, 1993), despite the fact that they are not backed up by actual data (Richards, 1996).

Because their borders clearly distinguish their implications, it may be simple to distinguish between the conceptions of culture and the travel business; in this way, it is similar to the concept of cultural tourism. A vacation on the beach is not considered cultural tourism, although visiting a society inside in a country known for their social parameters is. However, the two concepts of the travel industry and culture, as well as their associated implications, have recently undergone significant changes to the point where their refinements have become obscured; MacCannell (2002) claims that all travel is a cultural encounter, and Urry (1995) claims that the travel industry is culture. Some analysts claims that cultural tourism is new or has a postmodern appearance because of these assumptions. In any event, research into the notion of cultural tourism finds that what has changed is the extent of cultural tourism, as well as the forms of culture consumed by cultural vacationers (Richards, 1996).

3.3.1. Sustainable cultural tourism destinations

Sustainable tourism enhances current conceptual frameworks for S-LCA tourism planning and development by using residents as its primary focus (Choi & Sirakaya, 2005). Local government, developers and individuals are known for ignoring environmental values in order to maximise economic growth. To be really sustainable, tourism must be capable of preserving local and national culture while also enhancing social and individual well-being as well as protecting the environment (Terzić et al., 2014). Figure 6 shows the cycle of sustainable tourism.

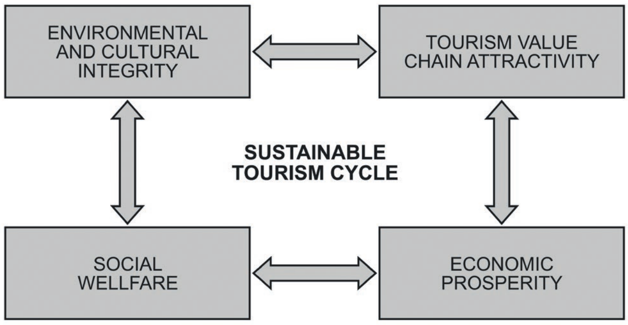

Figure 6. Dimensions of sustainable tourism
Source: based on UNEP (2005)

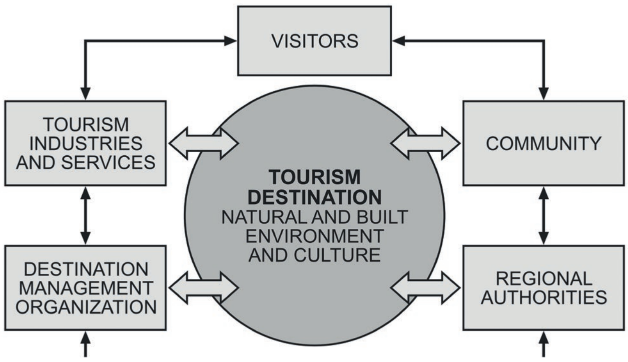

Figure 7. Sustainable destination management conceptual framework
Source: based on Vajčnerová et al. (2014)

Various sections of society, including governments, the tourism industry, visitors and residents are increasingly recognising the significance of the local historical heritage of the expanding phenomenon of cultural tourism. Cultural tourism follows the following principles: (a) it provides a unique visitor experience, particularly of a site's unique cultural, natural or historical attractiveness; (b) it is based on cultural or natural heritage resources; (c) it serves an educational role in promoting heritage conservation awareness among both visitors and heritage managers and owners, including residents, while contributing financially to heritage resource conservation; and (d) it creates economic advantages for local communities, allowing them to keep their cultural identities and living traditions which are important components of the heritage environment (UNEP, 2005). Figure 7 depicts the conceptual framework for S-LCA sustainable destination management.

3.3.2. The application of S-LCA to cultural tourism destinations

One of the most important jobs for travellers is to plan and manage tour itineraries that include a variety of exciting points-of-interest based on the tourist's preferences. The difficult task of selecting tour itineraries is exacerbated further by the need to account for a variety of real-world constraints, such as limited touring time, unknown traffic conditions, severe weather, group travel, waiting times and crowdedness (Lim et al., 2019). Then, stakeholders will be involved in the tourist process (Figure 7), with the most crucial being counselling organizations (travel and cultural heritage agencies), tour leaders, local communities (indigenous people, officials, residential complexes, welfare and services), and lastly tourists. The impact categories and tailored subcategories have an impact on the conceptual model (Figure 8) and are themselves influenced by other categories and subcategories (Table 3).

Table 3. The S-LCA impact categories and subcategories

Impact categories	Subcategories
Working conditions	Employment opportunity
	Employment stability
Social well-being	Social trust
	Social support
Technical-economic efficiency	Economic capacity development
	Technical infrastructure
Local heritage	Tangible heritage
	Intangible heritage
Destination governance	Social responsibility
	Social participation
	Transparency
Human rights	Social security
	Social equality

Source: authors.

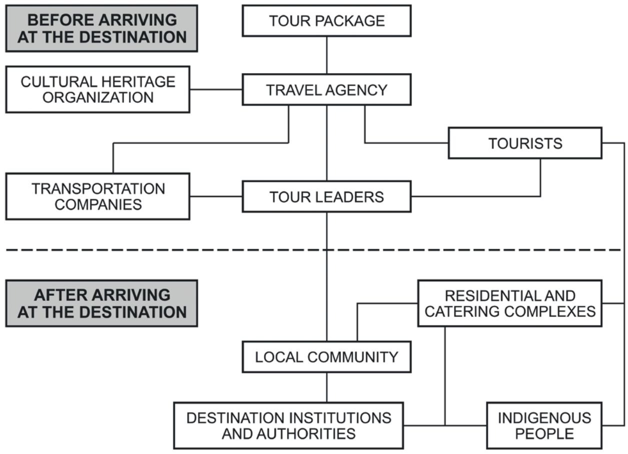

Figure 8. The process of tourism in the SLA
Source: authors

4. Description of the concepts outlined in the conceptual model

4.1. Working conditions

Employee interactions with their organisational context are thought to have an impact on working circumstances. As a result, working circumstances include both psychological and physical aspects of the workplace (Gerber, 1998). Other academics, such as Greenslade and Paddock (2007), believe that working conditions include a wide range of challenges, ranging from workload and scheduling to system-wide issues such as professional identity and the scope of practice in general.

4.2. Social well-being

Social well-being is defined as the appraisal and recognition of an individual's performance in society, as well as the quality of connections with others (neighbours and social groups) to which s/he belongs (Keyes & Shapiro, 2004). Respondents' psychological well-being was influenced by marital status, education, income status, and the types of tourism businesses in which they worked, but their social well-being was influenced by their age, education and organisational position. Meanwhile, mental health has a significant impact on future corporate work commitment. Managerial effects are investigated in terms of improving employee resilience, well-being and future recovery strategies (Kimbu et al., 2021).

4.3. Technical-economic efficiency

It is beneficial to first distinguish two forms of effectiveness: technical and allocative. Technical efficacy is defined as the capacity to handle given resources to achieve the best possible result. Allocative proficiency, also known as value effectiveness, is the allocation of financial resources in such a way that, given similar costs, the most advantageous mix of assets is obtained. Given an organization's financial constraints, no other asset mix would allow it to attain better results (Farrell, 1957; Leibenstein, 1966). Economic effectiveness is the sum of technical and allocative effectiveness (technical productivity allocative effectiveness) (Adeoye et al., 2012).

4.4. Local heritage

The significance of various elements such as places, buildings, and works of art is much highlighted, memorials, and the overall ambiance in a region is complex and encompasses multiple dimensions. These dimensions include historical, scientific, cultural, social, archaeological, architectural, natural, and aesthetic aspects. This understanding is supported by the *Heritage Act of 1977* and the research conducted by Movahed and Ghalehteimouri (2019). These entities play a vital role in defining the overall value and character of a region, acting as both tangible and intangible symbols of its heritage. Recognizing and preserving their significance is crucial as it ensures the ongoing appreciation and protection of our shared history and cultural identity, in line with the guidelines established by the New South Wales (NSW) in 2011 (Khoo & Noonan, 2011). Local involvement, education and training, authenticity and interpretation, sustainability-cantered tourism management, integrated planning, incorporation into a larger sustainable development framework for S-LCA, controlled growth, governance, stakeholder participation, market and product diversification, appropriate funding provision, international governance, support systems, a heritage capital approach and effective site management (Loulanski & Loulanski, 2011).

4.5. Destination governance

Supervising, coordinating and leading a network of players outside of the state to achieve certain goals is included in governance. It is about bringing together all essential stakeholders in order to successfully and efficiently implement specific actions and services (Schwab et al., 2001). Theorizing tourism destinations as complex adaptive systems allows for the projection of viewpoints on key traits and conditions that enable destinations to engage in dynamic-adaptive behaviour. Overtourism, for example, can serve as a feedback (feedforward) mechanism for bettering destination governance (Hartman, 2021).

4.6. Human rights

Human rights will be inherent for all. They describe the interactions between people and power structures, particularly the state. Human rights limit state power while also requiring states to take proactive actions to build a system in which all can fully exercise their these rights (Nowak et al., 2005).

5. Conclusion

When examining the distinctive properties of tourism destinations in historical, cultural, anthropological, social and physical aspects, the importance and necessity of their sustainability is felt more than ever. Because unsustainable tourism development can jeopardise tourism destinations' cohesive socio-cultural fabric, and because sustainability is the key to tourism destinations' long-term survival, any kind of instability will most likely mean depriving many local residents of sustainable income and create problems, given the economy of tourism destinations and the reliance of many on tourism. The tourism sector is experiencing a societal crisis. Given its significance and the impossibility of replicating it, research into tourism development sustainability is a continuous process and a constant movement to identify the unsustainable and turn areas and instances of instability into sustainability.

The S-LCA criteria identified and evaluated through the reviewed literature can be defined and proposed as a theme for appropriate decision-making through the combination of different environmental and human concepts of sustainability in tourism destinations. Because sustainability is taken into account for both social and environmental issues it is obvious that they are only fragile sources of tourism and have to be well looked after.

The suggested conceptual framework for S-LCA may be utilised to analyse the sustainability of varied tourism destinations because of the high sensitivity of socio-cultural components in cultural destinations; it is applied to cultural destinations due to the special place and significance of S-LCA. Because S-LCA takes a comprehensive approach to all stakeholder needs (working conditions social well-being) up to the highest level, the alignment of the complexity and sensibility of the socio-cultural system with the importance of S-LCA, particularly at cultural tourism destinations in developing countries, will result in synergy and efficiency for monitoring and managing the impacts and outcomes (human-rights and freedom of action). As a result, the conceptual framework for S-LCA proposed here can include all stakeholders in a cultural tourist destination. Furthermore, because it is decided that the S-LCA framework can successfully execute the principles and objectives of sustainable tourism destination management, it brings all stakeholders' interests together in a novel way, resulting in synergy. Finally, while research on S-application LCAs in tourism is sparse, this study proposes a novel model for quantifying the social impact of tourism on cultural locations using the S-LCA which highlights the following implications:

1. If S-LCA will be considered as a tool for evaluating impacts, it can itself improve local development processes and achieve sustainable tourism development.
2. S-LCA can bring the cycle of internal and external factors involved in tourism development to a dominant set of stakeholders for simultaneous understanding of the effects of tourism on a local community scale.
3. Due to the consistent view of all stakeholders' interests, including external tourism custodians, the need for synergy in the overall sustainability of the process and for tourism development, must be recalled. In this sense, each stakeholder's life is intertwined with another's and is a requirement for their long-term survival.
4. It focuses on a sensitive aspect of the destination system (the socio-cultural dimension), which has received less attention in policies and evaluations thus far. In particular, in addition to assessing the impact on tangible and intangible local culture, other dimensions such as improving working conditions, human rights, equal opportunities, interaction, cooperation, and even the way the destination is governed, must be considered.
5. Finally, it can identify the strengths and weaknesses of the cultural destination system from the stakeholders' perspective, based on impact categories, subcategories and inventory indicators (which are also local community assets) to reorient decision-making and analyse resources allocation.

After all, due to S-LCA's modernity and evolving nature, its implementation constraints, such as the lack of a database for accurate observation of changes, the threshold for tolerance of cultural elements, and the lack of observations and case studies available elsewhere in the world, cannot be overlooked.

Limitations

Sometimes political instability or religious issues and involvements are the biggest barriers to effective S-LCA implementation. Moreover, if tourism development policies are tied to environmental and social development they can slow-down or reduce economic growth and social well-being.

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DOI: https://doi.org/10.18778/0867-5856.33.2.02 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Travel decision making through blogs and vlogs An empirical investigation on how user-generated content influences destination image

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How to cite (APA style): Jog, D.R., & Alcasoas, N.A. (2023). Travel decision making through blogs and vlogs: An empirical investigation on how user-generated content influences destination image. *Turyzm/Tourism, 33*(2), 19–28. https://doi.org/10.18778/0867-5856.33.2.02

ABSTRACT

Tourist decision-making is based on the information available before visiting a destination. Although marketing content has a role to play, user-generated content (UGC) has gained momentum in recent years. This study considering the role of travel blogs and vlogs created by the user, aims to comprehend the role of these information sources in the decision-making of their consumers. The present research investigates the preference of travelers for UGC and its role in travel decision-making over other marketing information generated by destination marketing organisations (DMOs). The study is based on responses from 220 Indian tourists via an online web-based survey conducted using a structured questionnaire and applying multi-stage sampling. The study findings reveal a strengthened preference for blogs and vlogs among travelers compared to traditional DMO marketing content. The study provides implications for industry players that can help engage their visitors in UGC creation and dissemination for better marketing by suggesting suitable strategies for tourism.

KEYWORDS

blogs, vlogs, travel decision-making, tourist experience, tourism marketing, Indian tourist's opinions, destination marketing organizations

ARTICLE INFORMATION DETAILS

Received:
3 December 2022
Accepted:
1 August 2023
Published:
4 October 2023

1. Introduction

Tourism being a global industry, has created more experienced tourists and empowered them. Tourist decision-making processes have evolved, giving rise to tourist behaviours that are constantly adapting and adjusting (McCabe et al., 2016). As one of the powerful network tools, the internet has provided multiple avenues for content creators to be more active and have a wider reach (Zhao et al., 2022). The impact of the internet on user-generated content can be understood when it is evident that digital data is seen to double every 1.2 years (Beveridge, 2022). The billowing information content is referred to as 'big data', and user generated content is a portion of it (Lu & Stepchenkova, 2014).

Chetthamrongchai (2017) claims that information sources like brochures, posters, the opinions of tour operators and travel agents, mass media, travel experiences of friends and family, and personal experiences affect the tourist destination image, thereby significantly influencing tourist decision-making from the very beginning. Further, the internet has equipped the 'new' type of tourist with the latest customised information. It is a platform where people record and update their memories, thus creating a virtual reality of novel experiences, viz. bloggers who perceive themselves as publishers of these experiences (Thurm, 2014). Changes in this information might influence the way people travel and write about their experiences and since the appearance of travel blogs is increasing, it is necessary to analyse the effects of this dynamic genre on tourism experience (Thurm, 2014).

Advances in communication technology have become more accessible and have led to the popularity of blogs, thereby enabling people to engage more easily in social commentaries (McCabe & Foster, 2006). Travel blogs have become a powerful vehicle that drive people to tell their stories and help build better relationships with potential visitors. Blogs are a set of combined text, video, image and audio that portray virtual stories full of experiences. As a result, blogs offer the opportunity to reveal interpretations of tourism products and experiences and express their impressions, perceptions, thoughts and feelings. This information may include all that may otherwise not be revealed in a more constrained research environment, such as personal interviews (Banyai & Glover, 2012).

Their direct relation to the tourism industry is when experiences are shared with family and friends, which allows interaction and builds an engagement with potential visitors, thus creating destination hot spots. Moreover, bloggers' primary motivations for producing such posts may vary from entertainment and information to self-expression. Travel blogs have an essential role in online space which can help to market the destinations. On the other hand, as market trends keep changing and technology keeps evolving, travel vloggers are known to generate content and create an impact by inducing an intense belief in their target audience. As a result, vloggers have become popular and thus have a more significant effect than their competitors in the market (Lodha & Philip, 2019).

With the support of internet services, travelers can share pictures, movies and content material in blogs/vlogs and have the option of feedback. Recently, blogs have been a medium of marketing a particular destination and affect modern-day challenges (Cayzer, 2004). People can share blog posts with family and friends, which permits interplay and constructs an engagement to become new visitors to the destination. Research indicates that people tend to believe in online word of mouth more than conventional media (Johnson & Kaye, 2004). Besides, vloggers use this as a medium to upload personal content videos of a particular destination and their opinions. Such vlogs have increased overall attraction scores, and today are known as opinion leaders as well as a basic mode of gathering information via social media (Lee & Watkins, 2016).

With the advent of internet services, travel decision-making has been made easier due to the availability of various user-generated content (UGC) websites that feature real-time sharing of consumption experiences. UGC enables users to receive live service feedback and e-WOM (electronic word of mouth). The reviews posted by an author on UGC websites are a tool to obtain destination knowledge, generate ideas (in terms of travel decision planning) and, while in the process, search for other travel-related products and services. UGC was not always considered as credible as a travel company information source. However, more recent studies have shown greater trust in UGC than in information provided by travel company marketing departments (Lo et al., 2011; Marine-Roig, 2014; Zeng & Gerritsen, 2014), particularly among frequent travelers (O'Connor, 2010).

In the ongoing process of travel destination-making, consumers seek the guidance of destination marketing organizations (DMOs). DMOs are concerned with place marketing and selling and are competing for attention in the presence of UGC websites. Research has shown the involvement of both these during travel planning.

Furthermore, based on consumer needs and preferences, once a content creator uploads/updates their feed regarding a travel destination, their followers notice and hence it impacts on their travel decision-making using the content to prepare plans for a journey to that location. Such feeds, in turn, create more popularity for the place and attract more travelers. Whether the content mentioned earlier finds a new place online or not, it creates more content about the new location, a different set of people will be attracted and the cycle continues (Routledge et al., 2011).

In this process, the actions involve individuals after considering all the information they have perceived using the blogs and vlogs. The main idea of how several factors influence an individual's decision-making process is such that it can be categorised into two aspects: personal internal factors (i.e. financial) and environmental external factors (i.e. key location/destination) (Ni et al., 2016).

The key objective of this research is to provide some insight into how the usage of blogs and vlogs in the tourism sector influences tourists' perceptions when choosing a destination. Moreover, we will look into how the destination image created through such content plays an essential role in tourists' decision making. Further, the study attempts to look at the moderating role of certain socio-demographic variables including gender, age and travel frequency in the proposed relationships. The travel decision-making process is classified into various stages, starting from the decision-making process while choosing a destination after viewing a blog/vlog or other traditional source of marketing communication. The next stage involves visitors' expectations of the destination and comparing them with real-life experiences. This precedes the state of satisfaction and perceived quality for the destination and the process of revisiting, or spread by word of mouth and recommending the destination to friends and family (Galí & Donaire, 2015). The current study is restricted to understanding tourist decision-making based on the information shared at the first stage.

The following questions explore the information on blogs and vlogs within the study:

RQ_1: How do bloggers and vloggers impact the tourism industry?

RQ_2: What impacts do blogs and vlogs and traditional communication approaches have on travel decision-making?

RQ_3: Do age, gender and travel frequency moderate the relationship between the proposed variables?

This study is necessary to understand how blogs and vlogs, as well as traditional marketing communication approaches impact the minds of their target customers in choosing a particular destination. In particular, the study attempts to understand which source of information has a significant impact on tourist decision-making. The study additionally helps understand how they create a need to travel and how effective it is from intended user satisfaction with the site's content.

2. Literature review

The growth of digital media has led travelers to rely more on blogs to make travel-related decisions. Travel bloggers and vloggers are perceived to be social influencers in tourism destination branding as the stories posted by them are seen by viewers who get inspired to do the same (Peralta, 2019). Travel vloggers, influencers, family, friends and relatives affect our travel choices. Due to the popularity of user-generated content, including blogs and vlogs, several tourism businesses, handbooks and guides use such content as a necessary marketing effort (Lodha & Philip, 2019). This effort is referred to as content co-creation, wherein destination marketers include content creators in their formal marketing efforts by creating content together (Oliveira & Panyik, 2015). In comparison with the traditional form of marketing communication, the content so created inspires and communicates the personalised opinions and beliefs of the content creators, in addition to giving a sense of real-time experience by sharing information to prospective tourists which helps in their decision making (Thurm, 2014).

A travel blog is part of a website hosted on the internet. Vlogs can be short or long videos covering various subjects like technology, travel and current affairs. Content creators use sophisticated equipment to capture vlogs and tourism businesses find them valuable because audiences are particularly attracted (Zhao et al., 2022). Weblogs (blogs) have also increased in recent years however they have existed since 1997 (Akehurst, 2009). People rely on them to get informed about tourist locations and other travel-related details (Buhalis & Law, 2008; Volo, 2010). Vlogs differ from blogs as vloggers commonly record their own stories and their actual experiences in video format, against content in the form of text and photos in the case of blogs (Griffith & Papacharissi, 2010).

2.1. Travel decision making

Travel decision-making is a complex phenomenon (Nikolić et al., 2021). It is observed that the individual decision-making process for travelers differs based on travel motives, various decisions, context effects and social interactions among travel groups. In the current study, the authors attempt to consider the role of social interactions in creating and disseminating user-generated content in a tourism setting. For travelers, subjective knowledge is identified as highly relevant while making decisions as it could indicate tourists' confidence in making a proper decision (Sharifpour et al., 2013). Tourism is an experiential product (Adhikari & Bhattacharya, 2016); subjective knowledge includes the experiences tourists share on their social media pages (Bilgihan et al., 2016) which provide a real-time experience for prospective travelers. User-generated content, as subjective knowledge shared in the form of real experiences, provides social interaction opportunities (FitzGerald, 2012). With the advent of the world wide web, user-generated content in the form of blogs or vlogs is observed to facilitate timely consumer decision-making. DMOs must use such media to develop an awareness of products among tourists at different stages of tourist decision-making, a practice commonly referred to as content co-creation.

2.2. User-generated content

The 21st century is marked by the development of the world wide web which has led consumers to have considerably higher bargaining power. Because of this, companies have to improve market research and market intelligence to direct consumers towards appropriate decision-making (Akehurst, 2009). Thus, the travel industry predominantly uses UGC to influence and create brand recognition efficiently. UGC is social media content surveyed from consumers' genuine experiences (Heinonen, 2011). Due to this, it can positively encourage travelers' decisions through its appeal (Sparks et al., 2013) and thus significantly aid travel planning (Ayeh et al., 2016). Existing literature on UGC in tourism highlights its use in guiding travelers to evaluate the alternatives available while making travel-related decisions (Wang et al., 2019; Ye et al., 2011). UGC is available in different forms for this purpose, including blogs, weblogs, video blogs, virtual communities and social networking sites (Baruah, 2012). Considering blogging and vlogging as essential aspects of tourist production and consumption (Bosangit et al., 2009), current research has focused on them as user-generated content forms.

2.3. Travel blogs and vlogs

Information in the form of blogs and personal web spaces hosted on networking sites is growing fast, and its use is an intelligent move for businesses in their marketing plans (Gretzel, 2006). Blogs also include publications on the web in video or written form such as comments and thoughts presented sequentially. Weblogs are free writeups and opinion pieces available to the public in free form (Volo, 2010). Blogs are "virtual diaries created by individuals and stored on the web for anyone to access" (Sharda & Ponnada, 2008, p. 157), the "compilation and construction of lists of texts, images, relative links, videos, audios, personal commentary, observations, news and filtering of pertinent web content by the website author" (Pudliner, 2007, p. 47; Leu et al., 2005). Its increased popularity as a form of UGC lies in its feature to enable both bloggers and readers to share and explore "vast amounts of information quickly, seeking out the factual, the real and the truth" (Pudliner, 2007, p. 47).

Travel blogs and vlogs have become extremely popular in cyberspace as a consumer-to-consumer communication tool for visitors to express their experiences, moods and feelings (Volo, 2010). The popularity of such user-generated content is mainly due to the possibility of expressing inner experiences and sharing them with familiar and unfamiliar audiences who have an interest in such content which is challenging to incorporate into traditional communication media (Tung & Ritchie, 2011). Literature on consumer psychology, sociology and marketing has focused on the importance of storytelling in marketing experiences (Adaval & Wyer, 1998; Escalas, 2004). Travel websites have now recognised the importance of including UGC and have started marketing it through their content co-creation efforts (Gretzel, 2006). Considering blogging and vlogging to be an essential aspect of tourist production and consumption (Bosangit et al., 2009), current research has focused on them as a form of user-generated content.

Another school of thought still gives importance to the traditional means of internet use for travel planning, which includes referring to travel websites, advertisements, exhibitions etc., which form the primary sources of marketing communication (Llodrà-Riera et al., 2015). Traditional content still has its place in the marketing communication mix for specific categories of prospective travelers who consider such content to be a natural form of communication from the marketers and, thus, more authentic and trustworthy (Batra & Keller, 2016). Due to this, although the newer marketing communication methodologies, including blogs and vlogs and content co-creation, have taken precedence, the traditional form of marketing communication also has a significant role to play. In the current study, the authors attempt to assess the impact of blogs, vlogs and other sources of marketing communication on travel decision-making. The proposed test model is shown in Figure 1.

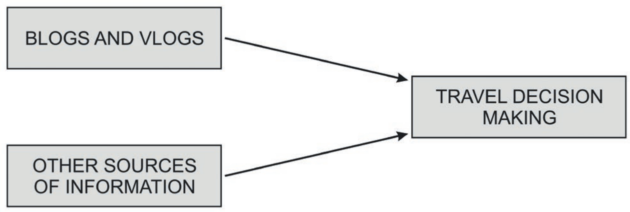

Figure 1. Proposed study model on travel decision making
Source: authors

3. Methodology

The methods discussed here entail data collection and analysis, population and sample size identification, and structural equation modelling methodology. The study uses an empirical research approach conducted in India. In this study, the sources of information, blogs and vlogs, as well as other traditional marketing communication, were used to predict tourist decision-making. A literature review at the initial stage helped to firm up the model. The table (Table 1) below illustrates the research framework applicable to the study conducted.

The structured questionnaire was designed using a measurement scale adopted from the literature. The source of marketing communication was measured using a scale proposed by Coromina and Camprubí (2016); blogs and vlogs were measured using a scale proposed by Keskenidou et al. (2014); and the scale to measure travel decision-making was adapted from a work by Abad and Borbon (2021). The quantitative data was gathered using an online survey form. In this research, a multi-stage sampling approach was applied considering the infinite nature of the population, which is tourists. Data were further coded, entered and evaluated using the Statistical Package for Social Science (SPSS). The scales used for analysis were pre-tested.

Table 1. Tabular representation of research frameworks

Serial number	Components	Particulars
1	research design	empirical research
2	nature of data	primary data
3	sampling technique	multi-stage sampling
5	sample size (n)	220 travelers
6	data collection tool	questionnaire (online survey using structured questionnaire)
7	respondents	travelers, visitors at a destination
8	age of respondents	minimum age 18+ and maximum age over 60

Source: authors.

3.1. Data analysis

In the research model below (Figure 2), the relationship between blogs and vlogs, and other sources of marketing communication with travel decision-making is assessed by way of confirmatory factor analysis (CFA) (maximum likelihood estimation) using AMOS 22.0, while SPSS 25 was used for other analyses. The expected fit indices were above the expected level. This paper attempts to determine the relationship between the different sources of information divided into two categories, primarily user-generated content and company-generated content (marketing communication), and to understand the impact of such media on travel decision-making.

As observed in Figure 2, the two independent variables, blogs and vlogs, and other sources of marketing communication, were assessed to understand their impact on the travel decision-making of the respondents.

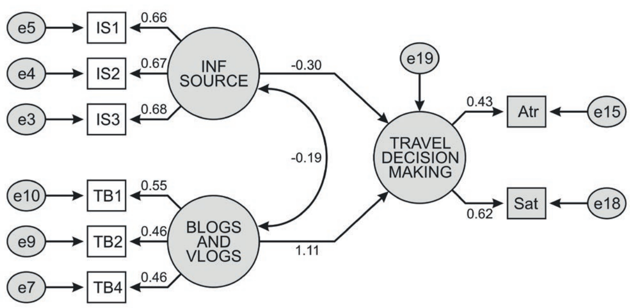

Figure 2. Research model of factor loading and path coefficients for travel decision-making
Notes: Atr – decision attributes; e – error term; Inf Source – other sources of marketing communication; IS – information sources measurement items; Sat – satisfaction; TB – travel blogs measurement items
Source: AMOS output; blogs and vlogs as authors sources of information

The resulting fit statistics were all above the minimum acceptable levels (Jog & Singhal, 2020): chi-square minimum (CMIN) = 36.483; degree of freedom (df) = 19; chi-square minimum/degree of freedom (CMIN/df) = 36.483/19 = 1.920; comparative fit index (CFI) = 0.938; root mean square error of approximation (RMSEA) = 0.65; Tucker-Lewis index (TLI) = 0.909 (refer to Table 2). Hence, the model fit is established.

Table 2. Model fit measures for Figure 2

No	Model fit measures	Values
1	CMIN	36.483
2	df	19
3	CMIN/df	1.920
4	CFI	0.938
5	RMSEA	0.65
6	TLI	0.909

Source: authors.

Table 3 explains the significant impact of the two independent variables, (a) other sources of marketing communication and (b) blogs and vlogs on travel decision-making. In particular, in the analysis, the blogs and vlogs' relationship with travel decision making was significant at 5%. Other sources of marketing communication also substantially impacted travel decision-making, and the relationship was significant at the 10% level. The significance of blogs and vlogs is higher than that of the other sources of marketing communication. As such, the information available through them has a higher acceptance in travel decision-making than the other sources of marketing communication.

Table 3. Significance of the research – model estimate

Tested paths in the study model	Estimate	*SE*	*CR*	*p*
Travel decision making ← blogs and vlogs	0.937	0.210	4.468	***
Travel decision making ← other sources of marketing communication	0.216	0.091	2.377	0.017

*** Coefficients are significant at alpha = 0.10.
Source: authors.

3.2. Testing for the moderating effect

To test the moderating effect of the impact of blogs and vlogs on the travel decision-making process of choosing a destination. Gaskin and Lim (n.d.) suggested that model fit measures used AMOS plug-in for analysis.

The moderating effect was tested by dividing the responses into two groups and testing their differential impact on the relationship between dependent and independent variables.

3.2.1. Moderating effect of gender

The responses were divided into two groups to test the moderating effect of gender. Of the total respondents, 59.5% were male, and 40.5% were female.

As evident from Table 4, gender significantly moderated the relationship between travel decision-making and the two information sources. The contribution of blogs and vlogs in travel decision-making is significant for male respondents at the 5% level and for female respondents at the 10% level.

Table 4. Moderating effect of gender

Paths	Male		Female	
	estimate	*p*	estimate	*p*
Travel decision making ← blogs and vlogs	1.042	***	0.644	0.031
Travel decision making ← other sources of marketing communication	−0.082	0.472	−0.38	0.017

*** Coefficients are significant at alpha = 0.10.
Source: authors.

With modernisation, the development of travel decision-making based on sources of information has been enhanced. Due to the wide variety of genres in blogs and vlogs, the male population tends to research and collect the required information from other consumers during planning trips more than the female population. The study findings are similar to Meng and Uysal's (2008) results.

3.2.2. The moderating effect of age

The sample was divided into two groups of respondents, young and old, to test the moderating effect of age. The resulting findings are provided in Table 5.

Table 5 indicated that age significantly moderated the relationship between the dependent and independent variables. It is evident from the table that the contribution of blogs and vlogs to travel decision-making was significant among the younger population at the 5% level and was not significant among the older population. Additionally, the role of other sources of marketing communication on travel decision-making was significant among the younger at the 10% level and was not significant among the older population.

Table 5. Moderation effect of age

Paths	Younger population		Older population	
	estimate	*p*	estimate	*p*
Travel decision making ← blogs and vlogs	0.94	***	0.645	0.178
Travel decision making ← other sources of marketing communication	−0.336	0.003	−0.067	0.645

*** Coefficients are significant at alpha = 0.10.
Source: authors.

3.2.3. The moderating effect of travel frequency

In Table 6, it is observed that travel frequency had a significant impact on dependent and independent relationships. As is evident from the above table, blogs and vlogs affect travel decision-making for frequent travelers. The relationship is significant at the 10% level and for 'less frequent travelers' significant at the 5% level. In the case of other sources of marketing communication leading to travel decision-making, the relationship was into significant for frequent travelers and relatively significant for less frequent travelers at a level of 10%.

Table 6. Moderation effect of travel frequency

Paths	Frequent travelers		Less frequent travelers	
	estimate	*p*	estimate	*p*
Travel decision making ← blogs and vlogs	1.63	0.022	0.642	***
Travel decision making ← other sources of marketing communication	−0.134	0.471	−0.31	0.007

*** Coefficients are significant at alpha = 0.10.
Source: authors.

4. Findings and discussion

The study findings reveal that 85.9% of the respondents believe travel vlogs inspire and create the need to travel, and 14.4% of the respondents believe that they do not. Travel blogs help individuals and travelers open up their minds and help define or create memorable stories. Successful YouTube vloggers in society have several audiences to help them give specific inspiration for their travel mode choice. Posting various videos online allows content creators to provide a positive experience with different travel insights at no cost to the viewers. Hence, it is a valuable source of inspiring young travelers to choose a destination (Cox, 2011; Hsieh & Shannon, 2005).

Additionally, the respondents were asked to provide details about the type of content they preferred among the options provided. These included (a) pictures shared along with some writeup; (b) only pictures with no write-up or content; and (c) only write-up with no pictures. The study findings revealed that, among the 220 respondents, content and pictures (content created by the travelers along with the images attached) were highly preferred by the respondents (i.e. 75.5%). 13.2% chose pictures or photographs (only pictures with no content written), and 11.4% preferred write-ups or content (only content and no images attached).

The above-stated study finding is congruent with the existing literature, which states that the internet has helped transform the tourist experience when planning and travelling and when travelers remember their experiences (Gretzel et al., 2006; Jansson, 2007). This literature on blogs and vlogs suggests that travelers' sharing their created content and experiences on social media represent a new element in creating meaningful tourism experiences (Wang et al., 2012). More importantly, as suggested by Wang et al. (2012) and Lewis et al. (2010), when travelers share travel experiences through social media, others can 'see' and experience the travelers' footsteps without physically being there. The internet has changed how travelers access information (Hay et al., 2022), and social media has provided different experiences for planning and booking trips. Travel blogs and vlogs have become an integral part of a destination because, with the content provided to the intended consumers, bloggers and vloggers can share their travel experiences and thus encourage others to consider visiting the destination.

The ease with which consumers can access information from the internet has a higher chance of altering the customers' final decision-making about their visit to a destination (Pan et al., 2007). Thus, it is evident that user-generated content is becoming the most credible source of information for travel (Lange-Faria & Elliot, 2012). Current research suggests that such content tends to be more trustworthy than information provided by traditional marketers. It is evident, particularly considering how social media is becoming the 'best friend' of customers where travel information and experiences are shared (Xiang & Gretzel, 2010).

5. Conclusion

This research has aimed to understand the impact of travel blogs and vlogs on travelers' decision-making. As the research was conducted, it was observed that over the years, user generated content was mainly deemed as credible as travel company information. Hence although both the sources of information were found relevant, UGC in the form of blogs and vlogs had a greater significance. In this vein, more recent studies have shown greater trust in UGC than information provided by travel company marketing, particularly among frequent travelers. Furthermore, based on consumers' needs and preferences, once a content creator uploads updates to their feed regarding a travel destination, their followers notice and impact their travel decision-making using the content to prepare plans for a journey to that location.

In order to achieve the expected results, convenience-sampling procedures (i.e. Google forms) were used, and the data was collected. According to the results, male (i.e. 59.9%) respondents were greater compared to female. When the various other sources of travel information content were examined, it was found that online blogs and vlogs are the preferred source of information for travel planning. Almost 41.4% of the respondents refer to them before making travel plans. 34.1% of the respondents were satisfied with online blogs and vlogs. Moreover, blogs and vlogs have shown a significant relationship on travel decision-making and have a higher chance in the market than other sources of marketing communication. The study illustrates that 72.7% of respondents approve of the impact that blogs and vlogs have created in the minds of the intended travelers.

The relevance of blogs and vlogs is known, and they are used as significant sources of information. However, the importance of travel blogs and vlogs is growing. People are involved in travel blogging and vlogging show their followers the activities they are involved in, thus broadening the use and dependence.

5.1. Study limitations

The study conducted is limited in several different aspects. It uses quantitative data, limiting the scope of interaction with the respondents. Secondly, the scope was limited to bloggers and vloggers sharing their experience of a destination on the internet, and the subsequent decision-making of the respondents was dependent on the same and not extended to other forms of user-generated content.

5.2. Recommendations and suggestions

The use of travel blogs and vlogs has had an impact on the minds of future travelers. Such user-generated content is relevant in addition to the traditional marketing communication generated by DMOs. Hence both forms of communication are necessary for successful marketing efforts. Additionally, for a successful blogger or vlogger in the field of tourism, it would be ideal if DMOs would further collaborate with various bloggers and vloggers to get the recognition they need. Such collaborative efforts will provide an opportunity for DMOs to create content that is both primary marketing and user-generated providing emphasis on the characteristics more relevant for destination marketing in both communication formats together. DMOs usually promote destinations and their products to potential travelers. On the other hand, bloggers and vloggers promote the destinations and products after visiting and using them. Bloggers and vloggers give their views about the destination and products. Thus, for travelers, they are a more credible sources of information for travel decision-making than DMOs because they 'promote from experience'. Collaboration between DMOs, bloggers and vloggers will benefit the travel industry.

On the other hand, as seen in the study conducted on the impacts of blogs and vlogs on travel decision-making, the following suggestions have been made to promote prospects.

1. Tagging places in blogs and vlogs can help promote particular destinations. Travelers watching them will get more profound knowledge about the sites, products and people.
2. Blogs and vlogs will be a great platform/medium for marketing destinations. Most influencers or content creators are paid to promote a particular tourist destination. This online mode of marketing can help reach a larger audience.
3. Offbeat tourism helps the destination get tourists and boosts the economy of that destination. Some travelers prefer to discover places that are unvisited by others. Influencers can visit such places and promote these undiscovered destinations, help promote them, attract more tourists to these places, and ultimately boost the destination's economy.
4. In conducting the survey, authors must use an off-line medium (e.g. a written questionnaire / telephonic medium) to gather the results. It would help respondents gain a clear picture of what the authors are referring to.

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DOI: https://doi.org/10.18778/0867-5856.33.2.03 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Determining the factors influencing tourist souvenir expenditure
The case of Turkey

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How to cite (APA style): Kızılcık, O., & Birdir, K. (2023). Determining the factors influencing tourist souvenir expenditure: The case of Turkey. *Turyzm/Tourism, 33*(2), 29–41. https://doi.org/10.18778/0867-5856.33.2.03

ABSTRACT

In this study, information will be explored that will contribute to increasing tourism income in destinations with low tourist expenditure per person. For this purpose, the souvenir expenditure of tourists in Turkey is examined. Souvenir stores in Sultanahmet and the Grand Bazaar in Istanbul were investigated using a qualitative case study research design. Semi-structured interviews were conducted with 11 souvenir sellers and 778 online comments of tourists shopping in souvenir stores were analyzed by netnography. As a result of the research, it has been determined that the efforts made to transform products based on the natural, historical and cultural richness of Turkey into brands, and thus increase local product diversity, play a critical role in increasing souvenir expenditure. On the other hand, the importance of the selection of high spending tourists as the target market and increasing the employment of qualified workers in the tourism sector has emerged.

KEYWORDS

souvenirs, shopping, tourism income, destination management, Turkey

ARTICLE INFORMATION DETAILS

Received:
3 December 2022
Accepted:
24 July 2023
Published:
20 October 2023

1. Introduction

Ten percent of the world's GDP is provided by the tourism sector. It constitutes the third largest export category, with 30% of service exports. Worldwide, 1460 million tourists traveled internationally in 2019, and 1481 billion dollars were spent on these trips (United Nations World Tourism Organization [UNWTO], 2020). These numbers reveal the magnitude of the economic dimension of tourism and how important it is for the world economy. Since tourism is an expenditure-driven economic activity, tourist expenditure needs to be extensively studied and understood (Wang & Davidson, 2010). According to Pulido-Fernandez et al. (2019), tourist expenditure is a determining factor in the economic viability of tourism in a destination. Turkey ranked 10th in 2016, 8th in 2017 and 6th in 2018 in the list of countries hosting the most international tourists. However, tourist expenditure per person in the other top ten countries is higher than the average for Turkey. For example, according to UNWTO data, the average expenditure per international tourist in 2018 was $2675 in the USA, $1650 in Thailand, $1450 in the UK, $1100 in Germany, $900 in Spain, $800 in Italy and $750 in France. In Turkey, it was approximately $550 (UNWTO, 2019). In addition, the primary effort of developed destinations is to encourage high-spending tourists to travel (Alegre et al., 2011). According to Pulido-Fernandez et al. (2016), a tourism policy suitable for sustainable tourism should include daily expenditure per tourist as a marketing objective, rather than trying to get the maximum number of tourists. The results from this study will facilitate the implementation of tourism strategies aimed at achieving an increase in per person expenditure.

Fu et al. (2018) stated that postmodernism, which emerged as an important 20th century movement in Western societies, and spread to other parts of the world with globalization, changed tourist behavior in many ways. In this context, postmodern tourists prefer a more flexible and personalized experience, take shorter trips and are more interested in local experiences. Souvenir purchases made with experiential consumption have become a valuable part of postmodern tourism (Fu et al., 2018). Today, shopping while traveling for leisure is not seen as a purely incidental activity. Shopping represents the main motivation (or one of the main motivations) for millions of tourists (UNWTO, 2014). Souvenirs enable people to collect positive memories from their travel experiences. Many tourists think that a trip is not complete if they do not buy souvenirs (Sthapit & Björk, 2019). On the other hand, souvenirs contribute to the development of local economies and represent the tourism image of the destination. They can raise awareness of a destination's attractiveness, landscape and history (Dumbrovská & Fialová, 2020).

Considering the importance of souvenirs for tourist destinations and tourists, research on souvenirs is increasing. Previous studies have made significant contributions to the understanding of the role of souvenir shopping on consumer behavior in travel and tourism (Anderson & Littrell, 1996; Lin & Wang, 2012; Park, 2000; Yu & Littrell, 2005). The literature shows that research on souvenirs in different regions of the world mostly focuses on authenticity (Asplet & Cooper, 2000; Chang et al., 2012; Elomba & Yun, 2018; Xie et al., 2012). Apart from authenticity, souvenir shopping has been investigated from various perspectives. In this context, research has been conducted on various topics such as travel motivation (Swanson & Horridge, 2006), tourist satisfaction (Suhartanto, 2016; Vega-Vazquez et al., 2017), tourist attitudes and behaviors (Swanson & Timothy, 2012), tourist experiences (Fangxuan & Ryan, 2018; Sthapit et al., 2018), destination image (Wong & Cheng, 2014), and the perceived value of souvenirs (Paraskevaidis & Andriotis, 2015). On the other hand, no research has been found on the factors affecting the increase in souvenir expenditure of international tourists at destinations (especially developing). In this study, why souvenir expenditure is low in Turkey has been investigated, and what tourism policy makers and souvenir sellers can do to increase this. In this context, souvenir stores in the Sultanahmet and the Grand Bazaar, two of the most important tourist sites of Istanbul (UNWTO, 2014) were included in the research within the framework of a qualitative case study research method. Many studies have been carried out with quantitative methods in the literature on souvenirs in tourism, and considering this, the value of qualitative research has been emphasized (Sthapit & Björk, 2019; Vega-Vazquez et al., 2017).

2. Literature review

2.1. The concept and scope of tourist souvenirs

Souvenir comes from the Latin word 'subvenire' meaning to 'come to mind' (Elomba & Yun, 2018). Souvenirs are defined as "tangible products that remind tourists of their travel experiences and are symbols of cultural interaction" (Fangxuan & Ryan, 2018, p. 143). Souvenirs consist of a wide variety of products usually with the name of the tourist city or region and offered for sale by local or travelling sellers, such as key chains, pen holders, designer clothes (e.g. 'I Love Istanbul' t-shirts), jewelry, scarves and handbags (Anastasiadou & Vettese, 2019). On the other hand, souvenirs also include items that are not always traded but still remind travelers of their experience. A stamp in a passport or visa, an account receipt from a memorable restaurant, or a museum entrance ticket are often kept as memories of a unique place and time (Swanson & Timothy, 2012). Swanson and Timothy (2012) classified souvenirs under four categories: (a) objects with logos that represent visitors' feelings about the destination; (b) functional household items such as kitchen utensils, rugs or clothing; (c) food products that evoke nostalgic feelings; and (d) souvenirs that represent a center of faith or religious symbol. In a study conducted in Macau, it was determined that tourists were mostly interested in local food products, handicraft items and collectibles, while antique items, toys and artistic or authentic clothing were chosen less (Kong & Chang, 2012).

Apart from souvenir stores, souvenirs can be sold in many different areas such as airports, bus stations, railway stations, museums and galleries, antique stores and stands set up in various places. Deciding what kinds of item to sell in souvenir stores is a costly and lengthy process. There are also environmental costs associated with the production, transportation and storage of souvenirs (Anastasiadou & Vettese, 2019).

2.2. Souvenir shopping and its importance

Shopping is one of the most common travel activities (Kong & Chang, 2012) and an extremely important leisure activity (Collins-Kreiner & Zins, 2011). The need and desire to shop can be a motivation for tourist travel, just like the need or desire to sunbathe. Although many tourists do not travel for shopping purposes, they shop while traveling and their shopping decisions affect their travel planning (Sthapit & Björk, 2019). Tourists shop during their trips because they need to bring back something from the time or place they experienced during their vacation or to keep a tangible memory (Li & Cai, 2008; Vega-Vazquez et al., 2017). This type of buying behavior can be defined as 'experience intensification' (Sthapit & Björk, 2019). Apart from saving their experiences, tourists also shop for souvenirs as gifts for their relatives and friends. In a study conducted on Chinese tourists, the desire to give gifts to relatives and friends was determined as an effective motivation factor on the shopping behavior of tourists (Fangxuan & Ryan, 2018). Similarly, Littrell et al. (1993) found that the vast majority of US tourists (about 70%) purchase souvenirs for family and friends during a trip. Women, honeymooners, those who have a longer than average stay, smaller groups or those who travel individually are among tourists who spend highly during their holidays (Anderson & Littrell, 1996; Littrell et al., 1993; Mok & Iverson, 2000).

Souvenirs enable people to take positive memories from their trips and can strengthen the cultural identity of tourist attractions (Deng et al., 2021). These are events, destinations or features that attract visitors from near and far. An attraction should be interesting and enjoyable enough to motivate people to travel to experience it. For example, the Louvre Museum (Paris) may satisfy the needs of art enthusiasts, while a trip to Hawaii can be satisfying for those who enjoy beaches, warm climates and cultural experiences. If the shopping opportunity can motivate people to travel by satisfying needs and giving pleasure, then it can be considered a tourist attraction (Timothy & Butler, 1995). Souvenir shopping is an integral component of a tourist's travel experience and can represent a significant proportion of overall travel spending (Kong & Chang, 2012). Tourists' shopping expenditure constitutes approximately 33% of total travel expenditure (Littrell et al., 1994). For example, in a study conducted in the USA in 1990, it was found that annual shopping expenditure exceeded transportation and accommodation, and constituted 31% of total holiday expenditure (Anderson & Littrell, 1996). Tourist shopping has become an important source of income for countries such as Australia, Hong Kong (almost half of total income from tourism) and Thailand (Heung & Cheng, 2000; Li & Cai, 2008). In Turkey, it has been estimated that total shopping revenue in recent years (2014–2020) constitutes an average of 16% of total tourism income. On the other hand, the share of 'souvenir expenditure' in the total holiday expenditure of tourists visiting Turkey in recent years has not exceeded 5%. The per person souvenir expenditure of international tourists in Turkey varies between $26–46 on average (Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı Yatırım ve İşletmeler Genel Müdürlüğü, n.d.). Pulido-Fernandez et al. (2016), in their study on a sample of tourists participating in cultural events in Spain, found that tourists spend an average of €130 per day on local handicraft products.

It will be beneficial to focus on the cultural and historical characteristics of souvenirs in order to increase the souvenir shopping expenditure of tourists (Swanson & Horridge, 2006). As a matter of fact, uniqueness and authenticity are considered key features for such shopping (Sthapit et al., 2018). The local products that tourists buy as souvenirs are actually imitations of original products produced and sold in bulk by non-native people. This practice causes foreigners to take ownership of cultural heritage products in an inauthentic way by imitating them. It also creates financial leakage, limiting the economic benefits that indigenous groups can derive from the products of their culture (Guttentag, 2009).

2.3. Previous studies on souvenir shopping

The role of tourist shopping in tourism research has consistently been underestimated, as evidenced by the scant research on tourist shopping (Kong & Chang, 2012). Shopping for tourist souvenirs is a current research topic (Vega-Vazquez et al., 2017). In recent years, the number of studies on souvenir shopping has increased and the topics of previous research on tourist souvenir shopping are summarized in Table 1. As seen in the table, researchers mostly examine tourists' attitudes and behaviors and their perceptions of authenticity. On the other hand, almost all the studies were carried out only on a tourist sample. This strengthens the importance of this study which was carried on souvenir sellers.

Table 1. Previous research on souvenir shopping

Researchers	Research topics
Swanson and Timothy (2012); Li and Cai (2008); Collins-Kreiner and Zins (2011); Anastasiadou and Vettese (2019); Park (2000); Oh et al. (2004); Swanson and Horridge (2006); Anderson and Littrell (1996); Birdir and Birdir (2020)	Attitudes and behaviors of tourists towards souvenirs
Soukhathammavong and Park (2019); Elomba and Yun (2018); Brida et al. (2013); Dumbrovska and Fialova (2020); Chang et al. (2012); Trinh et al. (2014); Deng et al. (2021); Lin and Wang (2012)	Authenticity perceptions of tourists and sellers towards souvenirs

Table 1 (cont.)

Researchers	Research topics
Ho et al. (2021); Lin (2017); Littrell et al. (1993); Asplet and Cooper (2000); Lin and Wang (2012); Akyürek and Zeybek (2018)	Souvenirs of a particular type (e.g. food items, handicrafts)
Fangxuan and Ryan (2018); Sthapit et al. (2018); Bojanic (2011); Chang (2014); Sthapit and Björk (2019)	Souvenirs and tourist experiences
Shtudiner et al. (2019); Paraskevaidis and Andriotis (2015); Wei (2018)	Souvenirs and tourist value perception
Kong and Chang (2012); Lacher and Nepal (2011)	Souvenirs and their economic effects
Bynum Boley et al. (2013); Anastasiadou and Vettese (2019)	Souvenirs, technology and social media relationship
Suhartanto (2016); Chang (2014)	Souvenirs and tourist satisfaction
Swanson and Horridge (2006)	Souvenirs and tourist motivations
Wong and Cheng (2014)	Souvenirs and destination image

Source: authors.

Souvenirs and authenticity are the most studied subjects in the current literature. Authentic souvenirs refer to objects based on culture, heritage, destination identity and the uniqueness of certain events or activities in a particular destination, thereby becoming an important sign of a destination's ethnicity or cultural identity (Soukhathammavong & Park, 2019). In a study on the authenticity of cultural motifs in clothing souvenir purchases in New Zealand (Asplet & Cooper, 2000), the importance of authenticity was supported. In another study conducted in Italy on the effect of authenticity-perception for shopping expenditure at cultural events (Brida et al., 2013), tourists were more likely to spend on authentic products. Researchers have confirmed that souvenir authenticity can positively affect tourists' perceived value and behavioral intention in the context of experiential consumption (Deng et al., 2021).

In some studies on souvenirs in the tourism literature, the concept of value has been investigated. In this context, as a result of a study on tourists in Greece (Paraskevaidis & Andriotis, 2015), four different categories of values were discovered; *use value* (functionality; meeting needs and recalling experience), *exchange value* (acquisition cost, for investment; hoping to earn higher prices in the future), *sign value* (prestige; for collection of unique and original items), and *spiritual value* (sacred symbols; for strengthening religious belief). In another study on Jewish and Christian tourists in Israel (Shtudiner et al., 2019), it was found that tourists (especially Jewish) are willing to pay more for souvenirs (endowment effect). These results show that tourists' perceptions of souvenirs are shaped not only by utility but also by meaningfulness.

In some studies on souvenirs, certain types of products were examined. In this context, as a result of a study examining the perspectives of tourists on food souvenirs (Lin, 2017), it was found that tourists buy food items as a result of three different motivation factors: (a) as a gift, (b) to preserve memories, and (c) as proof of travel. Yu and Littrell (2005) examined the factors affecting the shopping tendencies of tourists for handicraft souvenirs in the USA. Research results show that utilitarian value and shopping companion preferences have a significant impact on tourists' attitudes towards their shopping experience, thereby influencing their purchasing intentions. The findings also confirm that demographic factors such as gender, age, education and income are associated with tourists' shopping orientation (Yu & Littrell, 2005).

Another subject investigated within the scope of souvenir expenditure are the experiences of tourists. In a study conducted in Macau (Kong & Chang, 2012), it was concluded that among the four different tourist segments, namely seekers for experience, naturalness, sincerity and relaxation, the tourist segment with the highest general souvenir shopping interest were tourists seeking experience. As a result of a study on the souvenir shopping experiences of Chinese tourists in North Korea (Fangxuan & Ryan, 2018), it was determined that souvenir shopping experiences were concentrated under four categories: store features, payment methods, tour guides and souvenir sellers. On the other hand, in another study examining the effect of age and family life experiences on the shopping expenditure of Mexican tourists in the USA (Bojanic, 2011), it was found that age and marital status were not effective on shopping expenditure. However, the average expenditure of families without children is higher than those with (Bojanic, 2011).

In some studies, the relationship between souvenir items, technology and social media has been examined. For example, it has been found that tourists who share photos on social media are more likely to buy local souvenir products than tourists who do not (Bynum Boley et al., 2013). Anastasiadou and Vettese (2019) examined visitors' perceptions of 3D-printed, customizable souvenirs and their relationship with such items. While the findings support the design and customization of souvenirs using new technologies, they show that there are intellectual property and ethical challenges that need to be addressed.

According to the literature cited and discussed above, it is clear that almost all of the studies on tourist souvenir expenditure are designed for quantitative research approaches. Therefore, in future work on tourist expenditure, a knowledge gap can be filled using more qualitative research approaches. This study, which was designed using qualitative research methods, will contribute to filling that gap.

3. Method

3.1. Purpose and importance of research

The main purpose of this research is to discover information that will contribute to increasing tourism incomes in destinations with low per person tourist expenditure. For this purpose, the souvenir expenditure of tourists in Turkey was examined, why it is low and what could be done to increase it. Thus, it is expected that the results will contribute to increasing tourism income in Turkey and other destinations. The goals of the study also reveals its importance.

Tourist shopping, local souvenir sales, contributes to the growth of local economies (Elomba & Yun, 2018) and awareness of indigenous cultures (Xie et al., 2012). Many tourists prefer local products when choosing souvenirs (Guttentag, 2009). Souvenirs reflecting local characteristics are purchased more than those imported from abroad and sold at more affordable prices (Anastasiadou & Vettese, 2019). However, most of the souvenirs sold in tourist areas were produced and imported from other countries. Items reflecting indigenous ethnic culture are rare (Chow, 2005). In Turkey, souvenirs are imported from many different countries such as Taiwan, India, Brazil and France, especially China. This policy leads to a leakage of tourism income. For example, in a study conducted in Thailand, it was found that most of the souvenirs sold were imported and these items caused a leakage in income from local goods (Lacher & Nepal, 2011). For destination management organizations, it is important to conduct such a study to increase local income by reducing these leakages.

3.2. Research questions

In qualitative research, there are no hypotheses; only research questions are formulated (Creswell, 2016). These questions are determined according to the research problem and objectives. The main issue in the present work is the low tourist expenditure per person in Turkey compared to competing countries (especially Mediterranean ones such as Spain and France). The share of souvenir shopping in total holiday expenditure in recent years is only 5% (Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı Yatırım ve İşletmeler Genel Müdürlüğü, n.d.). In this context, one main and two sub-research questions were identified and are set out below:

1. Main research question: What are the factors that can increase the souvenir expenditure of tourists visiting Turkey?
2. Sub-research question 1: What is the domestic and import ratio of souvenirs sold in souvenir stores? And which goods (domestic or imported) sold in souvenir stores provide most income?
3. Sub-research question 2: In the light of online tourist reviews, which features (product, seller and store features) stand out for increasing souvenir spending?

3.3. Research design

This exploratory study was designed using a qualitative case study research design. Case studies in the field of tourism are carried out on many subjects such as demand analysis in tourism, tourism planning and development, destination image and competition, life cycles of destinations and visitor satisfaction (Xiao & Smith, 2006). A case study is an approach that is used to study phenomena over time using detailed and in-depth data collected from a limited number of systems (cases), many sources (such as observations, face-to-face interviews, documents and reports), and develops categories for describing the case (Creswell, 2007). Most souvenir expenditure in Turkey is made by international tourists in the provinces of Istanbul, Antalya and Muğla (Türkiye Cumhuriyeti Kültür ve Turizm Bakanlığı Yatırım ve İşletmeler Genel Müdürlüğü, n.d.). This case study was limited to Istanbul. Almost half (47.6%) of the more than 250 souvenir stores in Istanbul are located in Sultanahmet (*n* = 81) and the Grand Bazaar (*n* = 39) (TripAdvisor, n.d.) and since these places are the most important tourist places (UNWTO, 2014), they were used as the research area.

3.4. Population and sample

Purposive sampling was used in this study. This method was chosen because sample selection in qualitative research is usually not random, and is selected for a specific purpose (Miles & Huberman, 1994). There is no specific rule for calculating the sample size in qualitative research. In purposive sampling, it is determined by considering the research data. If the purpose is to increase knowledge, sample selection ends when no new information is obtained from the sample units (participants) (Merriam, 2009). In this study, since semi-structured interviews were conducted with souvenir sellers, sample selection was complete as soon as no new information could be obtained from the sellers. During this process, face-to-face interviews were held with 11 sellers in total, seven souvenir stores from the Sultanahmet and four from the Grand Bazaar. Kozak (2015) states that there is no need for case studies on tens or hundreds of people or businesses at the same time. Semi-structured interviews were conducted between 14–20 September 2020 and the audio recordings obtained lasted between 4–27 minutes. Indeed, Creswell (2016) suggested researchers schedule interviews that would last no longer than 30 minutes. In order to reach more reliable data, shops selling all kinds of souvenirs were included in the sample. Souvenir shops selling only one type (e.g., those who only sell carpets & rugs, decorative lamps or only food) and souvenir stands selling only small magnets, key chains, etc. were not included. Various jewelry items (bracelets, necklaces, rings and earrings with zultanite stones, etc.), shawls and scarfs, carpets and rugs, items with various logos (wallets, pillows, key chains, mugs, magnets, etc.), printed t-shirts (e.g. I Love Istanbul), Iznik patterned tiles and ceramics, decorative handmade lamps, decorative figurines (e.g. Sultanahmet and Hagia Sophia themed) and many other items are sold in the souvenir shops included in the research. Sample images from the product stands of souvenir shops are shown in Figure 1.

Figure 1. Examples of souvenirs sold in shops
Source: authors

3.5. Data analysis

In this research, interview and netnography methods were used as data collection tools. Since social facts are variable according to time, it is not possible to talk about their universality. Interview and netnography, which aim to capture and understand this relativity and dynamism of social phenomena, are the most frequently used methods in qualitative research (Miles & Huberman, 1994). Netnography is the use of social science methods to present a new approach to conducting ethical and thorough ethnographic research that combines archival and online communications, participation and observation, with new forms of digital and network data collection, analysis and research representation (Kozinets, 2015). The reasons for performing netnography are to increase the reliability of research data by diversifying it, to support semi-structured interview data and to discover possible new information. In this process, TripAdvisor, the most used online travel platform in the world, with a monthly number of visitors close to 30 million, was preferred (Barreda & Bilgihan, 2013). Two different souvenir stores with the highest ratings on TripAdvisor were included in the case study research process. The reason for this is to provide diversity by increasing the number of cases. A total of 778 tourists' e-reviews made on stores in Sultanahmet were examined and related categories were created. In the process of creating the categories, studies by Swanson (2004), Swanson and Horridge (2006), Li and Cai (2008) and Suhartanto (2016) were used. To analyze the data obtained within the scope of interview and netnography, the following 3-step analysis process explained by Merriam (2009) was taken as a guide:

1. Open coding: data that have any relevance or similarity in terms of meaning are coded separately.
2. Analytical coding: data coded separately in the first step are grouped together again.
3. Creation of categories: categories are conceptual elements that relate to and encompass many unique examples (or previously identified pieces of data) – some of the main categories can be divided into sub-categories.

4. Findings

4.1. Findings from semi structured interviews

The evaluations of the sellers regarding the question of which factors are effective in increasing the souvenir shopping expenditure of tourists, their suggestions were examined and the factors identified are given in Table 2. These factors are classified under nine categories: domestic production, qualified (high spending) tourists, qualified employees, tourism budget, accommodation type, marketing (storytelling, advertising and branding), economic support for sellers, tourism season and political relations.

Within the scope of attracting qualified tourists (with a high spending profile) to the country, almost all sellers emphasized tourists from countries such as Europe and the USA because they can spend more due

Table 2. Factors increasing souvenir the shopping expenditure of tourists

<table>
<tr><th>Sellers</th><th>Categories</th><th>Brief explanation of the categories</th></tr>
<tr><td>S1</td><td>– Qualified (high spending) tourists
– Advertising
– Tourism budget
– Qualified employees
– Tourism season</td><td rowspan="11">– Qualified (high spending) tourists: attracting high-spending tourists to the country
– Advertising: multi-faceted advertisement by the central authorities (e.g. ministries) and advertising for the targeted tourist audience; e.g. on subways, on buses or on social media (YouTube, Facebook etc.)
– Tourism budget: increasing the budget allocated to tourism
– Qualified employees: increasing the employment of educated and qualified employees in the tourism sector
– Tourism season: trying to extend the tourism season with alternative tourism types
– Storytelling: marketing of natural, historical and cultural places by making interesting stories
– Political relations: controlling the fragility of tourism so that the number of tourists does not fall (ensuring security and establishing good political relations with other countries)
– Local production: making locally produced souvenirs specific to regions (reflecting the historical, cultural and natural attractions of the region)
– Economic support for sellers: providing economic facilities for souvenir sellers by the state e.g. easing taxes, providing low-interest loans, etc.
– Accommodation type: preferring other accommodation types (e.g. bed & breakfast, half-board, etc.) instead of all-inclusive accommodation in the hospitality industry
– Branding: branding domestic souvenir products</td></tr>
<tr><td>S2</td><td>– Qualified (high spending) tourists
– Storytelling
– Advertising
– Political relations
– Qualified employees</td></tr>
<tr><td>S3</td><td>– Qualified (high spending) tourists</td></tr>
<tr><td>S4</td><td>– Qualified (high spending) tourists
– Local production
– Economic support for sellers
– Tourism season</td></tr>
<tr><td>S5</td><td>– Qualified (high spending) tourists
– Political relations</td></tr>
<tr><td>S6</td><td>– Qualified (high spending) tourists
– Qualified employees
– Accommodation type
– Political relations</td></tr>
<tr><td>S7</td><td>– Qualified (high spending) tourists
– Economic support for sellers
– Local production
– Branding</td></tr>
<tr><td>S8</td><td>– Qualified (high spending) tourists</td></tr>
<tr><td>S9</td><td>– No data was received</td></tr>
<tr><td>S10</td><td>– Qualified (high spending) tourists
– Branding</td></tr>
<tr><td>S11</td><td>– Qualified (high spending) tourists</td></tr>
</table>

Source: authors.

to exchange rate differences. In this regard, an excerpt from S1 is as follows:

> It is important for us that qualified tourists come. There are too many unqualified tourists right now. There are no Europeans anyway, qualified customers always go to our competing countries and spend very high amounts there.

It was emphasized that all employees serving tourists should be trained to have advanced communication skills in order to increase the souvenir shopping expenditure of tourists. In this regard, an excerpt from S1:

> There is also the qualification issue of personnel. Now, it is very important for tourists to come, but there must be qualified personnel to work in this sector. The tourist complains a lot about this. In other words, they cannot feel comfortable, they become restless, they start with the taxi driver from the airport, they are already messing with the tourist's thinking until they enter the hotel.

Another issue emphasized by the sellers to increase the souvenir shopping expenditure of tourists is that domestic production should be promoted in supply. In this context, an excerpt from S4 is given below:

> Now, domestic production is preferred. Most products come from China. Of course, it is not coming from China, which has been closed for 4 months and 5 months [during COVID-19], prices are increasing because they are on a dollar basis, domestic production should be preferred dominantly. We also have Izmir goods [a city in Turkey], all of the magnets, for example, come from Izmir.

While S1 and S2 emphasized that advertisements should be made for the natural, cultural and historical attractions of Turkey, S10 emphasized that a wide variety of souvenir products available in Turkey are not branded. An excerpt from S10:

> We have lots of products, but we are not good at branding our own materials. For example, we cover an imitation bag with our local Iznik pattern and the tourists love it…! However, we must work on branding more than imitating.

In order to attract more high-spending tourists to Turkey, all-inclusive accommodation should be abandoned and other accommodation types (e.g. bed and breakfast, half-board etc.) should be encouraged claimed a seller (S6). An excerpt from that seller's evaluation is as follows:

> The quality of the tourist is no longer good, why? Throughout Turkey, Antalya, Marmaris etc. If the hotels are not all inclusive, more high-spending customers will come. Half-board system is better. Hotels used to be half-board from 1992 to 2000, and what does that mean? Fewer customers but higher quality customers.

Seller 2 (S2) cites the monster myth in Scotland's Loch Ness, pointing out that natural, historical and cultural attractions should be marketed through engaging and compelling storytelling. An excerpt from the seller's evaluation is given below:

> Look, they made up a monster myth in a Scottish Lake because Scotland was not attracting too many tourists. What did the 'governor' of that place say? He said; we lied so that tourism could move… We cannot market ourselves, what we have.

Other issues highlighted by sellers (S4 and S5) are about the need for the country's government to provide economic assistance to souvenir sellers (e.g. alleviation of taxes, low-interest loans, etc.) and the need to provide security and establish relations with other countries in order to help lengthen the tourism season and lower the vulnerability of the industry.

4.2. Domestic and import ratios of souvenirs

The domestic and imported ratios of the products offered for sale in the souvenir stores in Sultanahmet and the Grand Bazaar are shown in Table 3.

Table 3. Domestic and import ratios of souvenirs

Location	Stores	Domestic ratio in %	Import ratio in %
Sultanahmet	Store 1	80	20
	Store 2	95	5
	Store 3	0	100
	Store 4	40	60
	Store 5	0	100
	Store 9	95	5
	Store 10	75	25
Grand Bazaar	Store 6	80	20
	Store 7	100	0
	Store 8	50	50
	Store 11	90	10

Source: authors.

According to the table, it was found that the stores sell 64% domestic and 36% imported souvenirs. On the other hand, as the prices of imported products have increased with the changes in the exchange rate (as of the current date) souvenir sellers (S4, S8, S10 and S11) have increased the proportion of domestically produced goods in their product supply. For instance, an excerpt from S10 is given below:

> 25% of our products are imported at the moment, however, that ratio was higher before the pandemic.

Domestic items provide more income for souvenir stores than imported items. An excerpt from S11 evaluation on this issue:

> Domestic products are sold the most, they are all local [the seller showed the ceramic plates here], there are magnets made here, some from China. Because of the dollar prices, we had it done here ourselves.

4.3. Findings from netnography

A total of 380 tourists visited souvenir Store 1, which ranked first on TripAdvisor with the highest level of satisfaction among tourists. When the scores of the e-reviews made for Store 1 were analyzed, the store had not received any e-review below average. In Table 4, a total of 21 sub-categories were identified for Store 1 under three main categories: product features (12 sub-categories), seller features (4 sub-categories) and store features (4 sub-categories). In the table, half of the features (49%) that tourists highlighted with expressions of satisfaction are related to product features, while the other half (47%) are related to seller features. On the other hand, it was determined that store features were given in e-reviews very rarely (4%).

Table 4. Categories and frequencies for Store 1

Main categories and sub-categories		*n*	Rate in %
Product features	diversity	109	10.4
	price	90	8.6
	quality	57	5.5
	packaging & shipping	56	5.3
	originality	54	5.2
	artistry	33	3.2
	handmade items	31	3.0
	localness	30	2.9
	giftable (to someone)	19	1.8
	travel memory	14	1.4
	design	13	1.2
	suitability for collection	5	0.5
Seller features	hospitality	217	20.7
	communication skill	115	10.9
	discounting & gifts	89	8.5
	low pressure selling	74	7.0
Store features	accessibility	19	1.8
	atmosphere	12	1.2
	counter layout	5	0.5
	width	5	0.5

Source: authors.

According to Table 4, the product features that tourists are satisfied with are diversity, price, quality, packaging and fast/quality shipping, originality, artistry, handmade items, localness, giftable (to someone), travel memory, design and suitability for collection. Hospitality, communicating (to give detailed information about products), discounting or giving free souvenirs (some small items) and an unpressurized sales approach constituted the seller characteristics which the tourists emphasized with expressions of satisfaction. Some excerpts from the e-reviews of tourists are given below:

> We purchased a range of outstanding pieces at very affordable prices in a 'pressure-free' and friendly atmosphere. I highly recommend.

> He was very hospitable, he offered us Turkish tea and some Turkish delight while we were visiting his store. Each piece was so unique, he told us how the art was made. All products were handmade by local artists.

As seen in Table 5, a total of 15 sub-categories were identified under three main categories: product features (9 sub-categories), seller features (4 sub-categories) and store features (2 sub-categories). Half of the features (48%) that have a positive effect on tourist satisfaction are related to product features, while the other half (48%) are related to seller features. Store features have a very low share (4%) just like in Store 1. On the other hand, price, diversity, packaging and fast/quality shipping, quality, localness, giftable (to someone), originality, travel memory and handmade features were the product features that had a positive effect on the satisfaction of tourists. Communication skills, hospitality, selling without pressure and giving discounts/gifts constituted the characteristics of the seller, effective in the satisfaction of the tourists. Some excerpts from the e-reviews of tourists belonging to the relevant categories are given below:

> Their prices are reasonable and they gave discounts on almost all the products we purchased.

> Here you will find everything you need to buy as a gift from your Istanbul trip. There are beautiful handmade items such as breathtaking colorful mosaic lamps, stunning Turkish tiles and pottery.

A total of 398 tourists evaluated the other gift shop (Store 2) which received highly satisfactory reviews on TripAdvisor. When the scores of the e-reviews made to Store 2 are examined, it was found that 363 e-reviews were excellent (91%) and 25 e-reviews were very good (6%). The features of Store 2 are shown in Table 5 in categories.

Table 5. Categories and frequencies for Store 2

Main categories and sub-categories		*n*	Rate in %
Product features	price	221	18.0
	diversity	144	12.0
	packaging & shipping	101	8.0
	quality	50	4.0
	localness	22	2.0
	giftable (to someone)	16	1.3
	originality	16	1.3
	travel memory	15	1.2
	handmade items	7	0.5
Seller features	communication skill	198	16.0
	hospitality	170	14.0
	low pressure selling	129	10.0
	discounting & gifts	95	8.0
Store features	accessibility	43	4.0
	width	3	0.0

Source: authors.

5. Discussion and implications

As a result of the findings obtained from souvenir sellers, nine categories that affect the increase in souvenir expenditure were identified. These categories are related to domestic production, attracting qualified (high spending) tourists, qualified employees (well educated in tourism, speaks at least one foreign language), tourism budgets, accommodation type (bed & breakfast, half board, etc.), marketing (storytelling, advertising and branding), financial support for sellers (by the government), the tourism season (spread of tourism activities throughout the year) and politics (friendly relations with target market countries). It is important for destination management organizations to benefit from these findings when developing their tourism industry strategies (Aguilo et al., 2017; Alegre et al., 2011; Mok & Iverson, 2000).

As the prices of imported products have increased during the global pandemic and the extremely high exchange rate (as of the date of the research), it was found that souvenir sellers have increased the supply of domestic production. However, more than one third (36%) of the stores in Sultanahmet and the Grand Bazaar, where the research was conducted, still sell imported souvenirs. This finding is similar to that of a study conducted by Lacher and Nepal (2011) in Thailand. Domestic production items mostly consist of ceramics and porcelains produced in Kütahya, while decorative lamps and handmade jewelry (e.g. silver rings made of zultanite stone, etc.) were produced in various workshops in Istanbul. Many items reflecting local motifs (for example, items with miniatures/logo of Sultanahmet or Hagia Sophia Mosque) were imported from China. Study findings showed that authentic souvenirs reflecting local culture, domestic production and handmade, provide more income than imported products, while local products create great satisfaction for tourists. In the literature, various other studies also emphasize the importance of local features in souvenir production (Guttentag, 2009; Keskitalo et al., 2021; Kong & Chang, 2012). Supporting and encouraging the production and sale of souvenir products representing local culture in destinations seems to be the best step to take. The production of souvenirs by providing training to unemployed people can create an important source of employment and income.

It was emphasized that there are a wide variety of souvenir products using the natural, historical and cultural attractions of Turkey, but these products are not promoted or branded to attract tourists. For example, Murano (Venice, Italy) is branded with glass art (Giubilato et al., 2016). Understanding the importance of branding and promotion, Turkey can develop similar strategies to brand some of its important cultural items. Iznik tiles are important in terms of reflecting the characteristics of Roman, Byzantine, Seljuk and Ottoman art. There are 21,043 Iznik tiles on the walls of the Blue Mosque (Türkiye Kültür Portalı, n.d.). Tile art can easily be an important product to promote.

As a result of the findings from tourists' e-reviews, it can be suggested that souvenir buyers take into account both product and seller features during the shopping process. Almost half (48%) of the e-reviews from both stores include evaluations of product features, while the other half include evaluations of seller attributes. In this context, it is possible to conclude that store features are not of great importance in the shopping experiences of the tourists. This result is not consistent with studies conducted in China (Li & Cai, 2008), North

Korea (Fangxuan & Ryan, 2018), Indonesia (Suhartanto, 2016) and the USA (Swanson, 2004; Swanson & Horridge, 2004; Swanson & Horridge, 2006). In those studies, store features were found to be an important factor in terms of tourist experience, travel motivation and satisfaction within the scope of souvenir shopping. The difference here can be attributed to differences in the present data collection and analytical methods. While online evaluations of tourists were used in the present study, a survey was the main instrument in previous research. The subject was approached with survey questions from related studies. In this context, it can be argued that more accurate results can be achieved by using different methods in researching the spending behavior of tourists (Kim et al., 2010).

6. Limitations and future research

In this research, semi-structured interviews were conducted with souvenir sellers and online tourist comments formed the main framework. The reason for this is that the research was conducted during the global pandemic and international travel was greatly reduced. When the literature on tourist expenditure was examined, almost all of the studies were designed using quantitative research approaches. Therefore, in future work on tourist expenditure, qualitative research approaches can be recommended to be used more. On the other hand, considering that there is limited research on the classification of souvenirs in the literature, work to fill this gap in the literature is suggested. In future studies, focus group meetings can be held with destination management organizations as well as souvenir sellers. Further research could be undertaken in other destinations where tourist expenditure per person is low.

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DOI: https://doi.org/10.18778/0867-5856.33.2.04 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Manifesting smart tourism destinations A study based on selected Himalayan cities in India

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How to cite (APA style): Jasrotia, A., & Gangotia, A. (2023). Manifesting smart tourism destinations: A study based on selected Himalayan cities in India. *Turyzm/Tourism, 33*(2), 43–53. https://doi.org/10.18778/0867-5856.33.2.04

ABSTRACT

In urban planning, the term smartness is considered as a philosophic dimension which enables smarter strategic decisions and directions. The involvement of information technology in the functioning of the daily life of cities is directed towards the development of smart cities. Smart tourism destinations can also implement smartness by employing suitable tourism applications within a smart city. The purpose of the study is to explore the enabling factors for establishing smart tourism destinations in the Indian Himalayas. This research used a qualitative methodology and conducted interviews with relevant stakeholders from the study areas, Jammu and Dharamshala. The data collected were recorded, transcribed and coded with the help of NVivo 12, in order to carry out thematic and content analysis. The findings of the study showcase that community welfare, information communication technology, quality of life, sociocultural heritage, stewardship, sustainable development and tourism resources are the enabling factors for smart tourism destinations in the context of the selected Himalayan cities in India. This study will be beneficial for destination managers for assessing destination smartness, and further, for researchers who want to study smart tourism destinations.

KEYWORDS

smartness, smart tourism, smart tourism destinations, tourism planning, Himalayan cities

ARTICLE INFORMATION DETAILS

Received:
19 January 2023
Accepted:
21 July 2023
Published:
31 October 2023

1. Introduction

In general, smartness is the ability to understand and solve problems using information technology. However, in reality smartness is a confusing term and is still fuzzy. 'Smart' has become a buzzword and is often associated with technological developments. Even though it is well known by practitioners and researchers, there is still a lot of curiosity amongst researchers about its application in several research areas. According to United Nations World Tourism Organization (UNWTO, 2015, p. [1]), tourism is "a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/ professional purposes". Considering the importance of information in tourism it is not astounding to witness the application of the concept of 'smart' in the tourism industry. Enabling smartness in tourism destinations means that they need to create an information and communication technologies (ICT) enabled platform to facilitate information exchange on tourism activities amongst stakeholders which can improve their decision-making (Buhalis & Amaranggana, 2014). A major challenge in the tourism industry is the existence of several stakeholders with different interests, therefore bringing smartness to a tourism destination is necessary. Smart tourism destinations (STDs) are advantageous in the tourism industry because they enable the transfer of valuable information for tourists and tourism organizations through a centralized platform (Femenia-Serra, 2018; Femenia-Serra & Ivars-Baidal, 2018). The true essence of such destinations is using technology to provide a framework to facilitate multiple visualizations in a shared direction.

Destinations should adopt bottom-up approaches in which technological platforms provide personalized services to meet local needs (Neirotti et al., 2014). 'Smartness' in its true sense means the dynamic sharing of knowledge for a social structure that is reinforced by an environment which is always adapting and learning (Buhalis & Amaranggana, 2014; Gretzel et al., 2016). Today in the tourism industry it is important to get timely feedback to give appropriate solutions for visitors. Monitoring and engaging with their human capital is equally important in the hospitality industry. Information can be used to recognize difficulties as well as provide individualised solutions to solve them. STDs can attain an understanding of tourists and their preferences and needs. Vigorous interaction between service providers and tourists is vital to provide products that are most suitable for their needs. This engagement will also assist service providers to innovate and offer better-quality services (Schaffers et al., 2011). STDs can enable smartness by employing suitable tourism-based smart applications with smart city components (Cohen, 2014; Jovičić, 2019). From the traditional understanding of tourism destination to an STD (Jovičić, 2019) the actual idea behind STDs is to concentrate on the needs of tourists by focusing on combining ICT with the environment of the tourism destination in order to enable enhanced tourism service quality (Buhalis & Amaranggana, 2014). Boes et al. (2016) discussed the concept of establishing STDs with concepts that enable competitiveness, destination sustainability and comprehensiveness on the basis of the concept of smart cities. The objective of this study is to explore the enabling factors for establishing STDs in Indian Himalayan cities. The following section encompasses the existing literature concerning STDs and their various facets in the modern world. After a literature review, the research methodology, data analysis and consequent results have been delineated. Finally discussion based on the findings, conclusions and future research are outlined.

2. Literature review

2.1. Smart cities and smart tourism

One of the most widespread changes in the 21st century is the explosion of ICTs. The high-tech progressions of the last few years have not just created a great impact on people, societies and businesses in their daily urban lives but also particularly in terms of tourism development (Gretzel et al., 2015). The revolution in mobile technology, and specifically the increasing popularity of smartphones and their several uses in enhancing travel experiences (Wang et al., 2012), is notable in this context. Advances in wearable technologies and augmented or virtual reality are expected to further push the boundaries of what data can be collected and how it can be utilized (Tussyadiah et al., 2018; Wise & Heidari, 2019). In general, 'smartness' is the ability to understand and solve problems using information technology. 'Smart' has emerged as a popular term which stands for social, infrastructural, technological and economic developments supported by smart technologies that include sensor technology, beacons, big data, mobile applications and several other ways to connect people with useful information. In the context of physical infrastructure, the emphasis is on muddling the boundary between the digital and physical world by enabling technology integration, e.g. smart homes, smart streets, smart lighting, smart transportation (Hwang et al., 2015). According to google trends, smart cities are a massive hub of human and social activities which aim to sustain and support people and the environment surrounding them. Intense business competition, the rise in global population, all kinds of pollution and various other challenges in today's world have forced cities to work in the direction of maintaining sustainability and competitiveness. There is no doubt that cities are the future of mankind. There has been a sudden rise in online searches for terms like 'smart cities' and 'smart tourism' since 2014 which proves that people are interested in these concepts. Indeed, governments around the world are investing heavily in smart city projects and there is increasing interest in harnessing such investments for tourism purposes. The conceptualization of the term 'smart city', varies from city to city and country to country, depending on the level of development, willingness to change and reform, and the resources and aspirations of city residents. Many definitions of smart cities exist. A range of variants are also obtained by replacing 'smart' with 'intelligent' or 'digital'. The term 'smart city' is used in ways that are not always the same. Smart cities are emerging all across the globe focusing on establishing smart infrastructure. Saunders and Baeck (2015) described the essentials of smart cities as a collaborative economy (i.e. smarter usage of resources, crowdfunding) and collective intelligence (i.e. platforms to make smarter decisions). Smart cities aim to infuse intelligence into each part of the infrastructure of a city to solve urban problems. These are efficient cities with a futuristic approach towards their economy, people, governance, mobility, environment and quality of life. Smart cities use technology with other organizational and planning aspects to speed up bureaucratic processes and help find new innovations and solutions to city problems and challenges (Giffinger et.al., 2007; Kanter & Litow, 2009). Considering the importance of information in the tourism industry and the dependency on big data and ICT (Benckendorff et al., 2014; Gretzel et al., 2015; Werthner & Klein, 1999), it will be right to accept the idea that smartness needs to be practiced within tourism destinations. In the context of tourism, smart technologies are altering tourist experiences and are engendering innovative models in tourism businesses (Shafiee et al., 2019). In the opinion of various researchers, the concept of smart tourism has evolved from the most modern concept of e-tourism. The implementation of ICT has led to a manifestation of e-tourism which includes central booking and global distribution systems (Buhalis, 2003; Gretzel et al., 2020; Werthner & Ricci, 2004) are a few examples. Traditionally, a large proportion of tourism researchers have been practicing survey-based and statistically driven studies that seek result-oriented findings but smart tourism summons researchers to acknowledge the exemplar shift that has been underway in tourism research (Hollinshead, 2004). The concept of smart tourism is without doubt a unique step towards the progression of ICT in the tourism industry. The term smart tourism has been added to cities (i.e. smart cities) to describe endeavors aimed at using innovative technologies to attain optimization of resources, effective and unbiased governance, sustainability and improved quality of life. Smart tourism is a promising scenario that results in more convenient, safe, exciting and sustainable living spaces for both residents and tourists, more personalized and therefore more relevant tourism experiences (Gretzel et al., 2016). Although, it cannot be achieved only through innovative technological advances but through the interconnection, synchronization and concerted use of different technologies which enable smartness.

2.2. Smart tourism destinations

Until now the available literature on smart tourism destinations (STDs) advocates that they use ICTs to enhance the production and development of tourism processes. Traditionally, tourism destinations are a combination of various services and it is difficult to manage them. STDs require the development of attractions, accessibility, amenities, available packages, activities and ancillary services. It is necessary to add value to the experience of tourists in a tourism destination (Buhalis, 2000). Further, smart cities and STDs can raise their attractiveness through the employment of technologies to improve their overall tourism experience (Ritchie & Crouch, 2005). The foremost importance in any STD should be given to implementing a demand and supply perspective. In other words, improving the tourist's travel experience and offering smart platforms to collect and dispense information amongst local stakeholders (Nam & Pardo, 2011). The actual idea behind STDs is to keep an emphasis on the needs of the tourist by merging ICT with casual culture to enhance service quality in the destination and to enhance its management. However, diverse proceedings and actions have been categorized as a part of smart tourism which has resulted in the misuse of the concept (Li et al., 2017). Hence, it can be said that STDs are places utilizing available technological tools and techniques to enable demand and supply to co-create value, pleasure and experiences for the tourist.

Consequently, STDs can be described as those applying existing technological apparatus and procedures to empower demand and supply to further co-create value, enjoyment and unique experiences for the tourist and profit generation for tourism organizations (Wang, 2013). Establishing STDs from the bottom necessitates authorities to positively involve local people to ensure community participation in developmental plans. The key behind the transformation of a tourism destination into an STD is widespread access to up-to-date information. In order to achieve this goal, tourism destinations must offer open access to information and unrestricted data through cohesive public-controlled operating systems and avoid merchant monopolies (Zygiaris, 2013). Additionally, to enable smartness in a tourism destination it is necessary to connect the relevant stakeholders through a technological platform. Information relating to tourism activities can be shared on such a platform (Buhalis & Amaranggana, 2014). Further, Buhalis and Amaranggana (2014) mention that in order to create true data openness in STDs, destination authorities must guarantee that all kinds of information generated from any type of tourism-related application should be available without supplementary cost. Hence, smart destinations fall within the wide-ranging concept of a smart tourism ecosystem, in which is created an amalgamation of smart technologies and smart cities. The smart tourism ecosystem nurtures new-fangled business models, new communication platforms and even new ideas for tourism businesses to ensure a long life-cycle for the tourism destination. STDs can be explained as a tourism system that utilizes smart technologies in producing, handling and distributing intelligent tourism services to tourists and is branded by rigorous co-creation of value and information sharing (Masseno & Santos, 2018). It is evident that the amalgamation of smart technologies with tourist activities is one of the significant features of an STD (Gretzel et al., 2015). In the context of tourism, smart technologies are changing consumer experiences and are generating creative tourism business models. In many ways, the concept of smart tourism can be perceived as a logical evolution from traditional tourism to the most modern concept of e-tourism. Consequently, STDs can be perceived as places utilizing available technological tools and techniques to enable demand and supply to co-create value, pleasure and experiences for the tourist and wealth, profit, and benefits for organizations and the destination.

3. Methodology

In the pursuance of the research objectives, the present study utilizes a qualitative research methodology. Qualitative research provides a subjective understanding of the respondents which helps to give deeper insights into the phenomenon and reaches areas other research methods cannot (Berkwits & Inui, 1998). The data was collected with the help of a semi-structured questionnaire for interviewing the respondents of the study. The interviews were conducted with various relevant stakeholders in Dharamshala and Jammu who belonged to private as well as government sectors and including tourism academics. Further, a semi-structured questionnaire was chosen for this study as it allows for open-ended responses from participants providing in-depth information and encouraging two-way communication which is suitable for the purposes of the study. A total of 30 people were interviewed. After careful sorting and evaluation, some interviews were found unsuitable for data analysis as the answers were vague and the quality of data was low. Finally, 26 interviews were found suitable. Sample size cannot be determined in advance in a qualitative study. It depends on the complexity of the inquiry and the saturation point at which no new information can be obtained from the respondents. For developing a 'richly textured' understanding of issues larger samples are required, that is at least 24 interviews (Hennink & Kaiser, 2020). The data sampling technique used was purposive sampling where the researcher has the freedom to select the cases according to the objectives of the study (Saunders et al., 2009).

The interviews were audio-recorded for the purpose of analysis and interpretation by the researcher. Interview is an apt technique to a researcher when seeking individual's experiences as it provides a deep insight. The questionnaire was designed on the basis of the available literature, i.e. Buhalis and Spada (2000) and Tran et al. (2017), and discussions with various experts from the tourism industry and academia. The questionnaire based on the dimensions in Table 1, included 25 open-ended questions in order to get the required information from the respondents.

Table 1. Format of the questionnaire

No.	Dimensions	Number of questions
1	Smart attraction	4
2	Smart accessibility	3
3	Smart amenities	3
4	Smart ancillary	8
5	Smart activities	3
6	Smart available packages	4

Source: Buhalis and Spada (2000) and Tran et al. (2017).

4. Data analysis and interpretation

The data collected for the study was first checked for the sociodemographic profiles of the respondents and the results are shown in Tables 2 and 3 below.

Table 2. Sociodemographic profiles of the respondents

Sociodemographic profile		Number of respondents
Gender	male female	15 9
Age group	20–30 31–40 41–50 51 and above	2 7 8 7

Source: authors.

Table 3. Employment profiles and the purpose of visit of the respondents

No.	Industry/field	Respondents
1	Public sector	7
2	Private sector	4
3	Academia	6

Source: authors.

Open coding was conducted as the first step of data analysis, after loading the transcripts into NVivo 12, which is concerned with identifying, categorizing, labeling and describing text from the transcripts. The next phase is known as axial coding where researchers have to develop sub-categories, and open codes, which are interrelated, are assembled to create tentative statements of associations among phenomena (Tan et al., 2013). After that a selective coding process was administered as the final step which is more abstract in nature and resulted in integrating all the sub-categories into a core category.

After administering thematic analysis on the transcripts, 21 sub-categories were developed, and these were further reorganized into seven themes namely:

1. Community welfare.
2. Information communication technology.
3. Quality of life.
4. Sociocultural heritage.
5. Stewardship.
6. Sustainable development.
7. Tourism resources.

Theme 1: Community welfare

> Local communities who frequently interact with tourists can be involved in capacity-building programs by local tourism authorities for dealing in a better way with visitors.
>
> If we talk about rural areas, I believe they need to be more sensitized about how tourism can bring economic and social advantages to them.

> Local communities definitely need to be made aware and educated, so that they can interact with tourists in a desirable manner. Workshops, local awareness programs etc. are a great way to educate the locals on this. We can create more jobs for locals by involving them on the organizing committees of such events.

Community welfare is a type of governmental backing for those living in a society. Community welfare can be provided to those of any income level, social status or background, but it is typically envisioned to guarantee that people are able to fulfill their basic human needs. Community welfare aims to ensure a basic level of well-being for citizens of a society which includes benefits like a free supply of food items, clothes and social services like education, healthcare, employment based training facilities etc. (Blank & Shapiro, 2001).

Theme 2: Information communication technology

> We can go to the local community and involve them in activities like policy making, designing of packages and programs related to tourism. This will encourage them to participate in the co-creation of the city. Social media is a great way to bring the local community closer to both the public and private sectors. We can motivate visitors to share their experience through social media.
>
> I agree it's important to provide quick access to important information regarding activities and timetables etc. We can provide such information at arrival points, at tourism information centers or on official websites so that tourists have all the information they need.

One of the widespread and notable changes which has occurred in the 21st century is the explosion of ICTs which has completely revolutionized societies and daily life. The technological progressions of the last few years have not just greatly impacted governments, societies, businesses and people in everyday contexts in cities, but also specifically in terms of tourism development and management (Gretzel et al., 2015). ICTs in the setting of STDs aim to drive soft power through traveler connectivity (Womack, 2009).

Theme 3: Quality of life

> Wherever I have been, I didn't find any medical facilities or dispensary available in the tourism attractions. At least, first aid services should be provided at each and every tourist attraction.
>
> I think public transportation is sufficient here. Traffic management although is a problem for Dharamshala, being a tourist destination. Transportation is an important part of the tourism industry as transportation links tourists with various tourist attractions. In order to improve accessibility, we should focus on the improvement of the existing roads, construction of more roads, air transportation and local flight operations.

> Events at state level can be managed but still the city requires convention centers and auditoria of large capacity.

Quality of life is an all-embracing term for quality in terms of various spheres of life. It is a typical level of living that comprises the hopes of citizens or society for a good life. These hopes or expectations are directed by the goals, values and socio-cultural context in which an individual lives. It is an idiosyncratic and multidimensional concept that describes a standard level for physical, emotional, material and social well-being. It further assists individuals or societies to measure or judge the different domains of their own lives. STDs apply the principles and strategies of the smart city to urban or rural tourism destinations which improves quality of life for the people. This includes not only control and making use of data collected from residents but also from tourists (Buhalis & Amaranggan, 2014).

Theme 4: Sociocultural heritage

> I am sure you know that we don't have such platforms in Jammu. The effective way to enable cultural exchange is to make sure that we have space and people ready to indulge in cultural exchange and again awareness among locals and steps from the administration are required.

> Well, we all know the condition of historic buildings in Jammu. I personally have been attending such meetings where the administration talks about plans to conserve the heritage of the city. But shamefully nothing solid has come out so far. The heritage buildings have become a hub for drug addicts and alcoholics. I won't name any names but unfortunately, we haven't been able to secure the premises of our heritage buildings. What's required is the seriousness and will to save our roots. We are nothing without our history and heritage.

Sociocultural heritage is passed on from one generation to another through parents, education, society, religion, traditions, friends, books, radio, television and movies etc. Cultural heritage refers to a communal bond which links us to a community. It signifies our roots, past, identities and our link to our history, to our present and the future as well. It encompasses social and cultural values and traditions passed down over several generations. It also includes the values, habits, attitudes, ideas, beliefs, monuments and buildings belonging to a particular community. STDs enable tourists to better communicate and interact with the surroundings of a destination while travelling and this further ensures the safeguarding of its heritage (Buhalis & Amaranggan, 2014).

Theme 5: Stewardship

> The natural amenities are precious and diverse in Himalayan cities and we have unique flora and fauna. We need proper urban planning in order to make sure that nature is not affected by day-to-day activities and most importantly by tourism.

> Tourism development can put pressure on natural and built amenities when the arrival of tourists increases in a destination. It can force local populations to compete for the use of critical resources. The administration should be seriously willing to make regulations and implement them and at the same time creating awareness among the masses.

While governance mostly deals with the proposal and enactment of laws to ensure a safe and productive society. Stewardship would be to make sure those laws are followed and adhered to by the governed. The term smart tourism has been embedded into cities to designate endeavors intended at using innovative technology to attain optimization of resources, effective and unbiased governance (Gretzel et al., 2016).

Theme 6: Sustainable development

> The natural amenities and resources of the Himalayas are very rare and fragile. We have many lakes, forests, rivers and animals. This makes us more responsible for taking steps which are sustainable and eco-friendly. We cannot just intensively promote tourism here, rather we need to promote sustainable tourism. It's the only way to preserve Himalayan cities.

> The Himalayas are rich in natural resources. Water, forests, flora and fauna are all abundant here. Due to the terrain they pack an incredible amount of biodiversity in a relatively small area. These are now under stress due to over-extraction. Conservation of these valuable resources is now crucial. The wise use, development and conservation of our natural resources is every individual's duty.

Sustainable development has emerged as a topic of interest in both academia and in private and public establishments (Rusandu, 2008). There is also a point of view that sustainable development depends on harmony with the necessities of the whole of human development and the ecological balance (Lélé, 1991). In other words, we can say that, the vision of sustainable development must be in accordance with combined economic growth, democracy, social justice, environmental protection and the rule of law. Sustainability and the preservation of nature are the sub-themes. Sub-domains, cultural, technological and political, of sustainable development have been considered too (James, 2014). Smart cities are an icon of a sustainable and livable city and similarly smart tourism destinations must be capable of guaranteeing the sustainable development of an area where tourism occurs (Schaffers et. al., 2011). The ultimate goal behind all these efforts is to enable resource availability and sustainability leading to an improved quality of life and visits (Buhalis & Amaranggan, 2014). Moreover, the Ministry of Urban Development in India, identifies the environment, social sustainability and competitiveness as the basic elements of smart cities that promote the quality of life.

Theme 7: Tourism resources

> There are few agencies which spend time and energy in planning the packages but they are not sufficient of course. Enough attractions must be created in the city. We lag behind in lots of ways as far as packages and products are concerned. We ought to have new products which can appeal to all.
>
> We need to identify other tourism attractions and we have to make service providers aware about them, so that they can add new attractions to already existing tour packages.

Tourism resources are natural and man-made creations which have the ability to attract tourists to a tourism destination. They are shaped in accordance with the various physical and psychological needs of the tourists. In the form of a tourism product, tourism resources generally take the shape of cultural, ethnographic, social, artistic and ambient resources. It is important to facilitate well-organized and effective utilization of tourism resources and integrating tourism suppliers to make sure that the profits or benefits from tourism are equally disseminated through the local society (Buhalis & Amaranggana, 2014).

Moreover, 'attractions, information, facilities, services, locals, technology, events, platforms, transportation, traffic' are the keywords with the highest frequency. These also make up parts of the statements in open coding which have been later grouped into themes. Figure 1 presents a bar chart for the first 10 keywords with the highest frequency whereas. Figure 2 includes all the 30 keywords extracted from the transcripts. It may be noticed that keywords like accessibility, amenities, internet, products etc. are important in terms of an STD, however their frequency is low. This may be due to the reason that respondents may not by chance have quoted them.

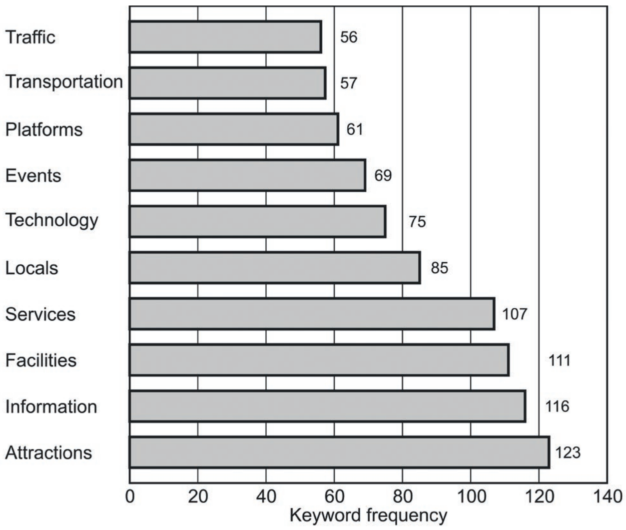

Figure 1. Presentation of important keywords obtained by content analysis
Source: authors

Figure 2. Word cloud of the important keywords obtained by content analysis
Source: authors

5. Discussion

This study brings out the enabling factors which can create support for Himalayan cities in the course of becoming STDs. It can help the local administration and the government to act accordingly in order to make sure that these challenges are tackled and developmental policies related to smart tourism are successfully and effectively implemented in the study areas. The themes identified will be beneficial for tourism destination managers to appraise their smart development, and further for researchers who intend to work on smart destinations, especially in India. These themes can act a roadmap towards the concrete indicators to be appraised in a tourism destination to transform it into an STD. This can further help to evaluate the level of smartness of a tourism destination by the detailed examination of its real-world applications (Wang, 2013). The analysis of the required indicators will also help the destination management organization in the management of destination smartness. Finally, it is clear from the results of the study that STD plans must acknowledge and practice environmental and social sustainability and data management, which are not merely tendencies but also primacies for any tourism destination. It is necessary to change the existing infrastructure-oriented approaches towards service-oriented ones. The main components of the STD concept are investments in human and social capital, traditional transport and modern ICT infrastructure in order to meet the social, cultural, economic, leisure and personal needs of visitors (Zygiaris, 2013). Collaborations among different sections and levels of stakeholders would improve the implementation and effectiveness of a smart tourism strategy and planning by the government (Buhalis & Amaranggana, 2014). It is also important to facilitate direct contact between tourists and local people by encouraging the locals to take active part in tourism activities (Gretzel et al., 2016). Local government can conduct capacity building programs for local communities to instruct and encourage them to provide services like home stay facilities for tourists or workshops for starting tourism-related businesses etc. This would promote local culture, involve the visitors in experiential tourism and also reduce the adverse effects of new construction on the environment. Stakeholders and local communities should take care of the available tourism attractions and should also take an active part in the preservation of natural (Bhagsu Nag-Dharamshala) and man-made attractions (Mubarak Mandi-Jammu), so that authorities can get the required help to preserve those attractions. Along with the administration, tourism stakeholders should take steps to promote local art, crafts and souvenirs which symbolize their traditional art and bring tourists to such spots. This would not only keep the local traditions alive but also help local people to sustain themselves economically through tourism.

'Smart tourism' is a novel term applied to represent tourism destinations globally (Hollinshead, 2004). It assists in overall city development and the enhancement of services in a number of ways. STDs can increase their competitiveness with the implementation of technologies to enhance tourism experiences. To ensure the success of a tourism destination it is important to focus on human resources and innovation in combination with cooperation and collaboration on local and regional levels (Masseno & Santos, 2018). Respondents are mostly in support of the smart tourism dimension, it is clear that there is significant potential in Jammu and Dharamshala to become STDs. This study could be a very important one in the existing growing popularity of STDs, as there is a need to prepare and execute sustainable plans which will lead the way to STDs in India.

6. Research limitations

Firstly, as results are context-dependent, they are not generalizable. The present study is one among the very few undertaken in India on STDs which aims to understand how they can be established in the Himalayan belt. The lack of work on STDs in the Indian context was a challenge for this study. Due to limitations of time and money the study is restricted to only two Himalayan cities i.e. Dharamshala and Jammu. Time and difficulty to get appointments for interviews, have been the major limitations. People have limited time and it is hard to cover the desired questions and topics in a short period. In order to get appointments for some interviews it took many months. Language has been a communication barrier as some of the respondents could not speak good English and few chose to speak in Hindi. Such audio recordings were later translated into English for the data analysis. Travelling to different locations is a costly and sometimes money became a constraint when interviews were scheduled at different times and dates. In addition, interviews with the government officials were often interrupted because of phone calls and visitors, breaking the flow and continuum of the interview. Moreover, many respondents (especially government employees) hesitated to answer questions regarding governance and policy related problems in their respective cities. They often overlooked the obvious problems and spoke highly about the plans of the government. This, to an extent affects the quality of the data collected. Due to the paucity of time the study was restricted to the opinions of only certain stakeholders. The sample taken for the study were from the public and private sectors and academics. Tourists and local residents could have been included in the study. Also, the sample size could have been increased.

7. Conclusions and future research

The debate on smart cities and STDs has been growing in the present time in India. However, the work of conceptualizing and defining an STD, what its constituents are and how to create one successfully, is still in progress. There is a need to understand the futuristic approach of transforming Indian smart cities into STDs. It is clear from the available literature that smart tourism is a fundamental part of smart city development and depends on infrastructure, utilization of information resources and the development of the intelligence industry. Various countries around the world are seeking to build smart tourism ecosystems on the basis of smart cities, but the complexity of the sector makes it difficult to go beyond technological advances. Cities in India are crowded with people and urban activities. An appraisal of some sectors at a city level is necessary to understand challenges in smart city development.

The development of smart tourism is already happening naturally from the excessive absorption of technology in the tourism industry. However, systematic and widespread coordination and exchange as well as the utilization of tourism data for value creation are still at a nascent stage. This work aims at studying the perspectives of key stakeholders towards the dimensions of STDs, which is the initial stage of contributing towards the tourism development of the study area. It is pivotal that at first the problems are clearly diagnosed so that appropriate solutions are provided for the improvement of policies, and this study identifies those which are to be rectified for the betterment of tourism in the study areas. The work contributes towards understanding situations and the views of respondents from public and private sectors and academics. It further contributes to identify enabling factors which can support Himalayan cities to become STDs so that the authorities can understand what is required there so that they can evolve in future towards smart tourism. This study also focuses on several popular aspects, including the utilization of smart applications which can be used for various functions, such as apps for parking or reservation of accommodation and the increasing involvement of citizens in destination planning.

This study has only touched on a very small aspect of the term 'smart tourism destination' and a lot of work can be done in this research area in India.

Future research can be improved by employing mixed methodology, multiple methods, quantitative study etc. to the perceptions of residents, in-depth interviews with tourists and focus groups with more experts in related fields that can cross-validate the findings achieved here. More stakeholders can be included in future studies (tourists, local residents etc.). This would make clear which group of stakeholders support which items of a STD. Also, it would be thought-provoking to perform a quantitative study on the perceptions of the residents (social capital) in relation to the 'smartness' of the destination. The area has been limited to only two cities, Jammu and Dharamshala, and this could be extended to other Himalayan cities for a broader view of the problems and challenges involved in smart tourism development. Further, there is scope to include more smart tourism dimensions and items in future studies which would provide a much broader scenario. Future studies could discover other factors influencing smart tourism development at Indian tourism destinations to make it smooth and sustainable. In the present scenario with growth in the popularity of smart cities in India, the need is to make and execute sustainable plans for the development of smart cities which will ultimately lead the way to STDs in India and across the world.

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Appendix. Questionnaire

No.	Respondent's opinions	Questions
1	About the smart attraction dimension	– Do you think there are sufficient 'artificial' attractions available in your city? Kindly elaborate. – Do you think the heritage attractions in the city are well managed? What else is required? – Do you think that we are well equipped for organizing special events like fairs, festivals etc. in the city and how can we manage them effectively? – In your opinion what are the various ways to manage the attractions of the city through collaboration and participation?
2	About the smart accessibility dimension	– What is your opinion about public transport and traffic management in the city? What else is required to improve accessibility in the city? – Internet, websites, mobile applications, social media, QR codes, information services etc. are immensely popular in this era. Do you think there are adequate digital facilities in the city? How can we utilize them to enhance the tourism in the city? – What kind of regulations are required to develop and maintain the accessibility of attractions in the city?

3	About the smart amenities dimension	– How do you think the natural amenities and resources of the Himalayan cities differ from other destinations? What should be done for their effective preservation and management? – Do you think there are sufficient built amenities in the city? Do you feel more hotels, restaurants etc. are required? – Which practices and methods should be used to manage both the natural and built amenities in the city?
4	About the smart ancillary dimension	– Do you think there are adequate banking facilities in the city? What is required to enhance the available banking services for the benefit of citizens and tourists? – Do you think there are adequate postal services in the city? What is required to enhance them? – Do you think there are sufficient medical services for tourists in the city? In your opinion how can we provide effective and quick medical services to tourists? – Do you think that local communities are well aware and educated to interact with tourists? Which steps can be taken to ensure the same? – In your opinion, are there sufficient platforms for enabling cultural exchange among visitors and locals for mutual enrichment? How can we facilitate effective cultural exchange? – Citizens these days are well equipped to collect, disperse and analyze news and information, especially by means of the internet. Do you think platforms for this journalism are available in the city? How can we engage tourists in citizen journalism? – Digital media have become an integral part of the consumption and production of culture in the past few years. Some examples of e-culture products and services include smart phone apps for museums, AR/VR apps, etc. Do you think e-culture is required to enable a visitor's respectful immersion in local history and traditions? If yes, then please throw light on its applicability in the city. – Do we have effective platforms for getting feedback from tourists in the city? How can we get feedback from tourists effectively through online and offline platforms?
5	About the smart activities dimension	– Are we well equipped for organizing gatherings and events on areas like education, religion, health or retreats in the city? What can be done for effective management of such events? – Providing quick access to an activities timetable, travel itinerates or ticket bookings/reservations is the latest and popular trend in tourism destinations? What is your opinion about it? – According to you, how can we effectively manage tourism activities in the city?
6	About the smart packages dimension available	– In your opinion are we equipped with the latest technology for effective management of transport services in the city? How can we make the best use of technology in transportation services? – In your opinion do we have sufficient technological platforms for providing information about available accommodation packages to tourists? How can technology assist in enhancing accommodation services? – Technology helps in enhancing overall experience of tourists and it can also assist in the co-creation of tourism packages? How can we utilize the technology for the co-creation of packages in the city? – Do you think the tourism packages which are being offered in the city are well-planned and sufficient? According to you what are the necessary steps required for the effective management of tourism packages and products?

DOI: https://doi.org/10.18778/0867-5856.33.2.05 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Destination brand brilliance as a differential advantage for a tourist destination

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How to cite (APA style): Barkhordari, M., Shirmohammadi, Y., & Hashemnia, S. (2023). Destination brand brilliance as a differential advantage for a tourist destination. *Turyzm/Tourism, 33*(2), 55–69. https://doi.org/10.18778/0867-5856.33.2.05

ABSTRACT

The purpose of this article is to investigate the formation of tourist-based destination brand brilliance as a differential advantage for a destination according to Alderson's differential theory. This will be done via content generated on social media sites by both destination management organizations and tourists, and through the mediating role of three dimensions of Aaker's brand equity model: awareness, image and perceived quality. Alderson's differential theory in a tourism context, and investigating the brilliance aspect of a brand, are both new research areas. Data was collected by electronically distributing questionnaires to 398 WhatsApp and Telegram users in Iran. This study confirms the relationship between tourist-generated content and destination brand brilliance through the mediating roles of awareness, image and perceived quality, but the content generated by the destination management organization to make a destination brand brilliant is only possible through the mediating roles of image and perceived quality. There is also a significant positive relationship between the perceived quality of a destination and the formation of destination brand brilliance. The findings of this research will help destination management organizations to better think about, and better manage, content generated on social media sites by organizations and tourists to form brilliance for their destination brand.

KEYWORDS

destination brand brilliance, social media sites, destination management organizations, tourist-generated content, Alderson's differential theory, destination brand equity

ARTICLE INFORMATION DETAILS

Received:
18 December 2022
Accepted:
1 August 2023
Published:
24 November 2023

1. Introduction

Due to ever increasing competition among tourism destinations, developing different competitive qualities is necessary (Hanafiah & Zulkifly, 2019). Every place strives to attract visitors and investors, but to be successful in this aim, it must be distinctive from others (Ruzinskaite & Lee, 2010). For enhancing the image of the destination and providing added value, place branding plays a significant role (Petrea et al., 2010).

Destination branding is a place (be it a country, city, region or town) which is perceived from the viewpoint of tourists and the tourism industry (Hanna et al., 2021). Destination branding reveals a destination's uniqueness and making it visible leads to a competitive advantage for the destination in the global tourism market (Miličević et al., 2016).

Terms such as 'place branding', 'national branding' or 'country branding' are becoming increasingly important (Briciu, 2013), and the branding of a place is the sum of all marketing activities, including "creating a name, symbol, logo and other graphical characteristic to identify and recognize a place; continuous fulfillment of expectations of an unforgettable experience; strengthening emotional ties between a place and its target group" (Jovičić Vuković, 2018, p. 135). The brilliance of a brand which is a distinct characteristic, sets one brand apart from others (Browe, 2018). The goal in making a brand brilliant is making it the obvious choice for the target clients (Humberstone, 2017) which results in competitive advantage for that brand.

In their research, Agaba and Kalu (2019) found that brand equity has positive significant effect on competitive advantage, and state that, by knowing this, firms can increase competitive advantage by paying attention to its dimensions. Brand equity can be preserved and enhanced by strengthening its dimensions (Yoo et al., 2000) which leads to a strong competitive advantage. "Destinations which possess a positive brand equity and strong competiveness attributes will have an advantage over their competitors in attracting more visitors" (Weng, 2019, p. 50). Gómez et al. (2016), by analyzing the application of city branding in five European capitals – London, Paris, Berlin, Rome and Madrid – found that the "brand equity of the European capitals consists of the awareness and perceived quality of a city as a destination and the influence of attitude on the brand and brand image" (Gómez et al., 2016, p. 1).

Brand equity, as assets of a firm, consists of "awareness, loyal customers, perceived quality and associations" (Aaker, 1991, p. 18) that are related to the brand's name and symbol. Brand equity is a valuable intangible asset for a company, but in an age when social media are hard to control, it gets harder and harder to manage (Seo et al., 2020). A brand has positive brand equity when consumers respond favorably to a product and when the brand is recognizable it has a 'differential effect' on consumer response (Keller, 2013). Each company always attempts to create some competitive advantage but the most important factor in competition is 'differential advantage', which can give a company an edge over what other competitors are offering (Alderson, 1957).

Today, use of the internet and social media sites (SMSs) is growing day by day and a large number of travelers use SMSs for searching and getting needed information and recommendations for planning trips (Bechte, 2023; Kar et al., 2021; Litvin et al., 2008). SMSs have revolutionized the business of tourist destinations (Kiráľová & Pavlíčeka, 2015) on which they have changed from 'passively' obtaining and using information on the internet to 'actively' produce content and communicate with others (Nong & Fong, 2022, p. 87). SMSs, a web-based technology, contribute to a direct and immediate relation between brands and their audiences in an online environment which, compared to traditional tools of communication such as TV, radio, news articles and magazines, turn one-sided communication into interactive communication and are very cost-effective, accessible and scalable techniques (Baruah, 2012; Bryikhanova et al., 2021). Among the advantages of SMSs is their freely and openly available content to users, generating and uploading huge numbers of videos and photos on its platforms for sharing trip experience with others (Kar et al., 2021; Wang et al., 2022).

SMSs offer opportunities to advertise to various target markets. Given the impact of SMSs on tourism and tourism products in general, they are also effective digital marketing tools, continuously evolving and becoming a key factor in helping businesses make the right decisions. They not only make travel more convenient, but also play an essential role in the development of the tourism business (Gvaramadze, 2022). Millions of communicators throughout the world use SMSs in their everyday routines (Nusair et al., 2012). In tourism, generated content on social media can be classified into two forms of uncontrolled content generated by visitors/tourists (tourist-generated content [TGC]), and traditional, controlled content generated by destination management organizations (DMO-generated content [DMOGC]), both of which have greatly changed tourist perceptions concerning destination brand equity (Huerta-Álvarez et al., 2020).

The aim of this article is to investigate the formation of tourist-based destination brand brilliance, which is considered a differential advantage for a destination brand based on the first three of Alderson's six differential bases i.e. market segmentation, selection of appeals and transvection. This is via content generated on SMSs by DMOs and by tourists, and through the mediating role of three dimensions of Aaker's brand equity model: awareness, image and perceived quality. This study also examines: (a) the effect of content generated on SMSs by DMOs and tourists on destination awareness, and destination image; (b) the impact of destination awareness and destination image on its perceived quality; and (c) the direct effect of the perceived quality of a destination on destination brand brilliance.

Since no study has been previously conducted on the brilliance aspect of a destination brand, and since no study has yet used Alderson's differential theory in the tourism context, this work can be regarded as an innovation in this regard. This article in addition to making a significant contribution to the literature on tourism by adding another aspect of brand marketing to Alderson's differential theory and to brand studies, is theoretically important because it provides a new field of study on branding for future work. Therefore, this article can be taken as the threshold for future research on Alderson's differential theory in the tourism field and on destination brand brilliance. The impact of the two types of content on the formation of destination brand brilliance is compared and contrasted. In this case, the current research is relevant to a destination marketing and managerial perspective, since it will reveal the effects of DMO- and tourist-generated content, as sources of information, on raising tourist awareness and creating a mental image, on making brilliant a destination brand, and on the final decision of prospective visitors when choosing a destination for their trip.

The structure of this article is as follows: section 2 provides the theoretical framework of the study, while section 3 includes a review of literature for the model's conceptual variables together with research hypotheses. Following methodology, data analysis and results, its theoretical contribution, practical implications and conclusions are provided, along with limitations and suggestions for further studies.

2. Theoretical framework

To assess the effect of the content generated on social media sites by DMOs and tourists on making a destination brand 'brilliant', considered a differential advantage, this study uses three dimensions of Aaker's (1991) brand equity model, i.e. brand awareness, brand associations (mental image) and perceived quality, as the mediating factors between content generated on social media and destination brand brilliance.

According to Aaker (1991), awareness refers to familiarity, and people often prefer to purchase a familiar brand because for them such familiarity means reliability and good quality. People assess a brand by their awareness. For associations or mental images, people will have positive thinking or good feeling towards a brand to which specific associations are linked. Perceived quality has a direct influence on customers' buying decisions especially when there is no incentive to buy. Perceived quality means support for high prices and brand stretching. Awareness, image and perceived quality are not independent, have cause-and-effect relationships, and represent customer insights and responses to the brand.

This study also uses Alderson's (1957) differential advantage theory of competition which describes the forces that act as motivators for firms to struggle for survival in the marketplace. Each firm in competition seeks some advantage over rivals which Alderson labels 'competition for differential advantage'. This competition comprises a constant struggle for establishing and maintaining differential advantages over other firms. When they are successful in applying changes to the targeted incentives of specific customers, for instance by preparing market offerings of 'higher quality or lower prices', they have a 'differential advantage' over other firms. Competition is the struggle among competitors for advantages, and in competition, a differential advantage is important as it can give a firm a decisive advantage over what other firms are offering on the market (Hunt & Arnett, 2006).

According to Heriyanto et al. (2021) Alderson was one of the first to suggest that firms must be able to produce unique characteristics so that consumers can compare competing firms. In Hunt's (2015) view, the basis for differential advantage can be an innovation that provides a particular customer with greater location convenience, faster service, lower prices or other advantages for a subset of potential customers. Among them, lowering prices are a form of differential advantage that could be neutralized quickly and easily, therefore improving services and facilities is the most commonly used means of gaining a differential advantage. According to Hunt and Madhavaram (2014) differential advantage theory competition "(a) is dynamic, (b) is both initiatory and defensive, and (c) involves a struggle for advantages" (Hunt & Madhavaram, 2014, p. 84).

3. Literature review and hypotheses development

3.1. Destination management organizations-generated content and tourist-generated content in tourism

Today SMSs are a new tool for providing information and changing DMOs' classical marketing and communication strategies (Bosio et al., 2018). Many DMOs have turned to SM platforms as a rather inexpensive and also global marketing tool (Hays et al., 2012; Uşaklı et al., 2017). Through SMSs, tourism businesses benchmark the experience of the consumer against their rivals in the market and consider its impact on profitability (Ampountolas et al., 2019). The main purpose of DMOs, which have traditionally been described as destination developers and marketers, is to market their destination to potential visitors (Blain et al., 2005; Presenza et al., 2005; Sotiriadis, 2021). Although, how the tourist perceives information, processes it and is motivated all impact on decision making for choosing a destination (Decrop, 2006), while information provided by DMOs about the destination plays a key role in tourists' intentions to travel (Cambra-Fierro et al., 2022). DMOs should be able to use both old and new media in an effective way to introduce and market their destination's attractions (Etuk, 2021). Their activities on these platforms are necessary for communication with prospective tourists in planning trips, and with real tourists throughout their trip (Bosio et al., 2018).

Nowadays, in the tourism market, a destination's ability to build enough awareness of its attractions for potential visitors has become a real source of 'competitive advantage' (Etuk, 2021). Levin (2020) asserts that brand awareness is equal to brand reach and explains that increasing awareness means attracting the attention of as many customers as possible. However, potential tourists travel to destinations in which they have more awareness (Araújo Vila et al., 2021). Providing information before and during the trip can be considered an important incentive that has both benefits for potential visitors and low costs for destination organizations (Bosio & Scheiber, 2022). Social media platforms are also crucial elements in the process of forming the image of a destination (Molinillo et al., 2017). Tourist's mental images are mostly formed by the information searching process (Chon, 1990) and anyone can create an image of a destination even though never having been there (Ferreira Lopes, 2011).

Instagram, as the largest data-sharing social media platform, having more than five million active users, has a large amount of useful information obtainable by potential visitors (Wang et al., 2022) and allows users to post images and textual content (Ong et al., 2022). One of the challenges for destination marketing organizations is finding out if they are marketing their destination in the best way on Instagram (Nixon, 2022).

Based on this discussion, the following hypotheses are proposed:

H_{1a}: DMO-generated content on SMSs has a positive impact on tourists' destination awareness.

H_{1b}: DMO-generated content on SMSs has a positive impact on tourists' destination images.

According to Liu et al. (2020), the investigation by Cox et al. (2009) was the first study that introduced the role of social media and its user-generated content (UGC) in the process of travel planning. Social media which consists of Web 2.0 applications allows its users to generate and share their content in the form of 'texts, videos, images and audios', and is supported by the huge amount of content produced by users on its platforms (İğneci & Pırnar, 2017; Kar et al., 2021). UGC has affected the tourism industry in three ways: (a) increasing SMSs such as MySpace (in 2003), Facebook (in 2004) and Instagram (in 2010); (b) changing travelers' behaviors in searching for information and planning a journey; and (c) combining social media platforms with the marketing methods of tourism organizations (Ayeh et al., 2013; Blystone, 2022; Kaplan & Haenlein, 2009).

UGC, by providing uncommercial, detailed and new information based on experience, meets the informational needs of customers (Yoo & Gretzel, 2011) and raises their awareness. In a tourism context, it brings destinations close to the prospective tourist, no matter where they are in the world (Kiráľová & Pavlíčeka, 2015). Consumer-generated content, by providing first-hand information and recommendations, is considered particularly important because they are from a consumer's point of view and people mostly rely on this content for indirectly experiencing their trip and also planning for it (Drews & Schemer, 2010; Gretzel et al., 2011; Tarannum, 2020). When a tourist visits a destination, the travel experience becomes an important tool for projecting a positive image of the destination to potential visitors (Juneja et al., 2022). Tourists share their travel experiences on SMSs, thus they become important representatives for providing destination images which influence the sustainable development of the destination (Zhu et al., 2022).

Hence, this article proposes the following hypotheses:

H_{2a}: Tourist-generated content on SMSs has a positive impact on tourists' destination awareness.

H_{2b}: Tourist-generated content on SMSs has a positive impact on tourists' destination images.

3.2. Destination awareness, image and perceived quality

'Destination awareness' is "what someone knows or thinks they know about a destination" (Konecnik & Gartner, 2007, p. 6). Destination awareness occurs once visitors have started the learning procedure and obtained knowledge about the destination brand (Huerta-Álvarez et al., 2020). Awareness has positive consequences such as selection and differentiation (Etuk, 2021). The destination awareness of potential visitors depends on information availability; the more available information about a destination, the more awareness of potential tourists about it (Gartner, 1993; Goodall, 1988). Awareness at its best leads to curiosity which can result in a visit, and the visit may lead to repeat purchases, on the condition of visitor satisfaction (Etuk, 2021; Konecnik & Gartner, 2007; Milman & Pizam, 1995). As Aaker (1991) indicates brand awareness includes a continuum from a sense of uncertainty about brand recognition to the belief that it is the only brand in the product category.

The 'destination image' concept was first introduced in the early 1970s by Hunt (1975), Gunn (1972) and Mayo

(1973) and thereafter it became a major topic for research in tourism (Stepchenkova & Mills, 2010). Images of travel destinations are susceptible to stimuli from a variety of sources, including one's own experiences (Cardoso et al., 2019), thus creating a positive image of a destination can affect tourist satisfaction and willingness to revisit (Jebbouri et al., 2022). The image of a destination influences tourists' "travel decision making, their behavior towards a destination, and the level of satisfaction and memory about the experience" (Susanti et al., 2023). By UGC, tourists' perceptions of the destination image can be increased (Hidalgo Alcázar et al., 2014). In their work, Nowacki and Niezgoda (2019, 2020) also found that the image of a place in the public perception is subject to the influence of tourists' opinion which can change the public choice and can determine competitive advantage. The image of a place affects not only regional but also corporate competitiveness, therefore in a city that attracts tourists, the image of the destination affects the profitability of many service-provider companies in the tourism market.

Aaker (1991, p. 80) defines 'perceived quality' as "the customer's perception of the overall quality or superiority of a product or service with respect to its intended purpose". The overall quality of a destination by a visitor consists of "products, services and experiences" (Konecnik & Gartner, 2007, p. 8). Perceived quality of services is related to consumer perception and is the antecedent of satisfaction (Aliman et al., 2014). According to Chon (1990) if the quality of a tourist destination's services is not satisfactory, it may lead to sharing information and negative opinions about the destination and thus harm destination brand equity (Wang et al., 2017). All marketing managers should be aware of the importance of destination quality and should match the consumer's subjective quality with real quality (Vantamay, n.d.). Destination image is considered one of the brand equity factors that influences the perceived quality of a destination (Roostika & Putri Yumna, 2023). Online travel agencies (OTA), which are also mediators between DMOs and potential tourists (Kalbaska, 2011) by offering a superior value proposition strengthen their relationship with their customers. This means that a better value proposition for tourists comes not only from app features, but also from the physical quality of services and facilities booked. Therefore, to convert potential tourists into actual tourists, functional features of OTA apps and the physical quality of services at travel destinations are of great importance (Talwar et al., 2020).

Hence, the following hypotheses are proposed:

H_3: Destination awareness has a positive impact on tourists' perception of quality in a destination.

H_4: Destination image has a positive impact on tourists' perception of quality in a destination.

3.3. Destination brand brilliance as a differential advantage for a destination

Tourist destination competitiveness is among the essential components of the tourism industry (Hanafiah & Zulkifly, 2019). Destination competitiveness is the destination's ability to attract more tourists and provide them with satisfying and memorable experiences (Weng, 2019). Just like consumer goods, evaluation of places is based on the 'brand' more than just actual or imagined features (Konecnik & Gartner, 2007). A predominant brand leads to a strong competitive advantage, and since "a differentiating association can be a key competitive advantage" (Aaker, 1991, p. 102), if a brand has a good position on an important attribute, it will be harder for competitors to challenge. If a brand is brilliant it means that it communicates in a way that always enchants the audience (Humberstone, 2017). Brilliance means "great brightness; luster, excellence or distinction; readily visible …; radiance" (Browe, 2018, pages are unnumbered). Brilliance is a feature related to the light which surrounds a product which can fascinate customers. In other words, it is the product and the light around it which causes organizational brilliance, and today a continuous effort is underway to raise the brilliance of products (Spoelstra, 2009). According to Weber Shandwick (2012, p. 2), "corporate reputation contributes to company market value". Weber Shandwick (2012, p. 2) also quotes from Gaines-Ross "it is now clear beyond a shadow of a doubt that a strong company reputation adds an undeniable brilliance to the brand". In a world that is getting louder and more crowded, a brand needs to communicate in a way that always charms the audience and keeps them interested and this is what a brilliant brand does (Humberstone, 2017).

Hence, the following hypothesis is proposed:

H_5: Tourists' perception of quality in a destination has a positive impact on destination brand brilliance.

Figure 1 demonstrates the relationships proposed in the hypotheses.

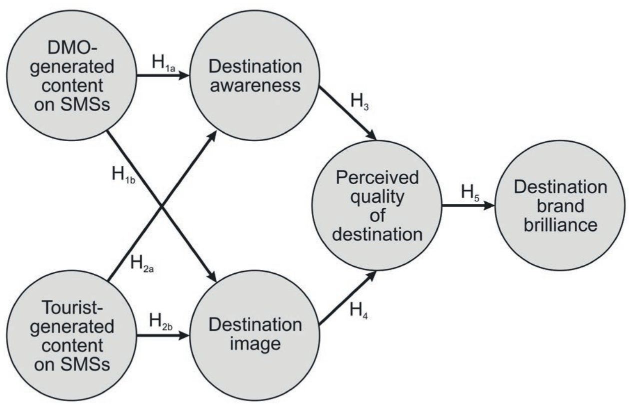

Figure 1. Conceptual model of the research
Source: modified from Huerta-Álvarez et al. (2020)

4. Methodology

4.1. Sample and data collection

In the current research, the method for collecting information was determined by a simple random selection of WhatsApp and Telegram SMS users in Iran. The participants, who were mobile SMS-users, were of different ages. To verify our hypotheses, the questionnaire, in which its statements were translated from English into Persian, was sent electronically to members of those communities (users of WhatsApp and Telegram). In Table 1 the demographic information of the respondents is presented. As shown, the number of female participants was larger than that of male (255 women/ 143 men), and the age range was young (80.4% under 45 years old). The sample was highly educated (91.2% were university graduates or above), and the majority were in employment (55.3%).

Table 1. Demographic profiles of respondents

Variable		Frequency	Percent
Gender	male	143	35.9
	female	255	64.1
Age	below 25	25	6.3
	25–35	136	34.2
	36–45	159	39.9
	46 and over	78	19.6
Education	below high school diploma	9	2.3
	high school diploma	26	6.5
	bachelor	151	37.9
	master or above	212	53.3
Job	employee	220	55.3
	self-employed	54	13.5
	jobless	31	7.8
	others	93	23.4
Isfahan trip experience	never	73	18.3
	once	86	21.6
	twice	61	15.3
	more than twice	178	44.7
Use of social media sites	WhatsApp	385	96.3
	Telegram	282	70.5
	Instagram	281	70.3

Source: authors.

For testing sampling adequacy, the Kaiser-Meyer-Olkin (KMO) measure was used to assess the appropriateness of using factor analysis on the data set, and Bartlett's test of sphericity was also used to test the homoscedasticity, which indicates if the samples are from populations with equal variances. Both tests had satisfactory indices: KMO = 0.931 > 0.7, and Bartlett' significance level = 0.00 < 0.01.

The questionnaire was created on a Google form and was structured in such a way that all the questions should have been answered (if a question was not answered, the next did not appear). Consequently, there were no outliers or missing data. Based on the critical value for the Mardia coefficient, which in this research is 1.84 and lower than 1.96, it is also concluded that multivariate normality was established (Kankainen et al., 2004).

4.2. Measurement

The information needed for this survey was collected through a questionnaire with 31 questions in order to measure the items and socio-demographic characteristics. The study was carried out by adopting a set of measurement items for each construct, all of which were from existing sources that had been tested before in the literature (Appendix). Each item was evaluated using a five-point Likert scale ranging from 1 (*strongly disagree*) and 5 (*strongly agree*). Before conducting the field work and in order to carry out a pilot test, the questionnaire was given to both experts and ordinary people to verify that it was comprehensible by all respondents. According to the pilot test results, the translation of some study statements was modified. In total, 398 responses to the questionnaire were collected.

The reliability of the scales was also established. Cronbach's alpha was used to measure the reliability of the scales and the results demonstrate that all dimensions reached optimal levels of reliability, with Cronbach's alpha indices above 0.7. With regard to the internal consistency of the constructs, construction reliability (CR) indices were all higher than the cut-off level of 0.7; average variance extracted (AVE) values also exceeded the minimum recommended level of 0.5 (Hair et al., 2017), except for destination image, whose result was marginal (Table 2).

5. Data analysis and results

Structural equation modeling (SEM) was used to evaluate the proposed structural model and to test H_1–H_5 (Figure 2). The data were analyzed using IBM statistical package for the social sciences (SPSS) Version 23.0 software, and to test all hypotheses,

Table 2. Measurement model estimation (dimensionality, consistency and validity)

Construct	Items	CR (t-value)	Loading	Cronbach's alpha	CR	AVE	MSV	ASV
DMO-generated content on SMS	DGC1	–	0.818	0.848	0.850	0.59	0.43	0.214
	DGC2	18.305	0.840	–	–	–	–	–
	DGC3	17.625	0.812	–	–	–	–	–
	DGC4	12.281	0.604	–	–	–	–	–
Tourist-generated content on SMS	TGC1	–	0.777	0.858	0.870	0.64	0.43	0.308
	TGC2	16.857	0.858	–	–	–	–	–
	TGC3	12.792	0.763	–	–	–	–	–
	TGC4	13.413	0.822	–	–	–	–	–
Destination awareness	DA1	–	0.726	0.712	0.720	0.59	0.58	0.430
	DA2	9.501	0.511	–	–	–	–	–
	DA3	14.765	0.803	–	–	–	–	–
Perceived quality of destination	PQD1	–	0.744	0.873	0.860	0.56	0.47	0.460
	PQD2	13.806	0.706	–	–	–	–	–
	PQD3	15.997	0.807	–	–	–	–	–
	PQD4	14.600	0.739	–	–	–	–	–
	PQD5	15.299	0.772	–	–	–	–	–
Destination image	DI1	–	0.809	0.701	0.760	0.53	0.51	0.410
	DI2	8.949	0.579	–	–	–	–	–
	DI3[a]	–	–	–	–	–	–	–
	DI4	15.611	0.778	–	–	–	–	–
Destination brand brilliance	DBB1	–	0.821	0.863	0.908	0.66	0.57	0.437
	DBB2	19.027	0.819	–	–	–	–	–
	DBB3	20.833	0.872	–	–	–	–	–
	DBB4	17.935	0.786	–	–	–	–	–
	DBB5	17.742	0.780	–	–	–	–	–

Note: CR – construction reliability, AVE – average variance extracted, MSV – maximum shared squared variance, ASV – average shared squared variance.

[a] DI3: Q19 relating to the measurement of destination image was eliminated because it presented a load under 0.5.

Source: authors.

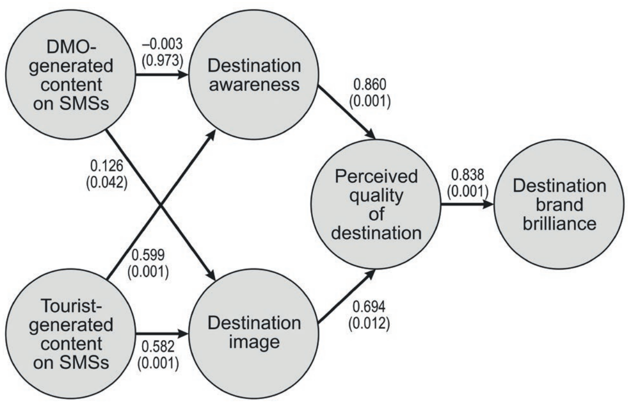

Figure 2. Structural equation model (SEM) estimation, standardized path coefficient

Note: p – statistic value between brackets; fit indices: degrees of freedom (df) = 2.34, root mean square error of approximation (RMSEA) = 0.058, comparative fit index (CFI) = 0.924, incremental fit index (IFI) = 0.925

Source: modified from Huerta-Álvarez et al. (2020)

analysis of moment structures (AMOS) was used. In particular, this study adopted the multiple mediation method via bootstrapping with 2000 samples. It applied the bias-corrected percentile of 95% for calculating each mediating effect. After using AMOS and regarding refinement of the measurement scales, one item (Q19) relating to the measurement of the destination image was eliminated because it presented a load under 0.6 (Hair et al., 2017).

5.1. Model refinement, reliability and validity

In the first estimation of the research model, it did not have satisfactory fit with goodness-of-fit indices. Using the covariance matrix between 16 measurement items as input, SEM analysis was performed to investigate the relationships between each pair of constructs as hypotheses. The fit indices of the model are shown in Table 3. The model's indicators of goodness-of-fit are:

degrees of freedom (df) = 2.34 < 3, root mean square error of approximation (RMSEA) = 0.058 < 0.08, Tucker-Lewis index (TLI) = 0.913 > 0.90, comparative fit index (CFI) = 0.924 > 0.90, incremental fit index (IFI) = 0.925 > 0.9.

Table 3. Goodness of fit indices of the model

Indices of the model	Criteria	Indicators
CMIN/*df*	< 3	3.160
Refined CMIN/*df*	< 3	2.483
Fit indices		
RMSEA	< 0.08	0.084
TLI	> 0.90	0.888
CFI	> 0.90	0.890
IFI	> 0.90	0.849
Refined fit indices		
RMSEA	< 0.08	0.061
TLI	> 0.90	0.927
CFI	> 0.90	0.938
IFI	> 0.90	0.939

Note: CMIN – chi-square minimum, *df* – degrees of freedom, RMSEA – root mean square error of approximation, TLI – Tucker-Lewis index, CFI – comparative fit index, IFI – incremental fit index.

Source: authors.

The reliability of the model constructs (as shown in Table 2) was assessed by using Cronbach's alpha, construct reliability and validity by all constructs' CR (>0.7), average variance extraction (AVE) (>0.5), maximum shared squared variance (MSV), and average shared squared variance (ASV), which indicated sufficient convergence effectiveness for these constructs (Hair et al., 2017). All constructs' CR are greater than AVE, and all AVEs are greater than MSV and ASV. The results indicate that all dimensions reach optimal levels of reliability with Cronbach's alpha indices above 0.7 (Table 2). According to univariate and multivariate normality tests, data normality was tested based on skewness and kurtosis indices for the scale items included in this study. No violation of the normality assumption was indicated based on the recommended absolute values of 3 and 7 respectively (Kline, 2011). According to an evaluation of the theoretical model, the result of path coefficient estimation (Table 4) was determined. According to Table 4 in hypothesis H1, that content generated on social media sites by DMOs has an effect on tourists' understanding of destination awareness with a path coefficient of −0.002 and p = 0.982, is not significant at the 95% level. Therefore, the first hypothesis is rejected.

As shown in Table 4, the six other hypotheses are however significant at the 95% level. Thus, these hypotheses are confirmed. According to the result, there is no significant relationship between content generated on social media sites by DMOs toward tourists' destination awareness. The Sobel test also showed no evident mediating effect of destination awareness between DMOGC on SMSs and perceived quality of the destination (Table 5). Therefore, this hypothesis is rejected.

Table 4. Significance testing results for model path coefficients

Hypothesis	Path	Path coefficient	*p*-value	Significant levels	Hypothesis support
H_{1a}	DMO-generated content on SMS → destination awareness	−0.003	0.973	NS	NO
H_{1b}	DMO-generated content on SMS → destination image	0.126	0.042	*	SP
H_{2a}	Tourist-generated content on SMS → destination awareness	0.599	0.001	**	SP
H_{2b}	Tourist-generated content on SMS → destination image	0.582	0.001	**	SP
H_3	Destination awareness → perceived quality of destination	0.860	0.001	**	SP
H_4	Destination image → perceived quality of destination	0.694	0.012	**	SP
H_5	Perceived quality of destination → destination brand brilliance	0.838	0.001	*	SP

Note: NS – not significant, NO – no support, SP – support; standardized path coefficient significant at $p < 0.10$, $^{*}p < 0.05$, $^{**}p < 0.01$, according to Hair et al. (2017) and Pritschet et al. (2016).

Source: authors.

Table 5. Sobel test results of the moderation effect

Path	Sobel test	p-value	Significant levels	Hypothesis support
DMO-generated content on SMS → destination awareness → perceived quality of destination	−0.045	0.963	NS	NO
DMO-generated content on SMS → destination image → perceived quality of destination	2.077	0.037	*	SP
Tourist-generated content on SMS → destination awareness → perceived quality of destination	6.731	0.001	**	SP
Tourist-generated content on SMS → destination image → perceived quality of destination	5.606	0.001	**	SP
Destination awareness → perceived quality of destination → destination brand brilliance	7.790	0.001	**	SP
Destination image → perceived quality of destination → destination brand brilliance	6.644	0.001	**	SP

Note: NS – no significant, NO – no support, SP – support; standardized path coefficient significant at $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.
Source: authors.

6. Theoretical contribution

"Alderson's contributions to marketing/management thought and theory are so far reaching that they are considered by some to be essential in building an understanding of marketing" (Tamilia, 2006, p. 473). Alderson (1957) adopts the term 'differential advantage' as "the term which best characterizes the dynamics of competitive advantage" (Alderson, 1957, p. 116). Differential advantage is a means for a firm to survive (Wooliscroft, 2006).

Until now, Alderson's differential advantage theory has not been used in the context of tourism and destination branding. In this research, an attempt has been made to examine tourist-based destination brand brilliance from the perspective of Alderson's differential advantage theory and, in this sense, the present article has made a contribution to that theory. The theory refers to the differential feature of a product or service, and the brilliance of a brand is also a differential feature of the product or service, considered a competitive advantage of the brand. Differential advantage makes the brand succeed over competitors. In addition this article has made a contribution to destination marketing and management thought and theory development from an Aldersonian differential advantage perspective.

This research investigated the formation of brand brilliance via DMOGC and TGC on SMSs through the mediating effects of the brand equity dimensions: destination awareness, image and perceived quality. However, this is the first time that the brilliance aspect has been studied and regarded as a brand competitive differential advantage, so it can be said that the present research contributes to the marketing and tourism literature by investigating the formation of the brilliance of a brand and especially destination brand. The positive and direct effect between destination perceived quality and destination brand brilliance illustrates that the quality of a destination and its services is important for forming brilliance for a destination brand.

This study also, by comparing and contrasting the impact of SMS generated content by both DMOs and tourists on potential tourists' destination awareness and image, has reached a different result from previous studies that suggest that content generated on SMSs by DMOs has no positive impact on creating awareness in potential tourists and only has positive impact on creating a destination image in tourists' minds. Therefore, this research has a managerial application because with the obtained results it helps DMOs to optimally use SMSs and content, and also by knowing the impact of the content of destination visitors on potential tourists, better manage the content produced by tourists.

Hunt and Arnett (2006, p. 334) refers to Alderson (1957) identifies six bases of differential advantage for manufacturing companies: "market segmentation, selection of appeals, transvection, product improvement, process improvement and product innovation" (Hunt & Arnett, 2006, p. 334). What Alderson means by 'market segmentation', which has the potential for a differential advantage, is that firms can have an advantage over rivals if they fill segments of demand not served or poorly served by competitors. What he means by 'selection of appeals' is that some companies can gain an advantage with the images that are conveyed to consumers through advertisements and other promotional tools. By 'transvection' he refers to gaining market share through a unique distribution channel. Since this article is about the tourism industry and providing services for tourists is different from products, we have used only the first three of Alderson's six differential bases as the theoretical basis of this article.

The tourist destination studied in this research was Isfahan province which, by possessing more than 22.000 historical monuments and sites, is called the top Iranian tourist destination by United Nations Educational, Scientific and Cultural Organization (Hateftabar, 2020), and is regarded as the tourist hub of Iran (Abyareh, 2007). According to the first three bases of Alderson's differential advantage, Isfahan can be said to have a differential advantage compared to other tourist destinations because of its architectural-historical attractions which are based on unique Iranian-Islamic architecture that cannot be found anywhere else. Based on the first of Alderson's differential advantages (market segmentation), this tourist destination is of interest to a certain group of tourists who are looking for architectural-historical attractions in an Iranian-Islamic style. The second of Alderson's differential advantages (selection of appeals) refers to the three elements of brand equity (image, awareness, perceived quality) of the destination, and also the advertising which is generated through content on social media sites by Isfahan DMOs, and by real tourists which convey the three elements of brand equity to the tourists. In this article, the third of Alderson's differential advantages (transvection) refers to the unique distribution channel of social media sites through which potential tourists get to know the attractions and services of this tourist destination.

7. Practical implications

The results of this research have different implications for destination marketing and management. Since the brilliance of a destination brand leads to the attraction of visitors and, therefore, results in economic benefits for the destination, it is essential for destinations to build brilliance into their brand in order to overcome their rivals. Since, according to the results of this study, perceived quality positively affects the formation of brilliance for a destination brand, if a tourist destination wishes to enchant its visitors and reach a brilliant level to get a differential advantage over its competitors, it must give attention to the quality of the services it provides to visitors and try to gain their satisfaction in order to leave unique memories of the trip. For this aim, DMOs should know about the needs and preferences of different types of tourists and visitors.

Today SMSs are of great importance and use in the tourism industry, so DMOs should not neglect building a base of satisfied visitors on SMSs to build trust in potential tourists and provide the imagery of an accepted and successful brand for them (Aaker, 1991). Proper and coordinated messaging must be sent by destinations to encourage consumer trust while also assuring safe travel within the region notwithstanding difficulties (European Travel Commission, 2022). For building destination brand brilliance and reaching a differential advantage, DMOs should also focus on providing necessary information about the destination on SMSs for potential visitors and raising their awareness about the destination. According to the findings of this research, poor content on SMSs generated by DMOs will fail to raise the awareness of potential tourists and also fail to build destination brand brilliance. So, effective content on SMSs by DMOs is of high importance in making a competitive and differential advantage for a destination.

Another implication of this research is that its findings confirm that there is a positive relationship between tourist-generated content on SMSs and raising the awareness of potential tourists which results in the brilliance of the destination brand and gains the attention of potential tourists. By knowing this, DMOs should find ways to stimulate or encourage visitors to produce positive content about the destination and about their travel experience on SMSs, as a result of which they can attract more visitors to the destination.

8. Conclusion

This research, by considering the mediating role of three dimensions of brand equity i.e. awareness, image and perceived quality, compares and contrasts the effects of the two types of content produced on SMSs, by DMOs and tourists, on forming the brand brilliance of a destination as a differential advantage according to Alderson's differential theory. There are many studies that overview the impact of social media content generated by DMOs or tourists on destination brand equity dimensions but this study took the initiative of studying the formation of brilliance for a destination brand by using Alderson's differential theory, for the first time in tourism literature, so contributing to the body of knowledge in the fields of destination branding and tourism.

In literature, the study conducted by Huerta-Álvarez et al. (2020) explored the content generated on social media sites by DMOs and tourists to positively influence tourist destination image. Gurung and Goswami (2017), and Hidalgo Alcázar et al. (2014), in their studies, also confirm that there is a positive impact of social media content generated by tourists on destination image. Seo et al. (2020) agree that UGC has significant effects on brand awareness while Roostika and Putri Yumna (2023) concluded that destination awareness and destination image positively impacted perceived quality. Therefore, the results of this study related to H_{1b}, H_{2a}, H_{2b}, H_3, and H_4 are consistent with these studies.

The work of Huerta-Álvarez et al. (2020) also found that DMO-generated content on social media has a positive effect on destination awareness. On the contrary, the results of the present study show that DMO-generated content on social media sites has no impact on tourist destination awareness, and according to the results, H_{1a} is rejected. Its rejection may come from a variety of reasons including (a) the lack of trust of the users of SMSs and potential tourists in the content produced by Isfahan DMOs, therefore, they prefer to refer to TGC for getting needed information; (b) insufficient advertising or the production of not very attractive content by Isfahan DMOs on their SMSs which causes a potential tourist to find TGC more attractive. Other reasons may be that since the study of Huerta-Álvarez et al. (2020) was conducted in Europe, there may be a cultural difference between Asians and Europeans in using the SMSs of their DMOs; that is, maybe Asians do not have much desire to refer to DMOs to get information for planning their trip.

In this study, it was found that there is a positive impact of the perceived quality of a destination on the formation of destination brand brilliance (H_4). Since no study has been conducted before on destination brand brilliance, no comparison can be made regarding this result. Based on the findings of this research, the perceived quality of the destination plays an important role in creating brilliance for the destination brand. Perceived destination quality has a positive impact on tourist satisfaction (Nikhashemi, 2017), which comes from receiving services of the desired quality. Eight main attributes contribute to the formation of the quality structure of the destination namely "amenities, accessibility and logistics, core tourism experience, hygiene, information, security, value for money and hospitality" (Rajaratnam et al., 2015, p. 466). These eight attributes, in addition to services, can be helpful in providing the best service to tourists and satisfying them, which leads to tourist revisits and finally to the brilliance of the destination brand.

The result of this study can be helpful for DMOs, and especially Isfahan DMO, to manage their content on SMSs, more accurately seek to troubleshoot and solve existing problems, and be able to try as best they can to gain potential tourists' trust and attract more to their destination.

9. Limitations and future studies

Although this research presents significant theoretical and practical implications, some limitations must be noted. First, the fact that it was carried out only in the Isfahan region in Iran can be regarded as a limitation in terms of the generalizability of research results. So, it is suggested that a similar study be conducted in the most similar cities to Isfahan on six continents, i.e. Kuala Lumpur (Asia), Johannesburg (Africa), Barcelona (Europe), Montreal (North America), Curitiba (South America), and Melbourne (Oceania) (Talebian et al., 2014), the results can be broadened by repeating the study. Second, this research used only a quantitative research method, so future research could apply a mixed-method that provides richer results. Third, the reasons why the content produced by Isfahan DMO do not affect the awareness of potential tourists is not investigated. Future research could help to clarify why the content generated by Isfahan did not create any effect on the destination awareness of potential tourists. Finally, more research is also needed to study potential tourists' incentives for explaining the reasons for their referring to and relying on TGC.

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Appendix. Constructs and item statements

Construct	Statement		References
DMO-generated content on SMSs	DGC1	I'm satisfied with the content generated on social media sites by the destination organization in Isfahan	Adapted from Huerta-Álvarez et al. (2020)
	DGC2	The level of the content generated on social media sites and other technologies by the destination organization in Isfahan meets my expectations	
	DGC3	Content generated on social media sites by the destination organization in Isfahan is very attractive	
	DGC4	Content generated by the destination organization in Isfahan is more effective compared to the content generated by other destinations	
Tourist-generated content on SMSs	TGC1	I'm satisfied with the content generated on social media sites by other tourists about Isfahan as a tourist destination	Adapted from Huerta-Álvarez et al. (2020)
	TGC2	The content generated on social media sites by other tourists about Isfahan is very attractive	
	TGC3	The content generated on social media sites by other tourists about Isfahan gives me different ideas about this destination	
	TGC4	The content generated on social media sites by other tourists about Isfahan helps me gain ideas about this destination	
Destination awareness	DA1	I can imagine what Isfahan is like as a tourist destination	Adapted from Huerta-Álvarez et al. (2020)
	DA2	I know about Isfahan	
	DA3	I can confirm Isfahan as a tourist destination	
Perceived quality of destination	PQD1	The quality of accommodation in Isfahan is excellent	Adapted from Huerta-Álvarez et al. (2020)
	PQD2	The quality of infrastructure in Isfahan is excellent	
	PQD3	As a tourist destination, Isfahan offers excellent quality	
	PQD4	The reliability of Isfahan as a tourist destination is very high	
	PQD5	Considering what is offered in Isfahan, I can expect excellent services	
Destination image	DI1	I can imagine several features of Isfahan as a tourist destination in my mind	Adapted from Huerta-Álvarez et al. (2020)
	DI2	Isfahan is different from other tourist destinations	
	DI3[a]	*Isfahan is superior to other tourist destinations*	
	DI4	I know Isfahan is a tourist city	
Destination brand brilliance	DBB1	The services provided by Isfahan win my trust	Adapted from Krystallis and Chrysochou (2014)
	DBB2	In terms of receiving good services, I can rely on Isfahan	
	DBB3	I'm satisfied with the quality of services in Isfahan	
	DBB4	Compared to other tourist destinations, the services provided by Isfahan are attractive and excellent	
	DBB5	Isfahan meets my main needs in terms of providing services	

[a] DI3 was eliminated following dimensionality analysis.
Source: authors.

DOI: https://doi.org/10.18778/0867-5856.33.2.06 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Ecotourism research progress: A bibliometric analysis (period 2002–2022) using VOSviewer Software

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How to cite (APA style): Le, A.T., & Nguyen, H.S. (2023). Ecotourism research progress: A bibliometric analysis (period 2002–2022) using VOSviewer Software. *Turyzm/Tourism, 33*(2), 71–81. https://doi.org/10.18778/0867-5856.33.2.06

ABSTRACT

This study aims to conduct a bibliometric analysis of ecotourism literature in the period from 2002 to 2022 using VOSviewer software. 1,693 articles indexed by Scopus were analyzed. The results reveal that ecotourism is a developing research field that attracts scholars from many countries. Most of the articles were published in the United States, China, Indonesia, Malaysia, Australia, and the United Kingdom. The study identified four main thematic areas: (a) the involvement of local communities and stakeholders in ecotourism management and development in protected areas; (b) ecotourists' perceptions, attitudes and behaviours; (c) the use of technology and environmental management to support ecotourism development planning and management; and (d) biodiversity conservation and sustainable development in ecotourism. This study suggests that decision-making based on data, stakeholder participation and climate adaptation in the planning and management of ecotourism is attracting the attention of researchers worldwide.

KEYWORDS

ecotourism, bibliometric analysis, sustainable development, VOSviewer

ARTICLE INFORMATION DETAILS

Received:
15 March 2023
Accepted:
12 October 2023
Published:
24 November 2023

1. Introduction

Ecotourism is one of the forms of sustainable tourism that aims to meet the needs of sustainable development worldwide (Fennell, 2008). The concept of ecotourism gained popularity due to the negative social and environmental impacts associated with mass tourism, which places more emphasis on income and growth rather than the conservation of the environment and the sociocultural goals of the community (Ziffer, 1989). One of the most widely accepted definitions of ecotourism is that of Hector Ceballos-Lascurain. According to this author, ecotourism is "travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations (both past and present) found in these areas" (Ceballos-Lascurain, 1987, p. 14). Discussions on ecotourism have gained prominence in both environmental and social conferences and journals worldwide, with expanded definitions incorporating ethical issues or normative elements (Cobbinah, 2015).

The increasing popularity of ecotourism at the global level has opened up many opportunities for research in this field. Moreover, the availability of numerous ecotourism-related publications has increased the demand for conducting research to examine and analyze their characteristics, trends and impacts (Hasana et al., 2022). Bibliometrics is a technique for examining the evolving principles over time based on the social structure, concepts and intelligence of a given field (Zupic & Čater, 2015). It utilizes representative abstracts from existing literature to analyze and categorize bibliographic documents (Suban et al., 2021). As a result, researchers employ this analysis to identify developing trends, intellectual structures and research characteristics, and to gain deeper insights into collaboration models within a specific field of existing literature (Donthu et al., 2021). Bibliometric indices were measured using the VOSviewer, a reliable software for bibliometric data research (van Eck & Waltman, 2010). This is a free software tool for creating, visualizing and exploring maps based on network data.

In the above context bibliometrics can also be used to explore and analyze trends and opportunities in ecotourism research in a given period of time. Unfortunately, the scope of previous studies in this field has been quite limited. They primarily have used data extracted from the Web of Science database (Liu & Li, 2020); focused only on articles published in selected journals (Khanra et al., 2021); focused only on articles published in the same journal (Singh et al., 2021); limited the content of ecotourism development to conservation areas (Hasana et al., 2022). Therefore, in order to fill the existing gaps, the current study has used the Scopus database. The analysis includes qualitative and quantitative aspects of ecotourism research in the period from 2002 to 2022 with the support of VOSviewer software. Specifically, the specific tasks identified in this study include: (a) analysis of the output of articles on ecotourism; (b) identify leading authors, journals on ecotourism research; (c) explore collaborative research trends; (d) identify the main research topics of the field of ecotourism. The study results provide the characteristics and research topics in different stages of development in the field of ecotourism since 2002. This analysis also identifies new research directions that researchers need to address in the future.

The rest of the article is organized as follows: in part 2, the bibliometric analysis method is introduced, and data collection is presented. Part 3 presents the results and discussion of the main findings of the bibliometric analysis while part 4 presents the conclusions, and finally, the references used for the study.

2. Data collection and method

The first stage of bibliometric analysis is to select a suitable database which has been determined by its usefulness for the research. The Scopus database was used to select a sample for the current survey. This is a database that is capable of providing detailed information on documents that are recognized by the academic community (Caviggioli & Ughetto, 2019). To perform the sample search process, a Boolean string was used in the initial search to find articles containing the keywords 'ecotourism OR eco-tourism'; these were chosen based on the experience of previous studies (Hasana et al., 2022; Khanra et al., 2021). The keywords may appear in the titles, abstracts, and author's keywords; however, this study only focused on searching for them in the titles because using a broader search would retrieve unrelated documents (Niñerola et al., 2019). The selected time frame for the search was from 2002 to 2022. The initial search yielded 2,630 articles.

The process of refining the research sample continued by selecting the most directly relevant articles on the ecotourism topic. The criteria chosen were (a) documents in the form of academic journal articles; book chapters, conference papers and books were excluded from the analysis; (b) academic journal articles written in English. As a final result, 1,693 articles from 572 different journals were selected and manually processed before being entered into for directory evaluation and analysis. The directory details of the articles were exported to an Excel spreadsheet for analysis, including journal title, publication date, author information, article title, keywords, abstract and citation count.

The continuous increase in tourism literature makes bibliometric analysis useful in tourism research for accumulating information, evaluating research performance and providing a profound insight based on evidence by analyzing previous research publications (Hall, 2011). The performance analysis techniques used include the total number of publications, total number of citations, authors and the leading countries publishing scientific articles on ecotourism. Using VOSviewer, this study examines the co-occurrence of author keywords, source co-citations, author and document co-citations, by utilizing scientific mapping (network analysis). The quantity, quality and structure of all types of bibliometric indices were also evaluated. Specifically, quantitative indices reflect the output of journals or authors; quality indices assess the importance and influence of authors, publications and journals; and structural indices reflect the degree of relatedness and connection of research topics, countries and scholars (Durieux & Gevenois, 2010). VOSviewer was used to compute and graphically represent the keywords on two types of bibliometric maps: network

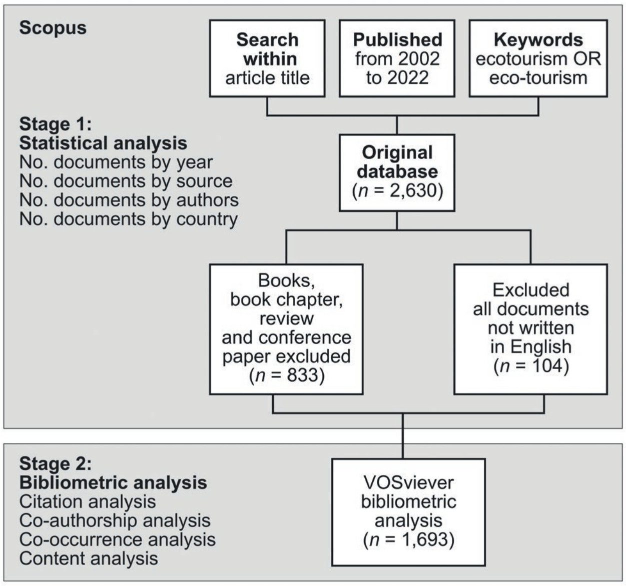

Figure 1. The process of data collection and the main research method
Source: authors

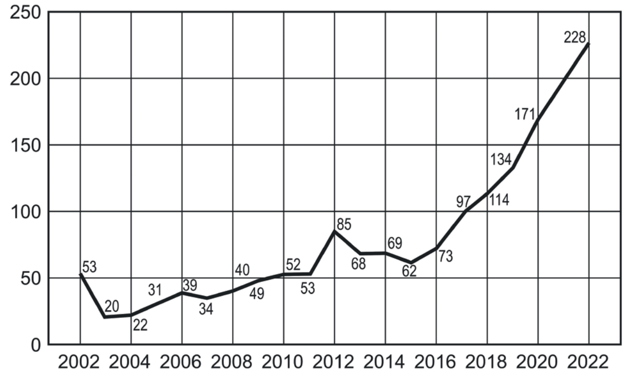

Figure 2. Number of academic articles from 2002 to 2022
Source: Scopus data

visualization and overlay visualization (van Eck & Waltman, 2017). The process of data collection and the main research method are illustrated in Figure 1.

3. Results and discussion

3.1. Annual publications

There were 1,693 articles published on the topic of ecotourism from 2002 to 2022 (Figure 2). The number of research articles on ecotourism has significantly increased in the past 20 years, from 53 articles in 2002 to 228 articles in 2022 (an average of 84 articles per year). Starting in 2002, designated as the International Year of Ecotourism, research has been conducted worldwide to gain a deeper understanding of ecotourism (Fennell, 2001). The number of articles recorded in 2002 was 53, followed by minor fluctuations from 2003 to 2008, and a growth trend from 2009 onwards when ecotourism began to be studied in developing countries (Mowforth & Munt, 2008). Therefore, what can be inferred from this data is that ecotourism is a developing research field and a topic that attracts the attention of scholars in many countries.

3.2. Leading journals

The number of articles and the number of citations can be employed to determine the popularity of journals, authors and articles in the field of ecotourism. The citation count of an article is used as a measure of the degree of recognition a published article has gained in academia (Caviggioli & Ughetto, 2019). However, this technique only takes into account a publication's popularity and not its importance in a research domain (Khanra et al., 2020).

The present study encompasses a total of 572 journals from various fields publishing research articles on ecotourism. Table 1 lists the top 10 journals based on the number of published articles and citations. These journals only account for 27.4% of the total articles, but they represent up to 53.6% of the total citations in the sample. *Journal of Ecotourism* tops the list with 141 articles and 3,550 citations. Established in 2002, this journal publishes theoretical, empirical and conceptual research on social, economic and ecological aspects of ecotourism, contributing innovative ideas and models for planning, management and practice in ecotourism (Singh et al., 2021). *Journal of Sustainable Tourism* comes in second for both indices with 68 articles and 3,489 citations. As the only journal devoted to sustainable tourism research (Lu & Nepal, 2009), it is entirely suitable for the ecotourism theme. Long-established tourism journals, such as *Annals of Tourism Research and Journal of Travel Research*, also appear on the list. The number of articles and citations for those journals is relatively stable.

The journal *Sustainability* ranks third in terms of the number of published articles among all sources. It is a multidisciplinary international academic journal published by MDPI, established in 2009, focusing on publications related to sustainable development in the fields of environment, culture, economy, education and society. However, due to its relative youth, its citation count has not yet reached a significant figure (Niñerola et al., 2019).

Out of a total of 572 journals, 64.5% only published one article, indicating that they are not specialized journals in the field of ecotourism. However, the high participation of a large number of non-specialized journals indicates that ecotourism is a multidisciplinary field that attracts interest from various research communities (Buckley, 2012).

Table 1. Ten journals with the highest number of articles in the field of ecotourism research

Rank	Journal name	Publisher	SCImago Journal Rank 2021	Number of articles	Number of citations
1	*Journal of Ecotourism*	Taylor & Francis	0.528	141	3,550
2	*Journal of Sustainable Tourism*	Taylor & Francis	2.476	68	3,489
3	*Sustainability*	Multidisciplinary Digital Publishing Institute (MDPI)	0.664	49	411
4	*African Journal of Hospitality, Tourism and Leisure*	Africa Journals	0.210	35	118
5	*Journal of Environmental Protection and Ecology*	Scientific Bulgarian Communication	0.182	34	64
6	*Journal of Environmental Management and Tourism*	ASERS Publishing House	0.238	33	82
7	*GeoJournal of Tourism and Geosites*	Editura Universitati din Oradea	0.332	31	168
8	*Tourism Management*	Elsevier	3.383	26	2,426
9	*Environment, Development and Sustainability*	Springer Nature	0.679	24	339
10	*Tourism Recreation Research*	Taylor & Francis	0.877	24	224

Source: compiled by the authors from VOSviewer.

3.3. Leading authors

The current study sample includes a total of 3,978 different authors and co-authors involved in publications. Among them, only 30 authors have successfully published five or more articles. Table 2 lists the authors with the highest number of ecotourism articles. At the top of the list is Mauricio Carvache-Franco; co-authored by Wilmer Carvache-Franco and Orly Carvache-Franco. This group of authors focuses on analyzing the sociological aspects and relationships with motivation, satisfaction and loyalty in ecotourism in nature conservation areas (Carvache-Franco et al., 2021, 2022). These scholars have only published ecotourism articles since 2018, so the number of citations is not high.

Other authors in the top 10 have fairly similar numbers of articles and citations, ranging from 7 to

Table 2. Ten authors with the highest number of articles in the field of ecotourism research

Rank	Author	Affiliations	*h*-index	Number of articles	Number of citations
1	Carvache-Franco, M.	Universidad Espíritu Santo, Samborondón, Ecuador	13	16	83
2	Carvache-Franco, W.	Escuela Superior Politécnica del Litoral, Guayaquil, Ecuador	10	14	52
3	Walter, P.	University of British Columbia, Vancouver, Canada	18	10	351
4	Buckley, R.	Griffith University, Brisbane, Australia	45	9	245
5	Carvache-Franco, O.	Universidad Católica de Santiago de Guayaquil, Guayaquil, Ecuador	9	8	30
6	Stronza, A.	Texas A&M University, College Station, United States	22	7	670
7	Fennell, D.A.	Brock University, St. Catharines, Canada	33	7	156
8	Jaafar, M.	Universiti Sains Malaysia, Minden, Malaysia	26	7	89
9	Hamzah, J.	Universiti Kebangsaan Malaysia, Bangi, Malaysia	7	7	62
10	Er, A.C.	Universiti Kebangsaan Malaysia, Bangi, Malaysia	13	7	48

Source: compiled by the authors from VOSviewer.

Table 3. Ten authors with the highest number of citations in the field of ecotourism research

Rank	Author	Affiliations	*h*-index	Number of citations	Number of articles
1	Weaver, D.B.	QUT Business School, Brisbane, Australia	39	727	6
2	Stronza, A.	Texas A&M University, College Station, United States	22	670	7
3	Powell, R.B.	Clemson University, Clemson, United States	25	356	5
4	Walter, P.	The University of British Columbia, Vancouver, Canada	18	351	10
5	Donohoe, H.M.	Flagler College, St. Augustine, United States	13	266	5
6	Buckley, R.	Griffith University, Brisbane, Australia	45	245	9
7	Snyman, S.	African Leadership University, Pamplemousses, Mauritius	10	192	5
8	Garrod, B.	School of Management, Swansea, United Kingdom	26	183	5
9	Butcher, J.	Christ Church Business School, Canterbury, United Kingdom	14	166	5
10	Fennell, D.A.	Brock University, St. Catharines, Canada	33	156	7

Source: compiled by the authors from VOSviewer.

8 articles and from 30 to 156 citations. Their research topics are very diverse, such as the relationship between ecotourism and gender (Linh & Walter, 2014); ecotourism certification (Buckley, 2002); measuring sustainability for ecotourism (Bhuiyan et al., 2016); and community perspectives on ecotourism (Stronza & Gordillo, 2008).

The most 'efficient' authors are determined based on the number of publications, while 'popular' authors are determined based on the number of citations (Hasana et al., 2022). However, when authors are ranked by the number of citations received, there is a significant difference in order (Table 3). At the top of the list is David Weaver with 727 citations and six articles. Weaver's theoretical contributions are an important foundation for subsequent studies to inherit and evolve (Weaver, 2005a, 2005b).

3.4. Research collaborations

The current study sample includes 123 countries participating in publishing. This shows that ecotourism is receiving significant attention from many countries around the world. However, the level of interest and research outcomes vary greatly among countries with the top 10 accounting for 71.2% of the total publications and 97.1% of the total citations in the study sample (Table 4). Overall, developed countries have an advantage in terms of the number of publications. The United States has a long-standing academic community that focuses heavily on environmental and sustainability issues. In addition, there are many specialized research centers and programs that focus on ecotourism and related topics. Therefore, it is not surprising that the United States tops the list. Similarly, the United Kingdom and Australia are two other countries with a long-standing academic tradition and significant contributions to the development of ecotourism (Khanra et al., 2021).

Table 4. Ten countries by number of articles in the field of ecotourism research

Rank	Country/territory	Number of articles	Citations	Total link strength
1	United States	243	8,643	122
2	China	188	1,790	57
3	Indonesia	146	447	21
4	Malaysia	119	1,127	36
5	Australia	111	3,329	61
6	United Kingdom	97	3,303	79
7	Iran	83	874	33
8	South Africa	74	2,095	32
9	Canada	74	1,456	53
10	India	70	574	20

Source: compiled by the author from VOSviewer.

The development of ecotourism can contribute to enhancing economic development, environmental protection and promoting sustainable development in developing countries (Mbaiwa & Stronza, 2009). Therefore, there is an increasing trend for developing countries to participate in research on ecotourism. China, Indonesia and Malaysia, following the United States, have demonstrated this trend. These countries have vast and diverse ecosystems and natural landscapes, making them attractive destinations for ecotourists. This has led to significant interest in

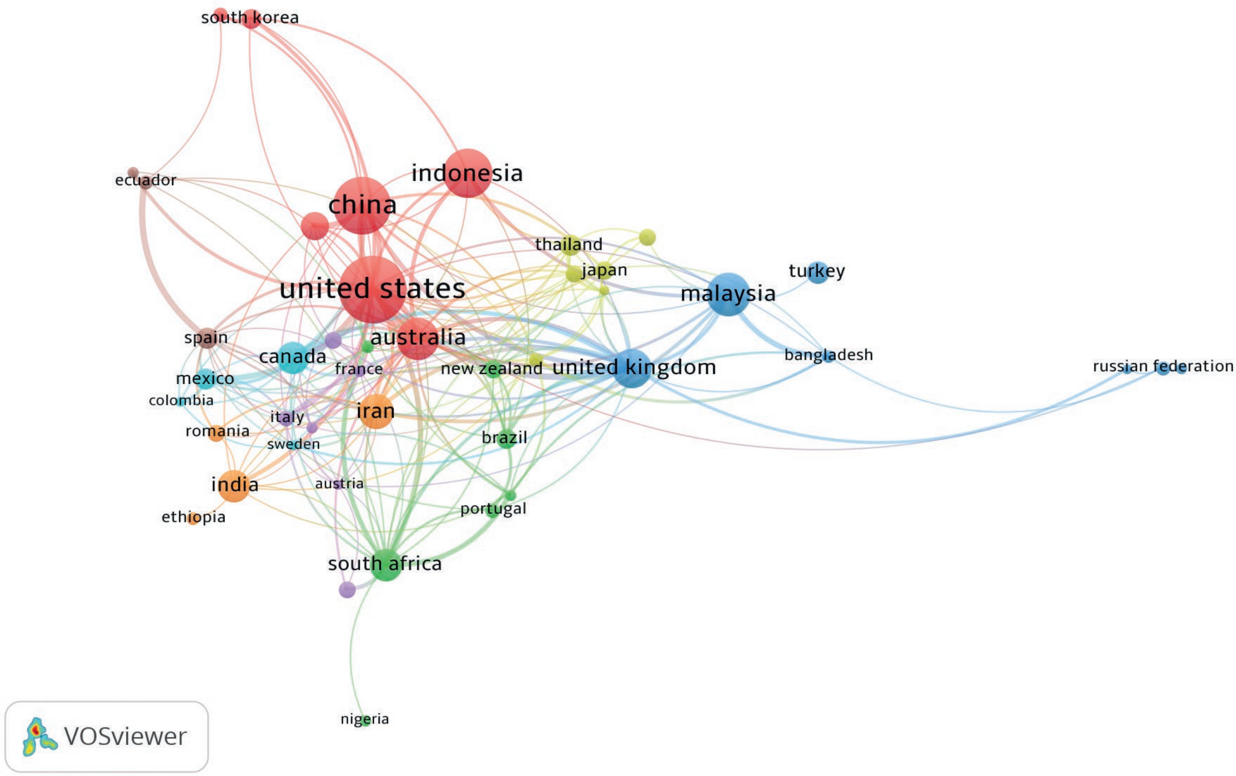

Figure 3. Co-authorship analysis among countries
Source: VOSviewer

domestic research and development of ecotourism. The main research areas on ecotourism in China, Indonesia and Malaysia focus on assessing the potential for ecotourism development (Izwar et al., 2020; Shi et al., 2015); sustainable development and management of ecotourism in conservation areas (Kaffashi et al., 2015; Marlina et al., 2020); ecotourists' experiences (Zong et al., 2017); and the development of new ecotourism products (Jaafar & Maideen, 2012).

Co-authorship analysis can help to identify the trends and nature of research collaborations in the study area and find out the presence of research groups in such terms (González et al., 2016). The total link strength shows the importance of a keyword in the field since a higher value means that it has been linked with others many times (van Eck & Waltman, 2010). From Figure 3, it can be observed that the United States and the United Kingdom are the two countries with the highest level of research collaboration. In addition, other countries also have different levels of research collaboration. For example, China has 57 co-authorships, while Malaysia and India have high levels of research collaboration with 36 and 20 co-authorships, respectively. However, there are also some countries with low levels of research collaboration, such as Ukraine with only one co-authorship and Serbia with only two. Therefore, research collaboration on ecotourism among countries is quite common, however, the level of collaboration among countries varies.

3.5. Key research themes

The network visualization map of keyword occurrences, generated using VOSviewer software, is shown in Figure 4. The size of the nodes and the words represented correspond to the weight of the nodes (keywords), which is the frequency of their appearance. The network connections display the co-occurrence of keywords that appear together more frequently in the analyzed articles; a line between two keywords indicates their co-occurrence. The distance between two nodes reflects the strength of the relationship between them – that is, the shorter the distance, the stronger the relationship. The thickness of the lines indicates the frequency of their co-occurrence while the color of the nodes represents different clusters or groups of keywords (van Eck & Waltman, 2010, 2017). As shown in Figure 3, 'ecotourism' is the largest node at the center; 'sustainable development' is the second largest. These two keywords have the highest total link strength, indicating that ecotourism and sustainable development are closely related and often appear together in theoretical research.

Identifying the most common keywords can help identify the most frequently occurring topics in this field (Garrigos-Simon et al., 2018). To identify the main research topics, 50 keywords were retrieved with a minimum occurrence limit of 30 times. These

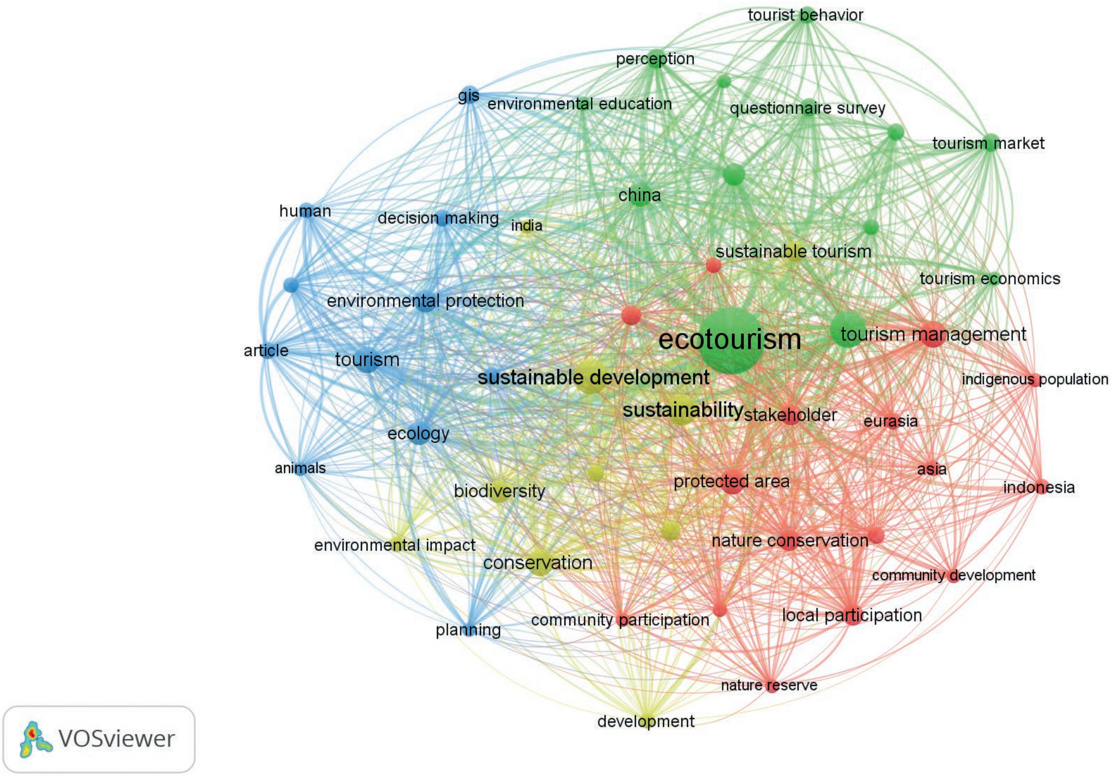

Figure 4. Network visualization of the simultaneous occurrence of keywords
Source: VOSviewer

keywords were grouped into four clusters, each with a distinct color. Four main research topics were identified from the network visualization map:

Cluster 1. Involvement of local communities and stakeholders in the management and development of ecotourism in protected areas

This is the largest cluster consisting of 16 keywords. Terms such as 'community development', 'community participation', and 'community-based ecotourism' appearing in the cluster indicate that studies have shown positive impacts of ecotourism activities, such as promoting local economic growth, creating job opportunities and income for the local community (Cusack & Dixon, 2006; Kunjuraman et al., 2022). Moreover, effective participation of stakeholders plays a significant role in the management and planning of ecotourism (Bansal & Kumar, 2013; Diamantis, 2018; Min, 2016).

Protected areas play an important role in the existence and development of ecotourism. Ecotourism in protected areas provides favorable conditions for responsible travel to natural sites, promoting environmental conservation, providing economic benefits for local communities and offering interpretation and education to tourists (Sobhani et al., 2022). Ecotourism is viewed as a sustainable lifeline for conservation areas, contributing to the conservation of local biodiversity, community development and education (Lindsey et al., 2007; Masud et al., 2017).

Cluster 2. Perceptions, attitudes and behaviors of ecotourists

The sustainable development of ecotourism depends on the behavior of tourists. As consumers of tourism services, tourist participation can impact the entire process of ecotourism development (Ren et al., 2021). Questionnaire surveys are used to collect data on tourists' awareness of ecotourism, including their attitudes towards nature, motives for participating in ecotourism activities and satisfaction with tourism services (Akbar et al., 2022; Samdin et al., 2021). This information is used to help operators and marketers adjust strategies to attract and retain tourists, as well as to develop ecotourism products and services that meet tourists' needs while promoting sustainability (de Souza et al., 2022).

Cluster 3. Using technology and environmental management to support ecotourism development planning and management

Geographic information system (GIS) technology is becoming increasingly popular and accessible, allowing researchers to analyze and visualize spatial data related to ecotourism sites. The main applications of GIS include assessing the potential and risks of ecotourism activities

(Acharya et al., 2022; Nino et al., 2017); monitoring and improving decision-making in management (Mohd & Ujang, 2016; Mukherjee, 2019); and planning for the development of ecotourism (Bunruamkaew & Murayama, 2011; Mulyadi & Nursyahputra, 2020).

The keywords 'animals' and 'ecology' also reflect the increasing concern in understanding the ecological impacts of ecotourism and how to sustainably manage these impacts. This relates to researching the ecological characteristics of ecotourism sites, evaluating the potential impacts of ecotourism activities on ecosystems, and identifying strategies to mitigate negative impacts (Ghosh & Ghosh, 2019; Tavakoli et al., 2022).

Cluster 4. Biodiversity conservation and sustainable development in ecotourism

The focus of ecotourism research is often on the creation of sustainable tourism. Terms like 'sustainable development', 'sustainability' and 'sustainable tourism' demonstrate an interest in developing tourism in a sustainable manner. Ecotourism destinations must be developed in a way that balances the economic, social and environmental needs of the local community. This involves working closely with them to ensure that tourism benefits are shared fairly, and that the impacts of tourism on the environment and local culture are minimized.

The prominence of phrases like 'conservation', 'conservation management' and 'natural resource' in the keywords suggests that research in this cluster is concentrated on figuring out efficient ways to manage natural resources in a way that supports biodiversity conservation (Anup et al., 2015; Kiss, 2004). This entails researching how ecotourism affects regional ecosystems and figuring out solutions to avoid detrimental effects while increasing the financial gains from tourism. Researchers guarantee that ecotourism remains a viable and sustainable economic activity that benefits local communities and safeguards natural resources for future generations by investigating the effects of ecotourism on regional ecosystems and proposing responsible tourist management practices (Hunt et al., 2015; Phelan et al., 2020).

The visual map of VOSviewer depicting keyword co-occurrences is the result of an analysis of the simultaneous appearance of keywords (Figure 5). According to the VOSviewer analysis, the period from 2012 to 2018 was when the keywords appeared together the most frequently. The purple nodes represent the keywords with the highest appearance rate in the early stage of the research period. The green and light yellow nodes represent the most commonly used keywords in recently published articles. The keywords 'ecotourism', 'sustainable tourism', 'sustainability', 'sustainable development' and 'biodiversity' are located in the middle of the scale (in green) due to the repetition of these keywords throughout the analyzed period.

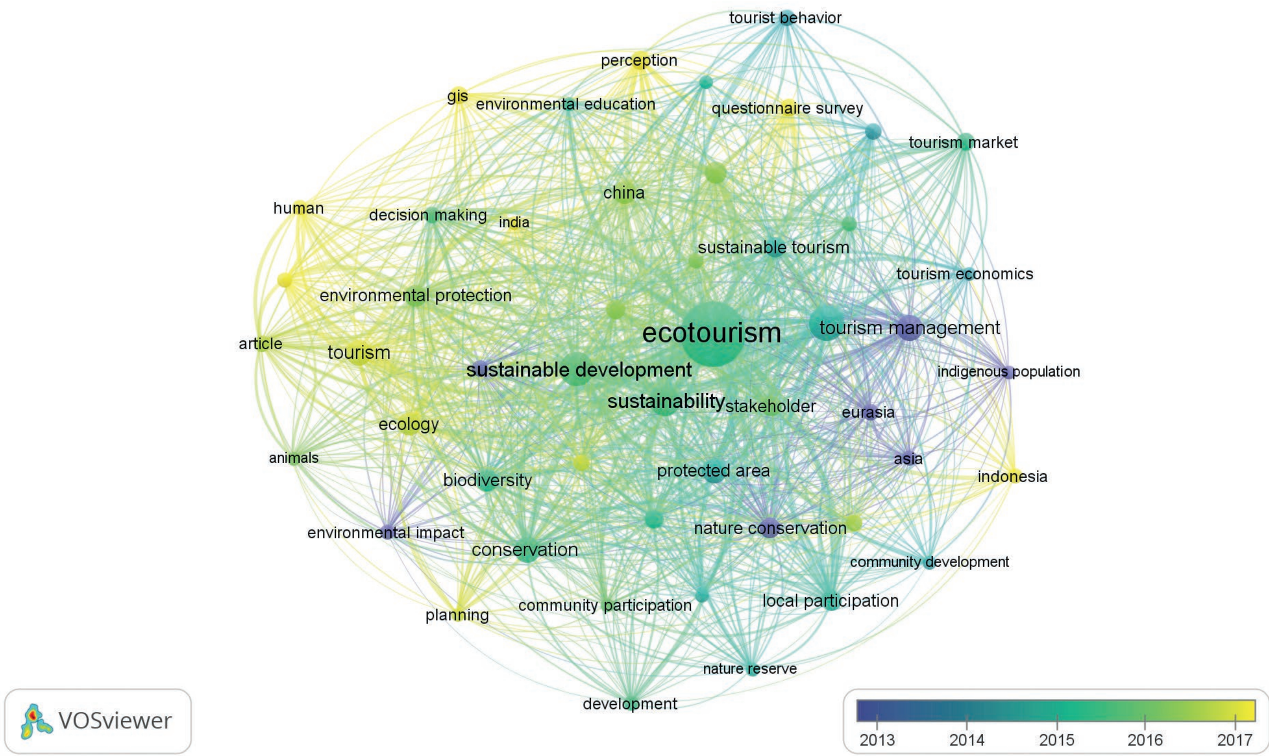

Figure 5. Keyword overlay visualization in ecotourism articles
Source: VOSviewer

The increased occurrence of keywords such as 'GIS', 'human', 'ecology', 'perception', 'questionnaire survey', 'climate change' and 'planning' in the later period indicates a growing trend in making decisions based on data, stakeholder engagement and adapting to climate change in ecotourism planning and management. Climate change is a global phenomenon that affects the environment and the natural resources that ecotourism destinations depend on (Day & Noakes, 2021). For example, changes in temperature, rainfall and sea level can alter ecosystems, wildlife behavior and biodiversity, which can then affect the attractiveness and survival of ecotourism destinations (Mkiramweni et al., 2016). As a result, researchers are increasingly focusing on understanding the impacts of climate change on ecotourism destinations and developing strategies to mitigate these impacts. This includes developing sustainable tourism activities to reduce carbon emissions and promote renewable energy, as well as identifying and adapting to changes in natural systems and resources (Ashok et al., 2022; Sitanggang et al., 2022).

4. Conclusions

Using bibliometrics analysis with the support of VOSviewer, the study provides an overview of the literature on ecotourism. The results indicate that ecotourism is an important research field, with a continuous increase in the number of academic articles and citations from 2002 to 2022. A total of 572 journals have contributed to publishing, with the *Journal of Ecotourism* topping the list, followed by the *Journal of Sustainable Tourism*, *Sustainability*, *African Journal of Hospitality*, *Tourism and Leisure*, and the *Journal of Environmental Protection and Ecology*. The most 'efficient' authors are Mauricio Carvache-Franco co-authored by Wilmer Carvache-Franco and Orly Carvache-Franco, while the authors receiving the largest number of citations are David Weaver and Amanda Lee Stronza.

In terms of collaboration, the study shows that most collaboration in the field of ecotourism occurs between developed countries, or between developed and developing countries, while collaboration between developing countries is still limited even though these countries have great potential for ecotourism development. Academic articles are mainly published in the United States, China, Indonesia, Malaysia, Australia and the United Kingdom. These are countries with a long-standing academic tradition or great potential in ecotourism.

The study has identified that articles in the period from 2002 to 2022 revolve around four main themes: the involvement of local communities and stakeholders in ecotourism management and development in protected areas; ecotourists' perceptions, attitudes and behaviors; the use of technology and environmental management to support ecotourism development planning and management; and biodiversity conservation and sustainable development in ecotourism. This study suggests that decision-making based on data, stakeholder participation and climate adaptation in the planning and management of ecotourism is attracting the attention of researchers worldwide.

Alongside its contributions, the study also faces certain limitations. For instance, it relies on only one database instead of utilizing various sources for information retrieval. Furthermore, the use of search algorithms geared towards articles also restricts effective searching. Additionally, the dataset solely focuses on English-language materials which leads to a potential underestimation of research conducted in other languages. It recommends that future research could be conducted by combining multiple databases (Scopus, Web of Science, Google Scholar) and visualization software to supplement and expand research results.

Declaration of competing interest

The authors declare that there are no potential conflicts of interest regarding the research, authorship, and/or publication of this article.

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DOI: https://doi.org/10.18778/0867-5856.33.2.07 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Innovation culture as a premise for engaging and memorable tourist experiences through gamification

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How to cite (APA style): Mileva, S. (2023). Innovation culture as a premise for engaging and memorable tourist experiences through gamification. *Turyzm/Tourism, 33*(2), 83–94. https://doi.org/10.18778/0867-5856.33.2.07

ABSTRACT

The purpose of the article is to research the impact of innovativeness and innovation culture as premises for effective gamification at destination level. The main hypothesis defended is that innovation culture and gamification can be powerful tools for tourism destination management. By creating a culture that supports innovation and implementing gamification strategies, tourism destinations can enhance their competitiveness, attract more tourists and improve the overall tourism experience. Bulgaria has been selected as the tourism destination for analysis. The methodology combines desk research with key informant surveys. The first survey is about innovativeness and innovation culture and the second is about destination gamification. Both include 18 informants, representing the travel and hospitality sectors in Bulgaria. The main findings are that innovation culture and gamification can be powerful tools for tourism destination management. The contribution is a first attempt to link innovation culture with destination management and the use of gamification as a tool for memorable tourist experiences. The article contains data and gives practical insights reflecting the Bulgarian perspective in the field.

KEYWORDS

innovation, innovation culture, gamification, tourism, Bulgaria

ARTICLE INFORMATION DETAILS

Received:
22 June 2023
Accepted:
6 October 2023
Published:
24 November 2023

1. Introduction

Innovation has been the focus in a large number of studies and in tourism in particular and technological innovations have transformed business models and travelers' behavior (Buhalis et al., 2005). Innovation can be driven by a range of factors, including customer needs, new technologies, government policies, competitive pressures and is influenced by internal and external factors (Gomezelj, 2016). A strategic and systematic approach to innovation is vital for the development of an innovation culture which refers to an organizational mindset that encourages and fosters innovation in all aspects of business. This includes the development of new products, services, processes and strategies that can help an organization stay competitive and adapt to changing market conditions. Besides the organizational aspect, innovation culture is important for tourism destination management, especially in the light of the new smart strategies and smart destination management which form overall destination competitiveness. The efficiency of smart tourism destinations depends not only on the implementation of adequate technological solutions, but also on appropriate governance, incorporating relational, instrumental and applied levels (Ivars-Baidal et al., 2019).

In this context we have selected for analysis gamification as a tool for the creation of engaging and memorable tourist experiences at destination level. Gamification as an expression of new technologies and as a marketing tool has become an integral part of many destination management organizations, allowing the interaction and engagement of tourists, but also dependent on the 'ecosystems' and involvement of different stakeholders (Mileva et al., 2021).

The analysis refers to destination management in Bulgaria, taking into consideration innovation and the innovation culture of tourism organizations with the integration of gamification for enriched and memorable tourist experiences.

2. Innovation and innovation culture in tourism

The leading innovations that have dramatically changed the face of tourism are external to the industry (Hjalager, 2010, 2015). and they radically change connections and dependencies between remote elements of the tourism system. The innovative capacity of microenterprises show that innovativeness depends on external connections and associations (networks, clusters, etc.) (Rønningen, 2010). Start-ups or 'young' enterprises seek, experiment and develop new products and services (Ateljevic & Doorne, 2000). Scientific and technological progress promotes tourism development, but there is usually some lag in the implementation of achievements in practice. The readiness and absorptive capacity of the organization itself also plays an essential role. In most cases, innovations in tourism are moderate, imitative and transferred (adapted) from other spheres (Weidenfeld et al., 2010).

Innovations go through different stages (Johanson & Vahlne, 1977): from earlier ones aimed at 'physically' close markets in terms of culture, language and business models to later when investments are directed to more distant markets, benefiting from experience and accumulated knowledge. Although the tourism market is by definition 'mobile', the model is useful as enterprises providing services in an institutionally different environment must develop new supply channels which require innovation in terms of creating new organizational forms and partnerships at each stage of the internationalization. An important aspect of innovation management is the optimal integration of external knowledge as more and more innovations are born in a network of interacting companies. So-called 'born global' tourism enterprises are a confirmation of this (Calof & Beamish, 1995; Chetty & Campbell-Hunt, 2004; Hjalager, 2015) as specific knowledge and awareness of the importance of internationalization for the success and future development of the enterprise are the basis of innovation. The acquisition of knowledge both external and internal to the enterprise itself depends on the ability, accessibility, transparency and effective communication for the acquisition of knowledge. In tourism, this refers to the possession of language skills, knowledge of the specifics and peculiarities of leisure time and consumer behavior while there is a dependence on networks and cooperation along the supply chain (Adner & Kapoor, 2010; Paget et al., 2010). Innovation requires not just knowledge transfer, but also effective absorption or even absorptive capacity: organizational, resource and cultural. In the field of tourism, the challenges are primarily related to intercultural features, including tolerance, differences, openness and others that can successfully be transformed into innovations (Chen, 2011). Innovation is based on competition, the pursuit of higher quality at lower price (Jacob et al., 2010).

Innovations require special attention to both so-called intra-organizational knowledge, as well as those outside the enterprise. Successful internationalization requires openness to external sources of knowledge and effective engagement in formal and/or informal networks. In the so-called network approach (Johanson & Mattsson, 1998) emphasis is placed on relations between firms as a coordinating mechanism determining behaviour. It is networks that bind enterprises together, providing them with various resources and sector-specific knowledge. In the network approach, markets are considered as relations between economic agents, therefore the individual enterprise cannot be studied independently, but only in relation to the other participants in the network. In tourism, networks and collaboration with different stakeholders, openness and readiness for exchange of ideas are essential for innovation culture. Tourism is a service sector for which new technologies and the reduction of barriers have created fundamentally new forms of service provision (Knowles et al., 2001). Many different business entities are involved in the supply chain, which means exceptional coordination and cooperation to ensure the quality of the tourist experience at the destination. Hence, a significant part of competitive advantage depends on innovation culture and the capabilities and capacity of individual organizations to partner with other entities along the supply chain. The leading role in the supply chain is usually held by market leaders (leadership), often with political and public influence (environmental).

At organizational level innovation culture is studied as an impact on business performance. It is identified as a critical factor in competitiveness, enabling adaptation and greater flexibility to market conditions and changing customer behavior (Gomezelj, 2016). Innovation culture in tourism is a multifaceted concept, involving different factors shaping a company's performance. These factors are individual, organizational and environmental (Baggio & Del Chiappa, 2014). Underlying innovation culture are the requirements for strong organizational culture, leadership and management practices supporting innovation, individual values, beliefs and behaviors that promote creativity, experimentation, risk-taking and collaboration (Gomezelj, 2016). The focus on continuous learning, improvement and the ability for effective management of the innovation process, requires a long-term commitment and willingness to invest in resources and capabilities to support innovation. Different types of innovation, product, process, organization and marketing (Organisation for Economic Co-operation and Development & Statistical Office of the European Communities, 2005) require different forms of innovation culture and management practices. The adoption of innovation culture at organizational level can lead to a range of benefits such as increased competitiveness and improved customer satisfaction, but also increased employee engagement and retention, and enhanced business performance (Gomezelj, 2016). In order to foster innovation culture it is important to prioritize innovation as an integral part of a strategic agenda and promote a culture of continuous learning and improvement, providing training and development opportunities for employees, encouraging cross-functional collaboration and knowledge sharing, and incentivizing and rewarding innovation and creativity.

Emerging trends and new technologies transform the external environment (macro and micro), competition, governmental policies and the agenda for strategic development which itself reflects innovation culture. The latest developments and consequences of COVID-19, clearly changed the environment by revealing the real benefits from innovation culture as a premise for survival and competitiveness.

At destination management level, innovation culture is characterized by a willingness to experiment, take risks and collaborate with stakeholders in order to develop new products and services enhancing the tourist experience. Core to the success of innovation culture at destination level is again the existence of strong leadership, effective communication and the active involvement of a broad range of stakeholders. The adoption of an innovation culture can lead to a range of benefits for the destination such as increased competitiveness, but also an improved quality of life for residents. Environmental and external factors, including market trends, government policies and technological change, influence the development of innovation culture in tourism destinations.

Smart destinations are characterized by the use of advanced information and communication technologies (ICT) to enhance the visitor experience, improve the management of tourism flows and increase the sustainability of the destination (Ivars-Baidal et al., 2019). The development of smart destinations requires a collaborative approach among stakeholders, including government, businesses, residents and visitors. The adoption of new technologies in destination management facilitates real-time monitoring and decision-making, allowing destinations to respond quickly to changing conditions and visitor needs. The application of ICT also raises a range of challenges, including data privacy and security concerns, the need for appropriate infrastructure and technical expertise, and also has the potential for over-reliance on technology. There is no doubt that the future of tourism destination management will continue to be shaped by the evolution of new technologies, e.g. artificial intelligence (AI), internet of things (IoT), blockchain and others, offering a wide set of opportunities for innovation. Thus, the success of innovation culture in tourism destinations depends on the ability to create a supportive ecosystem that fosters creativity, learning and collaboration among stakeholders and aligning the innovation efforts with broader community goals and objectives (Gomezelj, 2016; Ivars-Baidal et al., 2019).

3. Gamification for engaging tourist experience in destination management

As a concept, gamification is defined as the "use of game design elements and game thinking in a non-gaming context" (Deterding et al., 2011, p. 9).

At the destination level, gamification has proved to be an effective tool in marketing efforts for destination development, the raising of awareness, enhancing tourist experience, engagement, entertainment, improving customer loyalty and also at the organizational level supporting employee management (Corrêa & Kitano, 2015; Xu et al., 2014; Xu et al., 2017). Gamification works in a dynamic ecosystem based on complex relations between the major stakeholders in tourism: tourism organizations, tourists, employees and the community (Negruşa et al., 2015). It has great potential for tourist engagement, satisfaction, loyalty, learning, promotion of sustainable and responsible practices and behavior change. As a destination tool in can be applied in various tourism contexts, including destinations, attractions and events, and can be implemented using various technologies such as mobile apps, websites and social media. Gamification has become an increasingly popular research topic in tourism and hospitality, especially in the context of digital platforms (Bravo et al., 2021; Xu et al., 2014). The success of gamification depends on the careful consideration of various factors, such as user experience, game design, and alignment with the destination's goals and values (Pasca et al., 2021). Gamification is highly suitable for integration with different technologies such as augmented reality (AR). The combination of gamification with augmented reality enhancing visitors' learning and knowledge acquisition and providing a more immersive and interactive experience. The limitation factors besides gamification design, mechanics and dynamics are also quality of the technology and the alignment of game objectives with the destination's goals and values (Wu & Stilwell, 2018).

In practice we can find different approaches integrating gamification into destination management. Among them are gamified loyalty programs, the stimulation of repeat visitors and loyalty by offering rewards and badges for certain behaviors or achievements, such as visiting multiple attractions, sharing social media posts and completing surveys (Abou-Shouk & Soliman, 2021; Hofacker et al., 2016; Yang et al., 2017). Another way to apply gamification is by the creation of interactive wayfinding experiences for visitors, such as treasure hunts or scavenger hunts, that encourage exploration and discovery of the destination (Hsiao & Tang, 2021; Swacha & Ittermann, 2017). Gamification can be applied to the creation of immersive and interactive learning experiences for visitors, such as quizzes, puzzles and interactive exhibits that provide information on the history, culture and attractions of the destination (Corrêa & Kitano, 2015; Mileva et al., 2021). Not to be underestimated are different gamified sustainability initiatives, such as encouraging visitors to reduce waste or conserve energy through gamified challenges and rewards (Pasca et al., 2021). For destination marketing gamification allows the creation of interactive marketing campaigns that promote the destination and encourage visitor engagement, such as online games, social media challenges and augmented reality experiences (Abou-Shouk & Soliman, 2021; Bravo et al., 2021).

Overall, gamification can help to enhance the visitor experience, increase engagement and loyalty, and promote sustainable tourism practices, while also providing destination managers with valuable data and insights on visitor behaviors and preferences.

The benchmark analysis identified the following good practices in innovation culture in tourism destination management:

1. Amsterdam Innovation Motor (AIM) (Aimsterdam, n.d.): a public-private partnership that fosters innovation culture in Amsterdam by connecting businesses, universities and government entities to promote innovation and entrepreneurship.
2. Dubai Future Foundation (n.d.): an organization that aims to foster innovation culture in Dubai by promoting research, development and innovation in various sectors, including tourism.
3. Innovation Norway (n.d.): a government-funded organization that supports innovation culture in Norway by providing funding, advice and support to businesses and entrepreneurs in various sectors, including tourism.
4. VisitOSLO (n.d.): the official tourism board for Oslo, Norway, which has implemented various innovative initiatives, such as the Oslo Pass, a travel card that provides discounts and free entry to various attractions, and the Oslo Visitor Centre, a digital platform that offers personalized travel recommendations to visitors.
5. Tourism New Zealand (n.d.): the national tourism organization, which has implemented innovative marketing campaigns, such as the '100% Pure New Zealand' campaign, promoting the country's natural beauty and outdoor activities. They also have a strong focus on sustainable tourism practices.

These are just a few examples of how innovation culture can be fostered and implemented in tourism destination management. Gamification applications promoting different attractions and destinations have become a popular tool for the enrichment of tourist experience; a 'cross tool' between entertainment, digital marketing and promotion which definitely has the potential to raise tourist attention. But what are the limitations and borders of such experience when visiting an attraction or destination? What are the premises for successful and effective gamification in the light of current trends for innovation and the importance of innovation culture?

4. Methodology

The main research question can be defined as what is the relationship between innovation culture, gamification, tourism and destination management in the context of Sofia, Bulgaria? The research question is based on the need for deeper investigation into this complex relationship, specifically within the context of Sofia. It is based on a literature review on the topic, as well as on desk research on innovation, innovation culture and gamification in tourism.

The research methods employed consist of the combination of literature review, desk research, qualitative surveys and a mixed-methods approach to investigate this relationship. It utilizes both qualitative and quantitative data to provide a comprehensive understanding of the research topic.

Desk research was applied for analysis of national strategic documents such as 'Digital Bulgaria', 'National Vision for Tourism Digitalization 2030', surveys related to the Communication Strategy of Sofia as a Tourist Destination (2023–2027) (Sofia Municipality, n.d.), and data from the *Innovation.bg* report (European Commision, Representation in Bulgaria, 2020). This desk research helps provide background information and context for the study.

The primary data was collected by qualitative research methods through two surveys using the key informant technique. Measuring innovation culture is a complex process that involves assessing various factors related to organizational culture, leadership, employee behaviour and innovation outcomes. Different tools and methodologies can be used to measure innovation culture, such as surveys, interviews, focus groups, observation and analysis of organizational data. The main findings of exploratory factor analysis (Dobni, 2008) suggest that innovation culture can be measured as a generalized construct consisting of five dimensions: leadership support, empowerment and autonomy, idea generation, work environment and resources. In the survey these dimensions do not exist precisely, as in the preliminary test, and direct answers were too general, revealing a willingness to represent the organization as innovative and in positive light. This is why the questions were changed and we asked about the major deficits and weaknesses in innovation activity and innovation culture.

Two surveys were undertaken:

1. Survey 1: Targeted at the main players at the destination level, including travel agencies and the hospitality sector. This survey was conducted with 18 key informants. The sample selection criteria included factors such as revenue volume, efficiency and the number of employees.
2. Survey 2: Aimed to obtain deeper insights into gamification as a tool for destination marketing and management. This survey also involved 18 key informants representing various sectors, including tourism associations, cultural institutions, destination management organizations, governmental bodies, the IT sector and academia.

The first survey was directed at the main players at destination level: travel agencies and the hospitality sector. The second survey aimed to obtain deeper insight into gamification as a tool for destination marketing and management. The survey period initially launched in 2020, was extended in 2022 in order to take into account the COVID-19 consequences. In selecting the key informants, five eligibility characteristics were considered, namely, formal role and position in the community, knowledge, willingness, communicability and impartiality.

In the first survey 18 key informants participated, and the sample selection was made by such criteria as revenue volume, efficiency and the number of employees. Initially the sample was formed on the basis of available information on the degree of development (stability coefficient) according to the National Statistical Institute and the Bulgarian Industrial Association. Although attempts were made to form a sample, due to the lack of sufficient, reliable and representative information, the use of a random principle for selecting respondents was forced. A limitation of the survey is the lack of clear distinction between the personal opinion of the informant and the eventual official position for the represented organization. A semi-structured survey, combining open-ended and closed answer questions on a five-point Likert-type scale, ranging from 1 (*insignificant*) to 5 (*extremely significant*), was used in order to grade the importance given by the respondents to the questions asked. The survey period in 2020, was reopened and extended in 2022. The results do not consider differences in time (e.g. COVID), but rather evaluate it as a whole.

The second survey again with 18 key informants, was selected to represent tourism associations and companies, cultural institutions, Sofia destination management organizations, governmental bodies, the IT sector and academia.

The survey questionnaires were designed to include a combination of open-ended and closed-answer questions with a Likert-type scale ranging from 1 (*insignificant*) to 5 (*extremely significant*). This allowed respondents to provide both qualitative and quantitative data. The data collection methods for both surveys used Google Forms, allowing invited key informants to complete the questions online.

Key informants were selected based on five eligibility characteristics: formal role and position in the community, knowledge, willingness to participate, communicability and impartiality.

The key themes for the open-ended questions were identified based on a literature review and were then quantitatively assessed. Additionally, ‘free comments’ were collected and analyzed using an iterative-inductive thematic analysis method, which involves identifying themes or patterns in the data and refining them through a repeated process of comparison and revision. This allowed a combination of both quantitative and qualitative data collection to gain a more comprehensive understanding of the research topic. The two surveys aimed to explore the relationship between innovation culture, gamification, tourism and destination management and used a mixed-methods approach to achieve a more comprehensive understanding of this complex phenomenon.

The collected data were analyzed using various methods, including exploratory factor analysis for measuring innovation culture, thematic analysis for open-ended questions and quantitative analysis for closed-answer questions. The iterative-inductive thematic method was employed to identify themes and patterns in the data.

Our main hypothesis is that successful implementation of gamification in tourism requires a culture of innovation within the organization. The mixed methods approach has some limitations that should be considered when interpreting its findings including sample size and selection. The sample size is non-representative and the selection procedure of key informants may not have been representative of the entire sector. The study could only be considered a pilot and an introduction to developing an actual research methodology for the complexity of innovation culture and relationship with gamification in tourism. Also, the research relied on self-reported data from key informants which can be subjective and influenced by personal biases or perceptions. Moreover, the scope is limited as the research focused on a specific region (Sofia) and specific sectors (tourism, innovation, gamification), which may not be representative of the broader context. The research did not collect longitudinal data to track changes in innovation culture, gamification or tourism over time. Last, but not least, measuring innovation culture is complex, and the study relied on self-reported data and exploratory factor analysis, which may not capture the full complexity of this construct accurately. Not covered in detail are external factors able to influence innovation culture through gamification in tourism, such as changes in government policies (stimuli), economic conditions or industry-specific trends.

5. Main findings

5.1. Evaluation of innovativeness and innovation culture in Bulgarian tourism organizations

The innovation potential of the Bulgarian economy is driven primarily by the impact of external factors (European structural financing, EU pressure for developing an innovation-oriented policy framework), and despite obstacles at national and local levels (lack of understanding among policymakers of the importance of innovation; low administrative capacity; lack of mechanisms for promoting entrepreneurial and innovation culture; corruption).

The innovation system is considered as a set for the co-creation or the joint creation of value, composed of interconnected and interdependent networked actors. These include the firm, customers, suppliers, complementary innovators and other agents as regulators (Gomes et al., 2018).

There is no comprehensive vision of the priorities of the national economy, and the innovation system in particular, resulting in ad hoc policies and inconsistent and unsustainable measures for their enforcement. The input indicators of the national innovation 'ecosystem' and its functioning vary significantly from year to year, thus highlighting the precariousness of Bulgarian innovation policy which has no clear direction or parameters. The political instability over the last two years has not contributed to this in Bulgaria.

In Bulgaria, the units identified by innovation theory as elements of an ecosystem, along with the links among them (to the extent that they exist), are not managed within a consistent framework based on in-depth analysis of the potential and the need for innovation, the causal links in the innovation life-cycle, the place and role of individual units in the innovation ecosystem, the synergy effects among them and the opportunities for growth. Thus, the management of innovation processes remains outside the priorities of the policy cycle.

Innovation ecosystems include heterogeneous organizations that jointly grow through the creation of added value (Adner & Kapoor, 2010; Autio & Thomas, 2014; Moore, 1993). Participants in the ecosystem are from different projects, clusters and organizations, with different ways and forms of financing, with different management models, network connectivity and built partnerships between them. Some have been purposefully created as a result of targeted policies, programs and measures. The ecosystem is a dynamic structure that changes, but at the EU level policies are aimed at providing opportunities and supporting active participants in the ecosystem.

Overall, Bulgaria's innovation ecosystem is still in its early stages of development, but there is a growing momentum and support for innovation and entrepreneurship that is driving the growth of the start-up community in the country.

Bulgaria has adopted the Smart Specialization Strategy 2014–2020 and the Innovation Strategy for Smart Specialization (ISSS) for 2021–2027 (Republic of Bulgaria. Ministry of Innovation and Growth, n.d.). Among the five smart specializations are new technologies in creative and recreational industries. The strategy recognizes their innovation potential as a driver for social and cohesive innovations and new business models. The cultural and creative industries include digitalization and applications (computer and mobile) with an educational, marketing and recreational character and are seen as drivers for innovation. In this context the evaluation of innovation culture, digitalization and gamification in particular, are becoming important, not only in the tourism sector, but also for Bulgaria's development and resilience.

At the EU level, there is no single common index for measuring innovation, innovation culture and research activity. The main indices used for the analysis and assessment of the R&D ecosystem are the European

Innovation Scoreboard (EIS), Regional Innovation Scoreboard (RIS), Digital Economy and Society Index (DESI), Global Innovation Index (GII), European Index of Digital Entrepreneurship Systems (EIDES), European Digital Social Innovation Index (EDSII), the Global Competitiveness Index (GCI) of the World Bank, and the International Innovation Index (I3) which has been published since 2009 by the Boston Consulting Group. There are also other indices under development for which data should be purposefully collected and additional studies conducted: the Innovation Ecosystem Index (IEI), and Innovation Radar (IR) which is focused on the business and digital aspects of innovation.

According to the latest available data from the European innovation scoreboard 2022 (European Commission, Directorate-General for Research and Innovation, 2022), Bulgaria is still an emerging innovator with a performance at 45.5% of the EU average. Performance is increasing (1.6% points) at a rate lower than the EU (9.9% points) and the performance gap is becoming larger.

The tourism innovation ecosystem is characterized by collaboration, technology, customer feedback, education and research, and government support. These factors work together to create an environment that supports the development and adoption of new ideas and practices that can help tourism businesses stay competitive and meet the changing needs of visitors.

The results of the survey with key informants about innovations in Bulgarian Tourism organizations were in most responses neutral and product and marketing innovations were as significant (Figure 1).

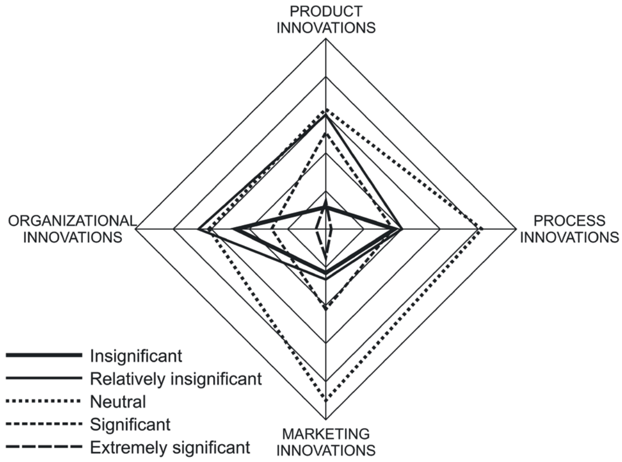

Figure 1. Innovations in Bulgarian tourism organizations
Source: survey results

The general evaluation of innovations and innovation culture in Bulgarian tourist organizations is not positive or high. Asked to identify the major deficits and weaknesses, the following answers deserve interest (see Table 1).

Table 1. Weaknesses and deficits in innovation and innovation culture

Respondent	Organization type	Comments
R1	Hospitality	We are lagging behind in innovation in terms of product development. … We are lagging behind the leaders
R2	Academia	Problems with innovation are related to culture and mentality, to inertia, getting into ruts, greed, copying ‘neighbours’ and therefore the inability to ‘see’ new opportunities’
R3	Tour operator	In Bulgaria, innovations occur with a delay compared to other European countries, this makes it more difficult for Bulgarian companies to adapt to rapidly changing business conditions
R4	DMO, NGO	‘Traditionalism’ in the thinking and actions of management and the limited resources of small and micro companies, which are the majority of those in tourism
R5	Hospitality	The market is ‘maturing’ with difficulty, and businesses are not taking enough risks. The majority of companies do not follow global trends and innovations, do not become informed
R6	Hospitality, NGO	Innovation processes in our country are at a slower pace and on a modest scale. The reasons are the low level of expertise and short-sightedness of the owners of the hotel base, betting mainly on physical investment and underestimating the upgrading of the service through quality, innovations, increasing the attractiveness of a stay etc.
R7	Hospitality	Not enough financial opportunities and resources, needed for innovations. Non-supportive management to innovative thinking people. Slightly rigid thinking of those employed in the industry and unwillingness to change the status quo. Competition and administrative stimuli will enhance the development of innovations in tourism
R8	Tour operator/ travel agency	Innovations require financial resources which are beyond the strength of the majority of Bulgarian companies. In addition, innovations are usually associated with change, which disrupts the momentum of business, and Bulgarian business does not like that

Table 1 (cont.)

Respondent	Organization type	Comments
R9	NGO, academia	Lack of financial resources, organizational problems, external economic and political factors that directly and indirectly affect Bulgarian tourism and innovation culture
R10	Hospitality	Lack of motivation, quality and capacity. There are successful practices, but unfortunately, they are isolated and do not show a sustainable trend in the organizations and enterprises where they happened
R11	NGO	Lack of experience, low involvement of the state administration in the problem and lack of cooperation in the non-governmental sector
R12	Hospitality	Innovation culture is extremely poor and there is a clear lack of working innovative solutions. There is a lack of innovation in products, marketing and processes and as a result we have a standard tourism product
R13	Academia	Innovations and innovation culture are in accordance with the overall country's status of emerging innovation performance. Tourism is not among the most innovative sectors in general, rather adopting those of others'
R14	Tour operator, NGO	Lack of serious governmental support, adequate policy and an adequate ecosystem structure working purposefully for the development of Bulgaria as an attractive tourist destination (compared to Turkey for example). We do not have an adequate strategy for the development of tourism, financial support in marketing and advertising, adequate personnel policy etc.
R15	Academia	Lack of investment in academic and research activities, including development and innovation transfer between research institutions and business
R16	DMO	There is openness to innovation, but no significant investment and financial support for tourism in particular
R17	Hospitality	Investments are mostly in reconstruction and the modernization of the tourist infrastructure, while funds allocated for innovations represent only about 2%
R18	Academia	Lack of an entrepreneurial culture aimed at innovation in tourism. Innovations are seen only as the application of new technologies and the reduction of transaction costs for more effective process work

Source: survey results.

The overall answers of key informants are not very positive in their evaluation of innovativeness and innovation culture in Bulgarian tourist organizations. Among the major deficits are a lack of financial resources, poor innovation culture, lack of adequate governmental support and stimuli for innovations. Many of the innovations are in practice, benchmarking or imitations of leading competitors' products, without distinctive features or specific competitive advantages.

5.2. Evaluation of gamification for destination management

The results of the survey with 18 key informants about gamification and its role for destination management confirm that integration of gamification adds value to the tourist experience (94.4%). As a limitation, gamification is not suitable for all ages with the major effect being on younger generations. Asked to evaluate the most important elements of gamification – mechanics, dynamics, aesthetics and technology for destination management with a scale (1 – *the lowest* and 5 – *the highest*) there is an almost balanced distribution of answers with the exception of the high importance of aesthetics (see Figure 2). The experts ranked different factors which encouraged tourists to prefer gamification applications at the destination: outlining alternative ways to learn about the destination, the opportunity to enrich experience through virtual reality and entertainment (see Figure 3). The evaluation of the potential marketing effect for destination management shows (see Figure 4) the highest average evaluation for the opportunity to raise awareness of the destination, engagement and co-creation, followed by brand awareness and creation of positive attitudes. The lowest turned out to be the catalysation of loyalty and brand positioning.

From a marketing perspective, the use of location-based gamification apps envisaged by local key informants coincides with the experience and potential outlined in other destinations (Mileva et al., 2021). The innovative approach would be attractive and in compliance with new consumer needs and new forms of travel. Gamification apps are mainly considered as a promotional tool and the opportunity to expand channels for communication, raising awareness, including feedback and data collection (Xu et al., 2017). A high level of agreement is stated in terms of deeper engagement and commitment (including the co-creation of services) and the effect on the experiences of tourists at the destination resulting in higher satisfaction (Sever et al., 2015; Yang et al., 2017).

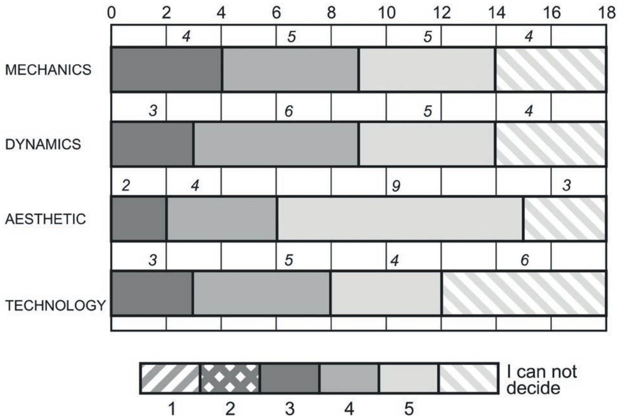

Figure 2. Most important elements of gamification for destination management
Source: survey results

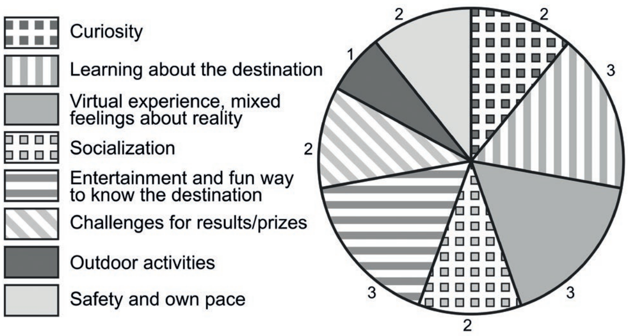

Figure 3. Factors encouraging tourists to prefer gamification applications
Source: survey results

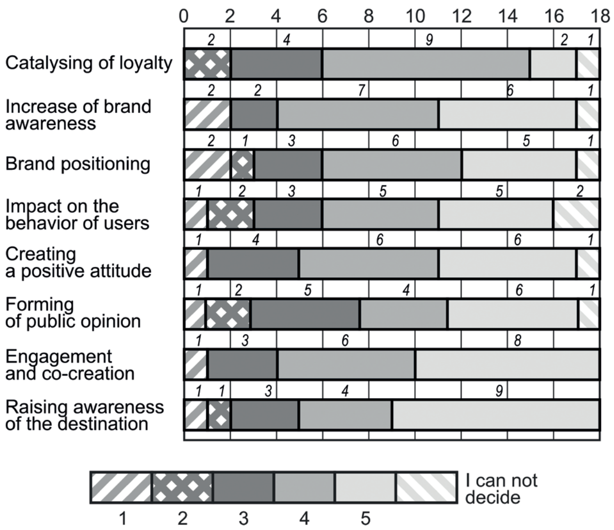

Figure 4. Evaluation of the potential marketing effect
Source: survey results

6. Conclusion and discussion

This article focuses on the role of innovation culture in driving competitiveness, growth and sustainability in tourism. Highlighted is the importance of an organizational mindset that values and rewards creativity, experimentation and risk-taking to achieve success in a rapidly evolving and highly competitive market. Some of the key themes explored in the literature include different types of tourism innovation and the impact of innovation on tourism organizations. The article gives practical insights from the perspective of Bulgarian experience, desk research and surveys with key informants.

Innovation culture in tourism can be defined as the organizational mindset, values and behaviors that encourage and support the development of new ideas, processes, products and services to enhance the competitiveness and sustainability of tourism businesses and destinations. It involves a willingness to take risks, experiment with new technologies and business models, and embrace changes in response to evolving market demands and customer expectations.

Innovation culture in tourism is critical to the success of tourism businesses and destinations in today's rapidly evolving and highly competitive market. It helps organizations to stay ahead of the curve, adapt to changing market conditions, and provide innovative and memorable experiences for tourists. By fostering an innovation culture, tourism businesses and destinations can unlock new opportunities for growth and profitability, while also contributing to the sustainable development of the tourism industry as a whole.

The surveys in Bulgaria revealed that innovations are mostly recognized as related to new technologies and digitalization, increased opportunities, speed, capacity and ways of working both at the intra-organizational level, as well as outside the organization in relationships with partners and suppliers. Innovation culture in Bulgarian tourist organizations is poor and this is aligned with its overall status of an emerging innovator performer.

Innovation culture can play a crucial role in the development and implementation of gamification in tourism destination management. An organization's culture that supports innovation can foster creativity, risk-taking and experimentation, which are essential components of successful gamification strategies in tourism. Moreover, an innovation culture can facilitate the adoption of new technologies and practices, allowing tourism destinations to stay competitive and meet the evolving needs and expectations of tourists.

Gamification, in turn, can be a tool for enhancing innovation culture in tourism organizations. By incorporating game elements and mechanics into the development of products and services, gamification can promote innovation by encouraging creativity, problem-solving and collaboration among employees. Furthermore, gamification can also facilitate knowledge-sharing and learning which are vital for creating a culture that values innovation and continuous improvement.

The survey showed that there is clear recognition of the importance of gamification for destination management. Gamification apps can (a) be an essential part of destination management, (b) create added value, awareness and recognition of a destination's tourist resources and (c) be a useful management solution for urban public areas in terms of the spatial concentration of tourists.

Tourism destination management can benefit from both innovation culture and gamification by providing a unique and engaging experience to tourists. Innovative tourism destinations that implement gamification strategies can attract and retain more visitors, increase revenue and enhance their reputation. Gamification can also help tourism destinations to better understand the needs and preferences of tourists, leading to the development of personalized and customized services. The analysis outlined other possibilities for how innovation culture can improve destination management and the integration of gamification for engaging and memorable tourist experiences:

1. Co-creation: collaboration between different stakeholders, including tourists, locals and businesses, can foster a culture of innovation in destination management. Co-creation can involve joint problem-solving, design thinking workshops and community engagement initiatives inclusively through gamification.
2. Digital transformation: embracing digital technologies and platforms can enable destinations to better understand their customers, improve service delivery and create more personalized experiences. This can include the use of social media, mobile apps such as gamified ones and big data analytics.
3. Sustainable tourism: a focus on sustainability can lead to innovative solutions in destination management. This can include initiatives to reduce carbon emissions, minimize waste and promote responsible tourism practices. Gamification can stimulate and incentivize tourists to engage in sustainable and responsible behaviors during their travels. This approach can help promote innovation in destination management by encouraging stakeholders to find new and creative ways to balance the economic benefits of tourism with the need to protect the environment and local communities.
4. Entrepreneurship: encouraging and supporting the development of small and medium-sized enterprises (SMEs) can foster a culture of innovation in destination management. This can include providing training, mentoring and funding opportunities for entrepreneurs and start-ups.
5. Design thinking: adopting a design thinking approach can encourage creative problem-solving and innovation in destination management. This involves a human-centered approach to problem-solving that prioritizes empathy, experimentation and collaboration.
6. Applying gamification not only for tourists, but also in promoting an innovation culture for destination management through training programs for employees in the tourism industry. These programs can help foster a culture of innovation by encouraging employees to experiment with new ideas and approaches to their work, while also providing them with the skills and knowledge necessary to implement these ideas effectively.

This is because gamification often involves the use of new technologies, such as mobile apps and AR, which may require significant investment and development resources. A culture of innovation can help to ensure that the organization is open to exploring new ideas and technologies, and is willing to take risks to achieve its goals. Moreover, an innovative culture can also help to ensure that the gamification strategy is aligned with the organization's overall objectives and values. This can help to ensure that gamification elements are relevant and meaningful to tourists, and that they contribute to the overall brand image and reputation of the destination. Ultimately, the connection between innovation culture and the introduction of gamification in tourism lies in the ability of an innovative organization to create more engaging and memorable experiences for tourists through the use of new technologies and creative design elements.

The main findings, answering the defined research question of what the relationship is between innovation culture, gamification, tourism and destination management in the context of Sofia, Bulgaria, reveal the following:

1. There is a positive relationship between the presence of a strong innovation culture within organizations in Sofia's tourism sector and the successful implementation of gamification strategies. Organizations with a culture that encourages innovation may be more adept at leveraging gamification techniques for marketing and management purposes.
2. The dimensions of innovation culture are complex and easy to evaluate, but key factors from the survey are leadership support, empowerment and autonomy, the work environment and resources. These dimensions could provide insights into what factors contribute to fostering innovation within the context of Sofia's tourism industry.

3. Gamification is used as an effective tool for destination marketing and management in Sofia's tourism industry. At the same time, the main challenges and opportunities associated with the implementation of gamification in the tourism sector in Sofia are innovation culture, technical barriers, budget constraints and resistance to change, while opportunities could relate to enhanced visitor engagement and competitive advantage.

The research confirms the main hypothesis that successful implementation of gamification in tourism requires a culture of innovation within the organizations surveyed in Sofia. There is evidence that organizations with a strong innovation culture are better equipped to innovate through gamification techniques.

As a conclusion, innovation culture and gamification can be powerful tools for tourism destination management. By creating a culture that supports innovation and implementing gamification strategies, tourism destinations can enhance their competitiveness, attract more tourists and improve the overall tourism experience. Gamification can foster innovation culture in destination management by providing stakeholders with the motivation, skills and knowledge necessary to develop and implement innovative solutions to the challenges facing the tourism industry.

Acknowledgements
This article is funded by Research Project 80-10-113/27.04.2023 'Development of a methodology for evaluating the innovation culture at the company level', funded by Sofia University Research Fund 2023.

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DOI: https://doi.org/10.18778/0867-5856.33.2.08 e-ISSN 2080-6922, ISSN 0867-5856

C O P E
Member since 2019
JM14487

Turyzm/Tourism
2023, 33/2

Work-related stress experienced by tour guides

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How to cite (APA style): Akkuş, G., & Arslan, A. (2023). Work-related stress experienced by tour guides. *Turyzm/Tourism, 33*(2), 95–110. https://doi.org/10.18778/0867-5856.33.2.08

ABSTRACT

Work-related stress (WRS) is stress caused or exacerbated by work. As 'maestro', tour guides (TGs) perform a variety of tasks within and outside the job description. Tour guides inevitably feel stress due to the demands from various parties. This study focuses on WRS of TGs and contributes to the literature by identifying stress factors from the perspective of TGs. According to the explanatory sequential design frame, a quantitative study was conducted with 90 participants, followed by a qualitative one with 16. From the five categories extracted through content analysis, to understand the relationship between WRS and work-related ill health (WRIH), WRIH-type and WRIH-reason were further analyzed. Findings show that WRS accounts for 15% of all the health problems of TGs. Unsafe conditions (UCs) are responsible for much of the stress experienced, while harassment, bullying and mobbing (HBM) from customers, shopkeepers, drivers and travel agents is the main stressor.

KEYWORDS

occupational safety and health, work-related stress, tour guide, unsafe behaviour, unsafe conditions

ARTICLE INFORMATION DETAILS

Received:
9 May 2023
Accepted:
4 September 2023
Published:
12 December 2023

1. Introduction

In its simplest definition, stress can be defined as constant mental tension. Lazarus (1966) stated that stress occurs when an individual feels that a person will not be able to achieve a sufficient level of success in the face of demands and threats to his/her well-being, while Raymond (2000) stated that stress arises when individuals worry that they cannot cope with certain situations. Selye (1936) pointed out that stress is the body's reaction to a change that requires physical, mental and emotional adaptation. The common points that stand out in the definitions are that it is a personal experience and caused by pressure, expectation or threat, and it negatively affects the individual's ability to cope or at least their perception of their competence.

Work-related stress (WRS) is stress caused or exacerbated by work. In this case, the person perceives the work environment with a sense of inadequacy in the face of the demands placed on him/her (Health and Safety Authority, 2022). This situation causes the employee to deviate from normal reactions in a way that disrupts psychological and/or physiological states (Caplan et al., 1975). This can also have negative organizational consequences (Karasek & Theorell, 1990). However, even if it does not apply at all times and in all circumstances, there are also cases where stress can stimulate personal development, trigger employee motivation and have a positive impact on work engagement by causing effort and time to be invested to meet challenging demands (Cavanaugh et al., 2000; Crawford et al., 2010; Karatepe et al., 2014; Lepine et al., 2005). Common job stress factors include excessive workload, long working hours, role conflicts, low job control, job insecurity, lack of support from managers and work colleagues, career concerns and interpersonal relationships (Andrews, 2010, p. 523; Finch, 2020; Olsen et al., 2019; Slišković, 2017).

The effects of job stress on individuals can be listed as follows: (a) physical (fatigue, muscular tension, sleep disturbances, headaches, gastrointestinal upsets such as diarrhoea or constipation, dermatological disorders and raised blood pressure / cardiovascular disease); (b) psychological (anxiety and irritability, depression, discouragement, pessimism, cognitive difficulties, such as a reduced ability to concentrate or make decisions, labile emotions); (c) intellectual (loss of concentration, lack of motivation, difficulty with thought processes, loss of memory and poor decision-making); and (d) behavioural (substance [including alcohol] misuse, decreased libido, aggression, inappropriate display of behaviour, isolation, a drop in work performance, unpunctuality, disinterest, lower tolerance of frustration and impatience) (Department of Health, State Government of Victoria, n.d.; University of Cambridge, 2023).

Beehr and Newman (1978) emphasized that if job stress is high or persistent enough, it can have lasting effects on physiological and psychological well-being. Stress can cause various chronic diseases such as diabetes, hypertension and cardiovascular disorders (Cooper & Marshall, 1976; French Jr. & Caplan, 1970). Chandola et al. (2006) found a relationship between work-related stress and metabolic syndrome (including abdominal obesity, high blood pressure and insulin resistance), which increases the risk of heart attack and type 2 diabetes. Accordingly, those who experience chronic work-related stress are twice more likely to experience the syndrome than those who do not.

Job dissatisfaction and burnout are the most prominent psychological effects of work-related stress (Konopaske et al., 2018; Robbins et al., 2014, p. 469). This is also associated with absenteeism, turnover rate and turnover intention (Siu et al., 1997). According to Ross (2006), the effects of job stress on the organization are high absenteeism, high labour turnover, poor timekeeping, poor performance and productivity, low morale, poor motivation, increased employee complaints, increased ill-health, accidents and incident reports. Vanagas and Bihari-Axelsson (2004) argued that each individual may perceive the stress factor differently and that one person may be affected either more or less than another.

The following section presents a literature review summarising the findings of previous empirical studies on this topic. Next, an explanation of the research methodology is provided. The findings are then presented. The discussion compares the results with those of other studies by discussing the limitations of the study and potential research directions.

2. Literature review

There are many studies examining the negative effects of stress on employees in terms of mental state, physical health, work performance, job satisfaction, commitment level and turnover intention in the hospitality industry with its labour-intensive, excessive workload, intense communication with guests, long working hours and 24/7 service structure (Hon et al., 2013; Jung & Yoon, 2013; Kim, 2008; Kim et al., 2015; Krone et al., 1989; O'Neill & Davis, 2011; Tsaur & Tang, 2012). Lo and Lamm (2005) proposed an individual (working hours, wage level, interpersonal relationships, work-home balance), organizational (company's occupational health and safety policies, employment policies, organizational structure, culture), industrial (characteristics of sectors, stakeholder pressures, professional association policies and practices) and national level (governmental institutions and regulations) approach to provide a more in-depth perspective on occupational stress in the hospitality sector.

Carrillo et al. (2020a) examined the stress experienced by tour leaders under four headings and 30 items: external factors, tourists' attitudes and behaviours, the nature of work and job roles. According to the study, among the external factors, problems at border gates, theft incidents, strikes and transportation accidents were the leading sources of stress. These were followed by undermining authority (tourists' attitudes and behaviours), collecting tips for others (job roles), transportation delays and natural disasters (external factors), being responsible for tourists' safety (job roles), irrelevant demands and misunderstanding instructions (tourists' attitudes and behaviours), sexual harassment (external factors), long journeys, variable monthly earnings and long working hours per day (nature of work).

Carillo et al. (2020b) evaluated external factors as the most stressful for tour leaders because they are unexpected and beyond control. Tsaur and Lin (2014) identified the challenges causing uncomfortable, tense feelings and stress that tour leaders constantly face and spend extra time and energy to resolve. Stress originating from the tour (disturbing behaviour of tour members and non-solution-oriented approaches of suppliers), the tour company (employees not fulfilling their duties) and personal (low and unstable income and work-family conflicts) accumulates over time and deteriorates mental health. Ayaz and Demir (2019) examined the sources of work-related stress in tour guides in six categories: nature of work, legal and organizational, operational, psychological and social, sectoral and occupational. Low wages, illegal tour guiding, work-social life balance and work-family balance were identified as important stress factors.

Dalgıç et al. (2021) found that the complaints conveyed by tourists to tour guides during the tour cover a wide range such as food, exorbitant prices charged by shopkeepers, hotels, the difference between the purchased tour and the tour program as distributed by the tour guide, uncomfortable vehicles, waiting in line at the entrance to museums and archaeological sites, entrance fees to museums and archaeological sites, congestion in the tour program, little time at archaeological sites and bus drivers. In a similar study conducted by Akgün et al. (2022), among the complaints reported by tourists to tour guides were poor service and food quality in restaurants, not following the content of the tour program, old vehicles, seating plan on buses, accommodation facilities, misbehaviour of hotel staff and bus drivers, tourists disrupting the tour by arriving late at departure time during the tour, joint tours with tourists speaking different languages, and long waiting times in front of museums were listed. Wang et al. (2010) suggested that the poor condition of the tour vehicle, such as being old, dirty, the microphone not working and air conditioning, is the main source of stress and anxiety for tour leaders. Akgunduz and Eser (2020) underlined that tour guides are also exposed to stress due to factors such as job insecurity, limited alternative job opportunities, and the necessity for continuous self-improvement. Ababneh (2017) indicated that job stress causes at least 15 Jordanian tour guides to leave the profession every year.

Tour guides have to hide their negative emotions and project positive emotions to tourists when they encounter various problems during the tour (Lei, 2019, p. 1252). The study carried out by Wong and Wang (2009) revealed that emotional labour, or in other words, institutionally required emotions, not only contributes to success in the profession but is also a source of stress. Emotional labour-induced stress felt during a trip causes mental distress as well as insomnia and abdominal pain. Mackenzie and Raymond (2020) expressed the relationship between the stress experienced by adventure tour guides and customer expectations, and dangers on the tours. Mackenzie and Kerr (2013) argued that communication difficulties due to language and cultural differences, lack of information provided to staff regarding trip details, unsuitable equipment and inappropriate customer groups; while lack of trust between the travel agency manager and the tour guide expose tour guides to stress on adventure tours. The study conducted by Xu et al. (2018) with Taiwanese tour guides revealed a significant relationship between job stress (workload, work-family imbalance, organizational task) and turnover intention.

2.1. Unsafe behaviour and unsafe conditions

Traditionally, work-related accidents are categorized as unsafe conditions (UCs) and unsafe behaviour (UB) (Choudhry & Fang, 2008). Although the employee, who is a part of the work environment and is affected by all kinds of environmental factors, is held responsible for the majority of work-related accidents due to his/her (unsafe) behaviour (Esin, 2007), studies conducted for more than twenty years show that organizational factors are the basis of serious and/or fatal accidents rather than individuals (Institution of Occupational Safety and Health, 2019).

Abdelhamid and Everett (2000, p. 54) define an unsafe condition as one "in which the physical layout of the workplace or work location, the status of tools, equipment, and/or material violate contemporary safety standards". However, they also note that UCs are due to the following causes: (a) management actions/inactions; (b) worker or co-worker unsafe acts; (c) nonhuman related event(s); and (d) UCs as a natural part of the working place. This classification covers UB as well. In this research, UCs are categorized as social-organizational, physical, structural, political and legal environments. Specifically, unsafe social-organizational factors (SOF) include UCs created by travel agencies, drivers, shopkeepers, customers, associations and other TGs whereas an unsafe physical environment (PE) includes vehicles (tour buses), and facilities (accommodation, food and beverage).

UB refers to "any behaviour that an employee engages in without regard to safety rules, standards, procedures, instructions and specific criteria in the system" (Li et al., 2018, p. 1). However, as Abdelhamid and Everett (2000) mention, unsafe acts may not be regardless of the working conditions. In this research, unsafe practices are considered either by the TG (worker) or by the driver (co-worker) and are categorized as negligence, unintentional fault (UF) and carelessness. An UF is considered beyond the employee's control and sub-categorized as physical, psychological and inexperience where physical represents tiredness, sleeplessness, ageing, doing things not a duty; inexperience covers inexperience, unconsciousness, lack of knowledge and youth; and psychological represents worries for the future, trying to do one's best, proving oneself and low self-confidence.

3. Methodology

This study aims to shed light on WRS from the TGs' perspective. As an explanatory sequential design (Guetterman et al., 2015), this study employs first quantitative and then qualitative data to enhance the knowledge of occupational safety and health (OSH) in the context of TGs. Both the survey questions, closed and open-ended, and the codebook were adapted from previous research (Akkuş, 2021; Akkuş et al., 2022). The survey was carried out in January 2021 and 90 usable surveys were obtained from the TGs who work in different regions in Turkey. The survey results were then analyzed using SPSS, the questions for the focus groups (FGs) were formed. Four FGs were held in March 2021, each with four TGs, 16 TGs were included in the total and 80,053 word-length texts were coded and analyzed between May–September 2021.

To ensure the validity of the research, several approaches were followed (Creswell & Plano Clark, 2018; Whittemore, et al., 2001). First, the study applied triangulation: TGs from different regions of the country, with different ages, gender and target markets were included in the study using purposive sampling; both quantitative and qualitative data were collected. TGs' narrations were summarized by the researchers for participant confirmation at the end of each FG session. The interviews were transcribed verbatim and a rich set of descriptions was provided with codes and themes. A computer-based programme (MAXQDA, 2021) was used to carry out the analysis.

3.1. Participants

On 22 June 2012, the Law on the Profession of Tourist Guide was published in the *Resmî Gazete* by a decision of the Council of Ministers in Turkey (*Turist Rehberliği Meslek Kanunu*, 2012). Accordingly, to be admitted to the profession, it is required to have graduated from associate, undergraduate, or graduate degree programmes of tourist guiding departments at universities or to complete a national or regional tourist guiding certificate programme organised by unions under the supervision and control of the Ministry of Culture and Tourism. The opportunity to become a tour guide has increased considerably in recent years with the growth of both undergraduate and graduate programmes. However, in addition to training, the requirements for obtaining a licence include passing an examination in a foreign language and taking part in training trips to different geographical regions organised by the Union of Chambers of Turkish Tourist Guides (Turist Rehberleri Birliği – TUREB) under the supervision and control of the Ministry of Culture and Tourism. Trips to seven regions must be completed to obtain a national tour guide licence. Otherwise, the person can only work as a local tour guide in the region(s) where he/she participated in the training. In addition, by paying certain fees, tour guides can choose to be active or inactive for a year. Whereas in 2021 the number of tour guides was 12,097, in 2023 the number of professional tour guides has increased to 12,878 in Turkey. Of those, 10,021 people have activated their 'cards' for the year 2023.

Of the participants in the survey 74 were male while nine of the participants in the FG were female (67% of tour guides are male in Turkey). The majority (52 participants in the survey and 6 participants in FG) were working in the Marmara region, consistent with the national average (45%). Although tour guides registered with the Istanbul Chamber of Tourist Guides (İstanbul Turist Rehberleri Odası – IRO), Çanakkale Chamber of Tourist Guides (Çanakkale Bölgesel Turist Rehberleri Odası – ÇARO) and Bursa Chamber of Tourist Guides (Bursa Bölgesel Turist Rehberleri Odası – BURO) naturally work mainly in the Marmara region, there is no obstacle for such a guide to lead tours in other regions if his/her 'card' is national. In this respect, it can be said that tour guides provide mainly national rather than regional services.

However, there is no national data to compare results about age and experience. The majority of the participants in this study were between the ages of 31 and 40 with more than 11 years of experience, and 78% of them had health insurance.

4. Findings

While 9% of the survey participants had work-related accidents (WRA), 29% of them had work-related ill health (WRIH). All of the FG participants had to deal with OSH issues to some extent. 60% of the survey participants and 13 of the FG participants had no OSH education. After applying content analysis to both the FG data and the open-ended questions of the survey, five categories were derived: reason for WRA, type of WRA, reason for WRIH, type of WRIH, and prevention. To fully understand the place of stress in the OSH context, the codebook for all the codes and sub-codes related to 'WRS' is shown in Figure 1.

Table 1. Description of work-related ill health type

WRIH-type	Frequency (*f*)	%
Physical	216	51.1
Mental	207	48.9
including:		
work-related stress	63	14.9
others	144	34.0
Total	423	100.0

Source: authors.

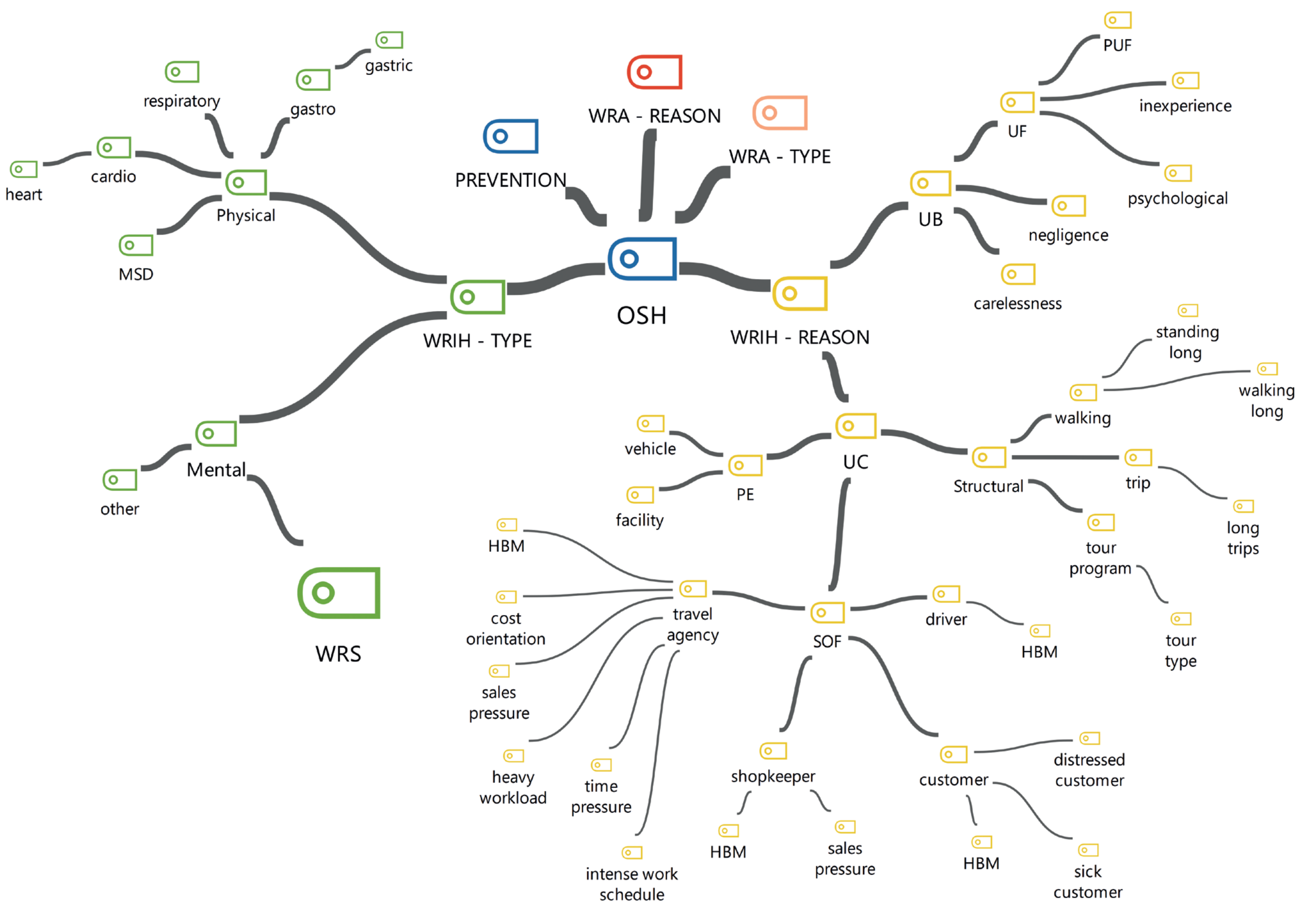


Figure 1. Codebook related to work-related stress (WRS)
Note: HBM – harassment, bullying and mobbing, MSD – musculoskeletal disorder, OSH – occupational safety and health, PUF – physical unintentional fault, SOF – social-organizational factor, UB – unsafe behaviour, UC – unsafe conditions, UF – unintentional fault, WRA – work-related accidents, WRIH – work-related ill health
Source: authors

The WRIH-type category has two codes: physical and mental (Table 1). Physical health problems (f = 216; 51.1%) are almost equal to the mental health problems (f = 207; 48.9%) that TGs have experienced. Within mental-based WRIH, WRS (f = 63; 14.9%) is the most common code among others (psychological problems and psychological fatigue).

To understand the relations between stress and related codes, code relations analysis and code intersection analysis were utilised by MAXQDA 2021. Code relations analysis shows that reasons for WRS are mainly due to UCs (f = 63; 79.7%) (Table 2). SOF (f = 45; 56.9%) is the foremost reason under this code with customers and travel agency (f = 17; 21.5% for both), shopkeepers (f = 9; 11.4%) and drivers (f = 2; 2.5%), respectively. Structural factors and PE (f = 9; 11.4% for both) related to the TGs' WRS ranked second after SOF among UC.

According to code relations analysis, unsafe behaviours (f = 16; 20.3%) are in second place. Only a TGs' UF was found to be associated with WRS: physical (f = 10; 12.7%), inexperience (f = 4; 5.1%) and psychological factors (f = 2; 2.5%), respectively. WRS was determined to have relations with other WRIH-types: psychological disorders (f = 8; 61.5%) and physical health problems (f = 5; 38.5%). Among physical problems, only gastric (f = 3; 23.1%) and heart (f = 2; 15.4%) were found to be related to stress.

Table 2. Code relations of work-related stress (WRS)

Codes		Stress	
		frequency (f)	%
WRIH-reason	unsafe condition	63	79.7
	social-organizational factor including: customers travel agency shopkeepers drivers	45 17 17 9 2	56.9 21.5 21.5 11.4 2.5
	structural	9	11.4
	physical environment	9	11.4

Table 2 (cont.)

Codes		Stress frequency (*f*)	Stress %
WRIH-reason	unsafe behaviour	16	20.3
	tour guides / unintentional fault	16	20.3
	including:		
	physical	10	12.7
	inexperience	4	5.1
	psychological	2	2.5
	Total	79	100.0
WRIH-type	physical	5	38.5
	including:		
	gastro	3	23.1
	heart	2	15.4
	mental	8	61.5
	including:		
	psychological disorders	8	61.5
	Total	13	100.0

Note: irrelevant or negligible codes (i.e. *f* = 1) were not included; WRIH – work-related ill health.
Source: authors.

4.1. Work-related ill health-reason and work-related stress / unsafe conditions

Code intersection analyses were performed to better illustrate the relationships between the above-mentioned codes and WRS. TGs' verbatim statements related to code relations were also given in the figures. UC is identified as the main contributor of WRS by several sub-codes: SOF, structural factors, and PE.

4.1.1. Social-organizational factor and work-related stress

The analyses show that customers and the travel agency make the highest contribution to TGs' WRS. Problems with shopkeepers and drivers are other stress-based factors in the working life of TGs. Among SOF, a common factor stands out: harassment, bullying and mobbing (HBM; *f* = 19; 24.1%). Furthermore, HBM is not only the leading factor but also the highest among all stress-based contributors. One-fourth of the WRS that TGs suffer is due to HBM from customers, travel agencies, shopkeepers and drivers. Sales pressure from shopkeepers and travel agencies, and distressed customers are the main causes of HBM (Figure 2).

Customers and work-related stress

Problems with customers are varied, but three of them are related to stress (Figure 3): distressed customers (*f* = 8; 10.1%), HBM (*f* = 6; 7.6%), and sick customers (*f* = 3; 3.8%). HBM from customers is mostly due to men's (or women's) sexual interest in TGs. Customers inviting TGs to their hotel rooms, waiting in front of the TGs' rooms, texting and proposing marriage contribute TGs' WRS. Female TGs are particularly concerned about tour groups consisting mainly of male tourists from certain countries. Female TGs come up with solutions such as wearing fake wedding rings, talking about their families and children, and changing their phone numbers. Distressed customers often argue with tour guides to change the tour programme according to their wishes or have arguments about any topic with tourists from countries with which they do not have friendly relations. Sick customers are another stress factor for the TGs. A statement by a TG summarizes well customers with certain health problems that require special attention:

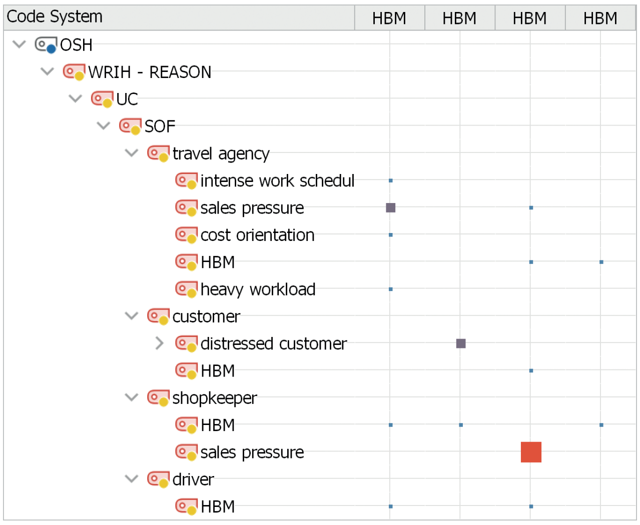


Figure 2. Code relations of harassment, bullying and mobbing (HBM)
Note: OSH – occupational safety and health, WRIH – work-related ill health, UC – unsafe condition, SOF – social-organizational factor
Source: authors

> N: Also, I ask my customers, whether they come from abroad or not, about their health history. I make such phone calls with customers; let's say before going on a tour. I say, do you have a special health condition that I need to know? For example, some of those coming from abroad are allergic to bees. You know, I need to know such details while travelling. Because the bee vaccine should be with him, you should also know that you can intervene urgently when your guest is stung by a bee. Because even in the most luxurious hotels, for example, let's say the customer is allergic to mushrooms… A friend's guest was served at the hotel and the woman was hospitalized. So this is happening in a 5-star hotel. That's why I want to know about food details, now allergies have increased a lot, or I want to know about people with high blood pressure because it happens to us, I need to know what the medicine is (FG-IV, Pos. 461).

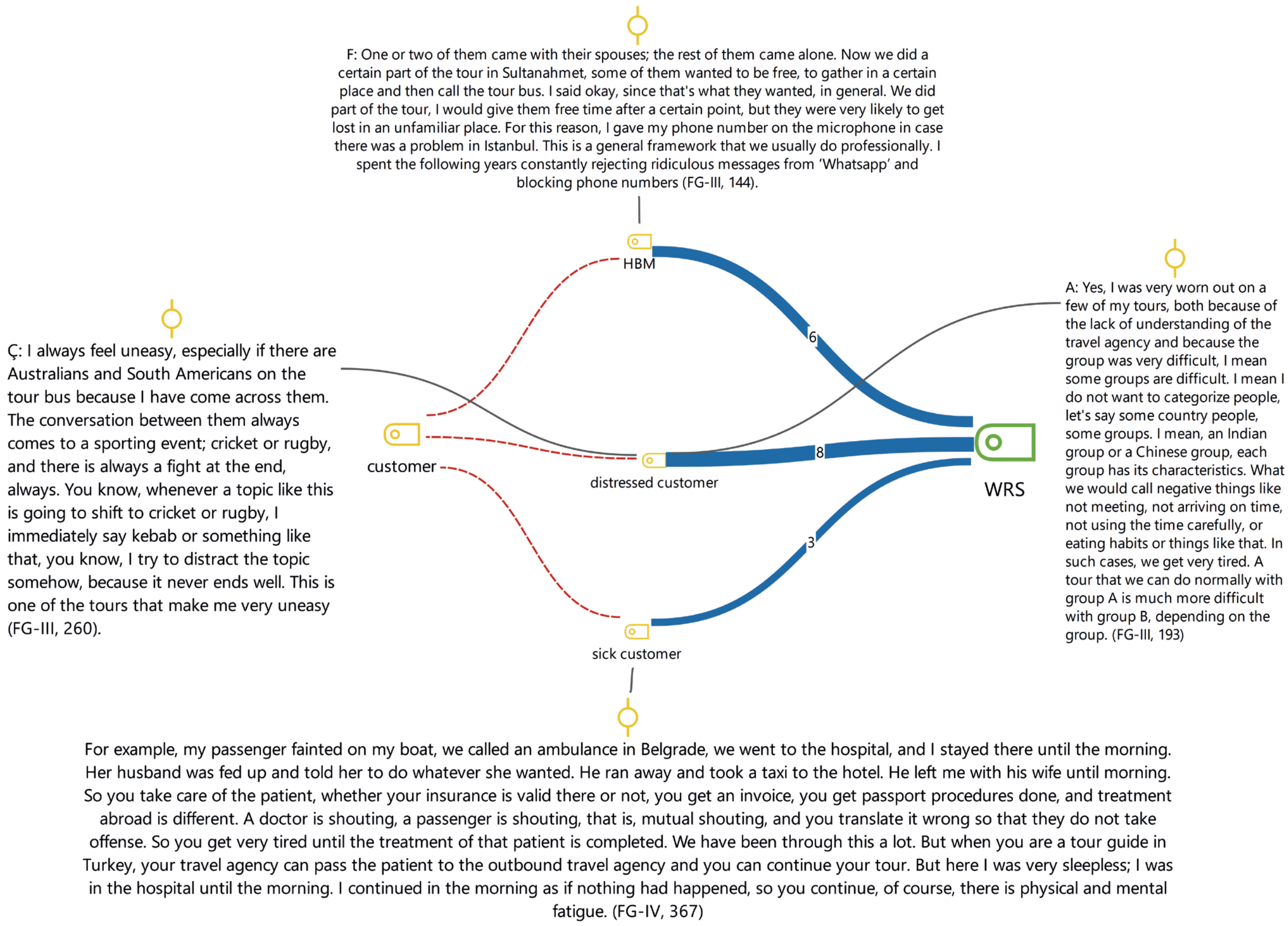


Figure 3. Code intersections between customer and work-related stress (WRS)
Note: FG – focus group
Source: authors

Travel agency and work-related stress

Travel agencies create stress on TGs due to various factors (Figure 4): HBM (*f* = 4; 5.1%), cost orientation, sales pressure, an intense work schedule (*f* = 3; 3.8% for each), heavy workload and time pressure (*f* = 2; 2.5% for the rest). All these factors are closely related to the high expectations of travel agencies for the TGs. Mobbing from travel agencies is mostly due to sales pressure or cost orientation. Travel agencies evaluate TGs according to the sales volume realised in a tour. TGs do not get enough rest during or between tours:

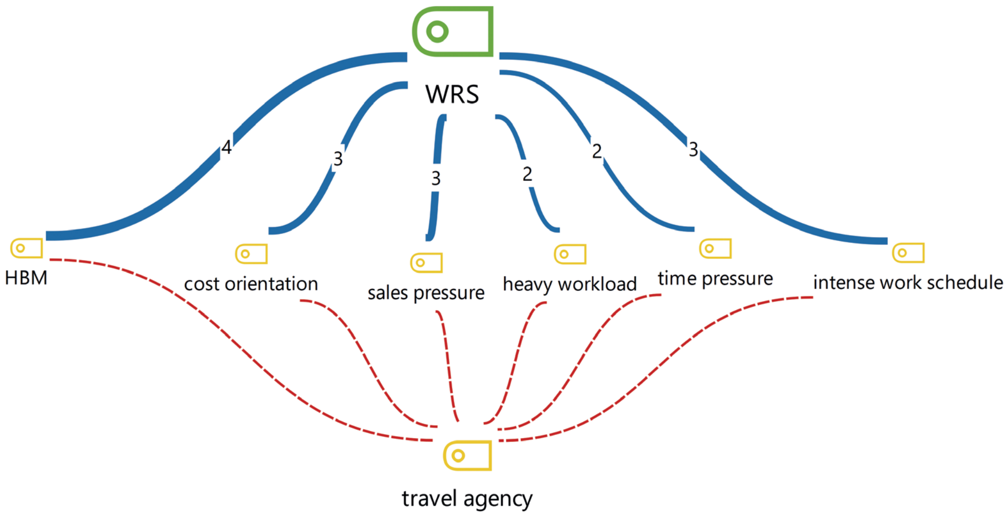
> D: Yes, sometimes, as I said, there can be very busy programs so that the travel agency can sell the tours, it also happens in Istanbul tours, especially in local groups; this is something that happens very often. He/she writes whatever comes to his mind on the list. Even if we put Antalya and Cappadocia aside, in a busy place like Istanbul, when there are programs such as breakfast in Eyüp Sultan in the morning, noon prayers in Süleymaniye, afternoon prayers in the newly built Çamlıca Mosque, etc., and when it is a crazy marathon in Istanbul and most of our tour is on the road and we are worried about getting someone somewhere on time, bus captains and tour guides, of course, when we are all under stress, such traffic accidents are inevitable, and in general, it is not the guides who make these tour programs (FG-IV, Pos. 120).

Despite overly demanding travel agencies, TGs accept their profession as it is:

> A: So you are responsible for the group, the situation there, the conditions of the restaurant, the hotel, accommodation, food and beverage, entrances, exits, visits, the whole thing depends on you. Imagine something like the conductor of the orchestra saying I'm sick and leaving his baton (FG-III, Pos. 21).

Shopkeeper and work-related stress

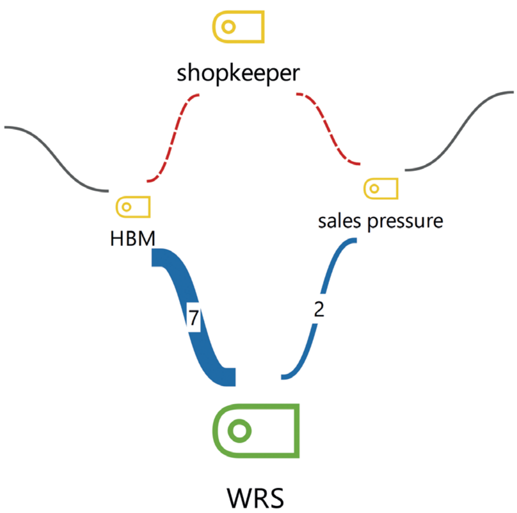
Another important social stress factor for the TGs is shopkeepers (Figure 5) with their HBM (*f* = 7; 8.9%) and sales pressure (*f* = 2; 2.5%). Shopkeepers' HBM mostly stems from sales pressure and turns into harassment. The TGs feel that the shopkeepers follow their every move and exert pressure by calling them day and night or by showing anger and power:



UÜ: There are many demands on tour guides. The travel agency prepares and sells the tour. The travel agency brings groups from abroad or domestic groups called in-going. They deliver the group to you and you control the bus captain, restaurants, and hotels. You ask the guests with a microphone if they have any diseases such as diabetes or claustrophobia or this and that. These are the things we all do. So 772 TL is the price of a tour package. You are asked to be health personnel and if your guest is old, you are expected to be a caregiver. You will be an entertainer at work; you will take the microphone and tell jokes. You are asked to sing songs, you are told not to bring complaints. With the mentality that whatever the guest says is right, crisis management is required in times of crisis. There are very big pressures like this on the tour guide. Therefore, the burden of tour guides should be eased. I mean, we are definitely in a very difficult situation under these conditions, whether it is terrorist incidents or traffic accidents, it shows that our life safety is in danger. There is a lot of pressure on tour guides and travel agencies can put pressure on some of our colleagues. I mean, we will give you this much money, don't you like it? Turkey's conditions are very good money and so on, but when you evaluate it all, you are the only one on the bus, all the duties are on you. So you are responsible for the group, you are responsible for the safety of the vehicle; you are responsible for the passengers to wear their seat belts. If they are diabetic, prioritize them at meals; make sure they take their medicines, and so on. So there is a lot of pressure on the tour guide. Especially travel agencies know this and ignore it and do not support us in this regard. So we are lone fighters. Let me say this frankly, we are the scapegoats again, in the slightest incident, negative feedback, complaint, and disorganization, it is us again. (FG II, 239)

Figure 4. Code intersections between travel agency and work-related stress (WRS)
Note: HBM – harassment, bullying and mobbing, FG – focus group
Source: authors

R: The sellers are bothering the tour guides. When we are guiding a tour in Turkey, we share on social media that we are in Cappadocia, we met the group, and picked them up from the airport. They know where you are going, and they start making phone calls saying you will be here tomorrow, a leather seller calls, a jeweller calls, but he calls 5 times a day and the other one calls too. You cannot make a narration; sometimes you get so many calls that you take a break from the narration. That's why sometimes we try not to share our location on social media anymore so that they don't know where we are. The travel agency says, you are doing my tour, but you tag other travel agencies and share information, why do not you share ours so that we can advertise? You know, they bother us a lot, sometimes hot air balloon operators, parachute companies, jewellery sellers, and ceramic sellers call us separately. So day by day, your spouse does not know where you are, but they know where you will be. They start calling at night. (FG-IV, 209)



AY: If you have a bad sales performance, you turn out to be a bad tour guide. I have done a favour for both you and the guest; I have contributed to the promotion of the country. I brought tourists to you, you know, it is a favour, and when you do not sell, do you blame me or I am a bad tour guide, whereas you are not a bad seller because you cannot sell, so this is a strange side of the business. (FG-I, 316)

Figure 5. Code intersections between shopkeeper and work-related stress (WRS)
Note: HBM – harassment, bullying and mobbing, FG – focus group
Source: authors

N: It is very true what Ms. Dilek said. Female tour guides seem to face less pressure from the sellers compared to men. There were even male tour guides who were subjected to violence (FG-IV, Pos. 220).

Some TGs have found solutions by hiding their profession:

AA: I travel in disguise a lot; I dress the same as the tourists. I don't walk with the group after leaving them inside for the last restroom break. I say the tour bus is on the right and then on the left. Toilet break and there are shops on the right, you know 'gift shop'. I leave my group there. Sometimes, if I think of it, I hide my professional tour guide work card and go to the bus with my hands in my pockets, looking left and right. You know, just like a tourist. However, I feel like I could have been their target too if I had gone with the group saying, "Let's go, let's go". I consciously choose this strategy there (FG-I, Pos. 213).

Drivers and work-related stress

The driver is an integral part of the tour and can be seen as a co-worker of TGs since they have to work in coordination for long hours for the success of the tour. However, drivers become another stress creator for TGs. They either try to dominate and conflict or make HBM ($f = 2$; 2.5%) on them (Figure 6). Some drivers sexually harass female TGs. Others try to dominate regardless of the gender of the TGs.

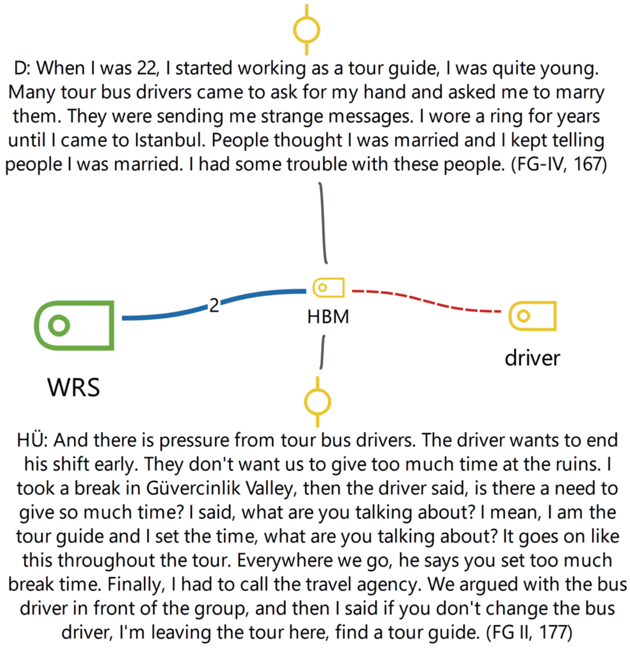


Figure 6. Code intersections between drivers and work-related stress (WRS)
Note: HBM – harassment, bullying and mobbing, FG – focus group
Source: authors

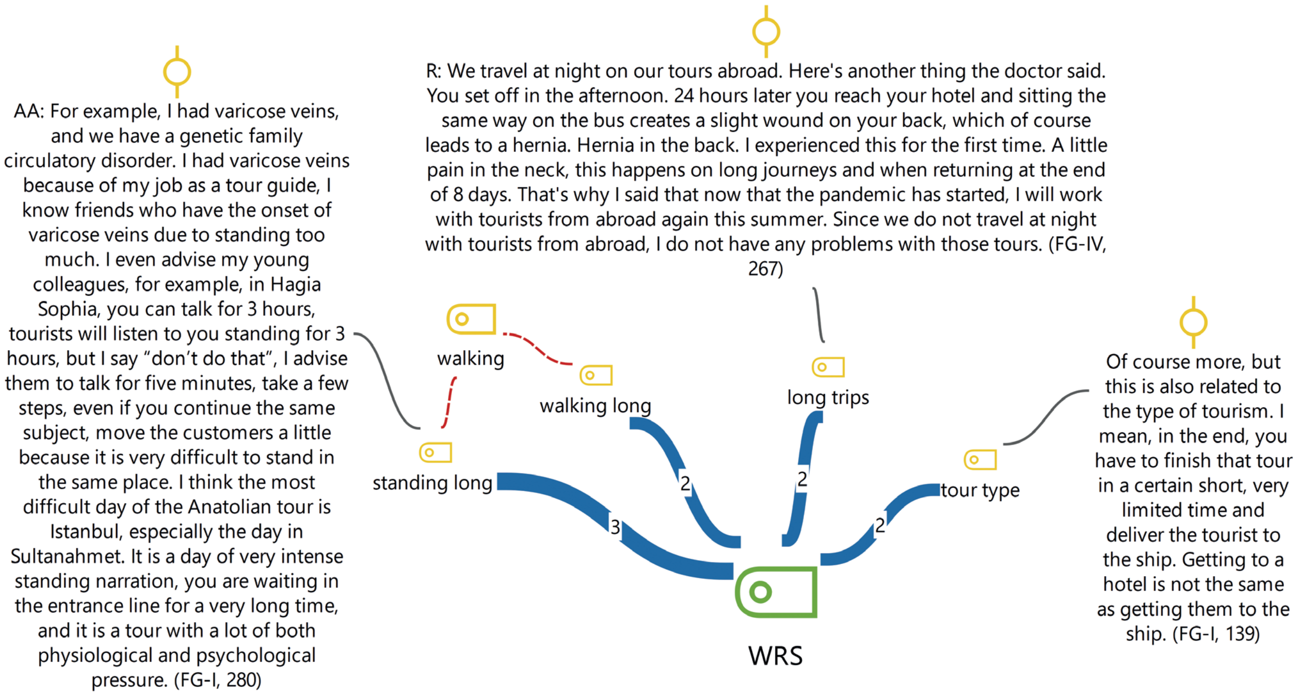


Figure 7. Code intersections between structural factors and work-related stress (WRS)
Note: FG – focus group
Source: authors

4.1.2. Structural factors and work-related stress

Structural factors refer to the nature of the profession and consist of trips, walking, responsibility and tour program. This code is composed of standing for long hours ($f = 3$; 3.8%), long walks, tour type and long trips ($f = 2$; 2.5% related to the rest) (Figure 7).

TGs are well aware of the challenges of their profession. As mentioned above, it is an extremely demanding job and the TGs accept it as it is. They know that tour guiding requires long trips, long walks, standing, constant talking, often staying away from home, and an irregular life. When these structural factors of tour guiding are combined with intense work schedule, sales and time pressure from travel agencies, distressed customers, HBM and sales pressure from shopkeepers, PE such as facilities and vehicles, and UFs of the TGs such as physical tiredness, sleeplessness and inexperience, the problems begin (Figure 8).

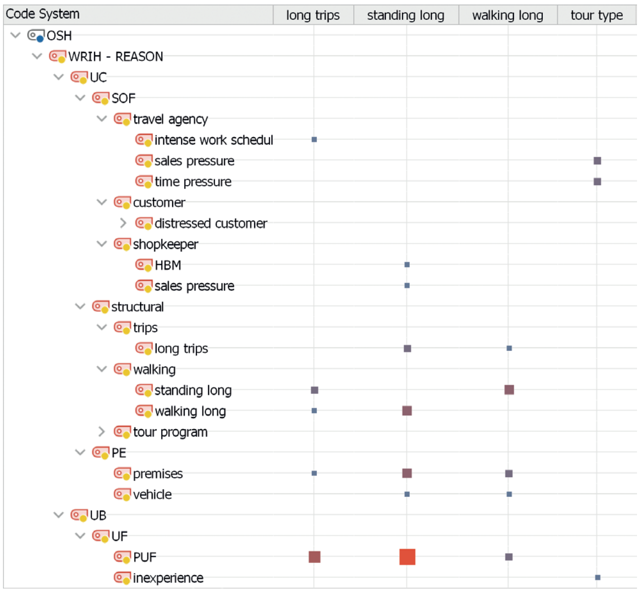


Figure 8. Code relations of structural factors
Note: OSH – occupational safety and health, WRIH – work-related ill health, UC – unsafe condition, SOF – social-organizational factors, PE – physical environment, UB – unsafe behaviour, UF – unintentional fault, PUF – physical unintentional fault
Source: authors

4.1.3. Physical environment and work-related stress

As subcodes of PE, facilities ($f = 6$; 7.6%) and vehicles ($f = 3$; 3.8%) are other UC factors related to stress (Figure 9). Facilities refer to the accommodation and food and beverage places that travel agencies have contracts with therefore these are the places where TGs are obliged to stay or eat. In most cases, the lack of hygiene in the hotel or the food is the cause of stress.

Vehicles, in other words, the tour bus, which is an indispensable part of tours, causes stress by accidents and breakdowns due to age and poor maintenance. Vehicles as a stress contributor are also strongly related to the intense work schedule and cost orientation of travel agencies (Figure 10). A TG explained the situation as follows:

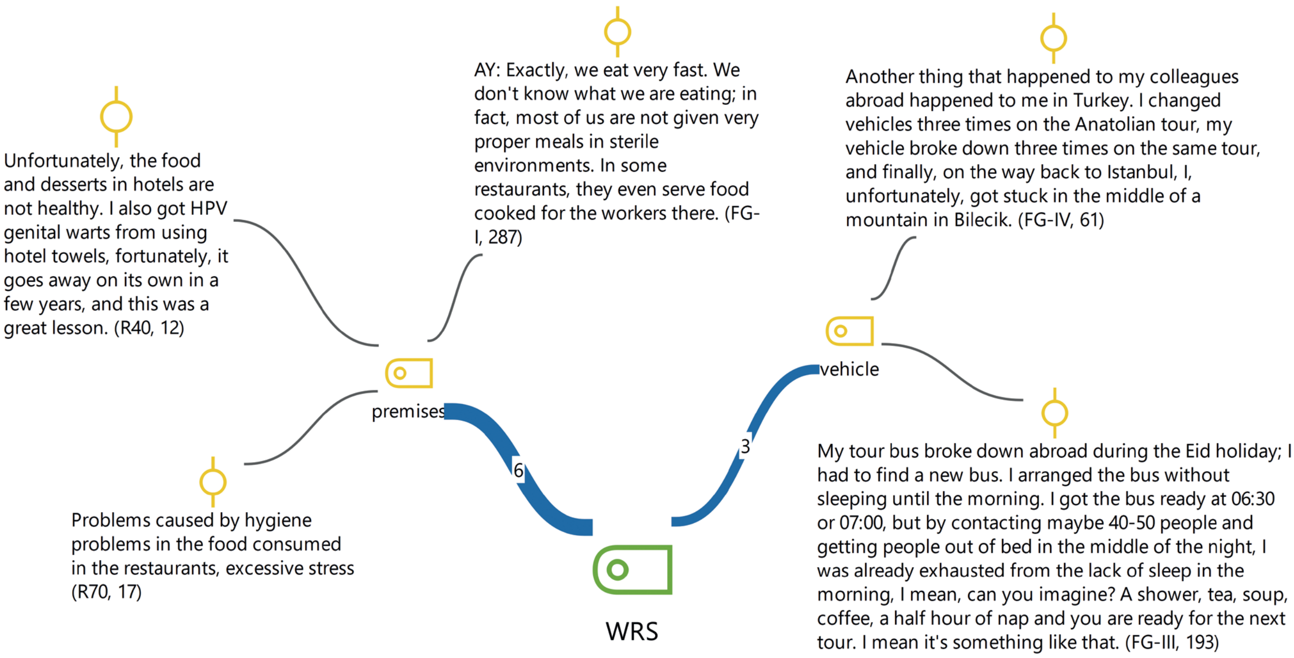


Figure 9. Code intersections between physical environment (PE) and work-related stress (WRS)
Note: R – respondent, FG – focus group
Source: authors

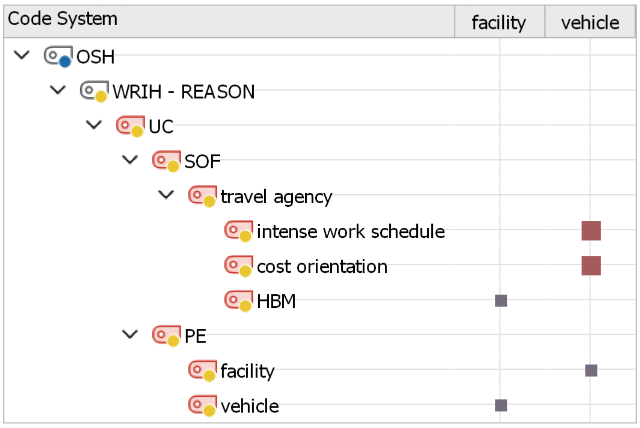


Figure 10. Code relations of physical environment (PE)
Note: OSH – occupational safety and health,
WRIH – work-related ill health, UC – unsafe condition,
SOF – social-organizational factors,
HBM – harassment, bullying and mobbing
Source: authors

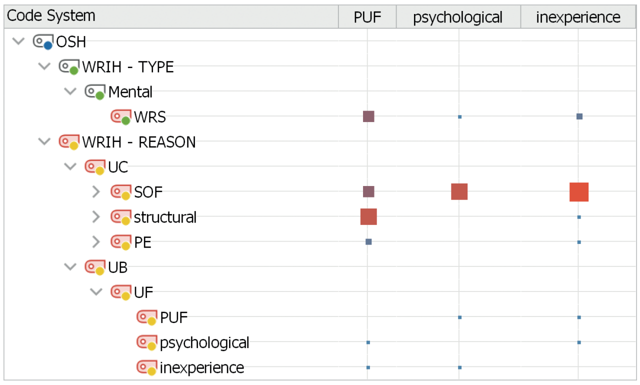


Figure 12. Code relations of unintentional fault (UF)
Note: OSH – occupational safety and health,
WRIH – work-related ill health, WRS – work-related stress,
UC – unsafe condition, SOF – social-organizational factor,
PE – physical environment, UB – unsafe behaviour,
PUF – physical unintentional fault
Source: authors

AA: Likewise, to cut down on tire costs in the maintenance of vehicles, they change the tires in 5 years instead of 3 years, or they retread the tires. Something unheard of in any foreign country is being done in Turkey. They stick a layer on the melted and worn tires, supposedly grooved, and they think that the tires will manage this way (FG-I, Pos. 126).

4.2. Work-related ill health-reason and work-related stress / unsafe behaviour

UBs of TGs have three sub-codes: UFs, negligence and carelessness. Only UF, which refers to the unconscious behaviours of the TGs, has been found related to WRS (Figure 11) with the sub-codes of physical ($f = 10$; 12.7%),

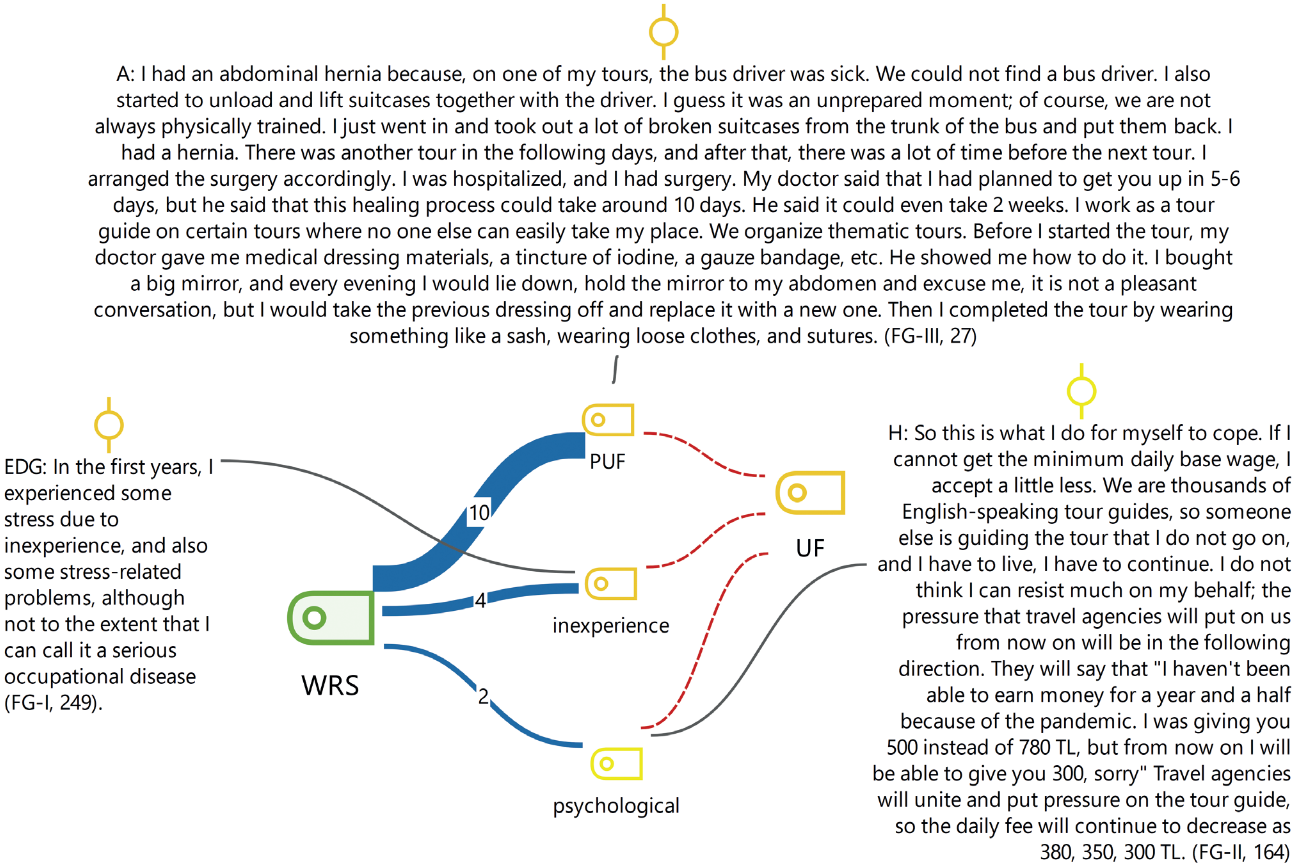


Figure 11. Code intersections between tour guides (TGs') unintentional fault (UF) and work-related stress (WRS)
Note: FG – focus group, PUF – physical unintentional fault, UF – unintentional fault, WRS – work-related stress
Source: authors

inexperience (f = 4; 5.1%), and psychological (f = 2; 2.5%). Physical UFs are mostly caused by tiredness, ageing, lack of sleep and doing things that are not their duty such as carrying bags. Psychological factors are mainly due to worry about the future and trying to do one's best while inexperience is the main reason for the code. These sub-codes are also related to each other.

The unintentional behaviour of TGs is highly related to SOF (Figure 12). Travel agencies with cost orientation and HBM make the highest contribution to the UB of TGs. TGs' worries about the future and inexperience are affected by these factors. However, physical UF is the main contributor to WRS amongst other UBs.

4.3. Work-related ill health type and work-related stress

Physical WRIH-types are musculoskeletal disorder (MSD), respiratory, gastrointestinal, cardio, infection, head and skin problems. Only two of them, gastric (f = 3; 23.1%) and heart (f = 2; 15.4%) problems were found to be related to WRS (Figure 13). Mental WRIH-types are coded as stress, psychological disorders, psychological fatigue and professional deformation. The last three are grouped as others. Only psychological disorders (f = 8; 61.5%) were related to the WRS. Contrary to the WRIH-reason, these relationships do not mean that one is the reason for another. However, these three work-related health problems are correlated to some extent.

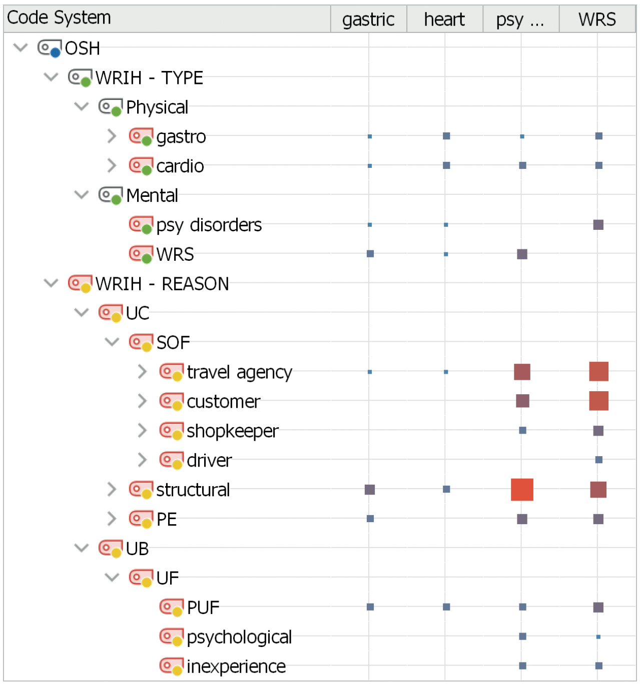


Figure 14. Code relations of work-related ill health (WRIH) type
Note: OSH – occupational safety and health,
UC – unsafe condition, SOF – social-organizational factor,
PE – physical environment, UB – unsafe behaviour,
UF – unintentional fault, PUF – physical unintentional fault
Source: authors

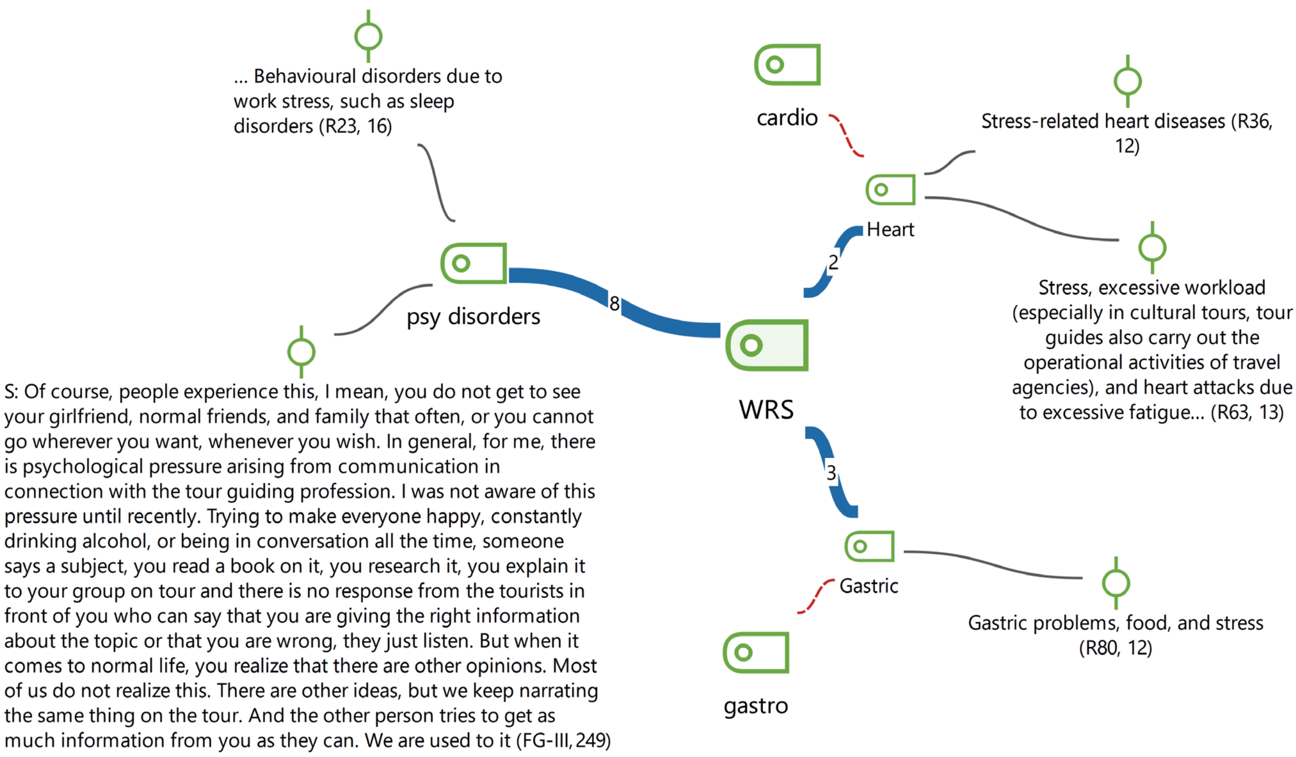


Figure 13. Code intersections between other health problems and work-related stress (WRS)
Note: R – respondent, FG – focus group
Source: authors

When the relations between the three codes and WRIH-reasons are analyzed, structural factors seem responsible for the physical health problems, which are followed by facilities and UFs. HBM and the heavy workload caused by travel agencies with a slight effect on physical health problems (Figure 14).

However, SOF (UC) is mainly responsible for psychological disorders and stress. Travel agencies ($f = 8$) with intense work schedules, time pressure, customers, shopkeepers, PE and structural factors are the main contributors to mental problems. UBs, especially physical UF due to tiredness and sleeplessness also contribute after UC.

5. Discussion

Despite TGs having a crucial role in the tourism industry and benefiting multiple groups such as tourism providers, tourists and locals, limited interest has been shown in the work-related challenges of TGs so far (Ababneh, 2017). Few studies on this topic reflect consumers' perspectives (Chen & Chang, 2020). WRS has been studied for recent decades in the context of the tourism industry. However, the stressors of TGs have not been sufficiently investigated. This study makes a comprehensive contribution to the literature by determining the possible reasons for WRS from the TG's perspective. The relations of WRS with both physical and mental health problems are also discussed in this study. Out of 90 surveys and 16 FG participant statements, five categories are derived, and for this study two of them, WRIH-type and WRIH-reason, were assessed to understand the role of stress in TGs' occupational safety and health.

The results show that WRS accounts for 15% of all health problems for TGs. Being psychologically worn-out was found one of the most common problems of TGs in Turkey in the study by Ulusoy et al. (2021). The same study revealed that when considered together with focusing problems, sleep disorder and mental fatigue, mental problems accounted for 22% of TGs' work-related health problems. This finding is much lower than our findings. This study demonstrated that work-related mental health problems account for almost half of all health problems. This is consistent with the findings of Health and Safety Executive (2021) which revealed that WRS is one of the leading occupational risk factors today.

An important contribution of this study is to identify possible reasons for WRS. Unsafe work-related conditions were found to be the main stressor for TGs. Among other factors contributing to UC, SOF stands out, accounting for more than half of the TGs' WRS. There is one striking factor that is present in almost all SOF: HBM. The fourth of these factors arising from HBM is harassment and bullying from customers, shopkeepers, drivers and harassment and mobbing from travel agencies. Sexual harassment from customers, drivers and shopkeepers is a prominent problem especially for female TGs (Carillo 2020a; Köroğlu et al., 2020; Wong & Wang, 2009; Zengin et al., 2014). The studies also show that sexual harassment is related to burnout and harms the psychological well-being of female TGs (Alrawadieh, 2021).

This study also demonstrated that customers and travel agencies, two integral parts of the package tour, are the primary reasons for TGs' WRS. Distressed or sick customers and harassment from customers are significant stressors for TGs. This result confirms similar studies in Turkey where 'unkind' customers cause health problems for TGs (Ulusoy et al., 2021). Organising a group at the beginning of the tour, and dealing with late and anxious tourists, are also mental stress factors for Chinese TGs (Chen & Chang, 2020). Tour leaders in South America state that customers' attitudes and behaviour increase their stress levels. Annoying customers who do not follow recommendations or warnings put extra burdens on TGs, and affect them negatively (Tsaur & Lin, 2014), which is also consistent with this study.

Travel agencies contribute to TGs' stress by mobbing, cost orientation, sales pressure, intense work schedule, heavy workloads and time pressure. The intense work schedule of TGs (Köroğlu et al., 2020) was also associated with stress in the study by Ulusoy et al. (2021). Most tour guides do not have time to rest because of their busy tour schedule (Chen & Chang, 2020). Chinese TGs sometimes have to stay with another guest in their room to reduce operational costs (Tsaur & Lin, 2014). These studies are consistent with our findings emphasising the cost-oriented approach of travel agencies. Besides, female TGs have more problems with travel agencies than male TGs (Alrawadieh et al., 2021). They have trouble not only with travel agencies but also with shopkeepers and drivers. Sales pressure from shopkeepers often turns into harassment (HBM) and increases WRS, as well. TGs need to build good relationships with drivers as they are critical to the success of the tour (Tsaur & Lin, 2014). Köroğlu et al. (2020) found that drivers were responsible for almost half of the problems that female TGs experienced. Therefore, drivers can be a source of stress by affecting or impeding the progress of the tour when they have poor dialogue with TGs or by harassing them (Tsaur & Lin, 2014; Wang et al., 2010).

This study also supports the existing literature (Ababneh, 2017; Chowdhary & Prakash, 2008; Mackenzie & Kerr, 2013): structural factors such as standing for long hours, long walks, tour type and long trips contribute to the TGs' WRS. The problems start when these structural factors of tour guiding combine with other stressors such as HBM, intense work schedule, sales and time pressure, distressed customers, facilities, vehicles, physical tiredness, sleeplessness and inexperience. Especially during the peak season, TGs can only stay at home a few days a month, so they have no 'private life' (Chen & Chang, 2020), exhibit unsocial behaviour (Alrawadieh et al., 2021), and their relations with their family are negatively affected (Batman, 2003; Köroğlu et al., 2020).

Unsafe work-related PEs affecting not only the physical health but also the mental health of TGs' are facilities and vehicles. Hotels, restaurants and other facilities contribute more to the WRS of TGs due to a lack of hygiene. Old or poorly maintained tour buses (Batman, 2003; Wang et al., 2010) are highly associated with intense work schedules and cost orientation. In this study, vehicle-related stress was lower than others although Wang et al. (2010) found that risk arising from tour buses is the biggest risk at 14%. However, in that study WRA was probably taken into account and vehicles were considered as a risk factor for traffic accidents (e.g. tour bus crashes). In this study, stress was handled as a WRIH, and not as risks arising from buses.

Although UCs are put forward as the main reason, UB (only UFs in this study) is also responsible for one-fifth of the TGs' WRS. However, more than half of this stressor was physical UF (tiredness, sleeplessness and doing things not a duty such as carrying bags) and it was because of the working conditions, i.e. UC. This stressor is also highly correlated with cost orientation and mobbing from travel agencies. Ulusoy et al. (2021) studied WRIH-reasons of TGs. According to their findings, UBs account for 34.1% (physical – 15.1%, psychological – 6%, inexperience – 12% and negligence – 3%) of work-related health problems. However, this rate is not specific to WRS, but for all WRIH-types. Psychological UFs are not specific to TGs in Turkey. Ababneh (2017) also argued that TGs worry about the future in Jordan.

Stress is related to gastric and heart problems (physical), and comes after structural factors such as long trips, standing for long hours and long walks. This is congruent with the study of Tsaur and Lin (2014) which says long-term tours, fast eating, different foods and nervous moods especially may cause mainly intestine and stomach diseases. Stress-induced stomach problems were also determined by Wong and Wang (2019). Heart-related risks increase due to changing eating habits during tours, especially outbound (Wiardani et al., 2018). No other association between stress and other physical health problems was found in this study although significant relationships have been found in some studies such as voice disorders (Cansu, 2020; Sanssené et al., 2019). Stress is also related to psychological disorders (mental), and comes after SOF, which mainly consists of travel agencies with intense work schedules and time pressure, customers and shopkeepers. This finding confirms the studies determining the highest probability of TG burnout due to high job stress (Ababneh, 2017; Alrawadieh, 2021; Tsaur & Lin, 2014).

Although this study has made extensive contributions to the literature, some limitations need to be outlined. Firstly, this study was carried out in Turkey with non-probability sampling, therefore generalizations may be limited. Further studies on the OSH problems of TGs will shed more light on this issue. Secondly, this study reflects WRS and related factors from TGs' perspectives. Future studies may involve other parties such as travel agency managers, drivers and tourists to give a more holistic picture.

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DOI: https://doi.org/10.18778/0867-5856.33.2.09 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Tourism village clusters: Potential for development at Jepara, Indonesia

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How to cite (APA style): Fafurida, F., Oktavilia, S., Putri P.I., & Lutfiana, N.A. (2023). Tourism village clusters: Potential for development at Jepara, Indonesia. *Turyzm/Tourism, 33*(2), 111–120. https://doi.org/10.18778/0867-5856.33.2.09

ABSTRACT

The tourism sector is one of the leading national economic sectors in Indonesia and it has developed very rapidly. Efforts to improve the rural economy are also directed at tourism development. Central Java is a province with a number of tourist villages and development in some regions like Jepara Regency has locations that are close to each other. This research aims at identifying the cluster pattern of tourist village development in Jepara Regency, Central Java Province. It applies a quantitative approach using secondary data with a k-means cluster analysis. The results found that there are three clusters of tourist villages in Jepara Regency: (a) cluster 1 has six tourist villages which have high numbers of visitors, easy access, appropriate public and tourist facilities, but have few attractions and their locations are quite far from each other; (b) cluster 2 has eight tourist villages with many attractions, appropriate public facilities, close distances between locations and easy access, but have low numbers of visitors and limited tourist facilities; (c) cluster 3 has ten tourist villages, easy access, but a low rate of tourist visits, limited attractions, long distances between locations, and also limited public and tourist facilities.

KEYWORDS

rural tourism, cluster, regional, economic development

ARTICLE INFORMATION DETAILS

Received:
3 January 2023
Accepted:
26 October 2023
Published:
12 December 2023

1. Introduction

The tourism sector is one of the leading national economic sector in Indonesia and has developed very rapidly. It has multiplier effects that may affect other sectors as well in encouraging regional and national economic development. The tourism sector plays an important role by being a source of foreign exchange earnings, creating jobs, increasing community and regional income, developing business and infrastructure, and also introducing the nation's culture. The significant role of the tourism sector is increasing.

The contribution of the tourism sector to national economic growth can be identified through the national gross domestic product (GDP), foreign exchange earnings, foreign tourist visits and domestic tourist trips.

In the period 2016–2020, the national tourism sector increased consistently, despite 2020 when it decreased due to the COVID-19 pandemic. The achievement of the tourism sector has made it the leader in contributing the foreign exchange to national economic growth. The following table shows data related to targets and their achievements in this contribution to national economic growth via several indicators during the period 2016–2020.

Table 1 shows that during the period of 2016–2020 the national tourism sector relative to national GDP reached its target. In 2018, the contribution was 5.25%, in 2019 – 4.80%, and in 2020 – 4.1%, but targeted at just 4% due to the COVID-19 pandemic. During 2016–2020, the achievement of the sector as a contributor to foreign exchange earnings also reached its target: in 2018, the sector earned foreign exchange of IDR 224 trillion, in 2019 – IDR 197 trillion, and in 2020 – IDR 41.3 trillion. The achievements exceed their targets and consistently make national tourism the leading sector contributing to foreign exchange earnings in the national economy. This was supported by the numbers of foreign tourist visits and domestic tourist trips also exceeding their targets. During 2016–2020, foreign tourist visits increased: in 2018 there were 15.81 million visits, in 2019 – 16.1 million, while in 2020 – 4.02 million. For domestic tourist trips: in 2018 there were 303.5 million, in 2019 – 290 million, and in 2020 – 129 million. In addition, the competitiveness of the national tourism sector has increased but has not yet reached its target, so it is necessary to improve infrastructure and other supporting factors so that competitiveness may increase and achieve those targets.

The national tourism sector involves both rural and urban tourism. Rural tourism has two components: rural tourism itself and tourist villages. A tourist village is an area with potential and uniqueness as a tourist attraction including the unique experience of life and the traditions of rural communities with all their potential (Wirdayanti et al., 2021). Tourist villages have a significant role in reducing the burden of urbanization, providing job opportunities and improving welfare, and is used as an alternative strategy for village development. In Indonesia, there are many villages that have been called tourist villages. Based on the 2020 village potential statistics, Indonesia has 1,734 tourist villages on various islands. Java and Bali have the most, namely 857, the island of Sumatra – 355, followed by Nusa Tenggara with 189, Sulawesi – 119, Kalimantan – 117, Papua – 74, and Maluku – 23.

The province in Java-Bali that has the highest number of tourist villages is Central Java Province. According to data obtained from the Youth, Sports and Tourism Office of Central Java Province, in 2020 it had 551 tourist villages. The number had increased significantly from 2019, when it was only 353 (Fafurida et al., 2023).

Figure 1 shows that the number of tourist villages in Central Java is increasing, despite the significant increase of 198 from 2019 to 2020. In Central Java, Jepara Regency located at the northern end of Java Island has drawn the public's attention due to its high tourist attractiveness with many potential and extraordinary tourist attractions. Based on data from the Central Bureau of Statistics of Jepara Regency (Kabupaten Jepara Dalam Angka, 2021), there are about 40 tourist attractions in Jepara Regency. The decree of the Regent of Jepara (Bupati Jepara Provinsi Jawa Tengah, 2020), states that Jepara Regency has 24 tourist villages and each has potential and characteristics that can be developed, such as Tempur with its original hillside charm, Mulyoharjo with sculptures and carvings, Troso with its weaving crafts, and Karimunjawa with its culture and the natural beauty of the underwater world.

Table 1. Tourism sector targets and their achievement in Indonesia: 2016–2020

Indicator	2016			2017			2018			2019			2020		
	T	R	A (%)	T	R	A (%)	T	R	A (%)	T	R	A (%)	T	R	A (%)
Contribution to national GDP (in %)	4.50	4.13	92	5	5	100	5.25	5.25	100	5.5	4.8[a]	87	4	4[a]	102
Foreign exchange (trillion Rp)	172	176	102	200	202	101	223	224	100	280	197[a]	70	48	41[a]	86
Number of workers (million)	12	12	104	12	13	105	13	13	100	13	15	115	10	14	140
Competitive index (World Economic Forum)	n.a.	n.a.	n.a.	40	42	95	n.a.	n.a.	n.a.	30	40	75	n.a.	n.a.	n.a.
Foreign tourists (million)	12	12	100	15	14	94	17	16	93	20	16	80	4	4	101
Domestic tourists (million)	260	264	101	265	271	102	270	303	112	275	290[a]	105	120	129[a]	108

Note: T – target, R – realization, A – achievement; n.a. – competitive index only (conducted twice a year); [a] temporary projection figure.
Source: Presiden Republik Indonesia (2020); authors' analysis.

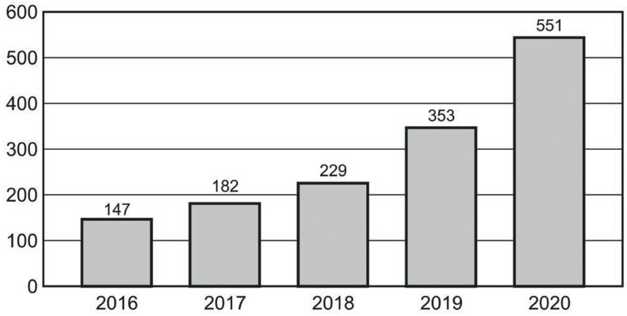

Figure 1. The number of tourist villages in Central Java: 2016–2020
Source: Dinas Kepemudaan, Olahraga, dan Pariwisata Provinsi Jawa Tengah (2020)

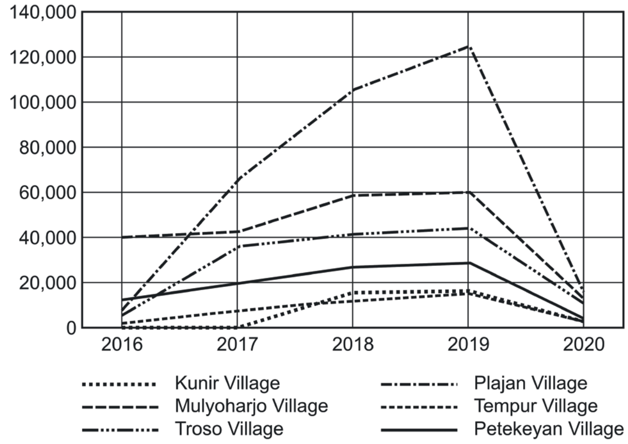

Figure 2. Number of academic articles from 2002 to 2022
Source: Scopus data

The development of tourist villages in Jepara Regency is considered to have had a high success rate, supported by their geographical location in that they tend to be close to each other and also by their variety. In some districts there is more than one tourist village, such as Tahunan that has several: Petekeyan with a carving craft center, Tegalsambi with its 'torch war' culture, and Telukawur and Semat with natural tourist attractions. Based on location several are quite close to each other and have various and interesting tourism potential and it is possible to develop them into a tourist village cluster.

According to data from the Tourism and Culture Office (Dinas Kepemudaan, Olahraga, dan Pariwisata Provinsi Jawa Tengah, 2020), during the last five years there has been an increase in the number of foreign and domestic visits despite a significant decline in 2020 caused by the COVID-19 pandemic and the government's policy to close some tourist attractions to prevent its spread.

Figure 2 shows that several tourist villages are located quite close to each other and have relatively stable increasing trends. This can be seen in Troso, Mulyoharjo and Petekeyan which have the characteristics of the attractiveness of handicrafts and the processing of different handicraft products, so it is possible to develop them into a tourist village cluster. At first, the artisan profession was only used to fulfill daily needs. However, market demand for Troso weaving, carving and sculpture keeps increasing so that craft businesses in the village are growing rapidly, making the village a center for the craft industry and the artisan profession supplies not only a daily need but also longer term to meet market demand.

After handicraft industry growth, collaboration can be carried out among village officials, tourism managers and the community to develop an industrial village into a tourist village. In the process of managing and developing a tourist village, a community group is formed called a tourism awareness group (*pokdarwis*) with legal status and local members. The majority of handicrafts in the tourist village are in the form of home-scale industry, so when tourists enter the residential area they will be presented with the process of making handicrafts in almost every house and can see and learn the manufacturing process of the craft. There are many handicraft shops. Every home artisan in the tourist village will be coordinated and integrated by the *pokdarwis*, other community groups and village government officials.

Promotion and marketing of tourist village products is carried out through print and social media by several organisations, including village governments, local government, *pokdarwis*, and others having an interest in it. Therefore, the number of tourist visits has increased every year. During the COVID-19 pandemic, the number decreased from the previous year but was still high enough for the tourist villages to survive. Based on this, the villages in Jepara Regency have a variety of attractions, they tend to be close to each other because each district has one tourist village or more, and the number of visits of foreign and domestic tourists is increasing every year. This shows success in the management and development of such villages with a close geographical location. Therefore, it is considered important to conduct research on the development of a tourist village cluster pattern and this study aims at identifying such a pattern in Jepara Regency, Central Java Province.

2. Materials and methods

This research uses a quantitative approach using secondary data obtained from the Central Bureau of Statistics and the Department of Tourism and Culture of Jepara Regency (Badan Pusat Statistik Kabupaten Jepara, 2021; Dinas Kepemudaan, Olahraga, dan Pariwisata Provinsi Jawa Tengah, 2020). The secondary data used includes information on tourist villages, their geographical location, the number of tourist attractions, transportation routes, amenities owned by tourist villages, supporting facilities and the number of tourist visits.

The data analysis technique uses cluster analysis according to the k-means method. Cluster analysis is a statistical tool that aims at classifying research subjects based on similar characteristics. Assumptions that must be fulfilled in cluster analysis are representative sampling and multicollinearity. A representative sample is one used to represent the population and here the Kaiser-Mayer-Olkin (KMO) test is used. If the KMO value is 0.5–1, it can be said that the sample used may represent the population (representative). Multicollinearity is the existence of a perfect or definite linear relationship among some or all variables (Gujarati, 1978). Multicollinearity occurs when the variance inflation factor (VIF) value >10 and the tolerance value <0.1.

This research uses the k-means cluster analysis method to classify tourist villages into clusters. The k-means cluster method is selected because this algorithm has a high accuracy and in processing the research subjects it tends to be more scalable and efficient, and not affected by sequence. This research uses several variables: the number of tourist attractions, the average number of tourist visits, the distance from the tourist village to the city center, accessibility, and available public and tourism facilities.

3. Findings

In the context of tourism, the cluster approach is used to increase competitiveness as a tourism development strategy. Research conducted by Rodríguez-Victoria et al. (2017) finds that grouping has a positive impact on competitiveness. Majewska and Truskolaski (2019) prove that cluster mapping may improve the identification of tourism clusters. Moric (2013) conducts a cluster approach to rural tourism in Montenegro showing that it may overcome its main problems in rural tourism by seeking and increasing competitiveness through the integration of different attractions so as to produce more complex and attractive tourism products.

In the context of tourism, Porter (2000) states that tourism clusters are based on the quality of the visitors' experience depending on the main tourist attractions and tourism complementary businesses, such as hotels, restaurants, shops and transportation facilities. The development of tourism clusters must be supported by the main tourist attractions and supporting factors in the form of public facilities, tourism facilities, institutions and other factors that may increase tourism competitiveness (Fafurida et al., 2020). The determination of tourist village clusters in Jepara Regency is based on the cluster theory of Porter (2000) and the factors that affect a tourist village cluster using the Porter diamond model are:

1. Factor conditions – the main factors that affect a tourist village cluster: tourist attractions, labor and infrastructure.
2. Demand conditions – factors that allow higher consumer demand to increase competitiveness from the number of tourist visits.
3. Structure, strategy and competition which are seen in the market share of tourist villages, tourism governance structures and tourism village promotion strategies.
4. Related and supporting industries that may encourage tourism development including accommodation, catering and retail.
5. The government which plays a role in providing policies and improving the quality of natural resources and tourism infrastructure.
6. Opportunities and circumstances that are beyond control such as politics, changes in market demand and tourist trends.

The determination of tourist village clusters in Jepara Regency based on the Porter diamond model is in line with research conducted by Saraswati et al. (2019) for building a competitive advantage in the Ngringingrejo Bojonegoro starfruit agrotourism area. This showed that the important determinant of competitive advantage there is in line with the model. In addition, it has been used in the industrial sector by Erika (2016) who shows that in the development and strengthening of industrial clusters it is used to formulate an implementation plan for industrial policy.

This research includes the variables of tourist attractions, the average number of tourist visits, the distance from tourist village locations to the center of the capital city of Jepara Regency, public facilities (electricity, water, telecommunications networks, banking, health facilities, places of worship and security) and tourism facilities (shops/kiosks, accommodation and restaurants). The determination of variables used is in line with research conducted by Nurkukuh and Kurniawati (2018) in the use of amenity variables, tourist attractions, institutions, accessibility and supporting facilities as components of a tourist village cluster. The steps in determining the cluster of tourist villages in Jepara Regency are:

1. Determining the data on variables used in the research.
2. Conducting a data standardization process in case of discrepancies in research data.
3. Testing cluster analysis assumptions in the form of a representative sample and multicollinearity tests.
4. Grouping data into clusters using the k-means cluster method, with the following steps:

Table 2. Descriptive statistics (n = 24)

Variable	Min	Max	Mean	Standard deviation
Tourist attractions	1.0	12	4.08	2.962
Average number of tourist visits	0.0	234,811.00	31,853.975	54,564.221
Distance between tourist villages	3.6	90	24.725	23.687
Public facilities in tourist villages	13.0	74	38.71	17.706
Tourism facilities in tourist villages	0.0	150	44.79	40.916
Security in tourist villages	7.0	80	36.79	16.272

Source: authors' analysis.

– determining the desired number of clusters,
– determining the initial cluster center (centroid),
– calculating the distance of each to the centroid,
– allocating locations to the nearest centroid,
– iterating to get a fixed centroid.

5. Interpretating the cluster – an explanation of the results of analysis and labelling to explain it.

Before conducting the process of grouping data using the k-means cluster method, standardization of research data is required because there are a high discrepancies among the variables. The following is a descriptive statistical table from the results of data standardization.

Table 3. Representative sample assumption test

Kaiser-Meyer-Olkin (KMO) and Bartlett' test		
KMO measure of sampling adequacy		0.512
Bartlett's test of sphericity	approximately chi-square	35.594
	df	21
	Sig.	0.024

Note: *df* – degrees of freedom, Sig. – significance.
Source: authors' analysis.

Table 2 shows the statistical results: the highest mean value is the tourist visit average of 31,853.975 and the lowest mean value is tourist attractions at 4.08. The results of these calculations are used to overcome data discrepancy by producing z-score values used in the data clustering process. Before clustering the data, it is necessary to test the assumption of cluster analysis using representative sample and multicollinearity tests. The representative sample test is for the sample used to represent the research population and carried out through Kaiser-Mayer-Olkin (KMO) and Bartlett's test.

Table 4. Multicollinearity assumption test

Collinearity statistics		Z-score: Tourist attraction object	Z-score: Average visits	Z-score: Distance	Accessibility	Z-score: Public facilities	Z-score: Tourism facilities	Z-score: Security
Z-score: Tourist attraction object	Tolerance	Constant	0.804	0.809	0.612	0.671	0.762	0.542
	VIF		1.243	1.236	1.635	1.491	1.312	1.846
Z-score: Average visits	Tolerance	0.557	Constant	0.534	0.608	0.595	0.792	0.542
	VIF	1.794		1.872	1.644	1.680	1.263	1.846
Z-score: Distance	Tolerance	0.858	0.817	Constant	0.677	0.632	0.825	0.559
	VIF	1.166	1.224		1.477	1.582	1.213	1.709
Accessibility	Tolerance	0.554	0.795	0.579	Constant	0.593	0.736	0.629
	VIF	1.804	1.257	1.728		1.686	1.359	1.590
Z-score: Public facilities	Tolerance	0.609	0.780	0.541	0.594	Constant	0.704	0.683
	VIF	1.642	1.282	1.847	1.682		1.420	1.465
Z-score: Tourism facilities	Tolerance	0.582	0.873	0.594	0.620	0.593	Constant	0.550
	VIF	1.717	1.146	1.682	1.612	1.687		1.819
Z-score: Security	Tolerance	0.538	0.777	0.524	0.689	0.747	0.715	Constant
	VIF	1.858	1.288	1.910	1.451	1.339	1.399	

Note: VIF – variance inflation factor.
Source: authors' analysis.

Based on Table 3, the KMO value is 0.512 with a significant value of 0.024. This means that the KMO value is in the range of 0.5–1, which means that the sample used in the research may represent the population or a representative sample. Then, the multicollinearity assumption is tested to determine the existence of a linear relationship among the variables by looking at the VIF value and the tolerance value for each research variable.

Table 4 shows that all variables in the research have a tolerance value greater than 0.1 and a VIF value less than 10 which means that all research variables are free from multicollinearity problems. Based on the results this shows that the variables in this research have passed the representative sample test and are free from multicollinearity problems and therefore can proceed to the clustering process. The initial cluster center is determined randomly from the research data shown below.

Table 5 shows a temporary grouping process with a centroid position that could still change so that it is necessary to repeat the process several times to obtain valid data in which the centroid position does not change its position in the determination of the three clusters.

Table 5. Initial cluster centers

Value	Cluster		
	1	2	3
Z-score: Tourist attractions	–0.36570	2.67245	–1.04085
Z-score: Average number of tourist visits	0.73026	–0.43970	1.08811
Z-score: Distance between tourist villages	–0.49498	1.15144	–0.79894
Access to tourist villages	1	2	2
Z-score: Public facilities in tourist villages	0.69419	–0.20943	–1.22601
Z-score: Tourism facilities in tourist villages	1.76481	–0.33708	0.90939
Z-score: Security in tourist villages	2.65537	–0.17156	–1.46212

Source: authors' analysis.

Table 6 shows that data repetition stops at iteration 3 and convergence has been reached because there is no change in the cluster center with a maximum absolute coordinate change of 0.000 and a minimum distance between the initial centers of 4.801. After the clustering process has been determined, the final step to form the three clusters is carried out. This process is used to identify the characteristics of each.

Table 6. Iteration history

Iteration	Change in cluster centers		
	1	2	3
1	1.900	1.887	1.891
2	0.639	0.000	0.401
3	0.000	0.000	0.000

Source: authors' analysis.

Based on Table 7, the characteristics of each cluster are as follows:

1. Cluster 1: tourist attractions and the distance between tourist villages are below the population average, while the average number of tourist visits, accessibility, public facilities, tourism facilities, and security in tourist villages are above the population average.
2. Cluster 2: the average number of tourist visits and tourism facilities are below the population average, while tourist attractions, location distance, accessibility, public facilities and security in tourist villages are above the population average.
3. Cluster 3: access to tourist villages is above the average population, while tourist attractions, the average number of tourist visits, location distance, public facilities, tourism facilities and security in tourist villages are below the population average.

In the final result of the clustering process, the distances between the cluster centers indicates that the greater the value for the clustering, the greater the distance between the clusters will be.

Table 7. Final cluster history

Value	Cluster		
	1	2	3
Z-score: Tourist attractions	–0.25318	1.11118	–0.73703
Z-score: Average number of tourist visits	0.76766	–0.17804	–0.31816
Z-score: Distance between tourist villages	–0.54494	0.84854	–0.35187
Access to tourist villages	1	2	2
Z-score: Public facilities in tourist villages	0.59065	0.60242	–0.83632
Z-score: Tourism facilities in tourist villages	0.55908	–0.15377	–0.21243
Z-score: Security in tourist villages	1.03705	0.18949	–0.77382

Source: authors' analysis.

Based on Table 8, the distance between cluster 1 and cluster 2 is 2.477, and for cluster 3 is 2.765. The distance between cluster 2 and cluster 3 is 2.808. After knowing the distances between clusters, an ANOVA test is carried out to identify the significance and differences between each cluster.

Table 8. Distances between final cluster centers (kilometer) based on k-means analysis

Cluster	1	2	3
1	x	2.477	2.765
2	2.477	x	2.808
3	2.765	2.808	x

Source: authors' analysis.

Based on Table 9, the results show that the three clusters have in the variables of tourist attractions, distance to tourist villages, public facilities and security significant differences at the <0.05 level, while in the variables of numbers of tourist visits, accessibility and tourism facilities there is no significant difference among the three clusters. After knowing the distance between clusters and the characteristics of each, the final step is to identify the members of each cluster.

Based on Table 10, the members of each cluster are as follows:
1. Cluster 1: Bondo, Mulyoharjo, Troso, Bandengan, Welahan and East Suwawal.
2. Cluster 2: Tanjung, Damarwulan, Plajan, Tempur, Karimunjawa, Kemujan, Batelait and Watu Aji.

Table 9. Result of analysis variance (ANOVA)

Value	Cluster		Error		*F*-test	Sig.
	Mean square	*df*	Mean square	*df*		
Z-score: Tourist attractions	7.847	2	0.348	21	22.557	0.000
Z-score: Average number of tourist visits	2.401	2	0.867	21	2.770	0.086
Z-score: Distance to tourist villages	4.390	2	0.677	21	6.483	0.006
Access to tourist villages	0.575	2	0.229	21	2.511	0.105
Z-score: Public facilities in tourist villages	5.995	2	0.524	21	11.436	0.000
Z-score: Tourism facilities in tourist villages	1.258	2	0.975	21	1.290	0.296
Z-score: Security in tourist villages	6.364	2	0.489	21	13.011	0.000

Note: *df* – degrees of freedom, Sig. – significance.
Source: authors' analysis.

Table 10. Cluster members

Tourist village	Cluster	Average distance between tourist villages (kilometer)	Tourist village	Cluster	Distance
Bondo	1	1.180	Batealit	2	1.800
Mulyoharjo	1	1.085	Watu Aji	2	0.841
Troso	1	2.032	Gemulung	3	1.041
Bandengan	1	3.197	Tegalsambi	3	1.351
Welahan	1	2.454	Kunir	3	1.377
Suwawal Timur	1	2.269	Petekeyan	3	1.610
Tanjung	2	1.696	Telukawur	3	2.060
Damarwulan	2	1.996	Panggung	3	0.970
Plajan	2	1.957	Semat	3	1.270
Tempur	2	1.887	Banjaragung	3	0.872
Karimunjawa	2	3.861	Kendengsidialit	3	1.157
Kemujan	2	2.540	Pule	3	1.535

Source: authors' analysis.

3. Cluster 3: Gemulung, Tegalasambi, Kunir, Petekeyan, Telukawur, Panggung, Semat, Banjaragung, Kendengsidialit and Pule.

Based on the clustering process, there are three tourist village clusters in Jepara Regency. The distribution of locations and members of each cluster can be seen on the map below (Figure 3).

Based on the results of clustering using the k-means cluster method, after iteration 3 there is a minimum distance between cluster centers of 4.801 and a significant centroid of 0.000. The clusters of tourist villages in Jepara Regency are:

1. Cluster 1 has six tourist villages: Bondo, Mulyoharjo, Troso, Bandengan, Welahan and East Suwawal. The advantages of cluster 1 tourist villages are that they have a high average number of tourist visits, easy access, with complete public and tourism facilities. While their weakness is that the attractions are limited and the distances between tourist villages is quite far.
2. Cluster 2 has eight tourist villages: Tanjung, Damarwulan, Plajan, Tempur, Karimunjawa, Kemujan, Batealit and Watu Aji. The advantages of cluster 2 are that they have many tourist attractions,

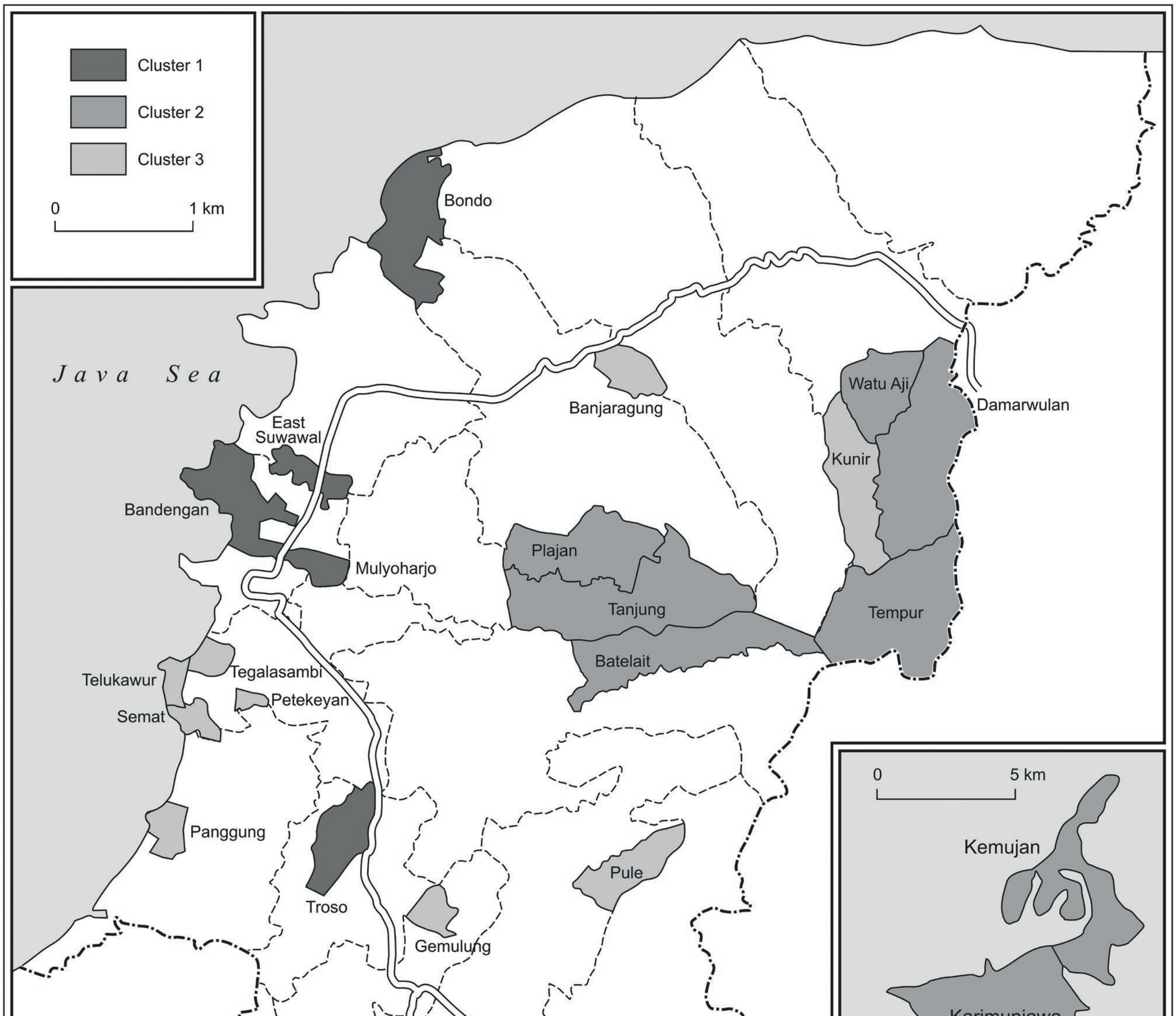

Figure 3. Map of tourist village clusters in Jepara
Source: results of k-means cluster analysis

complete public facilities, distances between tourist villages tend to be close and access is easy. While the weakness is that it has a low average number of visits and there are only limited tourism facilities.

3. Cluster 3 has ten tourist villages: Gemulung, Tegalsambi, Kunir, Petekeyan, Telukawur, Panggung, Semat, Banjaragung, Kendengsidialit and Pule. The members of cluster 3 are mostly still pilot tourist villages, so the advantages of this cluster are limited to easy access. While the weaknesses are that tourist attractions are still limited, the average number of tourist visits is low, distances between tourist villages tend to be long while public and tourism facilities are still limited.

The results of this study show that accessibility and facilities are very influential on tourist visits. This is shown in cluster 1 where even though the number of tourist attractions is limited and the distance between tourist villages is quite far, due to good accessibility and facilities, tourist visits are high. However, things are different in cluster 2, where even though there are many tourist attractions, complete public facilities, close distances between villages and easy access, there are a low number of tourist visits. This is due to several factors including that although there are many tourist attractions, they do not necessarily attract tourists. This shows the need to improve quality to encourage tourists to come and enjoy them. In cluster 3, despite conditions for easy access, tourist attractions are still limited, distances between villages are far, and public and tourist facilities are limited. This also leads to the number of tourist visits being low.

The results obtained from the analysis of tourist village clusters in Jepara Regency are in line with previous research using the k-means cluster method in data grouping. That conducted by Mustaniroh et al. (2016) is on the strategy of developing apple processing clusters with k-means clustering and hierarchy analysis, and this produces three clusters of apple processing small medium enterprise in Batu City in iteration 2 with the differentiating variables being the number of workers and the value of investment. The research of Maulida (2018) on the application of data mining in classifying tourist visits to top tourist attractions in Daerah Khusus Ibu Kota (DKI) Jakarta province with k-means, produces three clusters of superior tourist attractions in DKI Jakarta province in iteration 2 in which cluster 3 is a record for DKI Jakarta province. In addition, the research of Perera et al. (2020) using k-means cluster analysis on the grouping of visitors who travel to Rocha results in four cluster groups.

The cluster approach is also carried out in the industrial sector. Research conducted by Raharjo (2012) in classifying industries based on type and location results in four clusters including the furniture industry in Genuk, Mijen and West Semarang districts, and food processing in Central Semarang. The grouping was carried out using a geographical information system (GIS) method that is different from the k-means method used in this research.

4. Conclusion

From the analysis, this research has found that there are three clusters of tourist village development in Jepara Regency:

1. Cluster 1 has characteristics of a high average number of tourist visits, easy access to tourist village locations, complete public and tourism facilities, but limited attractions and quite long distances between tourist villages. There are six tourist villages in this cluster: Bondo, Mulyoharjo, Troso, Bandengan, Welahan and East Suwawal.
2. Cluster 2 has characteristics of many tourist attractions, complete public facilities, close distances between tourist villages, and easy access to locations, but a low average number of visits and limited tourism facilities. There are eight tourist villages in this cluster: Tanjung, Damarwulan, Plajan, Tempur, Karimunjawa, Kemujan, Batelait and Watu Aji.
3. Cluster 3 has characteristics of easy access to locations, but still has limited tourist attractions, low numbers of tourist arrivals, long distances between tourist villages, limited public and tourism facilities. There are ten tourist villages in this cluster: Gemulung, Tegalasambi, Kunir, Petekeyan, Telukawur, Panggung, Semat, Banjaragung, Kendengsidialit and Pule.

The results of this study show that accessibility and facilities are very influential on tourist visits. This is shown in cluster 1 where even though the number of tourist attractions is limited and distances between tourist villages is quite long, due to good accessibility and facilities, tourist visits are high. However, things are different in cluster 2, even though there are many tourist attractions, complete public facilities, close distances between tourist villages and easy access, tourist numbers are low. This is due to several factors; although there are many tourist attractions, they do not necessarily attract tourists. This shows the need to improve the quality of tourist attractions to encourage tourists to come and enjoy them. In cluster 3, there is easy access to the locations, but tourist attractions are still limited, distances between tourist villages are long, and public and tourist facilities are limited which leads to low numbers of tourist visits. In the future it will be necessary to have different strategies for developing each cluster.

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DOI: https://doi.org/10.18778/0867-5856.33.2.10 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

The impact of differential pricing on perceived service quality and guest satisfaction: An empirical study of mid-scale hotels in India

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How to cite (APA style): Ansari, A.I., Singh, A., & Singh, V. (2023). The impact of differential pricing on perceived service quality and guest satisfaction: An empirical study of mid-scale hotels in India. *Turyzm/Tourism, 33*(2), 121–132. https://doi.org/10.18778/0867-5856.33.2.10

ABSTRACT

The aim of this article is to identify the key factors of differential pricing and its impact on perceived service quality and guest satisfaction. Great attention has been given by researchers to service quality and guest satisfaction in the tourism and hotel industry. This study however examines an integrated model of differential pricing, perceived service quality and guest satisfaction linked to value perception and satisfaction among guests for prices offered at the time of room booking, and the services available during their stay. A self-administered questionnaire was given to guests who stayed in mid-scale hotels and 334 responses were collected randomly. Structural equation modelling was used to examine the data set, a second-generation method that enables simultaneous modelling of a large number of independent and dependent variables. Partial least square SmartPLS 4.0 was used to evaluate the data. The measurement model and the structural model are the two used to examine the data. According to survey results and findings, booking channel and booking volume are significantly related to guest satisfaction. Additionally, the booking channel has a significant relationship with perceived service quality. Maintaining high-quality websites is crucial to attracting visitors and keeping them, eventually leading to more people using travel websites out of loyalty.

KEYWORDS

guest perception, guest satisfaction, differential pricing, perceived service quality, mid-scale hotels, re-visit intention, pricing strategy

ARTICLE INFORMATION DETAILS

Received:
15 May 2023
Accepted:
26 October 2023
Published:
12 December 2023

1. Introduction

Hotels are classified by grade into three different levels: economy, mid-scale, and luxury (Xu & Li, 2016; Zhang et al., 2011). The dynamics of the Indian market help in the growth of the hospitality industry and encourage foreign hotel chains towards the Indian market. Although hotel chains each have their business philosophy and have differing market techniques, for example, Premier Inn, a budget hotel chain in the UK, presents itself as a mid-market value hotel brand. Many international hotel chains have pitched themselves high in India and provide specialty restaurants, modern architecturally-designed banquet halls and in-room dining facilities. Because of the wide services gap between various market segments, i.e. upmarket, mid-market or budget, each operates in a particular way creating opportunities in the Indian hospitality market (Sinha & Ekka, 2021). A hotel is a commercial establishment that mainly provides accommodation, food and beverages and related services to its guests. Mid-scale hotels have become the largest segment in India, falling between five-star and budget/economy, and have a growing demand from middle-income and international budget travellers. They are expected to hold a 40.21% market share over the forecast period to fill the gap between economy and luxury hotels. Economy hotels offer limited guest services and room amenities, a lack of trained and professional employees, along with small bedrooms and bathrooms. Luxury hotels offer top-class guest services and guest room amenities with well-trained and professional employees to meet international standards. Because of the rising expectations of guests, the hospitality sector has a higher service quality than any other. Many characteristics that have been created and put through testing in other service sectors can be applied to the hospitality industry. Quality plays a vital role in customer satisfaction and brand loyalty. Due to its vast breadth covering a range of business settings, few studies have used a comprehensive viewpoint to analyse service quality in tourism.

Guest perceptions and expectations, related to a hotel's products and services, vary according to the level of the hotel (Xu & Li, 2016; Zhang et al., 2011). Hotel room booking through online portals is becoming more popular and customers generally post, share and recommend their previous stay. Hotels have been receiving booking requests historically both directly and indirectly. The online role has increased over recent decades through the global distribution system within the travel sector (Ampountolas et al., 2019). Hotels focus on social media platforms and their presence to standardize customer experience against their competitors and expect an impact on profitability. An active presence on social media of a hotel has the potential to increase direct booking which can help a hotel to enhance business and profitability. This activity focuses on hotel managers who have authority over revenue management and price distribution decisions. This differential pricing allows managers to charge customers a different price for the same product or service (Lii & Sy, 2009), as per customer, location, time and product. The hotel can charge a lower price to attract new customers but offer a higher price to loyal customers for the same product. Perceived service quality (PSQ) is the key which measures a hotel's performance and is evaluated by guests based on various parameters such as sleep quality, room service, hotel staff behaviour towards in-house guests, product quality, etc. PSQ leads to guest satisfaction and in return encourages re-purchasing intention, builds brand image and provides advantages to the hotelier in the competitive hotel market (Cronin & Taylor, 1992). Offering basic hotel services and amenities, such as housekeeping-related services, can provide advantages and a good experience (Bulchand-Gidumal et al., 2011). Key attributes are tangible services that can create positive electronic word-of-mouth (eWOM) (Yen & Tang, 2019). Since hotel rooms are seen as 'perishable goods', hoteliers use a variety of room pricing techniques, such as high-demand and low-demand strategies, to try to optimize revenue. Take-up and customer demand affect room price tactics (Su, 2007). Because pertinent information is easily accessible and anyone can quickly compare prices for various solutions on the internet, it fosters more accurate price analysis. The cost of a hotel room varies depending on where it is located, allowing the employment of tactics for differential pricing (Bull, 1994). Differential pricing is widely executed for revenue maximization and hotels generally charge more when a buyer is closer to the use date because the hotel room inventory is fixed. Potential customers are segmented and categorized into groups, as per their demands, and a hotel controls prices accordingly. A hotel charges more to those who have less elastic demand and less to those who have more (Gwartney, 2009).

Although corporate offices and shopping malls are conveniently located nearby, hotels in the heart of a city also have the drawbacks of being close to traffic, noise and air pollution. On the other hand, hotels that are close to the seaside or mountains will offer their guests fascinating vistas as well as rest and refreshment. Location is a prominent factor in hotel selection and strongly impacts guest satisfaction (Arbel & Pizam, 1977). Hotels that are close to airports, railway stations or bus stops are preferred most by travellers.

2. Literature review

A hotel is often perceived as one of the oldest commercial establishments recognized as a global service industry (Whitla et al., 2007). A hotel provides a bundle of products and services for example, accommodation, food, beverage, room service, 24-hour a la carte and a multi-cuisine restaurant, banquets, swimming pool, spa, gymnasium, transportation-related services, etc. Global customers book the hotel and experience its products and services however many customers prefer to stay in a branded hotel chain for high-quality service. The customer is considered and treated as a guest in the hospitality industry which differs in service quality and value perceived (Baker et al., 2003).

Rate parity, which refers to a homogeneity in prices across different distribution channels from direct booking to all intermediate channels of traditional or electronic distribution. Rate integrity refers to the consistency of prices charged to the same customers throughout the same time period. Various factors have been identified by researchers that affect customer choice when selecting a hotel, such as price, services, location, brand image, 24-hour meal availability, etc. (Albayrak & Caber, 2015; Chu & Choi, 2000). A combination of the tangible (physical attributes) and the intangible (hotel services) have been identified by researchers in the hospitality industry (Kotler, 1991). In the same way, it has been proposed to divide hotel properties into the following: intangible services, hotel security, hotel reputation and service quality, which are then evaluated by the customer (Chow et al., 1995). In the same context, it has been suggested segregating a hotel's attributes into two categories, core and facilitating, an example of a core attribute is the facilities offered (tangible) by the hotel and an example of a facilitating attribute is the services offered (intangible) by a (Yen & Tang, 2015). Recently, several studies have investigated the impact of different hotel attributes on hotel booking, for example, value and room are critical attributes that contribute to a high level of hotel rating (Rhee & Yang, 2015). Guest expectations are very high for hotel staff and food, and they often express dissatisfaction against room personnel, front office personnel and hotel services. Cleanliness was found one of the most important areas for travellers but that did not meet expectations. The centre of attraction for any guest is sleep quality in evaluating a hotel's performance (Liu et al., 2013). A location which is convenient for the airport, business mall, bus stops and parking facilities plays a vital role (Dolnicar & Otter, 2003). Furthermore, approaches to the study of constructs are briefly overviewed in Table 1.

2.1. Differential pricing in the hotel industry

Differential pricing is the strategy of charging different prices for the same category of rooms to different guests depending on the booking channel, booking volume and booking timing (Biełuszko & Marciszewska, 2018; Lii & Sy, 2009; Suklabaidya & Singh, 2017). Furthermore, hotel rooms are considered 'perishable goods' therefore hoteliers use a variety of room pricing techniques such as high-demand and low-demand tactics to try to optimize revenue for the hotel (Napierała & Leśniewska-Napierała, 2022). Prices for hotel rooms focus on three different levels: low, best available and average daily rate (ADR), and as a result unique pricing methods, tactics and decisions are needed (Napierała & Leśniewska-Napierała, 2022).

According to Law et al. (2007), hotel room prices change depending on peak season, off-season and different market segments. Differential pricing is used in the hotel industry with rates such as corporate, discounted, best available, package, extended stay etc. (Enz et al., 2008; Mattila & Gao, 2016). Guest opinions on pricing strategies such as fairness, acceptability, reasonableness and honesty, on the other hand, varied for different pricing strategies. The internet encourages more accurate pricing inspection since it is highly transparent and makes it easy for anyone to quickly and easily compare prices for a variety of possibilities

Table 1. Approaches to the study of constructs

Authors and dates	Brief overview	Constructs
Abdel-aleem (2017), Lii and Sy (2009), Kimes and Wirtz (2003)	The authors revealed the differential pricing strategies for revenue maximization of hotels by using tactics. The survey was conducted based on 367 responses	Booking timing (BT)
Tomalieh (2014), Lii and Sy (2009)	The study demonstrated how booking volume and combination price discrimination impacted the marketing performance of hotels	Booking volume (BV)
Biełuszko and Marciszewska (2018), Abdel-aleem (2017), Choi and Mattila (2009)	The study ascertained how far hotels may use rate parity and price discrimination across a range of direct and indirect electronic distribution channels	Booking channel (BC)
Ali et al. (2021), Sujay and Afza (2019), Sadeghi et al. (2017), Kondasani and Panda (2015)	The authors revealed that customer satisfaction and behavioural intentions such as recommendations, loyalty and willingness to pay can be impacted by PSQ. The survey was conducted in three-, four- and five-star hotels	Perceived service quality (PSQ)
Sujay and Afza (2019), El-Adly (2019), Ali et al. (2017)	The authors highlighted how the dimension of service quality significantly influences the prediction of customer satisfaction. Furthermore, depicting the impact of price and hotel pricing on service quality	Guest satisfaction (GS)

Source: authors.

(Su, 2007). The market is segmentable, hence lower-price segment customers cannot afford higher-prices, and competitors cannot undersell a room in the higher-price segment (Enz et al., 2008). Due to the fact that this specific form of discrimination is lawful, the practice does not increase customer unhappiness. Guest pricing behavior also leads hotels to consider guest preferences over rivals when determining prices in a market with a wide range of competitors (Napierała & Leśniewska-Napierała, 2022). Price differentials create a situation where guests are faced with a decision of where to buy to escape a poor room booking decision (Enz et al., 2008).

2.1.1. Price discrimination

The practice of charging different prices to different customers for the same goods (Ahmed, 2010). According to Kotler (2000), price discrimination works on the following circumstances:

– market segmentation,
– competitive hotels cannot undersell rooms in the upper-price segment,
– it does not lead to resentment among guests,
– the specific type of pricing discrimination is allowed.

This revenue management tactic is made possible because of fixed capacity such as the hotel inventory (rooms) and typically, the guest who books rooms closer to the use date is less price sensitive. Furthermore, different offers to distinct guest categories, with different price sensitivities, may be the cause of differential price services through the diverse channels of distribution by hotels (Sipic, 2010).

2.1.2. Price fairness

According to Bolton et al. (2002), determination of whether a transaction or process of carrying it out is reasonable, acceptable or just. Additionally, the idea of pricing fairness includes two conceptually separate elements: economic and social. The method hotels use to determine their pricing structure has a significant impact on a guest's perceived price fairness (Lii & Sy, 2009). The negative effect of perceived unfair pricing happens because of the difference in appraised price and the reference prices (Xia et al., 2004).

2.2. Booking channel

Differential pricing occurs when a guest seeks a room through various booking channels such as direct booking, online travel agencies, hotel websites etc. (Biełuszko & Marciszewska, 2018). In the internet era, multiple booking channels have appeared and a hotel charges different prices for the same product on a different channel. According to Park et al. (2017), since the advent of the internet, many prospective travellers now make use of hotel websites or online travel companies to reserve rooms. Furthermore, by using websites, these travellers can quickly access a variety of information like cost, availability and past customer feedback. In other words, customers are using a relatively small screen, and managers are attempting to stimulate their booking intentions by presenting succinct yet powerful messaging on it.

2.3. Booking timing

Prices are adjusted in accordance with fluctuations in demand for example when two different customers have planned to visit the same hotel category based on seasons (peak and off-season) and time of reservation (Abdel-aleem, 2017). Furthermore, there can be a time gap for the purchase of a hotel room i.e. Customer A booked a month before the date of arrival and Customer B booked just a week before (Kimes & Wirtz, 2003; Lii & Sy, 2009).

2.4. Booking volume

Prices vary in accordance with customer purchase capacity for the same category, for example, bulk booking and single-night booking for the same category (Tomalieh, 2014). Hotels offer very attractive pricing to groups, long-stay guests, travel agencies, etc. to take a huge chunk of business for the same category of hotel room (Lii & Sy, 2009). These hotel pricing practices help to maximize revenue but with a high chance of losing a regular free individual travelers and discourage them from re-visiting.

2.5. Perceived service quality in the hotel industry

In today's competitive market, hotels should aim at focusing on customers' perceived service quality (PSQ) to meet their expectations. Research has disclosed the significant impact of PSQ on customer loyalty and satisfaction (Donnelly et al., 2006). PSQ also helps in increasing the profitability of a hotel, improving its performance and factors such as guest satisfaction and consequently word of mouth (WOM) etc. (Seth et al., 2005). PSQ has been defined by researchers as customer-received PSQ and is compared with their expectations (Grönroos, 1984). These dimensions are classified into two categories: functional quality (process of service delivery to guests) and technical quality (PSQ that is received by the guest in the hotel). Further, five different dimensions were identified in the SERVQUAL model (Sujay & Afza, 2019); tangibility, reliability, responsiveness, assurance and empathy.

In the same context, a further five dimensions of service quality under 'technical' were disclosed by the researcher and aligned with perceived service quality

(Ali, 2015): ambience, courteous service, quality of food and beverages, presentation and expertise of staff and the service quality of the hotel restaurant, together with overall value.

There is rising evidence that PSQ is the most significant factor that impacts on guest perception and an intention to re-visit (Zeithaml et al., 1996). PSQ has defined the capability to meet a guest's requirements and expectations (Lin & Su, 2003). In the hotel industry, PSQ is a measurement of service delivery that matches guest expectations.

2.6. Guest satisfaction

Satisfaction is a guest's feelings of happiness or disappointment based on a comparison of perceived service performance and expectation (Sujay & Afza, 2019). In the differential pricing literature, the concept of guest satisfaction is the key outcome of PSQ. Guest satisfaction is an integral part of improving the product and service quality of a hotel which helps in the retention of a guest in today's competitive market. A positive impression of a hotel in terms of product and service quality leads to re-visiting intentions and eWOM (Ghaith et al., 2019). The key objective of the hospitality industry is to make guests happy. A hotel's reputation will suffer if it is not specifically focused on its customer's needs, wants and expectations. This also applies to other hospitality-related properties. Using customer input from a hotel, this study looks at how service quality influences customer happiness and how it affects the hotel's reputation overall. Guest satisfaction measures how satisfied guests are with the services they have received in relation to what they had expected from the hotel. Further emotions could satisfy the guest if exceeding their expectations.

Based on an extensive review of the literature, three variables for differential pricing and their impact on PSQ and guest satisfaction are examined: booking channel, booking timing and booking volume (Figure 1).

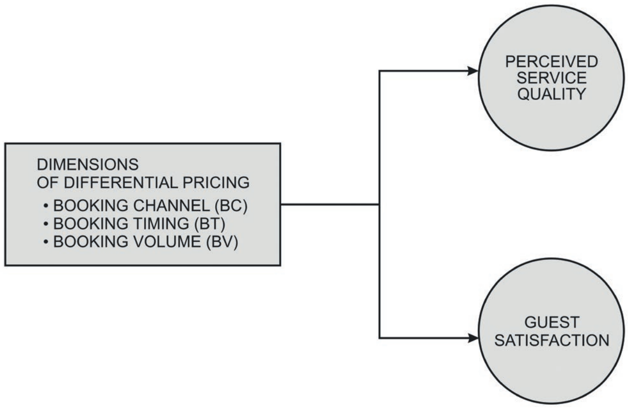

Figure 1. Conceptual model of study
Source: authors

2.7. Research gap

According to Sipic (2010), price is the key consideration for customers when choosing a booking channel because they always look for better deals. Pricing is one of the primary tools for marketing hence price discrimination is considered one of the major pricing strategies (Tomalieh, 2014). According to Ng (2010), hotels use a yield management approach due to fluctuations in supply and demand and charge different prices depending upon the channel, product, customer and time. PSQ is operationalized in the hotel industry by including reliability, confidence, responsiveness and communication (Sadeghi et al., 2017). Guests have faith in service providers when they sign up, switch or need support. According to Garbarino and Johnson (1999), a guest who trusts a firm is confident in the services provided and is more likely to recommend it. As a result, a guest compares expectations and PSQ and are said to be satisfied or dissatisfied (Sujay & Afza, 2019). According to Enz et al. (2008), location pricing is one of the numerous types of segmented techniques that hotels use to charge different rates for various locations. Numerous studies have been done at the international level on aspects of pricing strategies and hotel service quality revealing the impact of differential pricing in the hotel industry and then describes its relationship to PSQ and guest satisfaction.

3. Objective of the study

The purpose of the current research is to look at the importance of the impact of differential pricing on PSQ and guest satisfaction in mid-scale hotels situated in Delhi, India. According to Ahmed (2010) and Gwin and Gwin (2003), differential pricing consists of charging different prices for the same product and service. Value perception and satisfaction among guests for offered products and services at the time of booking hotel rooms and availing services during a stay is always very different. PSQ and guest satisfaction are both recognized as critical ideas concerning guests (Ghaith et al., 2019). The research objectives within this context are as follows:

1. To assess the impact of differential pricing on perceived service quality in mid-scale hotels.
2. To assess the impact of differential pricing on guest satisfaction in mid-scale hotels.

4. Development of hypotheses

The purpose of this study is to examine the impact of differential pricing on perceived service quality and guest satisfaction in mid-scale hotels. Based on the extensive literature reviews, three variables for differential pricing in the hotel are examined: booking timing, booking volume, and booking channel. The impact of these variables on perceived service quality and guest satisfaction in hotels. Further, the development of hypotheses is as follows:

H_1: There is a significant relationship between booking channel and perceived service quality.

H_2: There is a significant relationship between booking channel and guest satisfaction.

H_3: There is a significant relationship between booking timing and perceived service quality.

H_4: There is a significant relationship between booking timing and guest satisfaction.

H_5: There is a significant relationship between booking volume and perceived service quality.

H_6: There is a significant relationship between booking volume and guest satisfaction.

5. Research methodology

The goal of this study is to assess the impact of differential pricing on perceived service quality and guest satisfaction. As a result, the hotel's application of rate parity was examined at various levels. To achieve the objective, the researcher concentrated on both primary and secondary research (literature review).

5.1. Sampling and data collection

The study was conducted by using a self-administered questionnaire distributed to hotel guests focused on the mid-scale hotel segment and data was collected from January to April 2023 in Delhi. According to the Ministry of Tourism (2023), foreign tourist arrivals were 865,779 in February 2023. Delhi is the capital of India, one of the major destinations for both domestic and international travellers and has always been a strong market in terms of business demand as it is the center of all political and economic activity. With the growth of commercial centres in satellite towns like Gurugram and Noida, this demand has increased even more. Also emerging as a new hub for business and transit travel is Delhi's Aerocity. A five-point Likert scale was used and the statements were 1 – *strongly disagree*, 2 – *disagree*, 3 – *neutral*, 4 – *agree* and 5 – *strongly agree*. The target population was guests who stayed in mid-scale hotels i.e. three and four-star hotels (Soifer et al., 2021). A convenience sampling technique was used to collect the data through a self-administered questionnaire survey. A total of 57 mid-scale hotels were randomly chosen out of which 42 hotels permitted the collection of data. A set of questionnaires was distributed to 485 guests and 334 responses were collected, hence the response rate was 68.86%. Out of these 70.1% were male and 28.7% were female; 1.2% gave 'other' and the demographic profile of respondents are highlighted in Table 2.

Table 2. Demographic profile of respondents

Demographic variables		*n* = 334	Percent
Gender	male	234	70.1
	female	96	28.7
	other	4	1.2
Age	20–29	95	28.5
	30–39	109	32.6
	40–49	90	26.9
	50–59	33	9.9
	60 or above	7	2.1
Material status	single	128	38.3
	married	199	59.6
	separated	5	1.5
	widow(er)	2	0.6
Education	up to intermediate	37	11.1
	graduate	150	44.9
	post-graduate	114	34.1
	doctorate	26	7.8
	others	7	2.1
Occupation	private business	113	33.7
	self-employed	71	21.3
	professional	72	21.6
	government service	37	11.1
	others	41	12.3
Annual income	up to 5 lakhs	90	26.8
	5–9 lakhs	69	20.7
	10–14 lakhs	73	21.9
	15–19 lakhs	62	18.6
	20 lakhs or more	40	12.0

Source: prepared by the authors.

5.2. Data analysis and results

SEM, or structural equation modelling, was used to examine the data. SEM is a second-generation method that enables simultaneous modelling of a large number of independent and dependent variables. The partial least square (PLS) program SmartPLS 4.0 was used to evaluate the data. The measurement model and the structural model are the two used to analyse the data. The measurement model expresses the link between latent components and their relevant variables, whereas the structural model illustrates the causal relationship between the constructs (Chin, 1998).

5.3. Measurement model

The outcomes of the measuring model based on the PLS algorithm are displayed in Table 3. Based on the results of the investigation, convergent validity and internal consistency are evaluated. Internal consistency is evaluated using composite reliability (CR), while convergent validity is calculated using average variance extracted (AVE). To establish internal consistency, Fornell and Larcker (1981) suggested that the value of CR must be equal to or higher than 0.7. As it cannot account for more than half of the variance by item or variable, an AVE value of less than 0.5 is unacceptable (Henseler et al., 2009). To obtain an AVE value of 0.5, various variables are thus eliminated. Item BT1 and PSQ 2 removed from the 'working conditions' construct "Hotel room rates are high during peak season. As per price, the hotel room cleaning service was deemed to be good". According to Table 3, all constructions have an AVE value better than 0.5. Similarly, the CR value of each construct is more than 0.8. As a result, the model is found to have internal consistency, dependability and convergent validity.

An important aspect of structural equation modelling is to use discriminant validity to assess differences between different constructs in a model, as suggested by Fornell and Larker (1981) in which case discriminant validity is considered to be obtained when inter-construct correlations are less than the root of the square of the average variance extracted (AVE) represents, while non-covariance values indicate correlations between constructs referred in Table 4.

Table 3. Measurement model

Construct	Item	Loading	AVE	CR
Booking timing (BT)	Do you feel that early booking attracts a lower price?	0.853	0.579	0.797
	Do you feel that a hotel offers a high price for last minute booking?	0.834		
	The hotel offers a special occasion price such as for New Year's Eve	0.797		
Booking volume (BV)	Do you find that a hotel offers a special discounted rate for a long stay guest?	0.902	0.655	0.741
	Do you feel that a hotel offers a rebate for bulk booking of a room?	0.925		
	The hotel offers a special discounted rate for family booking	0.907		
	Do you feel that hotel offers a high price for an individual guest?	0.617		
Booking channel (BC)	Do you think that a hotel quotes a high price for a walk-in guest?	0.678	0.718	0.814
	The hotel offers low price for online room booking	0.828		
	Do you think that the hotel website rate is high?	0.848		
	The hotel offers attractive rates to increase direct booking	0.669		
Perceived service quality (PSQ)	Do you feel that hotel services vary according to the high price offered to the guest?	0.810	0.580	0.782
	Hotel staff were well behaved and courteous	0.818		
	Hotel service quality varied according to the low price offered to the guest	0.866		
Guest satisfaction (GS)	The service quality that I experienced met my expectations	0.780	0.692	0.858
	Overall, I was satisfied with the service quality provided	0.865		
	I associated service quality with positive experiences and recommend the hotel	0.780		
	For a slight increase in price, I would still return to this hotel	0.832		
	Do you feel that the hotel has overcharged?	0.635		
	Do you feel that the hotel has treated you differently due to a room booked at a low price?	0.084		

Note: AVE – average variance extracted, CR – composite reliability.
Source: authors' own work.

Table 4. Discriminant validity

Construct	BC	BT	BV	GS	PSQ
BC	0.760				
BT	0.522	0.809			
BV	0.789	0.614	0.848		
GS	0.704	0.567	0.734	0.715	
PSQ	0.794	0.481	0.677	0.687	0.832

Note: BC – booking channel, BT – booking timing, BV – booking volume, GS – guest satisfaction, PSQ – perceived service quality.
Source: authors' own work.

5.4. Structural model

The structural model is given in Figure 2. The model represents the relationship between the various constructs. These relationships are tested by running the bootstrapping procedure in SmartPLS 4.0 software.

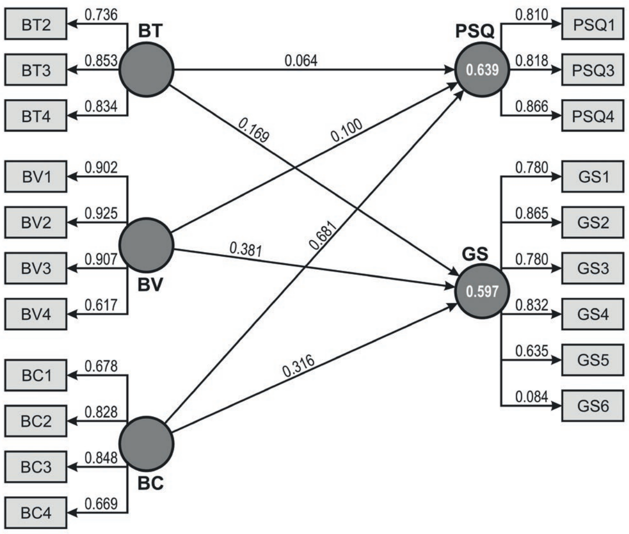

Figure 2. Structural model results
Note: BC – booking channel, BT – booking timing, BV – booking volume, GS – guest satisfaction, PSQ – perceived service quality
Source: authors' own work

5.4.1. Standardized path coefficients

These are an essential output in structural equation modelling. They represent the strength and direction of the relationships between variables in a SEM model while taking into account the scale of measurement. Unlike unstandardized coefficients, which depend on the measurement units of the variables involved, standardized coefficients are unitless and facilitate direct comparisons of the strength of relationships.

Chin (1998) provides a guideline for evaluating the significance of standardized path coefficients. David W. Chin is a prominent researcher in the field of SEM, and his work has significantly contributed to best practices in structural equation modelling. In the context of the research and the information provided, Chin's guideline suggests that standardized path coefficients should ideally be at least 0.2 and, if possible, greater than 0.3 to be considered significant. This means:

1. Standardized path coefficient of 0.2: if a standardized path coefficient is equal to or greater than 0.2, it indicates that there is a moderate relationship between the variables involved in that path. In this context, a coefficient of 0.2 suggests that there is a reasonably significant association between the constructs or variables being examined.
2. Standardized path coefficient of 0.3: if a standardized path coefficient is equal to or greater than 0.3, it indicates a relatively strong relationship between the variables. This suggests that the variables have a more substantial and meaningful impact on each other.

6. Discussion and research implications

The study has delved into the intricate relationships between various factors, including booking channel, booking volume, booking timing, guest satisfaction and perceived service quality. Rigorous testing of

Table 5. Results of hypothesis testing using structural model analysis

Hypothesis	Path coefficient	Standard deviation	*t*-statistics	*p*-value	Decision
BC → GS	0.316	0.131	2.416	0.016	supported
BC → PSQ	0.681	0.084	8.132	0.000	supported
BT → GS	0.169	0.106	1.592	0.111	not supported
BT → PSQ	0.064	0.091	0.707	0.480	not supported
BV → GS	0.381	0.132	2.879	0.004	supported
BV → PSQ	0.100	0.114	0.881	0.379	not supported

Note: BC – booking channel, BT – booking timing, BV – booking volume, GS – guest satisfaction, PSQ – perceived service quality.
Source: authors' own work.

hypotheses has revealed critical insights with wide-ranging implications for both academics and hospitality practitioners referred to in Table 5.

6.1. Booking channel and booking volume

The findings unequivocally confirm the significant impact of booking channels on guest satisfaction (H_1 and H_5). Additionally, booking channels significantly influence PSQ, lending empirical support to H_2. These outcomes accentuate the indispensable role of booking channels encompassing websites, online travel agencies and other platforms, in showcasing goods and services, while enticing and retaining clientele (Akincilar & Dagdeviren, 2014). In the contemporary landscape of the hospitality industry, a hotel management's strategic imperative is to maintain a dynamic website, effectively serving as a marketing tool. This strategic approach aligns with the competitive dynamics within the industry, underscoring the paramount importance of businesses maintaining high-quality websites. This is substantiated by previous research suggesting that repeat business from loyal customers tends to be less price-sensitive (Bowen & Chen, 2001). Notably, returning guests not only bolster a hotel's bottom line but also play a pivotal role in fostering positive WOM (McMullan & Gilmore, 2008). Hence, investing in high-quality websites and optimizing booking channels remains imperative for enhancing guest satisfaction and cultivating customer loyalty.

6.2. Booking timing and booking volume

In this study, an investigation was conducted into the impact of booking timing and booking volume on PSQ within the context of the hospitality industry. Contrary to prior research by Ozturk et al. (2016) and the studies conducted by Choi and Chu (2001) as well as Kim et al. (2009), the findings indicate a different outcome. The study reveals that, in the specific research context, booking timing (represented by H_3) and booking volume (represented by H_4) do not demonstrate a statistically significant influence on PSQ. Therefore, in contrast to the previously mentioned works, these factors do not appear to impact perception of service quality, as evidenced by H_6. These results offer a unique and intriguing perspective on the relationship between booking dynamics and service quality within the hospitality industry. This statement succinctly summarizes the research paper's key findings, highlights the contrast with previous research, and underscores the significance of the results.

6.3. Implications for practice and academia

In today's dynamic hotel industry, the selection and management of booking channels emerges as a critical determinant of guest satisfaction and PSQ. Hotel management must give paramount attention to the effectiveness of booking channels, including websites and third-party platforms. Sustaining high-quality websites is imperative for not only attracting but also retaining users, thereby fostering customer loyalty to travel websites. Practitioners can leverage these insights to inform their strategies, allocating resources judiciously to optimize their online presence.

6.4. Nuanced pricing strategies based on booking volume

The study spotlights the importance of understanding the influence of booking volume, particularly its significant role in guest satisfaction. To maximize guest satisfaction and occupancy rates, the hospitality sector should consider framing pricing strategies that cater to the diverse segments of guests and adjusting pricing strategies in response to booking volume fluctuations.

6.5. Future research directions

Future research could delve deeper into the mechanisms that mediate the relationship between booking channels, guest satisfaction and perceived service quality. Understanding the processes through which booking channels impact guest perceptions could uncover additional insights for hotel management.

6.6. Cross-cultural considerations

Investigating how these relationships may vary across different cultural contexts could provide a more comprehensive understanding of the dynamics at play in the global hospitality industry. By expanding on the discussion and implications of the findings, a more comprehensive perspective is offered on the practical implications and potential avenues for future research. These insights can guide strategic decision-making and research endeavours within the ever-evolving hospitality sector.

7. Conclusions

In conclusion, informed by the extensive body of literature in the field, this work has explored the intricate relationships between booking channels, booking volume, booking timing, guest satisfaction and PSQ within the competitive and ever-evolving landscape of the hospitality industry (Cembruch-Nowakowski, 2019). By drawing upon the research contributions of scholars and conducting empirical investigations, a deeper understanding of how these factors interplay and impact overall guest experience has been made.

7.1. Practical conclusions

Holistic marketing strategies reinforce the notion that in contemporary hospitality management, success hinges on the integration of various marketing tools and channels. As suggested by Akincilar and Dagdeviren (2014), businesses in the hospitality sector deploy a plethora of online marketing tools, including social media marketing, email campaigns and online advertising. Therefore, hoteliers should aim for holistic marketing strategies that harness the synergy of these tools to optimize guest satisfaction and PSQ (Hopf, 2018).

The strategic focus on booking channels builds on the insights of San Martín and Herrero (2012) and the research underscores the enduring significance of booking channels in shaping guest perceptions. The online booking experience, whether through a hotel's website or third-party platforms, plays a crucial role in attracting and retaining guests. As highlighted by Zhang et al. (2010), hoteliers should continue to invest in user-friendly websites and cultivate strong partnerships with booking platforms to enhance the overall guest experience.

7.2. Research contributions

Advancing the understanding of booking channels, this work aligns with the findings of Akincilar and Dagdeviren (2014) and contributes to the body of knowledge within the field of hospitality management by providing empirical evidence of the substantial impact of booking channels on guest satisfaction and PSQ. Emphasizing the complexity of marketing tools, as highlighted by Law and Cheung (2006), the modern marketing landscape in the hospitality sector extending beyond websites is emphasized. While websites are a cornerstone, the broader online marketing toolkit, encompassing social media, online advertising and email marketing, deserves equal attention (Abdel-Basset et al., 2019). The research highlights the complexity of marketing in the digital age, echoing the sentiments of Ryan et al. (2011) and encourages a nuanced approach.

7.3. Limitations and future research directions

The work is not without limitations. It primarily focuses on internal factors, yet the hospitality industry is also influenced by external factors such as economic conditions, cultural trends and market dynamics. Future research should consider these external influences and their impact on guest perceptions, as Casaló et al. (2008) and Ryan et al. (2011) have proposed.

There are unexplored dimensions of online marketing as this work has primarily explored the influence of booking channels, leaving open avenues for future research, in alignment with the suggestions of Law and Cheung (2006). Future investigations could delve deeper into the role of other online marketing tools and their synergy with booking channels, as recommended by Ryan et al. (2011) and Casaló et al. (2008). Investigating emerging technologies, mobile applications and the influence of social media engagement could provide a more comprehensive understanding of modern hospitality marketing echoing the sentiments of Law and Cheung (2006). The sample size and its representativeness could limit the broader applicability of the findings within the hospitality industry.

In closing, guided by the contributions of scholars in the field, this research underscores the enduring importance of booking channels while recognizing the dynamic nature of the hospitality industry's marketing landscape. A strategic balance between website quality and the broader online marketing toolkit is encouraged echoing the insights of Ryan et al. (2011), to meet the ever-evolving expectations of guests in an increasingly digitalized world. By acknowledging research limitations and charting future research directions, the work aims to contribute to the ongoing discourse in hospitality management, ultimately guiding practitioners and researchers toward a deeper comprehension of this dynamic sector.

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DOI: https://doi.org/10.18778/0867-5856.33.2.11 e-ISSN 2080-6922, ISSN 0867-5856

C O P E Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

The measurement of crisis management strategies in tourism Development and validation of a scale

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How to cite (APA style): Singh, R., Nazki, A.A. (2023). The measurement of crisis management strategies in tourism: Development and validation of a scale. *Turyzm/Tourism, 33*(2), 133–144. https://doi.org/10.18778/0867-5856.33.2.11

ABSTRACT

Crises and disasters pose significant obstacles to the socio-economic progress of any destination, especially in the tourism sector. Although travel and tourism are among the world's most prominent economic sectors, they are susceptible to various hindrances, such as natural disasters, political instability and unpredictable terrorist attacks, which can harm the destination's reputation and decrease tourist arrivals. While humans cannot control these incidents, they can implement measures, strategies and activities to mitigate their impact. This research aims to create and validate a scale for crisis management strategies in tourism using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). A 58-item questionnaire was developed based on literature reviews and interviews with destination marketing organizations (DMO's), which was then reduced to 47 items after content validation by experts and the target population. EFA was conducted on data from 346 tourism stakeholders, resulting in six discrete factors: media, promotional measures, partnering, security and awareness, innovative marketing, and finance. Finally, AMOS 21 was used to perform confirmatory factor analysis, and the crisis management strategies scale developed retained 38 items.

KEYWORDS

crisis management, crisis management strategies, scale validity, scale development

ARTICLE INFORMATION DETAILS

Received:
15 May 2023
Accepted:
26 October 2023
Published:
29 December 2023

1. Introduction

The travel and tourism industry is a prominent economic sector worldwide contributing to job creation, foreign exchange, export growth and overall prosperity (Singh & Mehraj, 2019). According to the World Travel and Tourism Council's annual report (WTTC, n.d.), the industry accounted for 10.3% of global gross domestic product (GDP) and supported 330 million jobs, representing one in ten globally in 2019. This highlights the industry's significant impact on the global economy and job market (Manhas et al., 2021; Nazki, 2018; Scholtz, 2019). However, despite its strength, the sector continues to face obstacles such as political instability, increasing incidents of terrorism and natural disasters worldwide. In recent times, the world has witnessed the severe impacts of the COVID-19 pandemic, resulting in a loss to the industry of 62 million jobs and US$ 4.5 trillion. Domestic visitor expenditure fell by 45%, and foreign by 69.4%. Tourism and hospitality were among the sectors most affected by the virus (Sigala, 2020).

The travel and tourism industry is very susceptible to crises and the short- and long-term effects of disasters (Gani et al., 2018). Disaster or crises are unexpected and unpredictable, whether natural or human, injuring people, damaging infrastructure and property, and threatening the survival of an organization (Pearson & Clair, 1998). Political instability tends to damage and vandalize a destination's image and shapes the perception of the tourist in a negative way towards it. This negative perception has terrible repercussions for the whole tourism industry and results in a drop in tourist arrivals worldwide. The downward inclination has a distressful and worrisome effect on the global economy, and particularly national economies, leading to a change in destination circumstances, potentially destructive, resulting in a destination crisis. From time to time, authors and researchers in the crisis management field have suggested specific measures and strategies to mitigate crises. However, these studies are qualitative, and areas lack use of a well-developed scale. Considering the above background, the present article's main endeavor is to develop and validate a scale of crisis management for tourism.

2. Literature review

2.1. Crises and crisis management

The Cambridge Dictionary (2004) defines a crisis as "a situation which has reached an extremely difficult or dangerous point, and a time of great disagreement, uncertainty and suffering", in the same way the Merriam-Webster Online Dictionary (2005) suggests a crisis is "an unstable or crucial time or state of affairs in which a decisive change is impending". Various authors have defined crisis similarly as an adverse incident with an unpredictable outcome (Bland, 1998; Campbell, 1999; Coombs, 1999; Coombs & Holladay, 2002; Faulkner, 2001; Moreira, 2007; Pforr, 2006; Ritchie, 2004; Ruff & Aziz, 2003). It is concluded that the literature provides no generally accepted definition of crisis and attempts to categorize types or forms of crises have been sparse (Faulkner, 2001; Glaesser, 2003; Pforr & Hosie, 2008; Pizam, 1999; Prideaux et al., 2003; Santana, 2004). The primary cause of the ambiguity comes from the varied and diverse terms usually used synonymously with crisis. For instance, terms like 'catastrophe', 'disaster', 'risk', 'chaos' and 'negative event' have all been used interchangeably with the term crisis.

Sönmez et al. (1994) classified crises into three categories: 'natural disasters', 'human-made disasters' and 'national security hazards'. Under the natural disasters category, Sönmez included floods, volcanoes, earthquakes and severe storms. Human-made disasters included building collapse, aircraft accidents, air pollution and offshore oil spills, while national security hazards included civil disorder, terrorism and biological attacks. In 1997, Lerbinger classified crises as either 'internal' or 'external'. Natural disasters, technological failures like an oil spill or the Chernobyl accident, conflicts like labor strikes and boycotts, and hostile events like terrorist attacks all contribute to external crises. There is another approach to classifying a crisis based on its cause which is perhaps the most common. El-Khudery (2003) differentiates between naturally occurring crises and human-made crises. He includes political and economic crises, riots, conflicts, technological disasters and terrorist actions as human-made crises. Crises, whether natural, human-made or political, are unwanted and threatening events that negatively impact the tourism industry, hence requiring practical managerial activity and immediate recovery. For Rosenthal and Pijnenburg (1991, p. 3) "crisis management involves efforts to prevent crises from occurring; to prepare for better protection against the impact of a crisis agent; to make for an effective response to an actual crisis; to provide plans and resources for recovery and rehabilitation in the aftermath of a crisis". According to Glaesser (2003, p. 22), crisis management is "a coordinated effort to anticipate, prepare for, respond to and recover from a crisis". Coombs (2007) defined crisis management as a strategy to protect a company, its stakeholders and the industry as a whole from the damaging effects of a crisis.

2.2. Crisis and image recovery

Tourism products are tangible. Marketers' most significant strategic marketing tool to attract potential visitors is to strengthen the position of the destination's image. Moreover, the industry sells experiences where the destination's image plays an important role (Singh & Mehraj, 2019).

The image represents the fundamental influential factor in the travelers' decision-making process and is recognized as the main component that attracts visitors (Butler, 1990; Gartner, 1989; Goodall, 1988; Sirgy & Su, 2000; Stabler, 2013; Yüksel & Akgül, 2007). Tourism being a susceptible industry relies on an image that has been created in the minds of the tourists. The complexity of a crisis is that it has strong impact on tourism behavior (Minar, 2019) and any unwanted or uneven incident has an impact on the destination image. One of its devastating effects is that it negatively affects the destination image (Gani et al., 2021). Sönmez et al. (1994, p. 22) provided a comprehensive definition of a tourism crisis: "Any occurrence which can threaten the normal operation and conduct of tourism-related businesses; damage a tourist destination's overall reputation for safety, attractiveness and comfort by negatively affecting visitors' perceptions of that destination; and, in turn, cause a downturn in the local travel and tourism economy, and interrupt the continuity of business operations for the local travel and tourism industry, by the reduction in tourist arrivals and expenditures". After a crisis, whether natural or human-made, it takes many years for the destination to rebuild its image (Beirman, 2002; Huang & Min, 2002). If we take the example of the Gulf war in 1991, it has been seen that it took nineteen months for Middle Eastern countries to attract tourists from America. The crisis which occurs at a destination is beyond the control of DMOs, but what lies in their hands is mitigating its impact by having sound strategies and plans. Hall and O'Sullivan (1996, p. 17–18) stated that "the only response the industry knows is just to increase marketing activities". Simultaneously, some authors laid stress on having previously prepared strategies and crisis management plans (Arbel & Bargur, 1980; Beirman, 2002; Faulkner & Vikulov, 2001; Gani et al., 2021; Glaesser, 2003; Sönmez, 1994; Wu & Shimizu, 2020). Tourism is considered as a source for destination revival, rejuvenation of business activities and employment (Boyd, 2019; Chan et al., 2020; Lee & Jan, 2022). To recover the image of a destination, there is a need for effective crisis management strategies (Gani et al., 2018; Gani & Singh, 2019; Scott et al., 2008; Singh et al., 2023). However, studies which were conducted with reference to crisis management strategies are mostly qualitative in nature and lack a proper measurement scale. The current study aims to formulate and verify a measurement scale for crisis management strategies.

3. Research methodology

The quality of research is determined by the appropriateness of the research methodology. The present study's main endeavor is to develop and validate a scale for the crisis management strategies needed to recover a destination's image. The research design is exploratory as it investigates different constructs for crisis management strategies. Multiple modifications were made throughout the different stages until a scale achieved the appropriate model-fit indices, reliability and validity measures. The area of study was the Kashmir division of the Union territory of Jammu and Kashmir, India. The study's total population was extracted from the data provided by the directorate of tourism in Kashmir, the pioneer body that keeps a record of registered tourism stakeholders. The primary concern was the selection of an appropriate sample size. Since this was a case with a fixed population size, we used the table developed by Krejcie and Morgan (1970) to decide on a sample size of 346. In addition, probability sampling, which entails selecting samples at random, was used.

4. Data analysis

The main aim of the current study is to develop and validate a scale for crisis management strategies. The procedure for the best practice for developing and validating a scale given by Boateng et al. (2018) was followed to accomplish the domain. The process of creating and verifying a measurement scale has been divided into three phases by Boateng et al. (2018):

1. Item development.
2. Scale development.
3. Scale evaluation.

4.1. Item development

4.1.1. Identification of the domain(s) and item generation

According to Kline (1993), a domain or construct is an investigated concept, attribute or unobserved behavior. Therefore, the study's domain should be established and defined before any item activity is carried out (Raykov & Marcoulides, 2011). Having a clear understanding of the phenomenon being studied, as well as the boundaries of the domain, will make item creation and content validation much easier.

As described above tourism being a susceptible industry, relies on the image created in tourists; any unwanted or uneven incident impacts destination image. One of the devastating effects of a crisis is that it negatively affects the image. So, tourism stakeholders need to revive the destination's image at a time of crisis. Researchers have suggested strategies, practices and measures to mitigate the negative impact of a crisis from time to time. But these studies are mostly qualitative and lack a well-defined measurement scale. Given the importance of crisis management strategies in tourism, the present study's main domain is to develop a scale for crisis management strategies.

After defining the domain of the study, the next step is to identify an item pool. This step is known as item generation or question development (Kline, 1993). There are two ways to find the right questions to ask: deductive and inductive. By reviewing relevant literature, the deductive method can be used to identify items based on preexisting domain-specific scales and indicators. The inductive approach, on the other hand, entails coming up with ideas based on methods like focus groups and personal interviews that are used in exploratory research.

The deductive strategy relies on a review of relevant literature and an analysis of relevant scales and indicators to identify items. Classification by starting at the top is also called 'logical partitioning'. The inductive approach, also known as 'grouping' or 'classification from below', generates items based on individual responses. Domain items can be identified using qualitative data gathered through in-depth interviews, focus groups and other forms of exploratory research. Morgado et al. (2018) highlight the importance of this strategy.

To generate items interviews were conducted to identify destination crisis management activities or strategies used by the Department of Tourism in Kashmir in managing political crises. The interview brings out the activities used by the directorate of tourism to mitigate the political crisis prevailing in Kashmir. This interview increases the horizon regarding political upheaval and its impacts on the image of Kashmir tourism. The crisis management activities/strategies extracted from the interviews became the base for setting up the questionnaire and its development.

4.1.2. Consideration of content validity

The process of checking items for content validity came after the items themselves were created. In other words, the "adequacy with which a measure analyzes the domain of interest" (Morgado et al., 2018) is what we mean when we talk about 'content validity', also known as 'theoretical analysis' (Hinkin, 1995). Content validity is crucial in scale development as it ensures that the items included are relevant and representative of the domain being measured. Without content validity, the scale may not accurately measure the construct of interest, and the results obtained from it may not be reliable or valid. Therefore, it is important to ensure that the items included in the scale are relevant and comprehensive to accurately measure the construct being studied. Following the generation phase there were more items and some were irrelevant to the main domain. To check whether the items generated are accurate, relevant, interpretable and appropriate, content validity was undertaken. Assessment of content validity can mainly be done through expert and target population evaluation (Boateng et al., 2018).

After the item generation stage, the list generated was validated by consulting three experts from crisis management, tourism management and destination image recovery. The items which were developed earlier were shown to the experts for their reviews. In their opinion, "accurate, relevant, interpretable and appropriate" items were accepted or modified while irrelevant items were rejected.

After evaluation by experts, the next step undertaken was to undergo an assessment by the target population. The main focus of this evaluation by the target population was to check 'face' validity, the "degree that respondents or end-users [or lay persons] judge that the items of an assessment instrument are appropriate to the targeted construct and assessment objectives" (Haynes et al., 1995, p. 243). To check the face validity of items, a Delphi method was employed; interviews were conducted with five tourism stakeholders, three were from travel and tour operations, and two from the hotel industry. After their opinions and views were given, some items were modified while a few were rejected. After completing the interviews, the items were progressively more accurate and relevant to the study domain.

4.2. Scale development

4.2.1. Pre-testing questions

After generating the items, the next step was to pre-test the questions before proceeding with scale development. Pre-testing had two aspects: assessing whether the questions accurately reflected the purpose and domain being studied; and evaluating whether the responses produced valid measurements for the questions being asked. Cognitive interviews were used to get the desired results. In cognitive interviewing, potential respondents are given a set of sample survey questions and then asked to describe the thought process they used to come up with their responses. Following Beatty and Willis (2007), for a cognitive interview a sample of 12 respondents was selected. Five were from the travel and tour operations business, four were from the hotel business, and three were houseboat owners. Cognitive interview results clarified and modified items that fitted with the domain of the study. Six items were deleted after the cognitive interview, and modifications and augmentation were made to specific items resulting from them. The process of pre-testing makes sure that those things which need to be asked to respondents are meaningful and precise.

4.2.2. Sampling and survey administration

Collecting data with minimal measurement error from an appropriate sample size is crucial (Boateng et al., 2018). Once the pre-testing of questions was completed, the study moved on to collecting data from the target population. In this particular study, a simple random sampling method was used to gather data, which is a type of probability sampling. It is widely considered to be the most effective sampling method, as it provides every element in the population with an equal chance of being selected. Since the population in this study is finite and known, the researchers used Krejcie and Morgan's formula to determine the appropriate sample size.

Keeping in view the study's domain, non-governmental stakeholders have been taken as the sample unit. As there are many non-governmental stakeholders in the tourism industry, it was impossible to respond to every group. In the present study, only three stakeholders (hoteliers, houseboat owners and travel agents / tour operators) were selected. Stakeholders have an essential role to play in implementing strategies to recover image during a crisis. The present study's total population was finite, the data for stakeholders (hotel, houseboat, travel agencies) was taken from the Department of Tourism Kashmir (2019), the pioneer body concerned with the registration of stakeholders. The sample for the present study was determined by Krejcie and Morgan's (1970) which suggests for the population of 3462, the appropriate sample needed is 346. For the total population, which is the combination of P1 (population of hotels registered with Department of Tourism Kashmir DTK) + P2 (population of houseboats registered with DTK) + P3 (population of travel / excursion agents and adventure tour operators registered with DTK), the sample was propositionally taken and is depicted in Table 1.

Table 1. Sample size

Stakeholder	Area	Population	Propositional sample
Hotel (P1)	Srinagar	430	43
	Budgam/ Yousumarg	4	1
	Sonamarg/ Ganderbal	16	2
	Pahalgam	99	10
	Gulmarg	46	4
	Total (P1)	595 (17.18%)	60
Houseboat (P2)	Nigeen / Dal Lake	910	91
	Total (P2)	910 (26.28%)	91
Travel / excursion agents and adventure tour operators (P3)	Kashmir division (except Gulmarg, Pahalgam, LEH & Kargil)	1565	156
	Pahalgam	237	23
	Gulmarg	155	16
	Total (P3)	1957 (56.44%)	195
	Total P (P1 + P2 + P3)	3462	346

Note: P1 – population of hotels registered with Department of Tourism Kashmir (DTK), P2 – population of houseboats registered with DTK, P3 – population of travel / excursion agents and adventure tour operators registered with DTK.
Source: Department of Tourism Kashmir (2019).

The Kashmir Valley was selected as the study area because current research deals with the evaluations of crisis management strategies in recovering the image of Kashmir tourism.

4.2.3. Item reduction and extraction of latent factors

Item reduction analysis is an essential step in the scale development process to ensure that the final scale consists of a set of items that are reliable, valid and relevant for the construct being measured. The analysis aims to eliminate redundant or poorly performing items, leaving only the most effective and informative ones. This helps to reduce respondent burden and enhances the accuracy of the measurement by minimizing the impact of extraneous factors such as measurement error and response bias. Various techniques can be used for item reduction, including factor analysis, item-total correlation analysis and expert judgment (Thurstone, 1947). Therefore, this phase seeks to identify items for deletion or modification that do not have or have the weakest relationship to the domain under study.

4.2.4. Results of factor analysis

Principal component factor analysis and varimax rotation were utilized to determine the underlying dimensions of tourism crisis management strategies. The measurement scale comprised 38 items, and a latent root criterion (eigenvalue) value above 1.0 (shown in Figure 1) and a factor loading of 0.50 were used as inclusion criteria for items. Six variables, entitled 'security and awareness', 'innovative marketing', 'promotional measures', 'partnering', 'finance' and 'media' were extracted from the analysis and accounted for 72.07 percent of the total variance as shown in Table 2. Using Kaiser-Meyer-Olkin (KMO) and Bartlett's tests, the adequacy of the data for factor analysis was evaluated, and the results (as shown in Table 3) indicated satisfactory results.

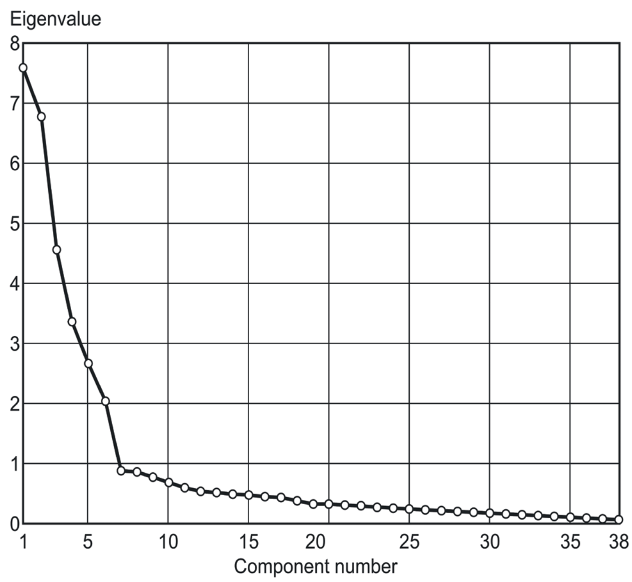

Figure 1. Scree plot
Source: authors

Table 2. Factor loading

No.	Attributes	Factor loading					
		F1	F2	F3	F4	F5	F6
Factor 1 (F1): Media							
1.	MEDI1: Media should provide positive information to target audience	0.915	–	–	–	–	–
2.	MEDI7: Encouraging travel writers to travel	0.886	–	–	–	–	–
3.	MEDI3: Threatening and blocking the media for propagating false and distorted information	0.838	–	–	–	–	–
4.	MEDI2: Spreading a feeling of safety and security	0.837	–	–	–	–	–
5.	MEDI4: Cooperation and media relations of tourism departments	0.837	–	–	–	–	–
6.	MEDI5: Highlight positive tourism activities, like zero percent crime rate against tourists	0.834	–	–	–	–	–
7.	MEDI6: Safe place for solo women travelers	0.666	–	–	–	–	–
Factor 2 (F2): Promotion							
1.	PROM2: Arranging familiarisation trips for travel agents and tour operators etc	–	0.896	–	–	–	–
2.	PROM3: Shooting high-definition videos of destinations	–	0.888	–	–	–	–
3.	PROM1: Shooting movies at destination	–	0.879	–	–	–	–
4.	PROM4: Road shows and recovery campaigns in different parts of the country as well as abroad	–	0.874	–	–	–	–
5.	PROM5: Celebrity endorsement	–	0.863	–	–	–	–
6.	PROM6: Development of good promotional materials	–	0.855	–	–	–	–
Factor 3 (F3): Partnering							
1.	PART3: Establishing a partnership between law enforcement agencies, tourism enterprises, the local community and tourists	–	–	0.928	–	–	–
2.	PART1: Working closely with the community and tourism industry representatives	–	–	0.925	–	–	–
3.	PART6: Partnering with outside tour operators and travel agents	–	–	0.884	–	–	–
4.	PART2: Partnering with embassies to improve travel advisories	–	–	0.874	–	–	–
5.	PART5: Inspire volunteerism among locals as this behavior could inspire tourists to visit	–	–	0.803	–	–	–
6.	PART4: Support the foundation of tourism federations and tourism associations	–	–	0.784	–	–	–
Factor 4 (F4): Security and awareness							
1.	SA5: Develop and implement tourist education programs aimed at reducing the risk of being victimized	–	–	–	0.842	–	–
2.	SA1: Maintaining many visible security measures	–	–	–	0.809	–	–
3.	SA2: Increase the presence of uniformed officers in tourist zones	–	–	–	0.789	–	–
4.	SA4: Easily accessible and friendly police	–	–	–	0.766	–	–
5.	SA3: Training police officers in accordance with tourism issues	–	–	–	0.765	–	–
6.	SA6: Give security advice to tourists	–	–	–	0.739	–	–
7.	SA7: Guide tourists and inform them about the situation at the destination	–	–	–	0.504	–	–

No.	Attributes	Factor loading					
		F1	F2	F3	F4	F5	F6
Factor 5 (F5): Marketing							
1.	MAR4: Undertaking intensive marketing campaigns to convince the general public that things are back to normal	–	–	–	–	0.830	–
2.	MAR5: Organising festivals like the snow festival, winter festival, spring festivals etc.	–	–	–	–	0.819	–
3.	MAR2: Bring unexplored destinations to the tourism map	–	–	–	–	0.817	–
4.	MAR3: Tracing out new potential tourism markets to enter	–	–	–	–	0.805	–
5.	MAR6: Organising sports events/activities	–	–	–	–	0.775	–
6.	MAR1: Introduce new tourism products/activities at the destination	–	–	–	–	0.720	–
7.	MAR7: Starting innovative ideas like lighting shows	–	–	–	–	0.577	–
Factor 6 (F6): Finance							
1.	FIN1: Providing governmental grants/ schemes for financing the ventures of tourism stakeholders	–	–	–	–	–	0.821
2.	FIN5: Government financial packages and greater budget allocation towards improvement of tourism destination infrastructure	–	–	–	–	–	0.816
3.	FIN4: Maintaining air fares (provide tax relaxation to airlines or subsidize air fares)	–	–	–	–	–	0.810
4.	FIN3: Reducing prices and offering incentives (e.g. package deals)	–	–	–	–	–	0.773
5.	FIN2: Government measures: tax incentives, special import provision to stimulate foreign investment, tax relief, extended credit to businesses, increased funding	–	–	–	–	–	0.689
Eigenvalue		7.60	6.76	4.55	3.36	2.66	2.03
Total variance explained (%) = 72.076%		13.63	13.06	12.19	11.66	11.63	8.82
Reliability alpha (%)		0.93	0.95	0.93	0.88	0.89	0.86
No. of items (total = 14)		7	6	6	7	7	5

Note: Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization; rotation converged in 6 iterations.
Source: authors.

Table 3. Kaiser-Meyer-Olkin (KMO) and Bartlett's test

Kaiser-Meyer-Olkin (KMO) and Bartlett' test		
KMO measure of sampling adequacy		0.849
Bartlett's test of sphericity	approximately chi-square	11875.897
	df	703
	Sig.	0.000

Note: *df* – degree of freedom, Sig. – significance.
Source: authors.

4.3. Scale evaluation

4.3.1. Tests of dimensionality

The next step in developing a scale is to examine factor dimensionality through an exploratory factor analysis (EFA). Confirmatory factor analysis (CFA) is used to verify the EFA-extracted factors underlying measurement features and concept validity. The objective of confirmatory factor analysis (CFA) is to determine whether or not an assumed factor structure adequately explains the data. Researchers can tell if their model is a good fit for the data and if the factors are valid and reliable by comparing the observed data to the hypothesised factor structure.

The Table 4 depicts the dimensions (chi-square: $\chi^2 = 2233.885$; degrees of freedom: $df = 650$; comparative fit index: CFI = 0.952; incremental fit index: IFI = 0.950; goodness-of-fit index: GFI = 0.906; adjusted goodness-of-fit index: AGFI = 0.899 and root-mean-square error of approximation RMSEA = 0.032) show that the data for the model fit and hence a measurement model (as shown in Figure 2) on crisis management strategies could be developed. Following the recommendations made by Netemeyer et al. (2003) the dimensions of crisis management strategies were tested for reliability and validity. Table 5 shows that the created model's composite reliability (CR) values for all tested constructs are greater than the 0.60 threshold given by Koufteros (1999). In addition, all of the average variance extracted (AVE) values for the various constructs were over the 0.50 cutoff that is generally accepted as being statistically significant (Fornell & Larcker, 1981). Hence, the CR and AVE values confirmed the reliability and convergent validity of the measured constructs. In addition, the discriminant validity of the components under study was confirmed by finding that the square roots of AVE were bigger than the correlations between constructs (Fornell & Larcker, 1981).

Table 4. Goodness-of-fit indices

χ^2	*df*	CFI	IFI	GFI	AGFI	RMSEA
2233.885	650	0.952	0.950	0.906	0.899	0.032

Note: χ^2 – chi-square, *df* – degrees of freedom, CFI – comparative fit index, IFI – incremental fit index, GFI – goodness-of-fit index, AGFI – adjusted goodness-of-fit index, RMSEA – root-mean-square error of approximation.
Source: authors.

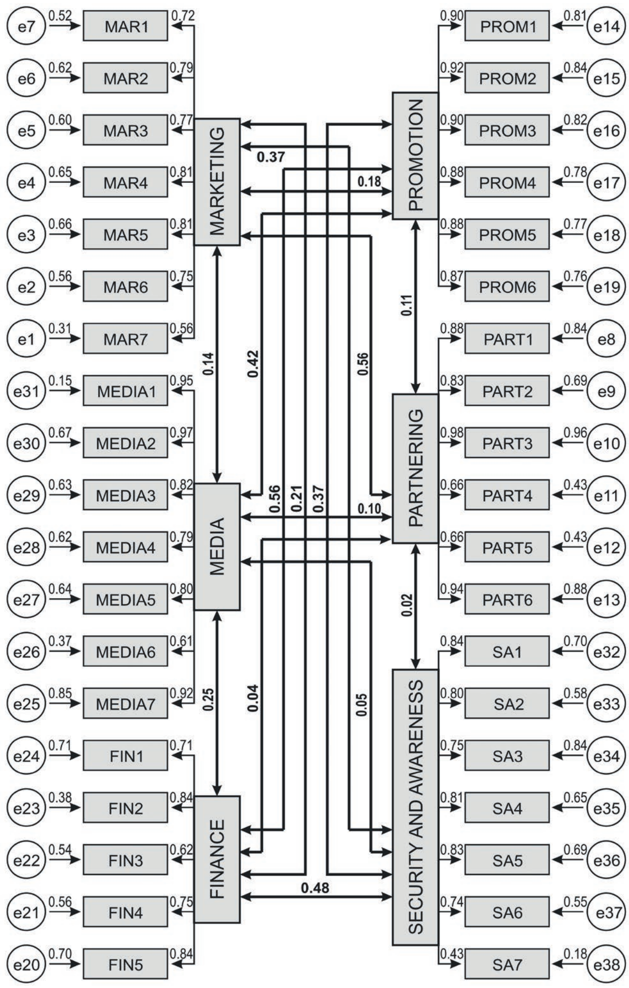

Figure 2. Measurement model
Note: MAR – innovative marketing, MEDIA – media, FIN – finance, PROM – promotional measures, PART – partnering, SA – security and awareness
Source: authors

Table 5. Composite reliability and average variance extracted

Dimensions	Items	Loadings	AVE	*CR*
Marketing	MAR7	0.561	0.558	0.897
	MAR6	0.745		
	MAR5	0.812		
	MAR4	0.807		
	MAR3	0.773		
	MAR2	0.786		
	MAR1	0.716		
Promotion	PROM1	0.896	0.794	0.959
	PROM2	0.916		
	PROM3	0.904		
	PROM4	0.884		
	PROM5	0.878		
	PROM6	0.869		
Partnering	PART6	0.937	0.693	0.930
	PART5	0.659		
	PART4	0.660		
	PART3	0.978		
	PART2	0.828		
	PART1	0.877		
Finance	FIN5	0.837	0.578	0.871
	FIN4	0.747		
	FIN3	0.734		
	FIN2	0.616		
	FIN1	0.844		
Media	MEDIA7	0.923	0.674	0.934
	MEDIA6	0.606		
	MEDIA5	0.798		
	MEDIA4	0.786		
	MEDIA3	0.793		
	MEDIA2	0.818		
	MEDIA1	0.972		
Security and awareness	SA1	0.836	0.562	0.897
	SA2	0.764		
	SA3	0.759		
	SA4	0.806		
	SA5	0.830		
	SA6	0.742		
	SA7	0.429		

Note: AVE – average variance extracted, *CR* – composite reliability.
Source: authors.

4.3.2. Tests of reliability

Porta (2008) defines reliability as the degree of consistency observed when a measurement is repeated under the same conditions. Several statistical measures and criteria are used to evaluate the reliability of a scale, including Cronbach's alpha, split-half estimates, ordinal alpha Spearman-Brown formula, etc. Cronbach's alpha is commonly used to determine the reliability of scales (Cronbach, 1951; Raykov & Marcoulides, 2011). In the present investigation, Cronbach's alpha was used to assess a scale's reliability. According to Nunnally (1978) and Hair et al. (1998) Cronbach's alpha for all factors exceeded 0.7, which is an acceptable threshold value. Table 6 displays the results of the reliability evaluation which reveals that Cronbach's alpha for all factors was greater than 0.7. This implies that all of the evaluated factors were reliable.

Table 6. Cronbach's alpha score

Dimension	No. of items	Cronbach's alpha
Security and awareness	7	0.883
Innovative marketing	7	0.895
Partnering	6	0.934
Promotional measures	6	0.958
Finance	5	0.867
Media	7	0.937

Source: authors.

4.3.3. Tests of validity

Scale validity is the extent to which an instrument accurately assesses the latent dimension or construct it was designed to assess (Raykov & Marcoulides, 2011). In this study, both convergent and discriminate validity of an instrument were evaluated. The obtained values of *CR* and AVE as shown in Table 7, support the constructs' reliability and convergent validity. When the square roots of AVE and the correlations between constructs were calculated, it was found that AVE values were greater than correlations (Fornell & Larcker, 1981; Manhas et al., 2012). This verifies the distinction or discriminant validity of the studied constructs.

5. Discussion and conclusions

During data collection and analysis, the results revealed that crisis management strategies which include: innovative marketing, promotional measures, financial, media, security and awareness and partnering, significantly impact destination image recovery. Disaster and crisis, particularly political instability and terrorism, negatively impact the image of destinations; mitigation and management is the only response. The study reveals that media strategy significantly affects destination image and has a role in mitigating a crisis which aligns with previous research by Avraham (2015) and Avraham and Ketter (2017) highlighting its importance in shaping destination image. As apparent disasters, political instability and terror attacks impact tourist flows towards destinations, this impact becomes escalated with negative media coverage and a ruined image of the destination. The research results demonstrate a strong positive association between promotional measures and the crisis-affected image of the tourism destination. This is consistent with earlier studies (Baker, 2007; Gilboa, 2006; Ketter & Avraham, 2021; Lahav et al., 2013; Singh & Nazki, 2019; Singh & Nika, 2019) emphasizing the significance of promotional measures in enhancing destination image, even in the face of crises.

While facing adverse events resulting from a crisis, the tourism industry needs the public, tourists and DMO's understanding and tolerance to mitigate the negative impacts. Although managing the crisis is not easy, it is in fact exponentially complex and cooperation between government agencies, practitioners, locals and academics is the only solution. DMOs and stakeholders

Table 7. Discriminant validity results

Dimensions	*CR*	AVE	Security and awareness	Marketing	Partnering	Promotion	Finance	Media
Security and awareness	0.897	0.562	**0.749**	–	–	–	–	–
Marketing	0.897	0.558	0.370	**0.747**	–	–	–	–
Partnering	0.930	0.693	–0.022	0.056	**0.832**	–	–	–
Promotion	0.959	0.794	–0.171	0.185	0.114	**0.891**	–	–
Finance	0.871	0.578	0.486	0.209	0.004	–0.056	**0.760**	–
Media	0.934	0.674	0.005	0.147	0.103	0.420	0.025	**0.821**

Note: *CR* – composite reliability, AVE – average variance extracted.
Source: authors.

related to tourism can promote destinations hit by the crisis by connecting local businesses and tourists through effective strategies, which is in line with prior research by Patterson et al. (2010) and Gani et al. (2018) underlining the importance of partnerships in destination management.

From the results of the study, security and awareness have a role to play in mitigating a crisis at the destination which echoes with earlier research by Peters and Pikkemaat (2006), Tsai and Chen (2010), and Park et al. (2019) that stress its role in shaping destination image at a crisis-hit destination. Besides the other factors, innovative marketing and financial strategies have significant role in mitigating a crisis and this is consistent with previous studies by Kotler et al. (1993), Stock (2009) and Walters and Mair (2012) highlighting the effectiveness of innovative marketing strategies in enhancing a destination image. So, the only tool remaining in the stakeholders' hands is to counter the negative impacts of crises by these strategies.

The present study's main impetus was to develop and validate a scale for crisis management which can be significant in image recovery. It is evident from the literature that crisis management strategies are the only solution. The present study has developed a scale with crisis management strategies formed by six discrete factors: media, promotional measures, partnering, security and awareness, innovative marketing, and finance. This scale was later confirmed by CFA where thirty-eight items were retained.

6. Research implications

The current study holds substantial importance for scholars and professionals as its outcomes carry theoretical and practical significance. In terms of theoretical implications, the present study has attempted to develop and validate a crisis management strategies scale that is an addition to the current body of knowledge. As far as practical implications are concerned, the study holds significance for tourism stakeholders. Strategies based on media, promotional measures, partnering, security and awareness, innovative marketing, and finance have a significant role in recovering the Kashmir Valley's image as a tourist destination. The work has suggested several specific strategies: "Think as innovative promotional measures", "Film tourism", "Delivering a counter message", "Insta-tourism", "Inspiring volunteerism among locals", "Limiting and narrowing the scale of the crisis", "Discounted or capped airfares", etc. These could be beneficial in reviving the image of Kashmir tourism back to its former glory.

7. Limitations and directions for future research

The current study has identified a few limitations that provide valuable directions for future research in crisis management strategies in tourism. The study's generalizability is constrained by its focus on crisis-affected tourist destinations in the Union territory of Jammu and Kashmir, India only, indicating the need for similar investigations in other crisis affected destinations in India. Besides, the study examined the perspectives of three key stakeholders only (hoteliers, travel agencies / tour operators and houseboat owners), it is essential to incorporate the viewpoints of tourists and other relevant tourism stakeholders in future studies. Furthermore, future research could explore comparative analyses between tourists and these stakeholders. In addition, the study followed the scale development and validation procedure outlined by Boateng et al. (2018), but alternative methods for scale development may yield valuable insight into the dynamics of crisis management and destination image over time.

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DOI: https://doi.org/10.18778/0867-5856.33.2.12 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Examining tourists' intentions to participate in tea tourism An emerging market context

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How to cite (APA style): Dutta, E., Soodan, V., Jassal, T., & Jain, A. (2023). Examining tourists' intentions to participate in tea tourism: An emerging market context. *Turyzm/Tourism, 33*(2), 145–156. https://doi.org/10.18778/0867-5856.33.2.12

ABSTRACT

Tea tourism, a growing niche segment within the broader realm of culinary and cultural tourism, has gained prominence as an emerging market opportunity. This study investigates the factors influencing tourists' intentions towards tea tourism. The research uses the stimulus-organism-response (S-O-R) framework, incorporating variables like destination credibility, authenticity, destination image, attitude and an intention to visit tea tourism destinations. Data from 392 domestic tourists were analyzed using structural equation modelling (CB-SEM). Key findings underscore the importance of factors such as destination image, tea-related knowledge and prior tea tourism experiences in shaping tourists' intentions. This research not only contributes to the emerging tea tourism market but also offers valuable insights for destination marketers, policymakers and tea industry stakeholders. Understanding these influencing factors can help tailor marketing strategies and offers to make tea tourism destinations more appealing, thus supporting sustainable growth in this burgeoning industry. Ultimately, this study sheds light on the preferences of tourists seeking immersive tea experiences and guides efforts to develop and promote tea-related tourism experiences effectively.

KEYWORDS

attitude, destination, infrastructure, small tea growers, sustainability

ARTICLE INFORMATION DETAILS

Received:
3 February 2023
Accepted:
26 October 2023
Published:
29 December 2023

1. Introduction

Tea has evolved into one of the most consumed daily beverages, and is capable of embodying and showcasing local culture, historical significance and established customs (Chen et al., 2021; Jolliffe, 2006). Tea holds the distinction of being the second most globally consumed beverage (Dhiman et al., 2023; Shen & Chen, 2008), and it gains significant attention owing to its numerous merits, including aromatic qualities, fragrance, flavour, and its potential positive impact on mental states (Brzezicha-Cirocka et al., 2016; Dhiman et al., 2023).

Numerous scholarly investigations have delineated the tourist activities stemming from tea-related traditions and consumption, coining the term "tea tourism" to describe this phenomenon (Jolliffe, 2007). By 2027, the ready-to-drink tea and coffee market is predicted to reach a value of 153.19 billion USD (GlobeNewswire, 2022). Tea tourism is emerging as a new form of tourism because of the spread of tea-drinking customs and cultures around the world (Zhou et al., 2016).

In order to create sustainable community livelihoods, tea production, and its consumption, have been integrated into tourism over time (Su, Wall & Wang, 2019; Su, Wall, Wang & Jin, 2019). Studies have been conducted in the past by integrating tea and tourism in various contexts (Liang & Lai, 2022; Shen & Chou, 2022). The academic literature has investigated tea tourism as a specialist tourism category which is still in its infancy with modest levels of tourists in most tea-growing regions. Research from an Asian perspective delivers insights into this form of tourism which offers experiential travel (Jolliffe, 2022). As an "alternative form" of tourism, tea tourism is acknowledged as an instrument for socio-economic development (Su, Wall & Wang, 2019; Su, Wall, Wang & Jin, 2019). In addition to providing income, tea tourism has promoted cultural heritage and social cohesion. Tea plays a significant role in the culture of nations such as India and Sri Lanka, and also holds great importance in the realm of tourism. Furthermore, tea has taken a variety of forms in different cultures (Jolliffe, 2007). Therefore, previous research established tea as a strong area of research as tea traditions combine tourists with cultural heritage (Bohne, 2021). Furthermore, tea cultivation plays an important role in reducing the impact of urbanization and strengthening biodiversity (Wu et al., 2023).

It has also strengthened the rural economy through social and infrastructure enhancements (Casalegno et al., 2019; Magar & Kar, 2016). Although tea tourism has been suggested as an alternative business for small tea growers by various research scholars, academic literature is lacking on this front. Tea tourism is growing in India (Sarmah, 2020; Solak & Amin, 2020) but this form of niche tourism needs time and proper planning to develop. While China, India and Sri Lanka collectively account for 65% of global tea production, it is important to note that tea cultivation extends to approximately 40 countries, including Turkey, Bangladesh, Indonesia and Malaysia (Food and Agriculture Organization [FAO], n.d.). Prior research on tea tourism has predominantly concentrated on destinations such as Bangladesh (Sultana & Khan, 2018), China (Cheng et al., 2010), Indonesia (Purwadi, 2016), Korea (Sohn et al., 2014), Sri Lanka (Jolliffe & Aslam, 2009), Taiwan (Lin & Wu, 2016) and Vietnam (Nam & Thien, 2019). India ranks second, and Turkey fifth in global tea production according to FAO 2019 statistics. However, there has been limited exploration of tea tourism in these regions. Yılmaz and Kumar Dixit (2023) revealed that in Assam, there are specialized tea tourism tours, promoting it as a central tourism theme. In contrast, the Eastern Black Sea region of Turkey integrates tea-related experiences into broader cultural tours, with its primary attraction being cultural. This highlights the distinct nature of tea tourism in Assam within the broader tourism spectrum.

Based on the arguments above, it can be inferred that tea production and consumption have a great deal of potential to be combined with tourism. From scholarly studies, newer opportunities for tea tourist experiences necessitate collaboration with tourism-related businesses (Su, Wall, Wang & Jin, 2019). Previous studies have attempted to highlight the issues linked with the processing and marketing of tea (Biggs et al., 2018; Haq & Boz, 2020; Munasinghe et al., 2017; Qiao et al., 2018). Although general agricultural sustainability and the long-term sustainable production of tea have also been studied (Deka et al., 2022), a gap still exists in the literature as no previous study has covered the possible integration of tea and tourism in the context of a developing nation like India which makes a significant contribution to its production. Global production surpasses 17 billion USD annually, with the tea trade valued at approximately 9.5 billion USD, contributing significantly to export revenue. Per capita tea consumption worldwide has grown by 2.5 percent over the past decade, driven by increased consumption in tea-producing nations, particularly in developing and emerging economies. The surge in demand is notable in East Asia, Africa, Latin America, the Caribbean and the Near East, while well-established European markets and advanced nations have witnessed a decline. Global tea production reached an estimated 6.5 million tonnes in 2021, with China contributing 47 percent, India is the second-largest producer, and with a rebound in black tea production in major tea-producing countries. Global tea consumption grew at an annual rate of 3.5 percent over the past decade, reaching approximately 6.4 million tonnes in 2021, driven by strong demand in China, India and other emerging economies. Import demand in traditional tea-importing markets like the European Union, the United States and Canada remained subdued, compensated by robust growth in producing countries in Africa and Asia. Anticipated significant growth in tea consumption is expected in various producing countries including Uganda, Rwanda, Kenya, Malawi, Zimbabwe, Bangladesh, Nepal, India, Indonesia and Sri Lanka (FAO, 2022).

According to available literature, most research is limited to identifying challenges and other critical issues related to the development of tea tourism. Notably, the existing literature focuses on broader perspectives which are difficult to generalize. Despite the substantial body of research on various forms of beverage tourism such as wine (Getz & Brown, 2006), coffee (Lyon, 2013), beer (Kraftchick et al., 2014) and whisky (McBoyle & McBoyle, 2008), tea tourism remains relatively unexplored in the academic literature. Research on tea-tourism covering the psychological aspects of individuals is not available. To address the gap, the present study uses the validated stimulus-organism-response (S-O-R) model to show the intentions of tourists to visit a tea-tourism destination. Based on the arguments above, the following research questions can be investigated:

RQ_1: What are domestic tourists' intentions to visit a tea tourism destination?

RQ_2: Do attitudes have a significant role to play in determining tourists' intentions?

2. Literature review and hypotheses development

2.1. Stimulus-organism-response theory (S-O-R theory)

Mehrabian and Russell (1974) proposed stimulus-organism-response (S-O-R) theory, which claims that when people are exposed to a stimulus (S), cognitive and affective internal states (O) are generated, consequentially activating their responses (R). Individuals' internal states, in other words, influence the input on their subsequent behavioural reactions (Lee et al., 2011). In the context of tourism, researchers have examined how a shopping/destination environment influences visitors' reactions and subsequent behaviour covering different tourism settings (Chang et al., 2014; Hew et al., 2018; Manthiou et al., 2017). S-O-R provides a comprehensive and concise framework for integrating cognitions and emotions in response to external stimuli in order to explain resulting behaviours (Su et al., 2020). The applicability of S-O-R has been established in a range of other contexts including tourism-related pro-environmental studies, environmental psychology and consumer behaviour (e.g. Kim et al., 2020; Li et al., 2022; Sachin & Kılıçlar, 2022; Su & Swanson, 2017). An analysis of linkages between tourists' environmentally responsible behaviour (TERB) as a response to destination image and place attachment (as an organism) and destination credibility (as an extrinsic stimulus) is achieved using the S-O-R theory (Qiu et al., 2022). Taking into consideration that S-O-R theory plays a significant role in determining the intentions of tourists and other evaluations based on their subjective behaviour, the current study employs the S-O-R model to underline tourists' intentions.

2.1.1. Destination source credibility (DSC)

Destination source credibility (DSC) is belief in the ability of destination management to deliver its promises (Veasna et al., 2013). Destination source credibility is crucial in forming tourists' opinions and attitudes (Roostika & Muafi, 2014). Although judged by visitors, it is an objective destination characteristic which is mostly subject to outside indications (Girish et al., 2021). Destination source credibility has a significant effect on both affective and cognitive images of a destination (Rahman et al., 2021) and has a major impact on TERB. Therefore, it is assumed that DSC impacts destination image and attitude. Hence based on the arguments above, the study proposes:

H_1: Destination source credibility has a positive influence on destination image.

H_2: Destination source credibility has a positive influence on tourists' attitudes.

2.1.2. Authentic experience (AE)

Authenticity is considered to be a judgement, meaning or belief created through a tourist and a location, and it refers to an original, 'behind-the-scenes' reality of an object (Adams, 1984). When it comes to tourism promoting cultural heritage, Lu et al. (2016) have validated the beneficial effects of authentic tourism experiences on travellers' emotive and cognitive impressions of a place. In the tourism industry this includes developing tourists' feeling of authenticity and examining the effects of authentic experiences (Lee & Chang, 2017). Additionally, empirical research has shown that genuine travel experiences can deepen visitors' attachment to a place (Jiang et al., 2016; Lee, Busser & Yang, 2015), and place attachment influences how travellers perceive destinations on both cognitive and emotional levels (Stylos et al., 2017). A person's connection to knowledge of and feelings about a particular thing might be viewed as being an authentic experience (Selwyn, 1996). Researchers have assessed authentic experience using existential and object-based methods (Kolar & Zabkar 2010; Lee & Chang, 2017; Lee, Fu & Chang, 2015). From the arguments, it can be said that authentic experience plays a crucial role in portraying a positive image of a destination and thereby impacting visitors' attitudes and intentions. Hence, the following hypotheses:

H_3: Authentic experience has a positive influence on destination image.

H_4: Authentic experience has a positive influence on tourists' attitudes.

H_7: Authentic experience has a positive influence on tourists' intentions to visit a tea tourism destination.

2.1.3. Destination image (DI)

The term "tourism destination image" shows how tourists perceive particular aspects of a destination, such as infrastructure, hospitality environment and a destination's distinctive cultural attractions (Cardoso et al., 2019; Chen & Tsai, 2007). The affective and cognitive components of a destination are covered by destination image and represent concepts and perspectives about a place that elicit feelings and emotions, ultimately generating behavioural intentions (Tasci et al., 2022). Several works have looked at and verified the effect of destination image on a range of behaviours including, pre-, post- and while visiting a place (Kim et al., 2019; Wang & Hsu, 2010). A destination with a favourable image is more likely to be chosen (Tan & Wu, 2016). As a result, the decision to travel to a certain location and the intention to do so seem to depend on how the location is seen by tourists. Consequently, the hypothesis that follows is:

H_5: Destination image has a positive impact on tourists' intentions to visit a tea tourism destination.

2.1.4. Attitude (ATT)

The degree to which a person has a favourable or unfavourable opinion or appraisal of an activity is described by the theory of planned behaviour (TPB) as an attitude toward behaviour (Ajzen, 1991). People are more eager to engage in a behaviour when they have a positive attitude toward it (Ajzen, 2001). When tourists engage in particular behaviours, their psychological tendencies, positive or negative, are conveyed through their attitudes (Ajzen, 1991; Kraus, 1995; Schiffman & Kanuk, 1994). The association between tourists' attitudes toward their destination and their intention to visit it has received empirical confirmation from the literature (Loureiro, 2015). Some scholarly studies (Doosti et al., 2016; Liu et al., 2018; Qiu et al., 2020) revealed a favourable association between tourists' attitudes and their intentions to visit a destination. Considering this, the following hypothesis is presented:

H_6: Tourists' attitudes have a positive impact on their intentions to visit tea tourism destinations.

3. Methodology

In the light of the presented discussion and existing scholarly literature, the authors present a research framework as delineated in Figure 1. Within this framework, destination source credibility (DSC) and authentic experience are posited as the stimulus variables, while destination image (DI) and attitude (ATT) are conceptualized as research variables. The anticipated outcome in this investigation is an intention to visit tea tourism destinations (ITT), serving as the response variable. The study elucidates the interrelationships among these constructs and delves into the practical implications for these stakeholder relationships.

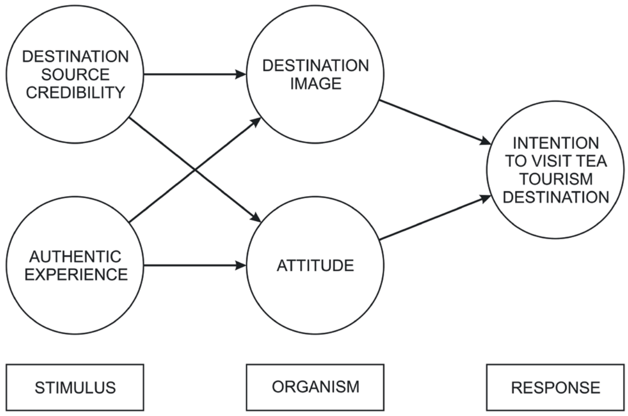

Figure 1. Research framework
Source: authors

3.1. Sampling technique

A structured questionnaire was used to test the relationships in the proposed model. The study's online questionnaire was derived from previously validated measures in the literature, with a few statements changed for research purposes. There are two sections to the questionnaire: the first contains demographic data about respondents of the target population, such as age, gender, income, occupation and purpose of visit; the second contains questionnaire items that use five variables to find out the intentions of domestic tourists to visit tea tourism destinations in India using a five-point Likert scale.

For this study, the target population was Indian domestic tourists. Kolkata's Netaji Subhas Chandra Bose International Airport departure area was used as an intercept location to gather responses from domestic tourists who were traveling to Bagdogra, the nearest airport to Darjeeling, as this region produces the most famous tea in India and can be treated as a tea tourism destination. This method was adopted because it provides the highest response rate and responses were collected directly from the airport. Respondents were chosen within the departure gates and lounge area of the airport over a five-day period. Minor adjustments were made to the questionnaire to enhance its precision and relevance. The selection of participants employed a convenience sampling method due to rapidity, simplicity, accessibility and cost-effectiveness. In cases where individuals declined to participate, replacements were sought before proceeding to the next sampling event (Gupta et al., 2018;

Gupta et al., 2020). Multiple techniques were used to eliminate biases, replacing inaccurate or misdirected responses with representative approximations based on the data obtained (Keeble et al., 2015). Following the recommendations, researchers used a 95% confidence level to determine the appropriate sample size (Burns et al., 1995).

3.2. Sample size

Utilizing information released by the government of India, the sample size for the current study was established. The number of domestic tourists visiting West Bengal during 2021 was 24 million thus contributing 3.6% to the total domestic tourist inflow in India (Ministry of Tourism Government of India, 2021). Keeping in mind the number of tourists visiting the state, researchers considered the recommendations of Cochran (1977) to fix the sample size for a large and finite population. The appropriate sample size for the study was found to be 385 (the confidence level was set at 95% and the margin of error kept at 5%). Keeping to an upper limit, the final sample size reached was 392. For this purpose, the researchers approached 767 tourists, thereby aggregating a response rate at 51%. The data for the research was collected from April 2022 to December 2022. The respondents' demographic profiles are highlighted in Table 1.

Table 1. Demographics of the respondents

Demographic variable		*n* (392)	Percentage
Gender	male	233	59.4
	female	159	40.5
Age	18–25	41	10.4
	26–35	87	22.1
	36–50	166	42.3
	more than 50	98	25.0
Purpose of visit	work	182	46.42
	vacation	210	53.57

Source: authors.

3.3. Sample demographics

Out of the 392 responses collected for this field study, 233 (59.4%) were male and 159 (40.5%) were female. The respondents were all adults, and the age group with the highest percentages was 36 to 50 years old (42.3%), followed by more than 50 (25%) and 18 to 25 (10.4%). This survey also looked at the tourists' purpose of visiting, and it was discovered that 210 (53.57%) of them were on vacation and 182 (46.42%) for work.

3.4. Data reliability and validity

The factor loadings for each item were considered to determine convergent validity. We followed suggestions given by Barclay et al. (1995) and Chin (1998) for threshold values related to individual item factor loadings. Furthermore, this study also established convergent validity using average variance extracted (AVE) and composite reliability (CR) as recommended by previous research (Aibinu et al., 2011). As can be seen in Table 2, the measures of convergent reliability are well within threshold limits. The square root of AVE (Table 3) has a higher value than correlations with other latent variables, thus establishing discriminant validity. The recommendations of scholarly studies were considered to corroborate our analysis of these measures (Chin, 1998; Hair et al., 2010; Litwin, 1995).

Table 2. Factor loadings, composite reliability (CR) and average variance extracted (AVE)

Factors	Items	λ	CR	AVE
Destination source credibility	DSC_1 DSC_2 DSC_3 DSC_4 DSC_5	0.800 0.741 0.733 0.815 0.709	0.873	0.579
Authentic experience	AE_1 AE_2 AE_3 AE_4	0.699 0.717 0.836 0.752	0.839	0.567
Destination image	DI_1 DI_2 DI_3 DI_4 DI_5	0.641 0.704 0.697 0.734 0.785	0.838	0.509
Attitude	ATT_1 ATT_2 ATT_3 ATT_4	0.811 0.710 0.729 0.836	0.856	0.598
Intention to visit	INT_1 INT_2 INT_3 INT_4	0.719 0.852 0.736 0.818	0.863	0.613

Source: authors.

Table 3. Discriminant validity

Construct	DSC	AE	DI	ATT	INT
DSC	0.760	–	–	–	–
AE	0.312	0.752	–	–	–
DI	0.186	0.313	0.713	–	–
ATT	0.014	0.171	0.320	0.773	–
INT	0.133	0.325	0.361	0.215	0.782

Note: DSC – destination source credibility, AE – authentic experience, DI – destination image, ATT – attitude, INT – intention to visit.

Source: authors.

4. Results

4.1. Goodness of fit assessment

The measurement model and the structural model were examined using CB-SEM (Anderson & Gerbing, 1988). The measurement model was validated through an assessment of reliability and validity (convergent and discriminant). As can be seen in Table 4, the study assessed measurement and structural models based on threshold values determined through previous studies.

Table 4. Model-fit summary statistics

Indices	Source (Bagozzi & Yi, 1988; Kline, 2005; Hair et al., 2010)	Measurement model values	Structural model values
χ^2/df	less than 3	1.98	2.09
Goodness-of--fit index (GFI)	greater than 0.90	0.96	0.98
Adjusted goodness--of-fit index (AGFI)	greater than 0.80	0.88	0.91
Comparative fit index (CFI)	greater than 0.90	0.91	0.93
Normed fit index (NFI)	greater than 0.90	0.94	0.94
Root mean square error of approximation (RMSEA)	less than 0.08	0.05	0.06

Source: authors.

4.2. Model analysis

The findings concerning the proposed hypothesis are shown in Table 5. As it can be seen, the paths: DSC → DI ($\beta = 0.206$, $t = 3.122$), DSC → ATT ($\beta = 0.108$, $t = 1.037$), AE → DI ($\beta = 0.171$, $t = 3.855$), AE → ATT ($\beta = 0.392$, $t = 6.146$), DI → INT ($\beta = 0.133$, $t = 2.033$), ATT → INT ($\beta = 0.200$, $t = 5.119$) were significantly related to the intention to visit a tea tourism destination and supported the hypotheses H_1, H_2, H_3, H_4, H_5 and H_6 respectively. Whereas AE → INT ($\beta = 0.011$, $t = 0.440$) was found not significant (H_7) and the hypothesis was not supported.

Table 5. Hypothesis testing

Hypothesis	Path	Estimate	*SE*	*t*-value	Result
H_1	DSC → DI	0.206	0.041	3.122^{***}	supported
H_2	DSC → ATT	0.108	0.033	1.037^{*}	supported
H_3	AE → DI	0.171	0.032	3.855^{***}	supported
H_4	AE → ATT	0.392	0.029	6.146^{***}	supported
H_5	DI → INT	0.133	0.040	2.033^{**}	supported
H_6	ATT → INT	0.200	0.035	5.119^{***}	supported
H_7	AE → INT	0.011	0.037	0.440	not supported

Note: DSC – destination source credibility, DI – destination image, ATT – attitude, AE – authentic experience, INT – intention to visit.

$p \le 0.05$, $^{**}\,p \le 0.01$, $^{***}\,p \le 0.001$.

Source: authors.

4.3. Testing the mediating effect

The implications of the predictor variable's direct and indirect impacts on the dependent variable were assessed through a breakdown of the links between the variables in order to determine mediation analysis (Table 6). According to Baron and Kenny's (1986) approach, researchers examined mediation effects and used a four stage methodology. First, the dependent variable should be impacted by the independent or explanatory variable. Authentic experience (AE), according to the study model, had a significant and direct influence on intention to travel to a tea tourism destination (0.037^{**}). Second, the mediator should allow the independent variable to have an effect on the dependent variable. Thirdly, the dependent variable must be affected by the mediator. The research revealed a significant (0.0708^{***}) indirect effect of authentic experience on intention through attitude and because of this it is possible to see the full mediation of the effect of authentic experience.

Table 6. Mediating effects estimates

Path	Direct effects	Direct effects with mediator	Indirect effects	Result
AE → ATT → INT	0.037^{**}	0.011^{ns}	0.078^{***}	full mediation

Note: AE – authentic experience, ATT – attitude, INT – intention to visit.

^{ns} – not significant.

$^{***}\,p < 0.01$, $^{**}\,p < 0.05$.

Source: authors.

5. Discussions and implications

The study explores tourists' intentions to visit a tea tourism destination using S-O-R theory as the underlying framework. Local cuisine and beverages play a significant role in co-creating enduring travel experiences (Mawroh & Dixit, 2022; Uehara & Assarut, 2020). Contemporary tourists allocate a substantial portion of their travel budgets to expenses related to food and beverages (Vodeb & Rudež, 2017). Tea consumption and its associated cultural significance are acknowledged as vital elements of gastronomic attraction, as products and as culinary heritage. Travelers often seek opportunities to immerse themselves in the world of tea, explore its culture, and visit the natural, historical and cultural sites in their chosen holiday destinations (Chen et al., 2021; Fernando et al., 2016; Sohn et al., 2014). Furthermore, tea has the potential to provide tourists with memorable and enjoyable travel experiences (Jolliffe, 2007; Su, Wall, Wang & Jin, 2019). Consequently, destinations offer tea and tea-related products as dedicated tourist attractions or experiences to cater to their interests.

Additionally, the research investigated the role of destination image and attitude as an organism where attitude has played the role of mediator in influencing the intention of tourists to visit tea tourism destinations. The model used in the study is distinctive in nature and has taken two different stimuli, i.e. destination credibility and authentic experience. The empirical findings indicate that authentic experience is directly significant in influencing the tourists' intentions to visit tea tourism destinations.

The current study established five variables which were empirically confirmed using CFA and EFA: destination credibility, authentic experience, destination image, attitude and intention to visit tea tourist destinations. Regarding the relationship between the constructs, SEM results revealed that just one of the two factors – intention to travel to a tea tourism site and authentic experience – has a negligible impact on that intention. Intention is significantly and positively impacted by all the other factors.

Both the destination image and attitude toward the destination were significantly impacted by the credibility of the destination. The finding is consistent with earlier academic research findings (Girish et al., 2021; Wong et al., 2020). Hence, the results of the present study clearly indicate that a credible information source or endorsement of destinations from trusted individuals impacts attitude and also improves the image of the destination within tourist communities. The study revealed that authentic experience is significantly associated with destination image. These results corroborate with findings of (Lu et al., 2016) and (Shi et al., 2019) highlighting the impact of authentic tourism experiences on tourists' impressions of a particular place. This implies that an authentic experience including culture, food and meaningful experiences would have a long-lasting impression on the minds of tourists which would lead to the development of a positive image in their minds.

Furthermore, the study endorsed the perception that destination image (DI) positively influences tourists' desire to travel. The findings show destination image as important since it influences tourists' decisions in a significant way. Previous research on destination image has been conducted in various settings, including natural and cultural destinations and urban (Gössling & Scott, 2009). Hence, this study corroborates the results of scholarly research on the role of destination image in determining intention (Khan et al., 2017; Prayogo et al., 2016; Whang et al., 2016; Yin et al., 2020). Attitudes of tourists can differ with experience although the change can be very slight (Pizam et al., 2002). As claimed by the previous study results (Zhou et al., 2023), favourable and noteworthy interpersonal engagements were found to significantly shape tourists' attitudes and behavioural intentions.

Surprisingly, authentic experience was found to have no significant association with the intention of tourists. As research has discovered that authentic travel experiences can develop attachment to destinations (Jiang et al., 2016; Lee, Busser & Yang, 2015), this result is an exception to these studies. The reason for the lack of significance of the relationship can be attributed to the lack of promotion and available resources to enhance tourists' experience at tea destinations.

The mediation test revealed the full effect of attitude which signifies that it influences how likely people are to choose a destination for tea tourism and how real their experiences are. It can be inferred that the host community and the tourism sector should offer satisfying authentic experiences to help tourists form positive opinions about tea tourism destinations, which will eventually result in an intention to travel.

5.1. Theoretical implications

This study has various implications for marketers, policymakers and local governing bodies. One of the major successes this study has achieved is in terms of getting a detailed insight into the role of the S-O-R model in determining the intentions of tourists to participate in tea tourism in the Indian context. Since tea tourism is closely associated with socioeconomics and can help alleviate livelihoods, current research can be considered a pioneer in this regard. Though, previous studies have extensively explored the intentions and subsequent behaviour of tourists towards tourist destinations including food and beverages (Lai et al., 2020; Liang & Lai, 2022; Ulfy et al., 2021), working on the same theme, this research has attempted to explore the potential of tea tourism in the context of a developing nation using the highly tested and validated S-O-R framework.

In addition, by employing SEM, this study tested the relationships and came out with findings that have the potential to be generalized. This adds to the existing theory and body of knowledge as a destination's image has a lot of potential to attract tourists in present times as the world is emerging from a deadly pandemic. Furthermore, the study has explored variables like destination credibility and authentic experience which are not only relevant but have not been explored in this specific context. To add to the implications, this study is unique and one of its kind in the Indian context as its findings can be replicated in other related destinations involving food and beverages.

5.2. Practical implications

The study findings have various practical implications, and the results carry the potential to be used by policymakers and marketers. Most of the research conducted in the tourism domain nowadays is focused on tourists and green generations (Yeap et al., 2021), as they are at the center of all economic activities. The world nowadays is struggling to bring tourists back to pre-COVID times, and the relationships demonstrated in the study have significant implications. Therefore, firms involved in marketing destinations, government bodies, and other agencies should consider the role of the variables destination credibility, authentic experience, destination image, attitude and intention in relating a tourist with a destination.

Additionally, it may be inferred from study results that destination credibility and destination image are associated. It signifies that branding efforts and marketing strategies employed by the tourism board and tourist agencies significantly impact and help to improve the image of a destination. It can also be added that trust in a source that is involved in the marketing of a destination plays a vital role. Therefore, it can be suggested that for tea destinations and their promotions, government websites, hoardings sponsored by the tourism board and promotions by trustworthy partners could improve the image of destinations amongst tourists. Tourism development boards could effectively leverage the advantage of obsessions with celebrities and the way they feel personally connected to generate authenticity in the promotional content. Furthermore, the significant relationship between authentic experience and destination image highlights the role of the immersive experience of tourists in developing a favourable image. Marketers should promote tour packages which include bundled activities, stays and local cuisines to develop a feeling of distinct experience amongst visiting tourists. The role played by destination credibility and authentic experience in determining tourists' attitudes showcases their potential to impact intentions.

It is pertinent to mention here that the dominant role of attitude is reflected through significant associations. Positive attitude formation amongst potential tourists is of huge importance as it not only is directed towards intentions but also due to its role as a mediator. The mediating effect also revealed that attitude fully mediates between authentic experience and intention to visit. This also strengthens the claim that attitude has a bigger role to play in determining tourists' intentions. Therefore, it is suggested that various stakeholders should take into consideration launching initiatives targeting the favourable attitudes of tourists. This includes an environment of safety, security and transparency. Additionally, at the local level, authorities should train and make local vendors, taxi operators, guides and restaurant and hotel owners aware and encourage them to develop and maintain a positive attitude towards tea-based destinations.

6. Conclusion

This research is a breakthrough in determining tourists' intentions to visit a destination with tea as its centre. The current study adds novel insights into the existing understanding of researchers and policymakers towards tea tourism. The insights revealed that tourists give due consideration to credible information sources to develop a favourable attitude and to sketch a positive image of the destination before deciding to travel. Also, the study indicated that attitude is at the centre of all tourism-related activities. If the tourists develop a positive attitude towards tea tourism, then it will lead to intentions among tourists to travel to these tea tourism destinations. This is possible through positive word of mouth, promotions and other activities. However, the findings revealed that authentic experience do not lead to the direct development of intentions. Tourists' intentions in this case are routed through the mediation of attitude. This enhances the importance of tourists' attitudes towards authentic experiences as it acts as a catalyst in drawing tourists towards tea-based destinations. This research further revealed the positive role of destination image and attitude in developing intentions towards tea tourism destinations. The current study advocates blending authenticity with better infrastructure to boost tourism in a sustainable and profitable way. The research therefore, strongly advocates the development of tea tourism-based destinations as it would not only connect the intangibles (culture and heritage) with tangibles (tea-based products), but rather could act as a catalyst in the all-around development of the region.

7. Limitations and future research

Like any other research, this study has its limitations. Firstly, quantitative research was conducted, but a qualitative analysis would give a more thorough understanding of the same. Another drawback was that it only included responses from local tourists, and this contributed to some bias in the results. For tea tourism destinations, the opinions of foreign tourists will also have a significant impact and aid businesses and the local population in developing marketing plans to draw in more visitors. Future studies should include a more varied sample of local tourists since they will offer more unbiased feedback from various perspectives. Conceptually, the current model could be strengthened by examining future hypotheses that were not explored in this investigation. The constructs of the conceptual framework proposed in the S-O-R model can be altered and tested empirically. Future research could test the existing conceptual framework in tourist locations in India or in other nations. Future research may include additional mediators or moderating variables, such as risk perception and electronic word-of-mouth (eWOM), and experimentally test them in various demographics, or the same model can be used to test the dimensions for religious, wildlife, wine and heritage tourism.

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DOI: https://doi.org/10.18778/0867-5856.33.2.13 e-ISSN 2080-6922, ISSN 0867-5856

COPE Member since 2019 JM14487

Turyzm/Tourism
2023, 33/2

Study of the therapeutic effects of Icelandic natural landscape images A case study of Chinese tourists

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How to cite (APA style): Bao, G. (2023). Study of the therapeutic effects of Icelandic natural landscape images: A case study of Chinese tourists. *Turyzm/Tourism, 33*(2), 157–166. https://doi.org/10.18778/0867-5856.33.2.13

ABSTRACT

The study employs a comprehensive experimental methodology, utilizing a diverse collection of photographs organized into 18 distinct groups. There are three main objectives. First, it explores the cultural and psychological factors that make Icelandic landscapes so therapeutic for the Chinese. Second, it aims to prove how photographs of natural landscapes (two-dimensional images) can have a healing effect on individuals. Third, it strives to create a model for sorting healing photographs and making them useful for selecting images for healing albums.

A Likert-scale questionnaire was distributed to 1,000 participants from China, 500 individuals who have visited Iceland, and 500 who have not. This diverse pool consists of 500 males and 500 females, spanning ages from 10 to 80.

The results reveal the top-ranked landscapes and significant improvements in participants' psychological well-being after viewing the pictures. The findings support the therapeutic nature of the curated collection of forty photographs, providing inspiration and promoting well-being through the beauty and transformative power of nature. This experimental investigation contributes to an understanding of healing landscapes and their potential in assisting psychological therapy and landscape design.

KEYWORDS

healing landscapes, Chinese travelers, Iceland, nature-based tourism, photography

ARTICLE INFORMATION DETAILS

Received:
27 June 2023
Accepted:
26 October 2023
Published:
29 December 2023

1. Introduction

The exploration of healing landscapes, environments with a profound potential to enhance overall well-being, has gathered significant attention in the realm of medical geography and environmental psychology. These landscapes possess the unique ability to offer restorative experiences, and effectively mitigate stress and anxiety. Pioneering research by the Kaplans and the founders of attention restoration theory (ART) has elucidated that exposure to aesthetically pleasing landscapes fosters mental well-being, aids in recovery from cognitive fatigue, and bolsters mood (Kaplan & Kaplan, 1989). Furthermore, work by Ulrich (1984) underscores the transformative impact of even a simple window view of natural surroundings in clinical settings. Patients provided with such views exhibit shorter hospital stays and demonstrate marked improvements in overall well-being.

In the sphere of therapeutic landscapes, gardens within healthcare facilities are integral components, ranging from modest window boxes to expansive terrains spanning hundreds of hectares. However, the healing potential of these environments extends beyond mere visual perception. Other sensory experiences, including olfaction, audition and tactile sensations, play pivotal roles in augmenting overall well-being (Ziegler, 2015).

For instance, Cerwén's et al. (2016) research shows that auditory encounters, such as the gentle rustling of leaves, the murmuring of streams, and the melodic calls of birds, exert a profoundly positive influence on both physical and mental well-being. Similarly, Baik's et al. (2018) study delves into the impact of the fragrance of *Abies holophylla* Max. needles on the autonomic nervous system, elucidating its influence on parameters such as blood pressure, heart rate, heart rate variability and vascular function (augmentation index [AIX], flow-mediated dilation [FMD]). Moreover, this study establishes its capacity to alleviate stress and facilitate vascular relaxation.

Studies conducted by Medvedev and colleagues corroborate that natural sounds, including bird songs and the soothing rush of flowing water, exert a notable restorative effect on individuals navigating stressful experiences, emphasizing the relatively less pronounced effect of urban noise (Mantler & Logan, 2015). In a study led by Jo, the scent of pine forests was collected and employed to recreate an authentic pine forest environment for experimental purposes. The findings indicated that the scent of pine trees significantly enhances emotional states, cognitive acuity and perceptual abilities. Additionally, survey results revealed that the fragrance of pine forests engenders positive emotional states and mitigates feelings of confusion (Jo et al., 2010).

Kaplan and Kaplan's (1989) research in environmental psychology has demonstrated that images, films and window views of natural elements engender relaxation, emotional equilibrium, cognitive rejuvenation and psychological and physiological regulation in individuals. Gesler's (2003) findings further emphasize that even the act of gazing at outdoor green landscapes through windows induces feelings of serenity and tranquility. Kahn's research on visual landscapes indicates that individuals in a mildly distressed state, when afforded the opportunity to view natural landscapes through office windows, experience a swifter reduction in heart rate compared to participants with views limited to white walls. Furthermore, with an extended duration of observation, the effectiveness of heart rate recovery escalates (Kahn et al., 2008).

In synthesizing the Kaplans' (Kaplan & Kaplan, 1989) content interpretation methodology (CIM) environmental psychology research method, Medvedev's comparative research method, and Jo's straightforward survey questionnaire analysis, this study deploys a quantitative analysis approach to ascertain the positive impact of two-dimensional visual perception on healing. Additionally, a mathematical model has been formulated to evaluate and predict the influence of specific photographs on healing, and the efficacy of this model has been successfully demonstrated. This paper embarks on a comprehensive investigation into whether photographs of natural landscapes wield a discernible impact on human mental health.

1.1. Enchanted journeys: Exploring the healing landscapes of Iceland through the eyes of Chinese travelers

Chinese travelers are drawn to the natural beauty of Iceland, which aligns with the Kaplans' theory of healing landscapes. This theory emphasizes qualities like fascination, coherence, legibility, compatibility, complexity and mystery (Kaplan & Kaplan, 1989). Iceland's enchanting glaciers, majestic waterfalls, geysers, volcanic eruptions and vibrant Northern Lights captivate their senses, creating a sense of wonder and fascination. Stepping into this Nordic realm feels like entering a magical sanctuary, providing a break from everyday routines and a source of psychological rejuvenation.

To understand the cultural significance behind the Chinese fascination with the natural landscapes of Iceland, it is important to delve into their appreciation for natural harmony and for poetic and mystical imagery.

In Tao Yuanming's *The Peach-blossom Fountain* from 421 (Gems of Chinese Literature / T'ao Yüan-ming – The Peach-blossom Fountain, 2016) the author portrays the landscape of such a spring, characterized by meandering streams, abundant wildlife and the melodious chorus of birdsong. The protagonist stumbles upon a hidden utopia filled with breathtaking natural beauty. This concept of an idyllic, harmonious landscape has its roots in Chinese culture where nature is often revered and celebrated for its transformative and rejuvenating qualities Iceland's natural landscapes resonate with Chinese travelers' cultural appreciation for the restorative power of nature, making it a highly sought-after destination.

Furthermore, in Yu's (2011) article *Poetic dwelling*, the author explores the rooted Chinese appreciation for natural landscapes, encompassing imagery of mountains, water bodies and lush vegetation. These captivating and enchanting images closely align with certain natural landscapes found in Iceland.

Additionally, the historical novel *The story of Mu Tianzi* from the Warring States Period (476 BC to 221 BC) exemplifies the allure of natural landscapes.

This depiction is widely acknowledged in landscape architecture, particularly in the highly regarded academic work *Chinese classical garden history* (Zhou, 1990). It serves as a paradigmatic example of the breathtaking panoramas found within palaces, representing the quintessential essence of Chinese classic gardens.

Within the pages of this literary work, a mesmerizing panorama unfolds, extending far beyond the boundaries of the "Queen Mother of the West's" palace. Nestled within its confines lies a resplendent jade pool, embraced by emerald-green waters, and accessible only to winged chariots traversing swift currents. The surroundings are adorned with a tapestry of lush foliage, creating an awe-inspiring spectacle. In perfect harmony with this landscape, the palace of the Yellow Emperor flourishes with an abundance of blossoms, plants and majestic trees, evoking the essence of wetland landscapes that grace verdant mountains. Pristine springs, revealing their crystalline depths, and gentle zephyrs caress the environment, providing solace for numerous avian and terrestrial creatures seeking sanctuary within these revered grounds (Zhou, 1990). Such ethereal splendor evokes profound serenity, akin to the enchanting vistas found in certain realms in Iceland.

The allure of Iceland's natural landscapes for the Chinese can be attributed to their longing for tranquility, harmony and beautiful healing vistas, as well as their affinity to poetic and mystical imagery. These cultural factors and concepts contribute to the special appeal that these landscapes hold in the hearts of Chinese tourists.

Anecdotes from Chinese tourists exemplify their experiences in Iceland. One tourist described the Skogafoss waterfall as a place of wonder and vitality:

> As I stepped into this magnificent waterfall, the mist of water spread all around. The rainbow continuously danced in the interplay of sunlight and water mist. In just one hour at this waterfall, I witnessed more rainbows than I had seen in my entire life. Is it the Penglai Fairy Island[1] (蓬莱仙岛) or the enchanted realm of the Western Kunlun Mythology's Queen Mother's Yaochi[2] (王母瑶池)? The natural aura here will surely keep me healthy and full of youthful vitality.

Another marveled at the vastness and the healing effect of the glaciers in Jökulsárlón:

> I feel incredibly small in the face of their vastness. The sheer magnificence of the glaciers has a profound healing effect on my heart. The skies are teeming with an abundance of birds, and the presence of seals adds to the enchantment. My love for nature runs deep. Can you witness the tears of joy streaming down my face? I am overwhelmed with happiness.

Within the embrace of Iceland, Chinese travelers can personally experience the power and serenity of nature, feeling transported to another realm where the complexities and wonders of the landscape bring a sense of tranquility and rejuvenation. This longing for the natural landscapes of Iceland represents the sincere expression of the Chinese people's pursuit of pure, unique and mystical natural beauty, fulfilling their desire for a healing and transformative experience.

1.2. Chinese tourism in Iceland: Exploring nature-based tourism and bilateral relations

Chinese tourism in Iceland has experienced significant growth in recent years. In 2006, Chinese tourists accounted for 1.1% of Iceland's international visitors, with approximately 10,000 visiting the country (Ferðamálastofa Icelandic Tourist Board, n.d.; Lanteigne, 2010). However, starting in 2015, there was a noticeable increase in Chinese visitors. By 2017, the number had grown by 80% (Ferðamálastofa Icelandic Tourist Board, n.d.). In 2019, the number reached nearly 100,000, representing a tenfold increase compared to 2006 (Ferðamálastofa Icelandic Tourist Board, n.d.; Lanteigne, 2010). However, the COVID-19 pandemic had a significant impact on tourism (see Figure 1), with the number of Chinese visitors dropping to 26,400 in 2022 (Ferðamálastofa Icelandic Tourist Board, n.d.; Hafstað, 2020; Statista, n.d.a, n.d.b).

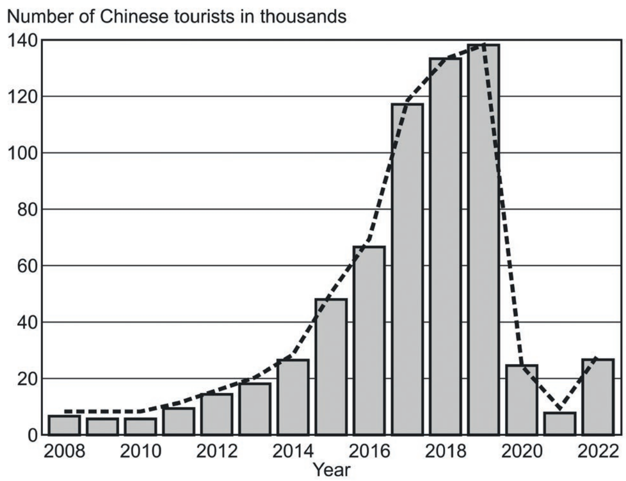

Figure 1. The number of Chinese tourists that travelled to Iceland between 2008 and 2022
Source: Ferðamálastofa Icelandic Tourist Board (n.d.)

Chinese tourists are increasingly drawn to the healing power of nature and the opportunity to explore Iceland's unique landscapes and cultural experiences. This growing interest in nature-based tourism aligns with the broader trend of Chinese travelers seeking meaningful and rejuvenating experiences (Li et al., 2011). Moreover, the strong bilateral relations between

China and Iceland have played a significant role in facilitating the growth of Chinese tourism to Iceland. The establishment of direct flights, favorable visa policies, increased media attention and cultural exchange initiatives have all contributed to the increasing flow of Chinese tourists to the country (Þórhallsdóttir & Ólafsson, 2017).

Chinese tourists are increasingly attracted to nature-based tourism in Iceland, aligning with the trend to seek meaningful experiences (Li et al., 2011). Bilateral relations between China and Iceland, including direct flights, favorable visa policies, and cultural exchange initiatives, have facilitated the influx of Chinese tourists (Þórhallsdóttir & Ólafsson, 2017). The rise in Chinese tourism can be attributed to factors such as the increased affordability of travel, improved transportation links and relaxed visa regulations. The pristine natural landscapes of Iceland, offering activities like glacier hiking, exploring volcanic landscapes, bathing in hot springs and witnessing the Northern Lights, appeal to Chinese travelers seeking awe-inspiring and rejuvenating experiences.

2. Methodology

This study employed a comprehensive methodology to investigate the impact of Icelandic landscapes on individuals' well-being. A diverse collection of photographs was utilized, encompassing pictures captured by the researcher as well as sourced from online platforms and books. Based on category-identifying methodology as a specific aspect of CIM from environmental psychology in *The experience of nature: A psychological perspective* by Rachel and Stephen Kaplan (Kaplan & Kaplan, 1989). The category identification method is a specific aspect of the content interpretation methodology (CIM). In this approach, researchers focus on identifying and categorizing scenes or environments based on participants' preferences. Determining the number and types of instances to include in a study involves considering various factors. When selecting study scenes, researchers need to articulate clear criteria, taking into account factors such as photo quality, detail, seasonal variation, and climate variation. The richness and usefulness of preference procedures depend on the types of sampled environments. In terms of data analysis, calculating the average rating for each scene is a common method.

Our hypothesis is that specific types of natural landscape image have a positive impact on individuals' mental well-being and mood. These photographs were organized into 18 distinct groups, each comprising eight pictures, to cover a wide range of iconic landscapes in Iceland. The themes explored included volcanic eruptions, auroras, moss-covered lava fields, tundra landscape, glaciers, ice caves, waterfalls, geothermal areas and geysers, the Blue Lagoon and natural hot springs, wildflower fields, dramatic cliffs and coastal formations, tranquil lakes and ponds, peaceful rivers and streams, serene forests and woodlands, mountain peaks and panoramic views, remote highland areas, charming traditional villages and pristine black sand beaches.

2.1. Photograph selection

The process of selecting photograph involves a shift from large-scale to small-scale spaces and from images with multiple landscape elements to a focus on single elements. The emphasis is on green, blue and white landscapes. This choice is driven by the known positive impact of greenery and water bodies on physical and mental well-being (Douglas, 2012; Wood et al., 2017; Ziegler, 2015). Additionally, white landscapes have also been found to have therapeutic effects (Brooke & Williams, 2021), a consensus reached by five landscape professionals and five industry experts. This results in a total of 18 categories, each comprising eight photographs:

– the green category includes scenes like moss-covered lava fields, tundra landscapes, wildflower fields, serene forests, charming traditional villages and remote highland areas;
– the blue category features scenes such as waterfalls, the Blue Lagoon, natural hot springs, tranquil lakes, peaceful rivers, streams and pristine black sand beaches;
– lastly, the white category encompasses ice caves and glaciers;
– the remaining category encompasses dramatic cliffs, mountains, auroras and volcanic eruptions.

A Likert-scale survey was conducted to evaluate the impact of Icelandic landscape pictures on participants' well-being. Participants used a 1 to 7 rating scale to score their perceptions. The survey questions were crafted in line with Kaplan and Kaplan (1989) and Marcus and Barnes's (1995) healing landscape standards, along with Lynch's (1960) criteria for spatial safety and legibility. These standards covered attributes like being away, extent, fascination, compatibility, readability and a sense of security. Lynch stressed that spatial legibility, which involves ease of understanding and navigation, enhances a sense of security. Kaplan argued that spaces with high readability reduce uneasiness from environmental confusion. Factors like familiarity and 'prospect refuge' contribute to a sense of security. The survey questions were designed to comprehensively address various elements of psychological healing in natural landscapes.

Following the selection, the 40 pictures were printed and shared both in physical form and online to gather feedback from the local Chinese population. During March 2023, over a period of ten days, 100 participants per day were selected, amounting to a total of 1,000 participants, 500 had been to Iceland and 500 had not. To ensure data accuracy and mitigate any potential duplication or abnormalities, five additional questionnaires were added to each daily group as safety data.

The participants were requested to provide detailed feedback on their experience of viewing the pictures and their perceived level of health and well-being after exposure. To differentiate between participant groups, they were categorized based on their prior visits to Iceland: those who had visited before and those who had never been. This categorization aimed to distinguish the impact of the Icelandic landscape pictures from the influence of participants' recollections of their previous trips.

The collected data underwent both semantic and statistical analyses. The semantic analysis involved categorizing the participants' responses according to their perceptions of the Icelandic landscape pictures and their corresponding levels of health and well-being. The statistical analysis included appropriate tests to analyze the quantitative data and identify any significant relationships or patterns.

If the 40 pictures are found to have a positive impact on well-being, they will be compiled into a healing landscape album of Iceland. This will feature quotations from the viewers of the albums, making it a self-guided and self-chosen collection of healing landscapes created by individuals themselves, rather than by the researcher or any external influence. The objective of this book is to tap into the inner healing power within individuals and leveraging the beauty and love deeply rooted in their hearts, as well as the transformative power of nature. It is anticipated that readers will discover healing and inspiration from the enchanting and poetic world of Iceland. Furthermore, these findings can provide theoretical support for incorporating natural elements in landscape design, fostering wellness and vitality.

3. Results

3.1. Sample data descriptive statistics

The following is a description of the characteristics of 1,000 surveyed individuals, comprising 500 who have been to Iceland and 500 who have not been to Iceland:

1. Gender distribution is equal.
2. The majority of respondents are young, with 33.21% falling in the 18–30 age group, and 27.08% in the 31–40 age group.
3. Enterprise employees constitute the largest occupational group, accounting for approximately 44.04%.
4. Many individuals work extended hours, with 47.29% working 8–10 hours per day, and 16.25% working over 10 hours.
5. Monthly income levels are relatively high, with most earning around 1300 euros or more.
6. Educational attainment is notable, with nearly half of respondents holding a university degree or higher.

Table 1 presents descriptive statistics of the surveyed individuals' demographic characteristics, showcasing key insights into gender distribution, age groups, occupations, working hours, educational levels, and monthly income.

Table 1. Sample data descriptive statistics

Demographic variables		Number of respondents	Percent
Gender	male	500	50.00
	female	500	50.00
Age	10–18	77	7.74
	18–30	332	33.21
	31–40	271	27.08
	41–50	120	12.01
	51–60	93	9.31
	61–70	81	8.12
	71 and above	25	2.53
Occupation	student	65	6.50
	government or public sector employee	322	32.21
	private sector employee	440	44.04
	freelancer	115	11.50
	full-time homemaker / stay-at-home parent	58	5.75
Daily working hours	0–3 hours	100	10.01
	4–6 hours	144	14.45
	7–8 hours	303	30.28
	9–10 hours	170	17.01
	more than 10 hours	283	28.25
Educational level	elementary school or below	31	3.14
	middle school	155	15.52
	high school	322	32.21
	college	490	49.01
	graduate school or above	11	1.12

Table 1 (cont.)

Demographic variables		Number of respondents	Percent
Monthly income (living expenses)	less than 1000 RMB	25	2.51
	1000–5000 RMB	32	3.21
	5001–10000 RMB	395	39.50
	10001–15000 RMB	512	51.20
	more than 15000 RMB	36	3.58

Source: author.

3.2. Analysis of related results

The study employed a two-group design, dividing the participants into group A (those who had been to Iceland) and group B (those who had not visited Iceland). The average scores for different landscapes, as ranked by the participants, were collected from each group. The scores were calculated by summing the individual ratings for each landscape and dividing it by the total number of participants in that group. For example, the score for "Jökulsárlón, a large glacial lake" in group A was determined by summing the ratings for each participant and dividing it by the total number of participants in group A, resulting in a score of 6.45. This was calculated as follows: ((7+6+6+7+6+7)/5 + (6+5+6+7+7)/5 + … + (6+7+6+7+7)/5) / 500, resulting in a score of 6.45.

Table 2 presents the ranking and scores for the top landscapes in both group A and group B. The landscapes are listed in descending order based on their average scores. These range from 1 to 7, with higher scores indicating a greater preference for a landscape.

Table 2. Average participants' ratings for categorized Icelandic landscape images

Landscape	Group A ranking	Group A score	Group B ranking	Group B score
Glacial lake	1	6.45	1	6.46
The Blue Lagoon	2	6.44	2	6.45
Ice caves	3	6.44	3	6.35
Serene forests	4	6.35	9	5.90
Peaceful rivers	5	6.34	5	6.24
Auroras	6	6.23	6	6.23
Mountains	7	6.21	10	5.89
Wildflower fields	8	5.92	8	5.91
Waterfalls	9	5.82	4	6.34
Cliffs and coastal formations	10	5.81	7	5.92

Note: Feedback on psychological well-being: group A – 89% of 445 participants reported feeling happier after viewing the pictures; group B – 88.4% of 442 participants reported feeling happier after viewing the pictures. Scores are based on a scale of 1 to 7, with higher scores indicating greater preference.

Source: author.

In both group A and group B, the top-ranked landscapes were similar, with "glacial lake" and "the Blue Lagoon" occupying the first two positions. Other highly ranked landscapes included "ice caves", "serene forests", "peaceful rivers" and "auroras". However, there were slight variations in the rankings between the two groups, indicating some differences in preferences.

Furthermore, feedback regarding the improvement of psychological well-being was collected from the participants in both groups. In group A, 89% of the 445 participants reported feeling happier after viewing the pictures, while in group B, 88.4% of the 442 participants reported a similar improvement. These findings suggest that exposure to the selected landscapes, regardless of prior visitation to Iceland, had a positive impact on the participants' psychological well-being.

The Pearson correlation coefficient formula was applied to calculate the similarity matrix between the two groups, resulting in a similarity value of 0.95. This indicates a high degree of similarity in landscape preferences and ratings between group A and group B, suggesting a significant level of agreement in their choices and evaluations of landscapes.

To further investigate the healing effects of photographs and the impact of different landscape categories on these effects, this study utilized a questionnaire analysis to gather data for processing, modeling and result analysis. The following steps were undertaken.

Firstly, a questionnaire analysis was employed to explore the healing effects of various landscape categories. The collected data underwent preprocessing, which involved removing outliers and filling in missing values. Normalization was then applied to ensure data compatibility for analysis. The preprocessed data was input into SPSS, and a stepwise regression method was utilized to select the influencing factors. Through this process, the number of influencing factors was reduced from 7 to 5.

Based on the selected influencing factors, a regression model was established using SPSS to predict whether a photograph possesses therapeutic effects. The model is as follows: healing effect of photographs = 0.62 + 0.33 question A + 0.24 question B + 0.19 question C – 0.08 question D + 0.12 question E. In this model, the independent variables are normalized as question A, question B, question C, question D and question E. The dependent variable represents whether the photograph has a healing effect: denoted as 1 if it does and 0 if it does not.

The coefficients of the stepwise regression model indicate the strength and direction of the relationship between each question (independent variable) and the healing effect of the photographs. According to the results of this model, the interpretations of the impact of each question on the healing effect are as follows:

1. Question A: This question evaluates whether the photo provides a sense of escape from the everyday

environment and from stress. The coefficient of 0.33 suggests that when respondents believe the photograph can deliver this feeling, there is a higher likelihood of it having a healing effect. The *p*-value of 0.002 indicates that the impact of question A on the healing effect is statistically significant, suggesting an association between respondents' answers to this question and the healing effect of the photographs.

2. Question B: This question assesses whether the open and spacious environment depicted in the photograph brings a sense of freedom and relaxation. The coefficient of 0.24 suggests that when respondents perceive the environment in the photograph to possess these characteristics, there is a higher likelihood of it having a healing effect.
3. Question C: This question examines whether the visual elements in the photograph capture attention and stimulate interest. The coefficient of 0.19 indicates a correlation between respondents' level of attention and interest in the visual elements of the photograph and its healing effect.
4. Question D: This question explores whether the depicted landscape aligns with personal preferences and needs. The coefficient of –0.08 suggests that when respondents perceive the depicted landscape to be incongruent with their personal preferences and needs, the likelihood of the photograph having a healing effect is lower.
5. Question E: This question investigates whether the photograph evokes a sense of security. The coefficient of 0.12 indicates that when respondents feel a sense of security from the photograph, there is a higher likelihood of it having a healing effect.

The R^2 value of the model is 0.74, indicating that the included questions explain 74% of the variance in the dependent variable. The adjusted R^2 value of 0.70, considering the number of predictive variables in the model, suggests a good fit and the model's ability to make accurate predictions on the test dataset. Additionally, the average difference between the predicted values and the actual observed values in the model is 0.2.

A random 10% of the dataset was reserved for testing purposes, and the model accurately predicted whether photographs had a healing effect with a mean squared error (MSE) of 0.0167.

The study identified the top ten natural landscape types in Iceland. These were glacial lakes, the Blue Lagoon, ice caves, serene forests, peaceful rivers, auroras, mountains, wildflower fields, waterfalls, and cliffs and coastal formations. From each category, the four highest-ranking images were chosen, resulting in a curated collection of forty photographs for the healing Icelandic landscape album. Some examples of the pictures are shown in Figure 2, Figure 3, Figure 4, Figure 5 and Figure 6.

Figure 2. Photographs of pristine mountain, serene forest, a waterfall and a snow cave in Iceland in May 2023
Source: G. Bao

Figure 3. Photographs of a waterfall, pristine black sand beach and geothermal lake in Iceland in May 2023
Source: G. Bao

Figure 4. Icelandic lake in July 2022
Source: F. Foremniak

Figure 5. Photographs of Large Glacier Lake, Jökulsárlón, in July 2022
Source: F. Foremniak

Figure 6. The Blue Lagoon in July 2022
Source: F. Foremniak

4. Discussion

The study identified the top ten natural landscape types in Iceland, which formed a curated collection of forty photographs for a healing Icelandic landscape album. The analysis revealed that landscapes featuring greenery and water as well as auroras and ice caves, received high scores and contributed to the participants' sense of calm, pleasure and fascination. The regression model provided insights into the impact of specific questions on the healing effect of photographs, with factors such as a sense of escape, open and spacious environments, attention-capturing visual elements, personal preferences and a sense of security influencing the healing effect.

This study substantiates the existence of a psychological healing effect of two-dimensional natural landscape images through experimentation. The results demonstrate the potential of specific types of natural landscape, such as water scenes, trees, expansive forests, glaciers, ice caves and blue hot springs, to enhance individual mental well-being and uplift mood. This aligns with Wilson's (1984) biophilia theory, wherein water and green symbolize life and serve as clues to food sources. Vast open natural spaces, particularly sparse grasslands, enable us to observe the activities of predators while providing concealed spaces, in accordance with 'prospect-refuge' theory. Additionally, ice caves offer warmth and protection. People's fondness for landscapes also stems from their need for survival. Landscapes such as the aurora, glaciers and cliffs evoke a strong sense of departure, signifying an escape from everyday life.

We integrated Kaplan and Kaplan's (1989) environmental psychology research methodology, Medvedev's comparative research methodology, and Jo's simple survey questionnaire analysis. Through quantitative analysis, we determined that two-dimensional visual perception positively impacts individual health. The experiment confirmed that natural landscapes have a healing effect on mental health. Furthermore, we constructed a mathematical model to assess and predict the impact of specific photographs on healing effects and demonstrated the effectiveness of the model.

Jo conducted an experiment using simulated pine forest scents to assess the physiological and psychological states of participants, confirming the therapeutic effect of pine forest aromas. This illustrates the healing potential of mimicking natural scents through olfaction (Jo et al., 2010). In contrast, our study visually demonstrated the healing impact of natural landscapes. Koura et al. (2021) employed virtual reality (VR) technology to replicate real natural settings, affirming their therapeutic influence in a three-dimensional virtual context. Our research shows that even two-dimensional images of natural landscapes possess healing properties.

In Sun's (2022) investigation into the healing effects of visual, olfactory and auditory stimuli in green landscapes, she posited that optimal psychological recovery occurs when all three dimensions are engaged. This suggests that human psychology tends to benefit from comprehensive sensory experiences. Based on Sun's (2022) findings, we can further evaluate healing effects by combining natural landscape imagery, soothing background music and plant-derived aromatic oils. Nonetheless, considering the outcomes of experiments by Sturt (2007), Sun (2022) and James et al. (2015), it is plausible that an environment integrating visual, olfactory and auditory stimuli would yield superior therapeutic outcomes.

Therefore, in addition to a curated collection of healing landscape images, incorporating ambient sounds from diverse natural settings (accessible via a QR code) such as flowing water, birdcalls and rustling leaves, along with naturally fragrant perfume, can form a comprehensive multi-sensory therapeutic landscape product. This amalgamation provides visual, olfactory and auditory stimuli for a more immersive healing experience.

5. Conclusion

This study conducted a controlled experiment to investigate the psychological healing effects of two-dimensional images depicting natural landscapes. The experimental design encompassed distinct variables, including the presentation of specific landscape types and their influence on individuals' mental well-being and mood.

In line with our initial hypotheses, the results affirmed that particular categories of natural landscape image, such as water landscapes, trees, expansive forests, laser lights, ice caves and blue hot springs, positively impact individuals' mental states. This finding provides empirical support for the therapeutic potential of two-dimensional landscape images on human mental health.

Furthermore, this study offers valuable insights for practical applications in healing and health interventions. Understanding how specific landscape types influence therapeutic outcomes enables the creation of targeted and effective treatment plans. Incorporating elements like water features, green plants, open green spaces and introducing imaginative features such as ice caves and auroras can be especially beneficial in alleviating anxiety and promoting relaxation, particularly in high-pressure work environments.

Additionally, the research findings illuminate pathways for developing tools and interventions that incorporate Icelandic landscapes into therapeutic environments. Leveraging Iceland's natural landscapes for healing photography, soothing music, visual meditation and virtual reality experiences can effectively contribute to emotional management, anxiety reduction, stress relief and psychological recovery.

Moreover, the model established in this study forms the foundation for AI-generated healing landscape images. This advancement holds promise for providing the characteristic attributes of healing landscapes, paving the way for an AI-powered collection of therapeutic landscape visuals.

Lastly, these findings carry substantial practical implications for Iceland's tourism industry and nature conservation efforts. The positive impact of Iceland's captivating landscapes on individual mental health may attract a greater number of tourists, ultimately fostering the growth of the tourism sector. Consequently, safeguarding and ensuring the sustainability of Iceland's natural landscapes becomes paramount for their enduring use in healing and intervention endeavors.

In conclusion, this study underscores the influential role of diverse landscape types in Iceland in eliciting healing effects through images, while offering insights for therapeutic and wellness interventions. These findings serve as crucial references and guidance for enhancing individual psychological well-being, tailoring treatment programs and advancing Iceland's tourism industry, all while emphasizing the significance of nature conservation and sustainability.

Prospect

Furthermore, by employing computer software, the photographs were transformed into landscape images imbued with inherent healing qualities. This innovative approach holds the potential to generate landscape visuals with therapeutic properties, presenting a distinctive contribution to the field.

Endnotes

[1] Penglai Fairy Island holds a prominent place in Chinese folklore as a mythical paradise. Described as a captivating and everlasting haven, it is said to be inhabited by immortals and gods. The island is revered for its association with immortality, longevity and spirituality, adorned with enchanting features such as immortal herbs, fruits and rejuvenating springs, bestowing eternal youth upon its visitors. Serving as a symbolic link between the mortal world and the realm of immortals.

Within Chinese culture and literature, Penglai Fairy Island carries profound significance, embodying humanity's aspirations for longevity, happiness and an idyllic paradise. Its allure has permeated various art forms throughout history, appearing in evocative paintings, enchanting poems and captivating theatrical works. Furthermore, Penglai Fairy Island serves as an origin of Chinese classical gardens and landscapes. These meticulously designed gardens draw inspiration from the island's inherent beauty and tranquility, seeking to recreate its serene atmosphere on a smaller scale. The concept of the Chinese classical garden takes root in the vision of Penglai Fairy Island, featuring thoughtfully arranged natural elements, intricate rock formations, meandering pathways and serene water features. These gardens endeavor to evoke a profound sense of harmony, balance and spiritual connection with nature, reflecting the enduring influence of Penglai Fairy Island on Chinese art, culture, and aesthetics.

[2] The term 'Yaochi' (瑶池) in Chinese mythology refers to the mythical paradise where the 'Queen Mother of the West' resides. It is believed to be located on Mount Kunlun. According to Guo Pu's annotated version of the *Shanhaijing* (*Classic of mountains and seas*), the Queen Mother of the West not only has her palace on Mount Kunlun but also possesses separate caves and resting places. The concept of Yaochi extends beyond a specific location and encompasses various heavenly realms. Moreover, Yaochi is considered to be the origin of the concept of the Chinese classical garden.

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Published by Lodz University Press

First Edition. W.11187.23.0.C

Printing sheets 21.0

Lodz University Press
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