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Pessinus Ancient City in Eskişehir, Türkiye.

The ancient city of Pessinus, which is 13 km away from Eskişehir Sivrihisar district center and located in the region where Galatian dominance is known on the road extending from Eskişehir (Dorylaion) to Ballıhisar (Pessinus) and the settlement of the Galatian tribe Tolistobog in Sivrihisar region dating back to 278-77 BC, was founded in the 8th century BC by the Phrygian King Midas as the sacred city of Cybele cult. Pessinus was the most famous trade and religious center of the region. The largest cult center of the Mother Goddess (Cybele) is located in the ancient city of Pessinus. The Phrygians adopted this goddess to such an extent that they considered all their states and countries as the property of Pessinus. Excavations at the site only began in 1967, when a team led by Pierre Lambrechts of Ghent University arrived at the site - with the aim of discovering the famous Temple of Cybele, often mentioned and described in the works of ancient authors. Despite more than 50 years of excavations, its origins remain a mystery. Unfortunately, despite all these excavations, the mysterious Temple of Cybele mentioned in the sources has not yet been discovered. One of the most interesting events in the city's history was the destruction of the black meteorite idol of the Mother Goddess Cybele in Pessinus in 204 BC. The request of the Roman Senate was quite strict: To take the sacred black meteorite, the symbol of the goddess in the temple of the Mother Goddess, and bring it to Rome. Italy was under threat from Carthage, and the Roman oracles, as they always did in difficult times, consulted the Sibylline oracle books, which had come to Rome. The prophecy was that the land of Italy would not be cleansed of foreigners until the Magna Mater (Great Mother-Cybele), the sacred black stone, came to Rome. This black sacred stone, known by various names since the first inhabitants of Anatolia and carefully guarded in the temple of Pessinus, came from the heavens and symbolized Cybele. The Romans first temporarily placed this sacred stone in the Temple of Victory on the Palatino hill, and later in the Temple of Magna Mater, which they built specifically for this black stone.

Karacahisar Castle in Eskişehir, Türkiye.

7 kilometers from Eskişehir city center, is a work of art that has been added to the historical accumulation of Türkiye with the research and excavations carried out since 1999. Karacahisar, where the foundation of the Ottoman was announced, has found its place in Ottoman sources with its conquest and the reading of the first sermon. The artifacts unearthed from the region, where excavations were carried out with the contributions of institutions such as the Ministry of Culture and Tourism, Eskişehir Governorship and under the leadership of Anadolu University, enable us to better understand the process of the establishment of the Ottoman Principality. Among these artifacts are tools made of wood and glass pieces, bone and metal. In the coming years, we will hear the name of Karacahisar Castle, where excavations are still ongoing, more and more; thus, we will better understand the history of the Ottoman Empire in the Eskişehir region.

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Dear Readers, Researchers, and Practitioners,

As we present the new issue of the Journal of Tourism Leisure and Hospitality, we find ourselves deeply concerned about the current global developments. We sincerely hope for an end to all these humanitarian tragedies.

The tourism industry is among the sectors most significantly affected by political, economic, and sociological changes. In this regard, we are closely and anxiously following the impacts of the ongoing conflicts—particularly those in our region—on the tourism industry. Faced with these calamities, all we can do is hope for a swift and peaceful resolution.

Despite the challenges, tourism scholars continue to work and produce knowledge with unwavering dedication. This issue primarily comprises bibliometric studies that aim to illuminate recent developments in the literature. As TOLEHO, we would like to reiterate our support for multi-variable and multi-method research approaches.

We welcome academic contributions that highlight developments in the field of tourism and offer insights or solutions to political, economic, sociological, psychological, and other related issues. We highly value your support in submitting such studies to our journal.

As always, we extend our sincere gratitude to all authors, reviewers, and members of the editorial board who contribute to the publication of this journal and help uphold its academic quality. We also thank our readers for their continued interest.

We hope this issue proves valuable and insightful for all our readers.

İ. Oya Coşkun, Ph.D.
Editor-In-Chief

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The role of destination image in domestic tourism development: Evidence from Mandalay City, Myanmar[1]

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ABSTRACT

This study examined the role of destination image in determining the satisfaction of domestic travelers in Mandalay City. Two objectives guided this study. The primary objective was to assess domestic travelers' perceptions of the destination image of Mandalay City. The second objective was to analyze the effect of destination image on the satisfaction of domestic travelers in Mandalay City. In this study, destination image was measured by four dimensions: namely, natural environment, cultural environment, social environment, and infrastructure. To attain these objectives, both primary and secondary data were utilized, and the data were gathered from travelers who have visited Mandalay City in the last two years. Convenience sampling was used to collect data for the application from a total of 385 travelers. The findings of this study showed that most domestic travelers' perception of Mandalay City is based on its cultural environment. In addition, two dimensions of destination image – namely, cultural environment and infrastructure – have significant positive effects on domestic travelers' satisfaction, highlighting their critical roles in shaping travelers' experiences. Specifically, the cultural richness and well-preserved heritage of Mandalay, along with its developing infrastructure, are key factors that enhance traveler satisfaction. This study contributes to the understanding of destination image dynamics in emerging tourism markets and provides practical insights for policymakers, tourism planners, and local businesses to improve destination attractiveness and traveler experiences in Mandalay.

KEYWORDS

Destination image, domestic travelers' satisfaction, natural environment, cultural environment, social environment, infrastructure.

1 This research has been approved by the Myanmar Research Synergy Association (MRSA) Ethical Committee Report on 7/02/2024.

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INTRODUCTION

The tourism industry, a dynamic and multifaceted sector, thrives on the allure of destinations and the experiences they promise. At its core, tourism is driven by the desire to escape the familiar, to explore new horizons, and to create lasting memories. However, the decision-making process for travelers is not solely based on tangible attributes like infrastructure or amenities. It is profoundly influenced by the intangible factors, such as destination image – the mental picture that potential tourists hold of a place. This image, a composite of beliefs, feelings, and impressions, acts as a critical determinant in shaping travel choices and experiences. In an era where destinations compete fiercely for tourist attention, understanding and managing this image is paramount. The significance of destination image extends beyond mere marketing; it is a fundamental element that dictates the success and sustainability of a tourism destination.

The concept of destination image was first introduced to the tourism sector by Hunt (1971), who defined it as the collective or individual perceptions of a location by those who do not reside there. This notion has since evolved, becoming a central theme in tourism research. Destination image is not a static entity. It is a dynamic construct that is shaped by a multitude of factors, including personal experiences, media portrayals, word-of-mouth, and marketing efforts. As noted by Huang et al. (2021), while the concept is widely recognized, its definition, measurement, and management remain complex and subjective. This complexity stems from the fact that destination image is both cognitive and affective, encompassing both information about a place and the emotional responses it evokes. The intangible nature of tourism services further amplifies the importance of destination image, often surpassing the reality of the destination itself (Dwyer, 2022).

The impact of destination image on tourist behavior is profound. As Dahiya and Batra (2011) suggest, it plays a crucial role in the initial decision-making process, influencing where travelers choose to visit. Moreover, a positive destination image can lead to increased visitor satisfaction, loyalty, and advocacy (Aniqoh et al., 2022). In today's competitive tourism landscape, where travelers are inundated with choices, a strong and positive destination image can be a decisive factor in attracting and retaining tourists. This image not only affects the initial visit but also shapes the post-visit perceptions, influencing future travel decisions and recommendations. Understanding the dimensions of destination image, as outlined by San Martín and Del Bosque (2008) and Qu et al. (2011), is crucial for destinations to manage and enhance their appeal effectively.

The formation of a destination image is a multifaceted process, influenced by various sources and experiences. As Kanwel et al. (2019) point out, a person's perception can stem from both personal experiences and information from other sources. This image can develop before, during, or after a visit, highlighting its dynamic and evolving nature. Hsu et al. (2009) emphasize that travelers' perceptions are often based on their imaginations, or the information provided to them. This underscores the importance of effective destination branding and marketing. The means through which a destination image is conveyed, such as its name, logo, and visual media, play a crucial role in shaping perceptions of the destination. Furthermore, the complexity and subjectivity of destination image, as highlighted by Huang et al. (2021), necessitate a nuanced approach to its measurement and management. The variables that define destination image are numerous and interconnected, making it a challenging yet vital area of study.

Given the critical role of destination image in the tourism industry, this study aims to delve deeper into its various dimensions and explore how they influence tourist perceptions and behaviors. Specifically, this research will focus on the Mandalay region. After Yangon, Mandalay is the second-largest city in Myanmar. With 1,225,553 residents as of the 2014 census, the city is situated on the east bank of the Irrawaddy River, approximately 631 kilometers (392 miles) north of Yangon. It was established by King Mindon in 1857, replacing Amarapura as the new royal capital of the Konbaung dynasty. Prior to the kingdom's absorption by the British Empire in 1885, it served as Burma's last capital. Despite the development of Yangon as the new capital of British Burma, Mandalay maintained its cultural and commercial significance during the British colonial era. When the Japanese conquered Burma in World War II, the city was severely damaged. Mandalay joined the recently formed Union of Burma in 1948.

With a lifespan of 142 years, Mandalay is the ancient capital of Myanmar, the center of Buddhist Sasana and traditional arts and crafts, and a city rich in historical landmarks, cultural monuments, and Buddhist temples. Thus, it is the most valuable historical site and is rich in cultural heritage. Additionally, Mandalay Hill, located in the northeastern portion of the current city, inspired the city's name. The hill has long been revered as a holy mount, and it is said that Lord Buddha foretold that a large city, the Buddhist metropolis, would be built at its base. Nowadays, Mandalay is regarded as the Burmese cultural center of Myanmar and the commercial hub of Upper Myanmar. Despite the recent rise of Naypyidaw, Mandalay remains the primary economic, educational, and medical hub of Upper Myanmar. Therefore, Mandalay is more than just a city. It is a living testament to Myanmar's cultural heritage. In this place, the artistry of ancient traditions and the warmth of its people create an unforgettable destination image, inviting exploration and promising profound experiences.

However, the coronavirus pandemic and the nation's political unrest have dealt a severe blow to Myanmar's domestic tourism sector in recent years. The quantity of foreign arrivals has therefore sharply declined. Nonetheless, indications suggest that domestic travel is starting to rebound, as seen by an increase in domestic travelers over the Thingyan vacation period in April 2022 (Thuta, 2022). This means that domestic tourism currently supports the national economy and local communities. By examining the natural, cultural, and social environments, as well as the infrastructure of the Mandalay region, this research aims to provide a comprehensive understanding of the factors that shape domestic travelers' perceptions and experiences. The primary objectives of this research are to determine domestic travelers' perceptions of the destination image of Mandalay and to analyze the effect of this image on their satisfaction with Mandalay. Thus, the findings of this research will contribute to a better understanding of how destinations can effectively attract and retain travelers. Besides, this research is particularly significant in the current context of Myanmar, where domestic tourism plays a crucial role in sustaining the industry and supporting local communities.

Figure 1. Map of Mandalay City (Source: Myanmar: District Map – Mandalay Region (Oct 23, 2017))

LITERATURE REVIEW

Concept of Destination Image

A crucial consideration in the tourism industry is the perception that prospective travelers have of a particular location. Hunt (1971) was the first to apply the idea of image to the tourist industry in the early 1970s. According to Hunt (1971), a destination image is defined as the collective or individual perceptions of a location that one does not currently reside in. Ever since, there has been considerable discussion on destination image in the travel literature (Melo et al., 2016). According to Sonnleitner (2011), destination images play a crucial role in trip planning. With the intangible nature of tourism services, destination images are believed to become even more crucial than reality (Dwyer et al., 2020). Moreover, destination image plays a crucial role in determining how valuable, satisfying, and loyal visitors feel about it (Sangle-or & Kornpetpranee, 2015).

According to Cavlak and Cop (2019), a person's perception of a destination may be influenced by both personal experiences and information from other sources. This impression may develop prior to, during, or following a visit to a location (Ioradanova & Stylisdis, 2019). According to Hsu et al. (2008), travelers' perceptions of the appearance of tourist sites are based on their imaginations or the information they are given. The tourist attraction is working to distinguish itself from other places and increase awareness of its brand in the meantime. A destination image can be conveyed through various means, including its name, logo, and visual media such as pictures and animations.

Melo et al. (2016) note that, despite several academics having established ideas related to tourism destinations, there remains disagreement over how to define, quantify, and shape these concepts, rendering them complex and subjective. These conceptualizations rely on location and time. According to Ksouri and Abdellatif (2015), measuring the destination image is a complex phenomenon since it depends on several variables throughout its development and growth, due to the variety of features and conclusions that define the destination image. As stated by Birdir et al. (2018), combining both affective and cognitive representations creates the destination image. While the affective image focuses on people's sentiments and emotions towards the trip, the cognitive image deals with information about the destination. Table 1 presents the different dimensions of destination images as described by two authors.

Table 1.
Dimensions of Destination Image (Source: Cetinsoz, 2017)

Authors	Dimensions
Martin and del Bosque (2008)	• Infrastructure and socio-economic environment • Atmosphere • Natural environment • Cultural environment
Qu, Kim and Im (2011)	• Quality of experiences • Touristic attractions • Environment and infrastructure • Entertainment/external activities • Cultural traditions

Concept of Travelers' Satisfaction

Understanding the relationship between destination image and satisfaction is crucial for providing insights into how a destination's image can shape travelers' perceptions and experiences. This foundational aspect can help identify key factors that contribute to a positive or negative traveler experience, ultimately guiding tourism strategies and marketing efforts to enhance destination appeal.

Satisfaction is theoretically defined as the traveler's emotional state in the post-visitation phase, after they have arrived at their intended destination (Horávth, 2013). Moreover, satisfaction is a traveler's statement of total satisfaction after a vacation or visit (Thiumsak & Ruangkanjanases, 2016). A traveler destination's ability to successfully promote itself depends on how satisfied its travelers are (Devesa et al., 2010). According to Kozak and Rimmington (2007), satisfaction influences travelers' decisions about which places, goods, and services to purchase, which is a critical component of maintaining a competitive tourism industry.

Yoon and Uysal (2005) were among the first to suggest that destination executives should cultivate positive traveler behavior and a high degree of post-purchase satisfaction to maintain and grow a competitive destination. Thus, traveler satisfaction is a significant indicator of intent to visit a place (Bramwell, 1998). Moreover, a variety of factors contribute to travelers' satisfaction with their travel experiences, including the high caliber of service, infrastructure, safety, cleanliness of the surroundings, consumer protection, and ease of access.

Satisfaction has several distinct components, each with its unique character (Parasakul, 2012). As a result, traveler satisfaction with tourism-related activities varies. Thus, achieving satisfaction encompasses meeting the different aspects of the tourism experience, such as being content with the services or the natural surroundings (beautiful, pristine, clean, and scenic). Every dimension of satisfaction needs to be examined independently. In conclusion, travelers' satisfaction with their travel experience will influence how devoted they are to a specific location going forward. Therefore, travelers who are satisfied with their tourism experience are more likely to return and recommend the location to others.

Research Model and Hypothesis Development

Numerous studies have been conducted by scholars on the effect of destination image on tourist satisfaction, as examined in the related literature. However, while numerous studies have explored the impact of destination image on tourist satisfaction, the current study focuses specifically on domestic travelers within the context of Mandalay, particularly given the political instability in Myanmar, which has led to a decline in foreign tourist arrivals. This research aims to fill this gap by examining the influence of destination image on the satisfaction of domestic travelers, with a focus on four key independent variables: natural environment, cultural environment, social environment, and infrastructure. By investigating these variables in the context of Mandalay, this study provides a unique perspective that differentiates it from existing studies. The research will provide valuable insights into how domestic tourists perceive Mandalay's image and satisfaction, which can inform local tourism policies and strategies, particularly in light of the changing dynamics in Myanmar's tourism sector.

According to Tang et al. (2022), the destination image comprises four elements: natural environment, cultural environment, social environment, and infrastructure. The authors then conducted a study with 545 tourists visiting rural regions in China. The study conducted by the authors examined the effects of motivation, destination image, and satisfaction on willingness to revisit. The study concluded that all destination image attributes — namely, natural environment, cultural environment, social environment, and infrastructure — have a positive and significant impact on tourist satisfaction.

The destination image is composed of four elements: natural environment, infrastructure, social environment, and entertainment (Xue, 2019). The authors also conducted a study with 400 Chinese tourists to Bangkok. This study indicated that destination image has a significant positive effect on tourist satisfaction. Another study conducted by Coban (2012) investigated the effect of destination image on tourist satisfaction and loyalty with 170 tourists who visited Cappadocia. In this study, the destination image is divided into two categories: cognitive and emotional. The result indicated that cognitive image has a significant positive effect on tourist satisfaction in this study.

In addition, the study conducted by Cetinsoz (2017) stated that Arab visitors' intentions to return are significantly and favorably impacted by their perception of their cognitive image. Stated differently, the more positively Arab visitors perceive Istanbul's natural appeal, infrastructure, overall atmosphere, social environment, and value for money, the more likely they are to return. Additionally, it has been demonstrated that there is no significant correlation between the intention to return and the affective image of Arab tourists. For the present study, the following hypotheses were empirically tested based on the above discussion.

- Hypothesis 1 (H1): The natural environment has a significant positive effect on domestic travelers' satisfaction.
- Hypothesis 2 (H2): The cultural environment has a significant positive effect on domestic travelers' satisfaction.
- Hypothesis 3 (H3): The social environment has a significant positive effect on domestic travelers' satisfaction.
- Hypothesis 4 (H4): The infrastructure has a significant positive effect on domestic travelers' satisfaction.

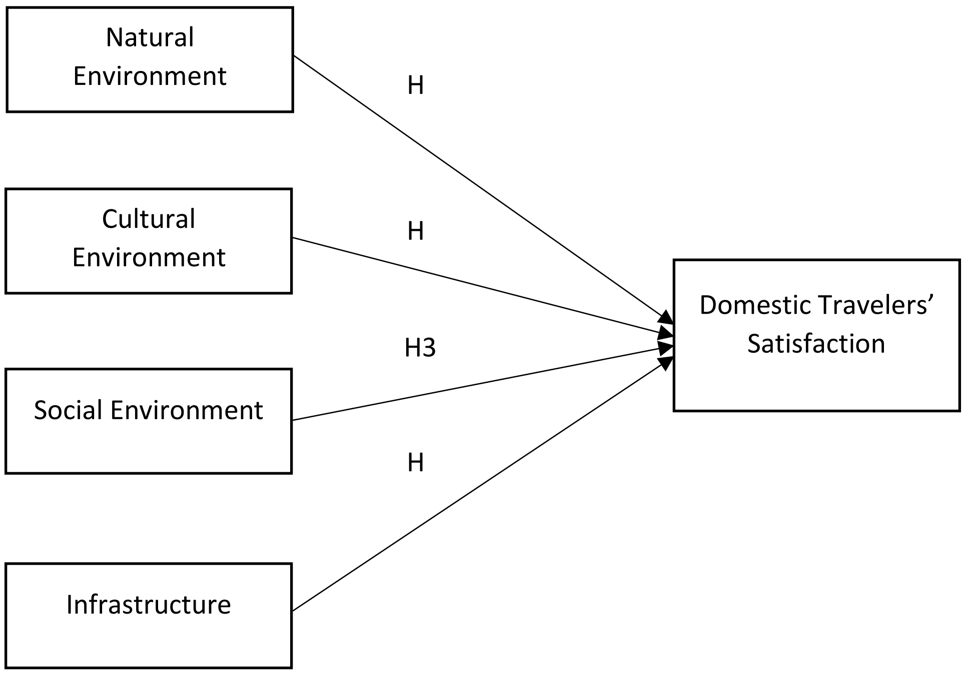

Figure 2. Hypothesized Framework of This Study (Source: Own research)

RESEARCH METHODOLOGY

The purpose of this study is to determine domestic travelers' perceptions of destination images and to analyze the effect of destination images on domestic travelers' satisfaction with Mandalay City. To achieve these objectives, a quantitative research approach was employed in this study. The population in this study consists of travelers who have visited Mandalay City within the last two years. The sample selected to reflect the characteristics of the population under investigation was chosen using the convenience sampling approach. According to Myanmar Tourism Statistics (2022), the number of domestic travelers arriving in Mandalay City is about 1.201 million. Since the population (N) exceeds 10,000, it can be assumed to be a large population for this study. Thus, to determine the required sample size, Cochran's formula (1977) was used, and the minimum sample size for this study was calculated as 385 with the formula. A survey was employed as the data-gathering method in this study, and it was administered to over 415 individuals. Nevertheless, 385 questionnaires were analyzed overall, considering incomplete, inaccurate, and unreturned questionnaires. The survey was conducted online using Google Forms, allowing participants to complete the questionnaires at their convenience.

The survey consists of three sections, each designed to gather specific data. The first section discusses demographic profiles of travelers (gender, age, marital status, education, monthly income, and visit time to Mandalay City). The second section consists of a destination image scale with 15 items, and the third section measures domestic travelers' satisfaction using a scale of 4 items. The aforementioned dimensions of destination image are used as independent variables in this study. The scales used by Mulia (2019) were utilized to measure the travelers' satisfaction. A Likert scale with ratings ranging from 1 to 5 is used to quantify each indication (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, and 5 = strongly agree).

DATA ANALYSIS AND FINDINGS

Demographic Characteristics of Respondents

The demographic characteristics of the respondents are presented in Table 2, providing insights into their gender, marital status, age, education level, monthly income, and visit frequency to Mandalay.

Table 2.
Demographic Characteristics of Respondents (n = 385) (Source: Survey data, 2024)

Variables	Group	Frequency	Percentage (%)
Gender	Male	105	27.27
	Female	280	72.73
Marital Status	Single	319	82.86
	Married	66	17.14
Age	Below 21	44	11.44
	21 – 30	199	51.68
	31 – 40	101	26.23
	41 – 50	41	10.65
	Above 50	0	0
Education	High School	31	8.05
	Bachelor's degree	229	59.48
	Master's degree	122	31.69
	Doctor Degree	3	0.78
Monthly Income	300,000 MMK – 500,000 MMK	218	56.63
	500,001 MMK – 700,000 MMK	46	11.95
	700,001 MMK – 900,000 MMK	27	7.01
	Above 900,000	94	24.41
Visit time to Mandalay	1 – 3 times	146	37.93
	4 – 6 times	74	19.22
	7 – 9 times	22	5.71
	Above 9 times	143	37.14

In Table 2, regarding gender distribution, the majority of respondents were female, accounting for 72.73% (n = 280), while males comprised 27.27% (n = 105) of the sample. In terms of marital status, a significant proportion of respondents were single (82.86%, n = 319), whereas 17.14% (n = 66) were married. The age distribution revealed that more than half of the respondents (51.68%, n = 199) were between 21 and 30 years old, followed by 26.23% (n = 101) in the 31–40 age group.

A smaller percentage of respondents (10.65%, n = 41) were aged 41–50 years, while 11.44% (n = 44) were below 21 years old. Notably, no respondents were above 50 years of age. Regarding educational qualifications, most respondents held a bachelor's degree (59.48%, n = 229), while 31.69% (n = 122) had a master's degree. A small proportion had completed high school (8.05%, n = 31), and only 0.78% (n = 3) had obtained a doctoral degree. The income distribution analysis revealed that the most significant portion of respondents (56.63%, n = 218) earned a monthly income between 300,000 MMK and 500,000 MMK, followed by 24.41% (n = 94) who earned above 900,000 MMK.

A smaller proportion of respondents (11.95%, n = 46) reported earnings between 500,001 MMK and 700,000 MMK, while 7.01% (n = 27) earned between 700,001 MMK and 900,000 MMK. Lastly, the frequency of visits to Mandalay varied among respondents. The most significant proportion of participants had visited 1–3 times (37.93%, n = 146), closely followed by those who had visited more than nine times (37.14%, n = 143). Meanwhile, 19.22% (n = 74) had visited 4–6 times, and 5.71% (n = 22) had visited 7–9 times.

Descriptive Statistics

Table 3 presents the descriptive statistics of the construct items, including the mean, standard deviation, and overall mean for each construct. The results provide insights into the respondents' perceptions and variability in responses across the measured constructs.

Table 3.
Descriptive Statistics Value for Each Construct (Source: Survey data, 2024)

No.	Construct Items	Mean	Std. Dev.	Overall Mean
1	NE1	3.90	1.00	3.46
2	NE2	3.96	0.97	
3	NE3	3.02	0.94	
4	NE4	2.97	0.89	
5	CE1	4.09	1.01	4.06
6	CE2	4.02	1.04	
7	CE3	3.98	0.99	
8	CE4	4.15	0.96	
9	SE1	3.69	1.00	3.62
10	SE2	3.66	0.95	
11	SE3	3.66	0.94	
12	SE4	3.47	0.90	
13	IF1	3.79	0.97	3.69
14	IF2	3.54	0.99	
15	IF3	3.95	0.94	
16	IF4	3.47	0.92	
17	TS1	3.78	0.97	3.89
18	TS2	3.84	1.04	
19	TS3	4.18	0.99	
20	TS4	3.74	0.90	

NE = natural environment, CE = cultural environment, SE = social environment, IF = infrastructure, TS = travelers' satisfaction

According to Table 3, the natural environment (NE) construct had an overall mean score of 3.46, indicating a moderate perception of the natural environmental aspects. Among the NE items, NE2 (M = 3.96, SD = 0.97) received the highest rating, while NE4 (M = 2.97, SD = 0.89) was rated the lowest, suggesting relatively lower satisfaction with this aspect of the natural environment. For the cultural environment (CE), respondents expressed a generally positive perception, with an overall mean of 4.06. The highest-rated item was CE4 (M = 4.15, SD = 0.96), while the lowest was CE3 (M = 3.98, SD = 0.99). The high scores across all CE items suggest a strong appreciation of the cultural environment.

The social environment (SE) construct yielded a moderate overall mean of 3.62. The ratings for SE items were relatively consistent, with SE1 (M = 3.69, SD = 1.00) receiving the highest score and SE4 (M = 3.47, SD = 0.90) receiving the lowest score. This suggests that, while respondents generally have positive views of the social environment, some aspects may require improvement. In the infrastructure (IF) category, the overall mean score was 3.69, reflecting a slightly favorable perception. IF3 (M = 3.95, SD = 0.94) had the highest rating, whereas IF4 (M =

3.47, SD = 0.92) received the lowest, indicating potential areas for enhancement in infrastructure development.

Finally, the travelers' satisfaction (TS) construct exhibited the highest overall mean of 3.89, suggesting a generally positive experience. The highest-rated item was TS3 (M = 4.18, SD = 0.99), while TS4 (M = 3.74, SD = 0.90) had the lowest rating. The high mean scores across TS items indicate that most respondents were satisfied with their travel experiences.

Assessment of the Measurement Model

This study conducted a two-step approach to conduct data analysis. First, confirmatory factor analysis (CFA) is used to assess the reliability and construct validity of the model. Second, multiple linear regression analysis is employed to empirically test the research hypothesis. Table 4 presents the results of the reliability and validity assessment for the five constructs: natural environment, cultural environment, social environment, infrastructure, and travelers' satisfaction. The analysis includes factor loadings, Cronbach's alpha, composite reliability (CR), and average variance extracted (AVE), which are crucial indicators of measurement reliability and construct validity.

Table 4.
Construct on Reliability and Validity (Source: Survey data, 2024)

Constructs	Items	Factor Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Natural Environment	NE1	0.824	0.714	0.815	0.530
	NE2	0.818			
	NE3	0.681			
	NE4	0.554			
Cultural Environment	CE1	0.894	0.912	0.939	0.793
	CE2	0.865			
	CE3	0.916			
	CE4	0.886			
Social Environment	SE1	0.931	0.901	0.931	0.773
	SE2	0.931			
	SE3	0.789			
	SE4	0.858			
Infrastructure	IF1	0.903	0.871	0.912	0.722
	IF2	0.825			
	IF3	0.839			
	IF4	0.830			
Traveler Satisfaction	TS1	0.899	0.874	0.913	0.726
	TS2	0.906			
	TS3	0.838			
	TS4	0.757			

NE = natural environment, CE = cultural environment, SE = social environment, IF = infrastructure, TS = travelers' satisfaction

The value of alpha is used to determine whether an instrument is reliable (Tavakol & Dennick, 2011). Table 4 indicates that the alpha value exceeds 0.7, which is greater than the threshold values suggested by Hair et al. (2013), indicating extreme internal accuracy and reliability for the scale in this sample. Factor loadings for all items are examined to assess the reliability of the indicators. Factor loading represents the variance shared between the item and the construct, and its standardized value should ideally be 0.5 or higher, which is also acceptable (Hair et al., 1998). As shown in Table 4, standardized factor loadings exceed 0.5, indicating that each item makes a significant contribution to its respective construct.

CR refers to internal consistency, indicating that all measures consistently represent the same latent construct. A reliability value of 0.7 or higher refers to good reliability (Cheung et al., 2024). In this study, CR values ranged from 0.815 to 0.939, reinforcing the robustness of the measurement model. AVE values, which measure the proportion of variance captured by each construct relative to measurement error, exceeded the minimum threshold of 0.05 (Fornell & Larcker, 1981). As shown in Table 4, the cultural environment (0.793), social environment (0.773), infrastructure (0.722), and traveler satisfaction (0.726) constructs demonstrated strong convergent validity. In contrast, the natural environment (0.530) had the lowest AVE but still met the acceptable threshold.

Discriminant Validity

Table 5 presents the discriminant validity assessment based on the Fornell and Larcker (1981) criterion, where the square root of the AVE for each construct is compared against the inter-construct correlations. The diagonal values represent the square root of the AVE, while the off-diagonal values indicate the correlation coefficients between constructs.

Table 5.
Discriminant Validity (Source: Survey data, 2024)

	NE	CE	SE	IF	TS
Natural Environment (NE)	**0.728**				
Cultural Environment (CE)	.565**	**0.890**			
Social Environment (SE)	.470**	.680**	**0.879**		
Infrastructure (IF)	.553**	.702**	.732**	**0.849**	
Travelers' Satisfaction (TS)	.388**	.698**	.560**	.633**	**0.852**

** means ($p < 0.01$),
NE = natural environment, CE = cultural environment, SE = social environment, IF = infrastructure, TS = travelers' satisfaction

The results confirm adequate discriminant validity, as the square root of the AVE for each construct (bold diagonal values) is greater than the correlation coefficients with other constructs. This suggests that each construct is more strongly related to its own indicators than to those of other constructs.

The highest correlation is observed between cultural environment (CE) and infrastructure (IF) ($r = 0.702$, $p < 0.01$), followed by social environment (SE) and infrastructure (IF) ($r = 0.732$, $p < 0.01$), indicating a strong association between these variables. This finding suggests that infrastructure development is closely linked with cultural and social environmental factors, which may influence travelers' overall perceptions. Meanwhile, travelers' satisfaction (TS) is moderately correlated with all other constructs, with the highest correlation found with cultural environment (CE) ($r = 0.698$, $p < 0.01$), implying that cultural aspects significantly shape tourists' satisfaction levels.

Despite the strong inter-construct relationships, the square root of AVE values (NE = 0.728, CE = 0.890, SE = 0.879, IF = 0.849, TS = 0.852) consistently exceed the corresponding correlation coefficients. This confirms that each construct maintains sufficient distinctiveness, satisfying the discriminant validity requirement.

Regression Analysis

Multiple linear regression was conducted to identify the causal relationship between independent and dependent variables. Moreover, regression analysis was used to estimate or predict the effect of the independent variable on the dependent variable. The significance level of 0.05 with a 95% confidence interval was used.

Assumptions for Regression Model Test

According to Field (2018), the validity of multiple linear regression depends on key assumptions: multicollinearity, which ensures predictor variables are not highly correlated; homoscedasticity, indicating uniform error term variance; linearity, which assumes a linear relationship between the predictor and dependent variables, and normality, requiring a symmetric data distribution. Violating these assumptions can compromise the accuracy and predictive reliability of the model. Thus, these standard assumption tests are conducted for this study.

Multicollinearity

Multicollinearity occurs when predictor variables in a regression model are highly correlated, resulting in inflated variance in the estimated coefficients. It is assessed using the Variance Inflation Factor (VIF), where values above 5 indicate severe multicollinearity (Hair et al., 2013). Tolerance, the reciprocal of VIF, represents the proportion of a variable's variance that is not shared with other predictors, with values below 0.1 indicating significant multicollinearity (Kutner et al., 2005). The following Table (6) is discussed to evaluate the VIF and tolerance of predictor variables.

Table 6.
Collinearity Assumption Test (Source: Survey Data, 2024)

	N	Mean	Tolerance	VIF
Natural Environment	385	3.46	.632	1.582
Cultural Environment	385	4.06	.413	2.421
Social Environment	385	3.62	.410	2.441
Infrastructure	385	3.69	.367	2.725

Dependent Variable = Travelers' Satisfaction

According to Table 6, the collinearity statistics for the predictor variables indicate no severe concerns regarding multicollinearity. All VIF values range from 1.582 to 2.725, well below the critical threshold of 5, and tolerance values range from 0.367 to 0.632, above the 0.1 threshold. Therefore, multicollinearity is not a significant issue in this model, suggesting that the predictor variables contribute independently to the regression analysis.

Homoscedasticity

To test the assumption of homoscedasticity in multiple regression analysis, a scatter plot of regression-standardized residuals against regression-standardized predicted values was examined.

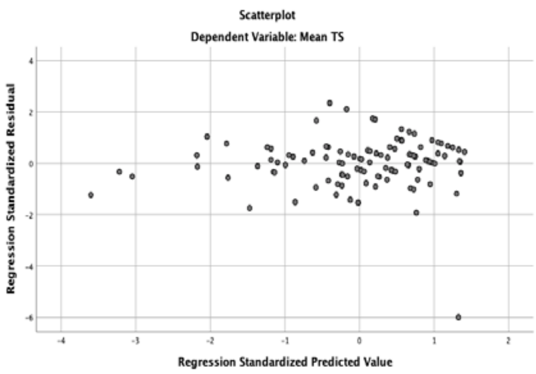

Figure 3. Scattered Plot for Homoscedasticity Test (Source: Own research)

As shown in Figure 3, the residuals are randomly scattered without a clear systematic pattern, indicating that the variance of residuals remains consistent across all levels of the predicted values. This suggests that the assumption of homoscedasticity is met, supporting the reliability of the regression model. However, a few potential outliers were observed, which may slightly impact the overall model fit. Despite this, the overall pattern of residual distribution does not indicate a serious violation of homoscedasticity, affirming the validity of the regression estimates.

Linearity Test

Linearity refers to the degree to which the change in the dependent variable is related to the change in the independent variable. The best test for normally distributed error is the normal probability plot of the residuals. If the distribution is normal, the points on such a plot should fall close to the diagonal reference line.

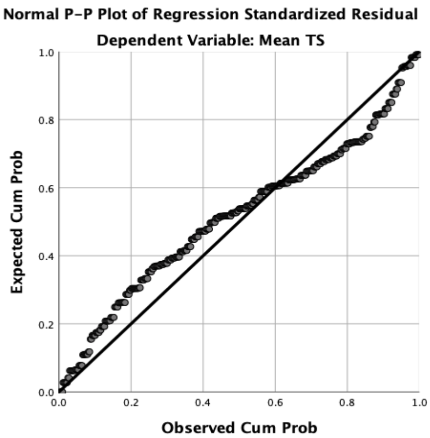

Figure 4. Linearity Test (Source: Own research)

As illustrated in Figure 4, the data points generally align with the diagonal reference line, indicating that the residuals are approximately normally distributed. Minor deviations are observed at the lower and upper ends of the distribution, but they do not suggest a severe violation of normality. Given this observation, the assumption of normality is considered reasonably met, supporting the robustness and reliability of the regression model.

Normality Test for Residuals

This study tests the normality assumption and presents the results graphically as follows:

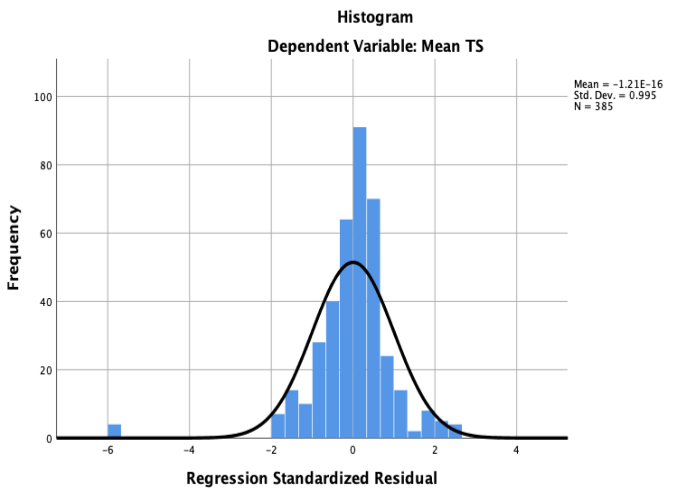

Figure 5. Normality Test (Source: Own research)

As demonstrated in Figure 5, the histogram of regression standardized residuals for 'Mean TS' exhibits a distribution that is close to normal. The residuals' mean (-1.21E-16) is nearly zero, indicating no systematic bias, while the standard deviation (0.995) reflects a reasonable spread. The histogram closely follows the normal curve, with most residuals clustering around zero and tapering off symmetrically. This pattern suggests that the errors are randomly distributed, supporting the assumption of normality in the regression model.

Regression Result and Discussion

The information gathered from the 385 respondents via the questionnaire was used to analyze how destination images affect the satisfaction of domestic travelers. To test the four hypotheses, multiple regression analysis was employed in this study.

Table 7.

Multiple Regression Results between Destination Image and Domestic Travelers' Satisfaction (Source: Survey Data, 2024)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.961	.165		5.833	.000
Natural Environment	-.030	.046	-.028	-.654	.514
Cultural Environment	.468***	.052	.501	9.023	.000
Social Environment	.031	.055	.031	.559	.576
Infrastructure	.279***	.059	.273	4.752	.000
R Square	.529				
Adjusted R Square	.524				
F Value	106.778 (P Value = 0.000)				

*** means 1% significance level

According to the regression analysis, the F value is 106.778 (sig. = 0.000), and the significance test of the regression equation indicates a linear correlation between the two independent variables (cultural environment and infrastructure) and domestic travelers' satisfaction. Except for the natural environment and social environment as destination image, the other two independent variables were significant in the model at a significance level of 0.000 (99%). The Adjusted R-squared value is 0.524, indicating that the closeness of the relationship between the independent variables and the dependent variable is 52.4%

The cultural environment and infrastructure have a significant positive effect at the 1% level on travelers' satisfaction. It shows that every one-unit increase in cultural environment helps increase satisfaction by 0.468, and every one-unit increase in infrastructure helps increase satisfaction by 0.279. The natural environment and social environment are not significant at any level.

Hypothesis Testing

According to the results and discussion of the multiple linear regression analysis, cultural environment and infrastructure are the primary factors influencing domestic travelers' satisfaction with the destination image. In contrast, neither the natural environment nor the social environment has a significant effect on satisfaction. Thus, the following results for hypothesis testing are conducted.

Table 8.
Results of Hypothesis Testing (Source: Survey data, 2024)

Hypothesis	Results
H1: Natural environment → domestic travelers' satisfaction	Not Supported
H2: Cultural environment → domestic travelers' satisfaction	Supported
H3: Social environment → domestic travelers' satisfaction	Not Supported
H4: Infrastructure → domestic travelers' satisfaction	Supported

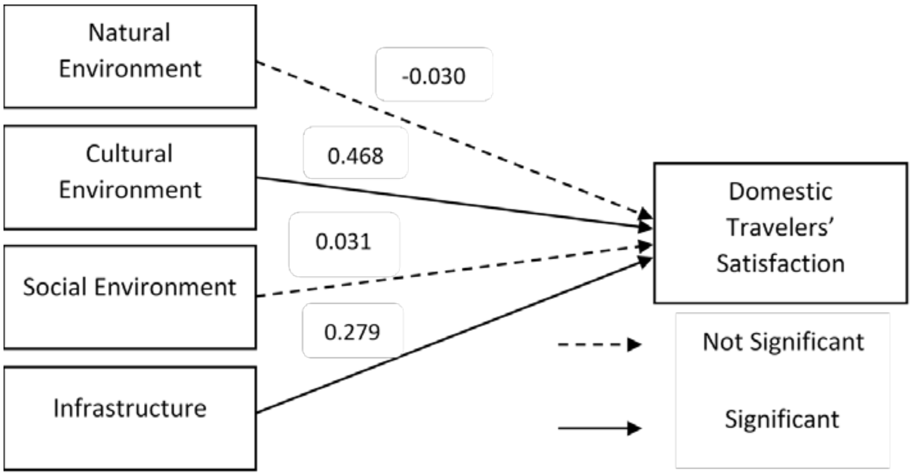

Figure 6. Results of Hypothesis Testing (Own research)

CONCLUSIONS AND DISCUSSIONS

Theoretical Contributions

This study aimed to achieve two objectives. The first objective was to describe domestic travelers' satisfaction with Mandalay City, and the second was to analyze the effect of destination image on domestic travelers' satisfaction with Mandalay City. To meet these objectives, a research framework that was relevant to the research area was developed and tested in a sample of 385 travelers who visited Mandalay. Multiple linear regression analysis was conducted to prove the hypotheses of this study.

According to the results of multiple linear regression analysis, the study's findings highlight the significant role of Mandalay city's cultural environment in shaping its destination image and influencing travelers' satisfaction. This suggests that travelers perceive Mandalay as a culturally rich and historically significant destination, reinforcing previous research that emphasizes the appeal of cultural environments in tourism (Austin, 2002; Baxter, 2020; Tang et al., 2022). This also proposes that travelers appreciate the city's highly recognizable traditional architecture, which serves as a distinct visual representation of its cultural identity. Additionally, travelers find Mandalay to offer a unique cultural experience, which is likely driven by its well-preserved intangible cultural heritage, including traditional arts, performances, and local customs. The historic sites and heritage further contribute to its intense cultural atmosphere, allowing travelers to immerse themselves in an authentic and meaningful journey. In combination, these elements create a powerful cultural environment that enhances travelers' satisfaction by providing them with a deep sense of place and connection to Mandalay's historical and cultural legacy.

The study further reveals that the infrastructure of Mandalay city is the second most significant factor contributing to travelers' satisfaction. This finding aligns with previous research (Gretzel et al., 2015; Zekan et al., 2022; Avieli & Sermoneta, 2020), which underscores the importance of well-developed infrastructure in enhancing the overall travelers' experience. The assessment of Mandalay's infrastructure includes key elements such as the quality of its road layout, which facilitates ease of travel and accessibility within the city. In addition, the presence of an effective travelers' information network ensures that travelers can easily navigate and access relevant information about attractions, accommodations, and services. The availability of high-quality hotels and accommodations further enhances the comfort and convenience of tourists, making their stay more enjoyable. Moreover, the city's commitment to maintaining hygiene and cleanliness plays a crucial role in shaping positive perceptions and reinforcing a sense of safety and well-being among travelers. Collectively, these infrastructural factors contribute to a seamless and satisfying travel experience, highlighting the critical role of urban planning and service quality in tourism development.

Practical Implications

The findings of this study reveal that the cultural environment and infrastructure are critical drivers of traveler satisfaction in Mandalay City, presenting clear practical implications for policymakers, tourism planners, infrastructure developers, and businesspersons.

Firstly, given the strong positive effect of the cultural environment, policymakers in the Mandalay region should prioritize cultural heritage conservation initiatives, including the restoration and maintenance of historic sites, traditional architecture, and intangible cultural heritage, such as local arts and performances. This requires strategic policies that integrate sustainable tourism development with cultural preservation efforts to ensure the long-term attractiveness of Mandalay as a travel destination. Additionally, policymakers should work towards enhancing public infrastructure, ensuring efficient transportation networks, clear signage, and a comprehensive traveler information system that supports seamless navigation within the city. These measures will not only enhance traveler satisfaction but also position Mandalay as a competitive destination for cultural tourism.

Secondly, urban planners and infrastructure developers should focus on improving transportation, expanding traveler amenities, and maintaining high hygiene standards in public spaces. The study highlights that good infrastructure plays a key role in traveler satisfaction, suggesting that modern developments that respect cultural heritage can enhance the tourism experience. This includes enhancing digital services, such as mobile apps for navigation, multilingual information platforms, and smart city initiatives tailored for tech-savvy tourists. By striking a balance between cultural preservation and urban development, Mandalay can create a sustainable and welcoming environment for visitors.

Finally, entrepreneurs and business owners in the tourism and hospitality sector can leverage the study's findings by aligning their services with travelers' expectations of an immersive cultural experience. Investments in culturally themed accommodations, guided heritage tours, and traditional entertainment can further enrich the destination image. Moreover, businesses should prioritize service quality by ensuring high standards of hospitality, cleanliness, and customer engagement to enhance visitor satisfaction. Collaborating with local artisans and performers to offer authentic cultural experiences can create unique value propositions that appeal to international and domestic tourists.

Limitations and Needs for Further Studies

This study on the satisfaction of domestic travelers in Mandalay offers significant insights, identifying several areas that require further exploration. The results highlight the significant impact of the cultural environment and infrastructure on traveler satisfaction. However, no significant effects were found from the natural and social environments, indicating that these factors require more detailed investigation. Future research could incorporate qualitative methods to gain a deeper understanding of travelers' personal experiences and perceptions. The reliance on a quantitative survey approach in this study limits the ability to explore the underlying reasons for satisfaction, suggesting that a mixed-methods approach could provide a deeper understanding. Additionally, the focus on domestic travelers within the context of political instability in Myanmar underscores the importance of longitudinal studies to examine the long-term effects of socio-political changes on destination image and traveler satisfaction. Lastly, further studies could explore how various dimensions of destination image interact with factors such as digital media, personal values, and travel motivations to develop a more comprehensive and integrated model of traveler satisfaction.

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Examining the effect of life satisfaction on hedonic eating[1]

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ABSTRACT

Life satisfaction is a key factor in determining an individual's life expectancy, as people with high life satisfaction tend to be satisfied with their living conditions and enjoy their lives. On the other hand, hedonic eating is an action that individuals perform for pleasure. Although life satisfaction has been investigated in the literature concerning cognitive, psychological, socio-cultural, and economic factors, it has been addressed in a limited number of studies regarding eating. In this context, the effect of life satisfaction on the sub-dimensions of hedonic eating—namely, coping, enhancement, social, and conformity—was examined. As a result of the study, a negative relationship was found between life satisfaction and hedonic eating, suggesting that conformity purposes may have a negative impact on life satisfaction. The study aims to contribute to the literature in the fields of gastronomy, nutrition, sociology, and psychology, as well as food and beverage, catering, and recreation businesses and organizations operating in the field of social sociology and psychology.

KEYWORDS

Satisfaction, life satisfaction, eating disorders, hedonic eating.

[1] This study was approved by the Anadolu University Scientific Research Ethics Committee on 28.12.2023 with 663920 protocol number.

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INTRODUCTION

Eating is the most basic physiological need (Lau et al., 2017), and it is affected by sociocultural, psychological, and cognitive factors (Meneguzzo et al., 2020). In this context, hedonic eating is defined as an action related to sociocultural and cognitive processes, without considering the physiological need for energy intake (Galmiche et al., 2019; Stroebe, 2022). Individuals engage in hedonic eating with the intention of pleasure and enjoyment, and they feel psychologically sound as a result (Lee & Dixon, 2017). For this reason, it is seen that individuals tend to eat for pleasure and enjoyment, to cope with negative psychological states such as anger and stress (Ertem & Karakas, 2021), to feel better (Devonport et al., 2019; Evers et al., 2018), or when they are in their social environment (Motteli et al., 2017; Yiengprugsawan et al., 2015). These factors affecting hedonic eating are conceptualized in the literature as hedonic eating for social, coping, enhancement, and conformity (Burgess et al., 2014). Hedonic eating, which usually occurs with foods high in sugar and carbohydrates, causes health problems such as obesity, diabetes, and high blood pressure in individuals when done excessively (Mason et al., 2020). On the other hand, life satisfaction is a concept related to sociocultural, psychological, and cognitive factors. It affects an individual's life and actions (Camacho et al., 2019). Individuals' cognitive evaluations of whether their expectations are met in life conditions determine their life satisfaction and guide their actions (Suldo et al., 2009). Considering the literature, life satisfaction was investigated in terms of variables such as management (Akin, 2008; Berggren & Bjornskov, 2020; Ozdevecioglu & Aktas, 2007; Polatci, 2015; Serinikli, 2020), religion (Sholihin et al., 2022), health (Kim et al., 2021; Zhang et al., 2020), working conditions (Bernarto et al., 2020), social developments (Duong, 2021), tourism (Ciftci & Zencir, 2019; Kodas et al., 2021) and recreation (Cetiner & Yayla, 2021; Yerlisu et al., 2012).

Additionally, several studies have examined expectations (Kapteyn et al., 2010), factors influencing satisfaction (Pavot & Diener, 2008), and life satisfaction levels (Best & Chinta, 2021; He et al., 2024) across different countries. However, it was only examined relating to eating within the scope of disorders such as obesity (Baumann et al., 2017; Mo & Bai, 2024), bulimia nervosa (Watson et al., 2015), binge eating (Claydon et al., 2020), anorexia nervosa (Tan et al., 2022), and orthorexia nervosa (He et al., 2021; Strahler & Stark, 2020). In addition, hedonic eating was investigated within the scope of eating disorders (Aukan et al., 2024; Nymo et al., 2022; Parker et al., 2022), body mass index (Yassibas et al., 2024), and genetics (Narjabadifam et al., 2021), but it was not addressed in terms of life satisfaction.

This study aims to examine the effect of life satisfaction on hedonic eating. In this context, the study examined the effect of life satisfaction on hedonic eating, specifically in terms of social, conformity, coping, and enhancement, which are sub-dimensions of hedonic eating. The study aims to contribute to the literature in the fields of gastronomy, nutrition, sociology, and psychology, as well as food and beverage, catering, and recreation businesses and organizations operating in the field of social sociology and psychology.

LITERATURE REVIEW

Life Satisfaction

Life satisfaction is defined as an individual's overall satisfaction with their life, encompassing their desires and needs, and their contentment with life's conditions, as well as their acceptance of these conditions (Proctor et al., 2017). Since life satisfaction is related to various socio-cultural, cognitive, physiological, and psychological factors, it has been examined by experts from different perspectives (Bernarto et al., 2020; Khodabakhsh, 2022; Szczesniak et al., 2021). In a study by Dockery (2003), the results of 245 studies from 32 countries were analyzed. It was determined that life satisfaction depends on many variables, such as living in a democratic country with high employment rate and individual freedom, having high purchasing power, being a part of the majority instead of a minority, being happily married, being able to make decisions about one's own life, having good physical and mental health, being successful in social and bilateral relationships. It has also been observed that the level of recreational and entertainment activities in which the individual participates affects life satisfaction (Gokce & Ozer, 2021; Liu et al., 2021).

The fact that life satisfaction is influenced by the socio-cultural living conditions in which an individual lives and how they perceive these conditions reveals the cognitive aspect of life satisfaction. It has been observed that the level of life satisfaction varies despite individuals living in similar living conditions (Aymerich et al., 2021; Komura et al., 2023). The most basic and comprehensive studies on the cognitive variability of life satisfaction are the experimental studies conducted by Andrews and Withey (1974) and Andrews and Crandall (1976). If an individual is satisfied with their living conditions, it is observed that they derive satisfaction from their life and feel psychologically well. Individuals with low life satisfaction may consider their life conditions negatively and experience negative emotional states such as stress, anger, depression, and psychological disorders (Bai et al., 2021; Rogowska et al., 2020). In cases where individuals do not feel psychologically well, eating is often the easiest action to replace other variables that contribute to this emotional state (Konttinen, 2020; Reichenberger et al., 2020). Studies examining life satisfaction in relation to various variables are presented in Table 1. Additionally, the studies conducted in Turkiye are presented in Table 2.

Table 1.
Studies on Life Satisfaction (Source: Own research)

Author	Year	Scope	Variables	Country
Sun et al.	2025		Greenspace exposure Gender	China
He et al.	2024		Urban living	China
An et al.	2024		Courage Recreational participation	Japan
Glaz	2024		Occupational satisfaction Meaning of life	Poland
Milosevic et al.	2024		Internet use	Norway
Morales-Garcia et al.	2024		Depression Occupational self-efficacy Occupational performance	Peru
Becchetti et al.	2024		Inequality of opportunity	Europe
Graca and Brandao	2024		Spiritual coping Emotion regulation Mental well-being	Portugal
Santilli et al.	2024		Courage Career adaptation	Italy
Jeong et al.	2024	Life satisfaction	Smartphone use Depressive symptoms Cognitive functions	South Korea
Dulai and Jaspal	2024		Social Connectedness Identity Resilience	UK
Best and Chinta	2021		Work-life balance	USA
Kalaitzaki et al.	2021		Social capital, social support Perceived stress, Resilience	Greece
Barrington-Leigh	2021		Sustainability	Canada
Lv et al.	2024		Social participation Depression Cognitive function	China

Table 2.
Studies on Life Satisfaction in Turkiye (Source: Own research)

Author	Year	Scope	Variables	Country
Ozdevecioglu and Aktas	2007		Employee Occupation Career Commitment Organizational Commitment Work-Family Conflict	
Ozer and Kucuk	2024		Mindfulness Level Perceived Stress Level	
Bayram et al.	2010		Social Exclusion	
Akin	2008		Organizational Support Social Support Work/Family Conflicts	
Yerlisu et al.	2012		Leisure Motivation Leisure Participation	
Polatci	2015	Life satisfaction	Perceived Organizational Support Perceived Social Support Job And Marriage Satisfaction	Türkiye
Cetiner and Yayla	2021		Activity Commitment Quality Of Life	
Macit	2021		Level of Burnout	
Kodas et al.	2021		Local Resident Perceptions of Tourism Impact Support for Tourism Development	
Serinikli	2020		Organizational Cynicism Job Autonomy Job Performance	
Ciftci and Zencir	2019		Social Entrepreneurship Job Satisfaction	

Hedonic Eating

Eating with different motivations, rather than meeting physiological needs, leads to the emergence of an unconscious tendency to overeat. Unconscious eating triggers eating for socio-cultural, psychological, and cognitive reasons, regardless of energy intake and nutritional needs, and can lead to health problems (Zhou et al., 2017). Hedonic eating may be characterized as an unconscious act of eating. Hedonic eating is defined as consuming food primarily for pleasure and enjoyment, regardless of hunger or the need for energy intake (Crane et al., 2023). Individuals often feel psychologically well and emotionally satisfied after engaging in hedonic eating (Ortega et al., 2023). Hedonic eating is a pleasure-oriented behavior. Some studies reported that under advanced neuroimaging techniques, delicious and high-calorie foods are perceived as a reward by the brain (Berthoud, 2011) and that there is a tendency towards hedonic foods in negative emotional states (Stroebe, 2022). However, hedonic eating and emotional eating should not be confused with each other. Emotional eating is an eating behavior defined by individuals consuming food depending on their emotional state rather than hunger or specific mealtimes (Gonzalez et al.). It occurs in response to emotional triggers such as loneliness, depression, and anxiety (Ambwani et al., 2015).

The fact that individuals engage in hedonic eating, which can lead to excessive calorie intake and addictive eating patterns, rather than conscious eating, often occurs outside of main meals and late at night, amplifies the impact of hedonic eating behavior on health problems (Zhu et al., 2020). There are studies (Kaur & Jensen, 2022; Livovsky et al., 2020) that found that weight gain, obesity, and health problems occur as a result of hedonic eating.

Life Satisfaction and Hedonic Eating

Eating is a concept related to sociocultural, psychological, and cognitive factors such as life satisfaction. The relationship between eating and socio-cultural factors can be explained by the family's eating habits from birth (Schnettler et al., 2021) and the social environment (Oh et al., 2014). Individuals' eating behaviors show significant similarity with those of individuals with whom they regularly consume food (Motteli et al., 2017). In this context, conformity eating is defined as eating to feel more comfortable in an individual's social environment, even if they do not need it (Boggiano et al., 2017). It has been found that individuals tend to eat more on weekends (Boggiano et al., 2015) or in social environments for the sake of conformity (Herman et al., 2019). Additionally, within the scope of socio-cultural differences that individuals adapt to, hedonic eating levels vary across countries (Keller, 2019). Research shows that in countries with collective cultures, such as Morocco, Suriname, and Turkiye, eating is an essential element of social coexistence. (Kohinor et al., 2011; Nicolaou et al., 2008). At this point, it becomes clear that eating also serves social purposes. Studies have revealed that individuals often eat for pleasure and enjoyment in social environments, regardless of their energy needs (Burgess et al., 2014; Schnettler et al., 2015). Apart from socio-cultural reasons, individuals may consume food for cognitive and psychological reasons. Individuals may consume food to enhance their psychological well-being and achieve optimal cognitive functioning (Spence, 2017). Individuals who consume certain foods report feeling emotionally satisfied and experiencing a sense of strength (Long, 2017; Wagner et al., 2014). On the other hand, some studies reveal that individuals eat hedonic food to feel good (Chmurzynska et al., 2021). The fact that foods provide psychological enhancement in individuals ensures that they consume hedonic food to cope with situations such as stress and anger (Ertem & Karakas, 2021). Individuals often consume high-calorie, tasty foods to cope with negative emotional states (Sinha, 2018). Negative relationships have been found between negative emotional states and restrictive eating (Polivy et al., 2020). In addition, meta-analysis studies have examined the relationship between positive emotions about life (Kerry et al., 2023) and feelings of love, compassion, and mercy (Gu et al., 2022) with life satisfaction.

Considering all these studies, a research model and four hypotheses related to it were developed.

H_1: Life satisfaction (LS) affects hedonic eating for coping purposes (COPHE).
H_2: Life satisfaction (LS) affects hedonic eating for enhancement purposes (EHE).
H_3: Life satisfaction (LS) affects hedonic eating for social purposes (SHE).
H_4: Life satisfaction (LS) affects hedonic eating for conformity purposes (CONHE).

METHODOLOGY

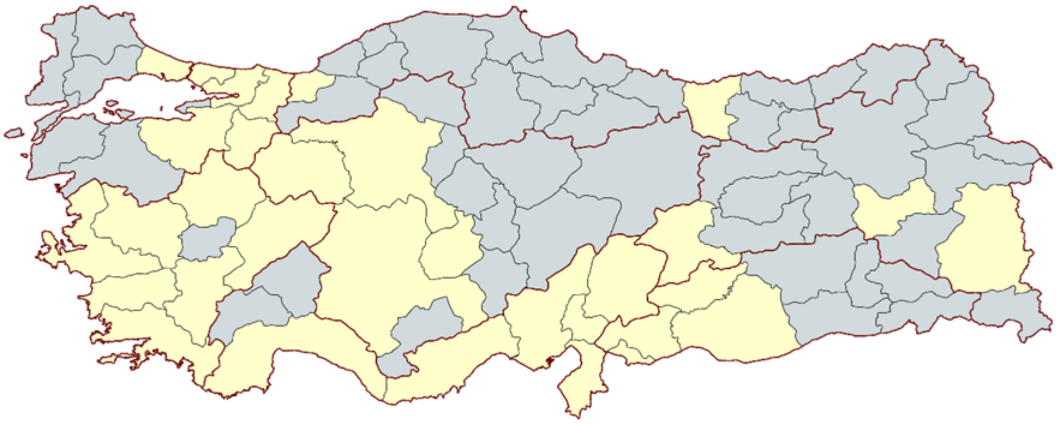
Study Design

This study aims to examine the effect of individuals' life satisfaction on hedonic eating. Quantitative methods were utilized in this study, and data were collected using the survey method.

Sampling

The research population comprises individuals aged 18 and above in Turkiye. The participants were determined by the snowball sampling method. A reference individual is selected in a predetermined region, and this individual is expected to reach the individuals in their social environment through the snowball sampling method (Biernacki & Waldorf, 1981; Noy, 2008). The snowball sampling method has a positive impact on time and cost, as it facilitates the creation of a diverse range of participant groups (Sadler et al., 2010). In the study, the snowball sampling method was employed to recruit participants from provinces with varying economic and social conditions in Turkiye. The sample consisted of 287 participants living in 31 provinces in Turkiye. In factor analysis, it was determined that a sample size of 10 times the number of items in the scale was sufficient, and in cases where the model was complex, 250 samples were deemed sufficient (Nevitt & Hancock, 2004).

Also, Kaiser Meyer Olkin (KMO) and Barlett test were performed for sample suitability and adequacy. Participants living in Istanbul, Ankara, Antalya, Adana, and Mersin comprised the largest group in the sample. These cities have the potential to impact life satisfaction, including work-life balance and stress, as well as influence hedonic eating through their social environment and food and beverage options (Kan & Kantar, 2024). The provinces where the participants live in the sample group are marked in yellow on Turkiye's map and are presented in Figure 1.



Data Collected Cities; İstanbul, Kocaeli, Sakarya, Düzce, Bursa, Bilecik, Kütahya, Manisa, İzmir, Aydın, Muğla, Denizli, Eskişehir, Afyonkarahisar, Ankara, Konya, Antalya, Aksaray, Mersin, Adana, Osmaniye, Hatay, Kilis, Gaziantep, Kahramanmaraş, Malatya, Adıyaman, Şanlıurfa, Van, Muş and Giresun

Figure 1. Provinces Where the Participants Live (Source: Own research)

Research Tools and Data

The research data was collected through an online survey created through "Google Forms". The order of the questions in the survey was fixed when each participant viewed it. The survey link was sent to the participants via e-mail and WhatsApp. Research participants were asked to complete the survey and forward the link to their acquaintances, both within their province and in other provinces. A total of 287 participants responded to the survey. No incomplete question was found among the answered surveys. The data were collected between December 29, 2023, and January 25, 2024.

Scale

In this study, the 5-point "*Satisfaction with Life Scale*" developed by Diener et al. (1985), which has been validated for reliability and validity in Turkish by Bekmezci and Mert (2018), was used to assess the life satisfaction of individuals. The scale used is a 7-point Likert-type scale, ranging from 1 "Strongly Disagree" to 7 "Strongly Agree." The 19-point "Palatable Eating Motives Scale, PEMS" developed by Burgess et al. (2014) and checked for reliability and validity in Turkish by And et al. (2018) was used to measure the hedonic eating of the participants. The PEMS scale comprises four sub-dimensions: social, coping, enhancement, and conformity. There are five items under the social and enhancement dimensions and four under the coping and conformity dimensions. The scale used is a 7-point Likert-type scale, ranging from 1 "Never" to 7 "Always". At the end of the 24-item survey, which measured life satisfaction and hedonic eating, demographic questions were included.

Analyses

Frequency analysis was used to determine the demographic characteristics of the participants. A Cronbach's alpha test and factor analysis were performed to assess the reliability and validity of the scale. Kaiser Meyer Olkin (KMO) and Barlett's Test were performed to determine data suitability before factor analysis and sampling adequacy. Hypotheses were tested by regression analysis. The effects of changes in one variable on another are determined using regression analysis (Draper & Smith, 1998; Rawlings et al., 1998). Simple one-way linear regression analysis was employed to assess the impact of life satisfaction on hedonic eating in the study. The research data were analyzed using IBM Statistics for Windows Statistical Product and Service Solutions (SPSS) 27.0.1 software.

FINDINGS AND DISCUSSION

Frequency Analysis Results

The participants' demographic information is presented in Table 3.

Table 3.
Demographic Findings (Source: Own research)

Gender	***n***	***%***	**Monthly income**	***n***	***%***
Male	113	39.4	0 – 11402	117	40.8
Female	174	60.6	11402 – 30000	121	42.2
Age	***n***	***%***	30001 – 50000	37	12.9
18 – 24	109	38.0	50001+	12	4.2
25 – 35	78	27.2	**Education**	***n***	***%***
36 – 45	55	19.2	Primary school	19	6.6
46 – 55	36	12.5	Secondary school	58	20.2
56 and over	9	3.1	Associate school	47	16.4
Marital Status	***n***	***%***	Bachelor's degree	125	43.6
Single	167	58.2	Master's Degree	35	12.2
Married	120	41.8	PhD	3	1.0

A total of 113 participants were male, and 174 were female. The majority of the participants (65.2%) were young individuals between the ages of 18 and 35. 43.6% of the participants held a bachelor's degree, and 12.2% had a master's degree. 40.8% of the participants had an income at or below the minimum wage (as of July 2023).

Reliability and Validity

Before measuring the reliability and validity of the study, a normality test was performed on the data. As a result of the normality test, it was found that the skewness and kurtosis values of the items fell within the range of -1 to +1. Considering these values, it was determined that the data had a normal distribution. After the normality test, Cronbach's Alpha values for the dimensions were calculated, and factor analysis was performed on the items. Kaiser Meyer Olkin (KMO) and Barlett values were calculated to determine the suitability of factor analysis and sampling adequacy. Kaiser Meyer and Barlett values were KMO: 0.857, $p < 0.05$ for the Satisfaction with Life Scale and KMO: 0.895, $p < 0.05$ for the PEMS scale. Considering these values, it was determined that the data were suitable for factor analysis (Black & Babin, 2019). The Cronbach Alpha values for the scale dimensions are presented in Table 4, and the factor analysis results are given in Table 5.

Table 4.
Cronbach's Alpha Test Results (Source: Own research)

Satisfaction with Life Scale	
Factor	*α*
Life Satisfaction	.874
Palatable Eating Motives Scale	
Factor	*α*
Social Hedonic Eating (SHE)	.869
Coping Hedonic Eating (COPHE)	.859
Enhancement Hedonic Eating (EHE)	.838
Conformity Hedonic Eating (COPHE)	.782

Table 5.
Factor Analysis Results (Source: Own research)

		Factors				
#	**Items**	**LS**	**SHE**	**COPHE**	**EHE**	**CONHE**
3	I am satisfied with my life.	.870				
2	The conditions of my life are excellent.	.849				
1	In most ways, my life is close to my ideal.	.815				
4	So far, I have gotten the important things I want in life.	.802				
5	If I could live my life over, I would change almost nothing.	.747				
8	I consume hedonic foods/drinks because they help me enjoy a party.		.790			
16	I consume hedonic foods/drinks because they make social gatherings more fun.		.702			
19	I consume hedonic foods/drinks because they improve parties and celebrations.		.665			
10	I consume hedonic foods/drinks to socialize.		.625			
7	I consume hedonic foods/drinks because my friends want me to eat/drink them.		.694			
20	I consume hedonic foods/drinks to celebrate a special occasion with friends.		.620			
6	I consume hedonic foods/drinks to forget my worries.			.801		
9	I consume hedonic foods/drinks because they help me when I feel depressed or nervous.			.854		
11	I consume hedonic foods/drinks to cheer up when I am in a bad mood.			.587		
21	I consume hedonic foods/drinks to forget about my problems.			.678		
12	I consume hedonic foods/drinks because I like the feeling.				.674	
14	I consume hedonic foods/drinks because they are exciting.				.666	
15	I consume hedonic foods/drinks to get "high-like" feelings.				.658	
18	I consume hedonic foods/drinks because they give me a pleasant feeling.				.585	
22	I consume hedonic foods/drinks because it is fun.				.691	
17	I consume hedonic foods/drinks to fit in with a group I like.					.494
23	I consume hedonic foods/drinks to be liked.					.887
27	I consume hedonic foods/drinks, so I will not feel left out.					,771
13	So that others won't kid you about not eating or drinking these items					,880

As shown in Table 3, the reliability coefficients for all dimensions of the scale are higher than 0.70. Since the Cronbach's Alpha value is higher than 0.70, the scale is considered reliable. Factor analysis revealed that the factor loadings were higher than 0.45. It was determined that the factor loadings of the items explained the relevant dimensions (Black & Babin, 2019). As a result of the factor analysis, the item "I consume these foods/drinks because my friends want me to eat/drink them," which was explained under the coping dimension by Burgess et al. (2014) in the PEMS scale and included as the seventh item in this study, was explained under the hedonic eating for social purposes (SHE) dimension.

Regression Analysis Results

Simple one-way linear regression analysis was used for hypothesis testing in the study. The results of the analysis are presented in Table 6.

Table 6.
Regression Analysis Results Related to Life Satisfaction Effect on Sub-Dimensions of Hedonic Eating (Source: Own research)

X	Y	*B*	*Std. Error*	*β*	*t*	*Sig.*	*R*	*R^2*	*F*	*Sig.*
LS	SHE	-.052	.051	-.60	-1.019	.309	.060[a]	.004	1.038	.309[b]
LS	COPHE	-.109	.063	-.102	-1.738	.083	.102[a]	.010	3.022	.083[b]
LS	EHE	-.043	.059	-.043	-.735	.463	.043[a]	.002	.540	.463[b]
LS	CONHE	-.105	.050	-.123	-2.089	.038	.123[a]	.015	4.366	.038[b]

As a result of the regression analysis, it was determined that the independent variable, life satisfaction, significantly predicted the dependent variable, hedonic eating for conformity. As can be seen in the regression analysis results given in Table 5, the model of life satisfaction affecting the hedonic eating for social purposes variable (F: 1.038, sig:.309), the model of life hedonic eating for coping purposes (F: 3.022, sig.: .083), and the model of hedonic eating for enhancement purposes (F: 0.540, sig.: .463) are not significant. According to the results of regression analysis, hypotheses H1, H2, and H3 are rejected. The model (F: 4.366, sig.: .038) that the life satisfaction variable affects the hedonic eating for conformity purposes variable is significant (H4 accepted), and as the life satisfaction variable increases, the hedonic eating for conformity purposes variable decreases (B: -.105, sig.: .038). 1.5% of the variance in the hedonic eating for conformity purposes variable can be explained by the life satisfaction variable (R^2: .015).

The study's findings showed similarities with those of other studies on life satisfaction and eating habits in the literature. Some studies have found that non-essential eating or eating disorders do not occur as a means of coping with stress or to feel better (Claydon et al., 2020; Herren et al., 2021; Pannicke et al., 2021). Additionally, studies indicate that high life satisfaction has a positive impact on the consumption of healthy foods (Seconda et al., 2017). Furthermore, when individuals consume healthy foods, rather than hedonic ones, their psychology is enhanced (Spence, 2017). On the other hand, the relationship between life satisfaction and healthy food consumption (Nevarez, 2016) or eating disorders such as emotional and binge eating was not found (Gurkan et al., 2022; Kusbiantari et al., 2020). As a result of the regression analysis, it was determined that life satisfaction had a statistically significant and negative effect on hedonic eating for conformity, thereby supporting H4. This finding was consistent with the results of other studies in the literature. Some studies found that individuals engage in non-essential eating in social activities to conform to their social environment (Aydin & Gumusboga, 2023). Additionally, research has shown that individuals with low life satisfaction tend to consume excessive and unhealthy food in an attempt to conform to social events (Dunbar, 2017).

CONCLUSION

Eating is an integral part of life, and it is closely tied to socio-cultural, psychological, and cognitive processes, including life satisfaction. The fact that life satisfaction is discussed within the scope of eating habits and eating disorders, but not considered in terms of hedonic eating, has created the research problem. The present study measures the effect of life satisfaction on hedonic eating. Four hypotheses were developed to determine the effect of social enhancement, coping, conformity, and hedonic eating on life satisfaction. Study data were collected from 287 participants living in 31 different provinces in Turkiye. As a result, it was found that life satisfaction significantly predicted hedonic eating for conformity purposes, but did not predict hedonic eating for social, enhancement, or coping purposes. Additionally, it was found that as life satisfaction increases, hedonic eating for conformity purposes decreases.

Theoretical Implications

The present study, along with the results of other studies, demonstrates that hedonic food is consumed at a very high level, offering both taste and satisfaction (Crane et al., 2023; Ortega et al., 2023), thereby creating new research opportunities for nutrition and gastronomy researchers to develop healthy alternatives to hedonic food. In this context, product development and sensory analysis studies can be carried out. Also, the detection of healthy food that provides pleasure and satisfaction through neuro-gastronomy studies reveals new research scopes. Different physiologic socio-cultural phenomena, such as eating, which increase life satisfaction by providing social similarity and harmony, should be investigated in the fields of sociology and psychology. Investigating the relationship between life satisfaction and social and recreational activities related to eating, such as gastronomy tourism and food festivals, constitutes a new research topic in the field of gastronomy, tourism, and recreation. Investigating the relationship between life satisfaction and hedonic eating in samples of different countries and comparing the results creates opportunities for the development of the literature on the subject. Examining life satisfaction and hedonic eating levels across different countries in terms of culinary culture and eating habits presents opportunities for exploratory research in gastronomy, psychology, and sociology.

Practical Implications

Individuals with low life satisfaction engage more in hedonic eating for conformity purposes. A result of the research and the findings of different studies, which reveal that being in social environments increases life satisfaction through consumption in these environments (Schnettler et al., 2015), suggests that food and beverage establishments, catering companies, and recreation businesses should emphasize hedonic foods in their menus and services. The development of healthy alternatives to hedonic foods, which are often consumed in social environments and venues, presents gastronomy and nutrition experts with new opportunities for product development. The opening of food and beverage, catering, and recreation businesses that serve healthy hedonic foods creates new business opportunities. Supporting and certifying these businesses, which will contribute to social psychology and health, reveals the responsibilities of nutrition authorities and institutions operating in the field of social psychology and sociology.

Limitations and Future Suggestions

The research was conducted using the snowball sampling method, involving 287 participants from 31 provinces in Turkiye. Variables should be investigated in large samples in Turkiye and other countries using other sampling methods. The research data were analyzed by simple one-way regression analysis. The relationship between life satisfaction and hedonic eating should be examined using structural equation modeling, incorporating possible moderator variables such as socio-cultural, psychological, and physiological factors.

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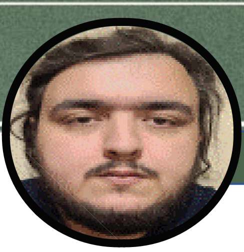

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Integrating technology and tourism education with design thinking: Developing and evaluating a design-based learning environment[1][2]

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ABSTRACT

Design-based learning is a pedagogical approach that aims to design creative and innovative learning outcomes through collaboration on topics within the learning process. This study aims to develop a design-based learning environment utilizing information and communication technologies (ICT) and to evaluate the learning experiences of students resulting from the training. The participants in the study, which employed a qualitative research approach, consisted of students enrolled in the 'Destination Management' course within the Tourism Management Undergraduate Program. Data were collected through a needs analysis form and student diaries. As a result of the analysis, it was seen that technology-supported, creativity-encouraging, interactive, student-centered educational activities and techniques were preferred more by the students. It was also found that integrating ICT into the course content not only facilitated the course process but also increased students' motivation, collaborative work, and ability to use technology. It is believed that the research results will make significant contributions to creating learning environments that equip students with 21st-century skills.

KEYWORDS

Design-based learning, design thinking, information and communication technologies, technology integration, tourism education.

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INTRODUCTION

In today's rapidly evolving technological landscape, educational systems are profoundly influenced, necessitating the adoption of new approaches to education. Tourism education is one of the fields where technology integration is particularly prominent (Emir & Doğantan, 2020). "Design Thinking," the central theme of this study, plays a significant role in facilitating technology integration and equipping students with advanced skills (Assen et al., 2023). Design thinking offers a process centered on students, aiming to understand their needs and experiences. While fostering a student-centered learning process, it also seeks to enhance creative problem-solving skills. This approach encourages students to develop innovative solutions to problems encountered in the tourism sector. Moreover, by engaging with real-world problems, students can enhance their problem-solving abilities, thereby strengthening their career preparedness (Tovmasyan, 2018).

One of the core principles of design thinking is empathy. Students' ability to understand their target audience and develop sensitivity to their needs is a key factor in the success of sectoral practices. When educators guide students, they can unveil their creative thinking skills and support the development of innovative approaches. This perspective promotes a learning environment where students not only advance academically but also express their emotions and ideas (Brown, 2009). Consequently, contemporary educational settings are transforming to foster students' learning processes and provide them with hands-on experiences. Student-centered learning, collaborative processes, and the use of innovative educational technologies are of considerable importance in tourism education. Integrating design thinking into tourism education can create opportunities for enhancing teaching methods and learning experiences.

In this context, the study emphasizes the importance of adopting and disseminating a design-based learning approach in tourism education. It aims to develop a learning environment grounded in information and communication technologies and to evaluate students' learning experiences. The study may offer valuable insights into understanding students' perspectives on learning processes and how this integration and transformation should be implemented. The objectives of the research can be summarized as follows:

- To develop a design-based learning environment for tourism management students using information and communication technologies.
- To investigate and document students' experiences with design-based learning.
- To contribute to the existing literature on design-based learning as a pedagogical approach.

CONCEPTUAL FRAMEWORK

Education and Technology Integration in Tourism

Education 4.0, which emphasizes the importance of technology in education, forms the foundation of digital transformation, specifically referring to the integration of smart technologies into educational systems (Hwang, 2014). Educational technologies encompass a range of tools and techniques, including virtual reality, augmented reality, online learning platforms, and software applications. These tools provide learners with enriched learning experiences and strengthen their connection to real-world applications (Baker & O'Flynn, 2021).

Tourism education is not only a dynamic field but also one that continuously evolves under the influence of information and communication technologies (ICT). The integration of technology into tourism education involves the transmission of theoretical knowledge alongside the incorporation of practical applications, making the learning process more interactive and effective. It enables students to acquire practical knowledge and facilitates their ability to keep up with industry changes (Baker & O'Flynn, 2021). By offering students the opportunity to learn theoretical concepts in a hands-on and interactive manner, this integration enhances the quality of education. Consequently, students gain not only theoretical insights but also practical skills for industry application, preparing them more effectively for their future professions through the active use of technology.

Technologies employed in tourism education include 360-degree VR videos for virtual tour guide training (Huang et al., 2016), AR applications for promoting historical and cultural heritage (Yung & Khoo, 2017), and platforms such as Moodle and Blackboard for managing and organizing content (Martín-Blas & Serrano-Fernández, 2009). For instance, virtual reality applications allow students to take virtual tours of diverse tourist destinations, thereby adding visual and experiential dimensions to their learning (Albayrak et al., 2018). Online simulation tools enable students to practice in areas such as hotel management, travel agency operations, destination management organizations, or event planning. By combining technological learning with experiences beyond the classroom, students enhance their sector-specific knowledge and skills (Keller, 2018).

The advantages of technology in tourism education include overcoming geographical limitations and fostering global collaboration. Students gain opportunities to explore diverse cultures and destinations worldwide, broadening their perspectives and cultivating an international vision. For example, virtual shopping experiences and online tourism fairs enable students to acquire international-level experiences (Beirman, 2018). Guttentag (2019) examined the use of digital simulations in tourism education, highlighting significant contributions through scenarios such as hotel management and travel agency operations. By applying such scenarios via digital simulations, these tools make meaningful contributions to tourism education.

Students' perceptions of technology integration offer valuable insights into its effectiveness in learning processes. Research indicates that students generally evaluate technology-supported education methods positively, noting that these methods enhance their learning motivation (Johnson et al., 2016). Interactive and experiential learning environments, especially in tourism, increase student engagement and make knowledge retention more durable (Doğantan, 2023).

Digital Applications in Tourism Education

Emir and Doğantan (2020) classify digital applications used in the tourism sector into four main categories to guide educational curricula: end-user applications, sector-specific applications, strategy-based applications, and disruptive innovations. For instance, design tools (e.g., *Adobe Photoshop, Illustrator, InDesign*), social media platforms (e.g., *Facebook, Instagram, Snapchat*), and publishing applications (e.g., *Adobe Reader, Microsoft Publisher*) have become foundational at all levels of education. Tourism graduates are increasingly expected to possess proficiency in utilizing these tools (Hardy et al., 2006).

Applications such as *Cloudbeds, Preno, Hostaway*, and *Lodgify* are becoming standard in many hotels, enabling the efficient management of hotel functions. Modern property management systems (PMS) leverage cloud-based web technologies, enabling the automated and integrated management of multiple facilities worldwide. Training in the use of such systems within tourism education typically focuses on room management and hotel operations (Nadkarni, 2003). Students trained in these industry-specific software systems acquire the practical and operational skills required to work effectively in the sector.

As industries worldwide shift toward a data-centric approach, understanding how to access and analyze large datasets from relevant sources (e.g., *Google Analytics, Facebook Analytics*) is crucial for acquiring marketing intelligence tailored to specific domains (Chen et al., 2012). Analytical software tools such as *Microsoft Azure, SPSS*, and *AMOS* assist managers in interpreting industry-related data through visualization, modeling, and forecasting, thereby optimizing company performance. By incorporating these strategy-oriented applications into curricula, higher education institutions enhance students' ability to leverage technology for strategic decision-making.

This research combines technology (software) with design thinking in education. Design thinking facilitates the development of creative solutions to address various challenges and aims to create learning environments that promote active participation aligned with students' needs (Kelley & Kelley, 2013). The integration of technology and design thinking in tourism education underscores the significance of students' perspectives.

Students often emphasize the advantages of technology use in the teaching process, particularly noting that virtual learning environments and interactive educational tools improve their concentration and make learning experiences more engaging. Additionally, group projects and collaborative activities conducted through a design-thinking approach contribute to the development of students' social skills and strengthen cooperation among peers (Dumont et al., 2016; Doğantan, 2023).

Design-Based Learning

Design is a multifaceted process that involves various skills, including observation, synthesis, critical thinking, feedback, visual representation, creativity, problem-solving, and value creation (Neck et al., 2011). Design-Based Learning (DBL) is a pedagogical approach that aims to facilitate the creation and production of innovative and creative learning outcomes through collaborative processes associated with the subject matter of the learning experience (Gomez Puente et al., 2013). In other words, DBL is a pedagogical approach where learners collaboratively engage in iterative cycles of problem identification, prototyping, and reflection to create innovative solutions to real-world challenges. Rooted in constructivist principles, DBL emphasizes active, student-centered learning and integrates theoretical knowledge with practical application (Gomez Puente et al., 2013; Doppelt, 2009). This approach enhances learners' capacity to produce content and develop collaborative abilities. Within these learning processes, learners are expected to confront real-world problems and devise solutions that address them. The process of creating an authentic product enables learners to experience both theoretical and practical aspects simultaneously (Doppelt, 2009).

Research suggests that the sustainability of tourism education requires the adoption of approaches that enable experimentation with new ideas and prototyping (Hsu, 2018). In this context, design-based learning (DBL) is seen as one of the most popular pedagogies related to innovation processes and innovation education (Ruano-Borbalan, 2019). However, it can be said that research on the application of this approach in hospitality and tourism education is very limited. In a study in the field of tourism, DBL was considered as an experiential learning approach and how course content could be designed. Students identified customers' desire to discover and create their own coffee as a design issue and developed innovative solutions through collaborative activities, including brainstorming, empathy, and storyboarding. It was determined that the activities encouraged tourism students to think creatively and actively, and were effective in developing students' communication, teamwork, decision-making, and empathy skills (Doğantan, 2023). In another study on design thinking in hospitality education in the Netherlands, it was found that design thinking played a crucial role in developing students' higher-order thinking skills (Assen et al., 2023).

The DBL approach situates learners at the core of the learning experience (Gomez Puente et al., 2013) while integrating problem-based and project-based learning steps into its methodology. This enables learners to explore and comprehend numerous previously unknown elements through active engagement. Learning processes under DBL are typically collaborative and interdisciplinary (Gomez Puente et al., 2013). In this framework, learners utilize prior experiences and interact with their peers to design, develop, and construct their own solutions and content (Chandrasekaran et al., 2013).

The design process itself is inherently practical, fostering active learning through experiential methods. This characteristic aligns the DBL approach with constructivist principles, emphasizing learner autonomy and participation. During the DBL process, learners devote significant time to the design phase (Doppelt, 2009), which offers them the opportunity to gain diverse perspectives (Neck et al., 2011). In this phase, learners employ visualization tools to translate their ideas into tangible products (Seitamaa-Hakkarainen, 2011). In other words, learners can tailor their content development to their preferences (Doppelt & Schunn, 2008).

Moreover, the DBL process provides critical benefits by enabling learners to achieve enriched learning outcomes and acquire advanced technological skills (Doppelt et al., 2008). Figure 1 presents the outcomes derived from the DBL process.

Figure 1. Benefits of the DBL Process (Source: Chandrasekaran et al., 2013)

As shown in Figure 1, DBL environments enable learners to work in collaborative settings through interaction-based processes, allowing them to develop solutions to the problems they encounter. From this perspective, it can be argued that adopting the DBL approach in learning processes is a critical element for achieving experience-based, enriched learning outcomes. In addition to enhancing learning outcomes, the DBL approach is also considered significant in fostering learners' ability to establish social environments and become confident participants in the learning process.

Resnick and Rusk (1996) identified the following advantages of the DBL method:

- Design activities allow learners to take a central role in the learning process.
- Design activities support the problem-solving process, culminating in the creation of a product.
- Design activities demonstrate that learners can achieve learning objectives through multiple pathways.
- Design activities are structured as interaction-based processes with an interdisciplinary approach.
- Design activities enable learners to reach consensus among themselves, fostering collaborative solutions.
- Design activities provide learners with opportunities for practical application, enabling them to experience more enduring learning experiences.

Components of the Design-Based Learning Process

The Design-Based Learning (DBL) process is designed to equip learners with various skills, including fostering creativity, enriching their imagination, acquiring advanced thinking abilities, and developing problem-solving skills (Joordens et al., 2012). The DBL process comprises the following stages: identifying the problem and determining needs, gathering information, generating alternative solutions to the problem, selecting the most appropriate solution, designing and developing a prototype, and evaluating and refining the process.

Although these stages closely resemble the steps of problem-based learning, the DBL process distinguishes itself through its emphasis on prototyping, development, refinement, and evaluation phases. Furthermore, like problem-based learning, the DBL process supports learners in conducting scientific research and engaging in scholarly activities (Doppelt et al., 2008). This process enables learners to gain experience in problem-solving, formulating hypotheses, and applying research methodologies.

As illustrated in Figure 2, DBL environments consist of five components:

- Project characteristics
- Design components
- Social context

- Role of the teacher
- Evaluation

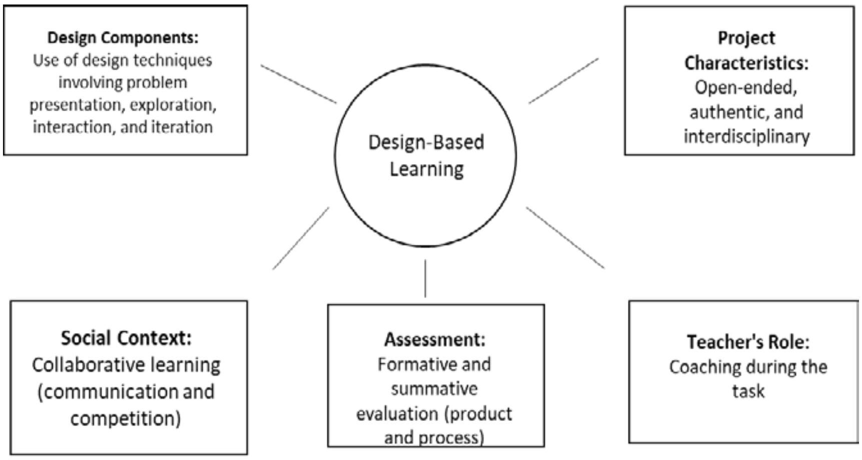

Figure 2. Components of DBL Environments (Source: Gomez Puente et al., 2013)

When considering Figure 2, it can be inferred that the Design-Based Learning (DBL) process should be structured based on a problem situation, incorporating an interdisciplinary perspective and promoting collaborative learning. Additionally, instructors are expected to assume a guiding role, acting as facilitators to support learners throughout the process. In the evaluation stage, it is suggested that process-based assessment approaches be adopted.

When reflecting on the potential fields where the DBL process could be applied, the tourism sector stands out as a significant area for implementation. Learners in tourism can engage in collaborative group activities within their courses, identifying the strengths and weaknesses of tourism regions. They can also discuss potential strategies for further improving these regions.

In such learning environments where the DBL process is employed, learners can experience a learner-centered educational experience, embedded within communication and interaction processes.

METHOD

This research aimed to develop a design-based learning environment grounded in information and communication technologies and to evaluate students' learning experiences. A qualitative research approach, the case study design, was utilized for this purpose. In a case study, detailed and in-depth information about a situation is gathered through multiple sources of data within a specific period (Creswell, 2013). In this study, data were collected through a questionnaire (needs analysis) and student diaries.

Participants

The study participants consisted of a total of 26 students, including 10 males and 16 females, who enrolled in the "Destination Management" elective course during the 2023-2024 academic year at Anadolu University, within the Tourism Management Bachelor's Program. The students' ages ranged from 20 to 24 years old.

Data Collection Tools and Process

In the research, data were collected through an online questionnaire and participant diary forms.

1. Participant Diary Form: It is noted that diary studies are a technique used to collect qualitative data regarding specific experiences, behaviors, and activities over time (Salazar, 2016). In this context, participant diaries were used to capture students' experiences during the course process. The diary was developed by Lee (2023) to assess

the effects of design-based entrepreneurship education. No changes were made to the form, but foreign language experts were consulted for translation validity. Students filled out their diaries at the end of each class and shared them through the learning management system (Mergen). The participant diary consisted of the following questions (Table 1):

Table 1.
Questions of the Participant Diary (Source: Own research)

1	What do you think were the objectives of today's lesson?
2	How did you feel after the lesson?
3	Was there any topic in the lesson that challenged you? If so, what were they?
4	If there was any topic in the lesson that challenged you, what did you do to overcome these challenges?
5	Do you think you developed any skills during the lesson? If so, please explain.
6	Which skill would you have liked to develop further in today's lesson? Please explain.
7	If you would like to add anything related to the lesson, please write it here.

2. Need Analysis Form: The Need Analysis was used to reflect the multiple perspectives of the participants and gather more detailed information regarding their learning experiences through the collection of qualitative data. The form, organized as a needs analysis, was developed based on the study by Çolak and Efeoğlu (2021). Needs analysis forms were reviewed by three field experts to ensure content validity. Based on the feedback provided by the experts, these forms were finalized. Additionally, a pilot study was conducted prior to the research. In this context, the forms were administered to five students, and unclear points were identified; the forms were then revised accordingly.
The needs analysis questions directed to the students guided the course design in the research. As it is known, needs analysis is applied to identify educational needs. However, unlike the traditional applications of needs analysis, this study did not focus on the expectations of the students, but rather aimed to explore different learning methods beyond their expectations. After different learning methods were applied, the students were asked the same questions again at the end of the training. Thus, the aim was to focus on the perceptual changes of the students before and after the training and to evaluate the effectiveness of the course design. The form consists of both closed and open-ended questions (Table 2).

Table 2.
Questions of the Needs Analysis (Source: Own research)

1	What are the reasons for choosing the 'Destination Management' course?
2	Which activities in the learning process would make you happier?
3	In which environment do you feel more comfortable during the learning process?
4	Which assessment methods during the learning process are more satisfying to you?
5	Which resources are more important to you as learning materials?
6	What competencies have you achieved by the end of this course?

Data Analysis

Thematic content analysis was used for data analysis. Firstly, the findings of the needs analysis and student diaries were transcribed and converted into Word format. A coding scheme was prepared, and the text was examined and analyzed according to the scheme (Şavran, 2012). In other words, a coding list was created and categorized under themes. As a result of the thematic analysis conducted separately by two researchers, final themes and codes were determined through comparison. Student diary findings were interpreted through direct quotations. The findings of the needs analysis were quantified and visualized using graphs.

Course Design

Based on the design-based learning approach, an 8+1 (software training) week activity plan was developed for the 'Destination Management' course (Figure 4). The Hasso Plattner Institute of Design (D.School) at the University of Potsdam in Germany is one of the leading educational institutions focusing on promoting design thinking in education. The curriculum of D.School is designed for university students (Lin et al., 2020). In this context, during the course design for this research, the six-stage 'Design Thinking' process developed by the Hasso Plattner Institute of Design (D.School) was used as a foundation (Figure 3). The practical lessons were conducted in a computer lab, and during this process, an online platform (software) was utilized to allow students to share ideas and collaborate.

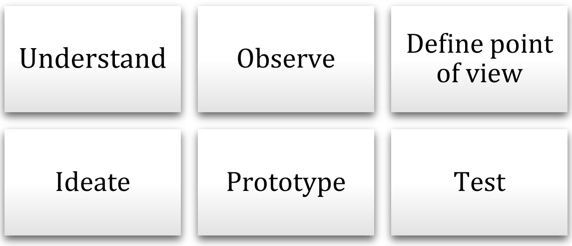

Figure 3. The six phases of the Design Thinking process (Source: Hasso-Plattner-Institut)

The first stage of the Design Thinking process, known as "Understand," involves the design team investigating the design question, conducting research to develop a collective perspective, and gathering information about both the relevant aspects of the topic and general assumptions. At this stage, it is crucial to explore and evaluate insights from both theory and practice thoroughly. During the "Observe" stage, the team creatively applies qualitative research methods to gather data. They begin to understand the context and opportunity areas from the perspectives of relevant stakeholders. Qualitative research techniques, including observations and interviews, are employed in this study. For example, in-depth studies are conducted to gather information about potential users' environments, conceptual worlds, contexts, expectations, and experiences.

In the "Define point of view" stage, the team synthesizes the results and data from the previous research-focused process steps. They focus on the insights gathered from the research phase and decide on the direction and target audience for which they aim to develop solutions. Based on these findings, the team creates "Persona" by identifying relevant social groups and fictional characters, forming the foundation for the next ideation phase (Hasso-Plattner-Institut). A Persona is a fictional user profile that helps in developing strategies by understanding and empathizing with the target audience (QuestionPro).

In the next phase of the Design Thinking process, "Ideate," the team generates a wide range of ideas using creative techniques: brainstorming, body storming, role-playing, and design, among other methods, which can be synthesized. In the subsequent stage, the team develops prototypes. A prototype helps them reach a common understanding of the core function of the idea. This approach enables them to materialize their innovative suggestions, facilitates the conveyance of ideas quickly and clearly to third parties, and provides a concrete presentation of the final outcome. Prototypes for ideas may include representations of new products, services, business models, and new forms of interaction and information transfer (Hasso-Plattner-Institut).

The final phase, "Test," involves soliciting feedback from the target audience regarding the prototypes (Doğantan, 2023; Pande & Bharathi, 2020). The team tests their ideas through direct interaction with current and potential users, experts, and project representatives. This way, team members can compare the new findings with their previous perspectives (Hasso-Plattner-Institut).

Course Process

During the course process, students were first asked to consider themselves as part of the design team within the destination management organization. In this context, based on the "Understand" and "Observe" stages of the design thinking approach, students were expected to identify the design challenges and gain insights by analyzing issues related to any destination with low visitor satisfaction, as shared on a web-based platform (Tripadvisor). In this context, first, each group selected a destination in Turkey (Cappadocia, Salda Lake, Cumalıkızık) that received low visitor satisfaction ratings on TripAdvisor. Destinations were identified based on having at least 20 negative reviews. The comments were then converted into Word format. In this process, the students followed a qualitative research process based on secondary data. They conducted a thematic analysis by categorizing the comments according to the predetermined destination elements: attractions, amenities, accessibility, image, pricing, and people. As a result of the analysis, students created a conceptual map of visitor reviews using the 'mind mapping' technique. The entire process was conducted in a laboratory environment, utilizing group work and a collaborative digital platform. At the end of the process, students gained a deep understanding of the target audience (destination visitors).

In the "Define point of view " stage, students were asked to create a "Persona" to develop empathy towards the target audience. By using Persona, students gained insights and empathy regarding the issues within the destination and the visitor profile. In the "Ideate" phase, they employed the "brainstorming" technique to propose solutions to the identified problems, categorizing information under various themes.

In the "Prototype" phase, students were tasked with developing strategies for the proposed solutions and visualizing the key points of their strategies using a strategy presentation template. The "strategy presentation template" served as a tool to visually represent the strategies they developed for addressing the destination’s issues. In the final "Test" stage, students were asked to present their prepared presentations to invited subject matter experts and faculty members, receiving feedback on their work.

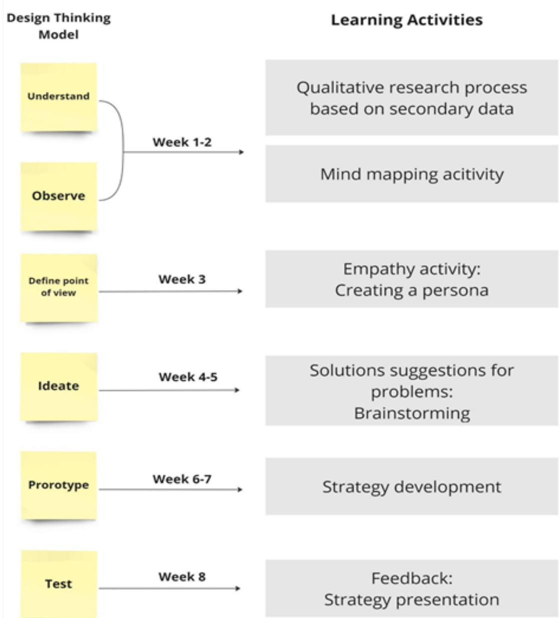

Figure 4. The implementation of DT in the Destination Management course (Source: Own research)

FINDINGS

The findings presented below summarize the comparison of the needs analysis results conducted at the beginning and the end of the semester. Subsequently, the findings from the analysis of data collected through student diaries are presented.

Findings of the 'Needs Analysis' Applied at the Beginning and End of the Semester

The first question in the needs analysis conducted was, "What are the reasons for choosing the 'Destination Management' course?" As seen in Figure 5, it was determined that the majority of students who responded at the beginning of the semester chose the course primarily due to the convenience of the class schedule and day. However, when the same question was asked at the end of the semester, it was observed that the majority of participants had shifted towards options such as "I want to apply the knowledge I gained during the learning process to my life outside of school" and "I believe it will be professionally beneficial." These results indicate that the design-based learning process, which emphasizes students' experiences, had an experiential impact on the students.

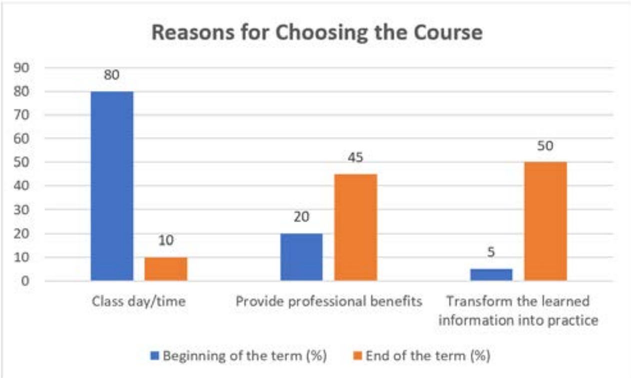

Figure 5. Reasons for Choosing the Course (Source: Own research)

The second question administered at the beginning of the semester was, "Which activities in the learning process make you happiest?" The responses to this question were, in order: 'direct instruction,' 'question-answer,' 'discussion,' and 'technology-supported activities.' When the same question was asked at the end of the semester, phrased as "Which activities in the learning process made you happiest?", the responses were ranked as follows: technology-supported activities (interactive), discussion, team/group work, and brainstorming. As shown in Figure 6, students who experienced technology-supported teaching in the course expressed a preference for interactive and technology-supported content in future educational processes, rather than traditional teaching methods such as direct instruction and question-and-answer.

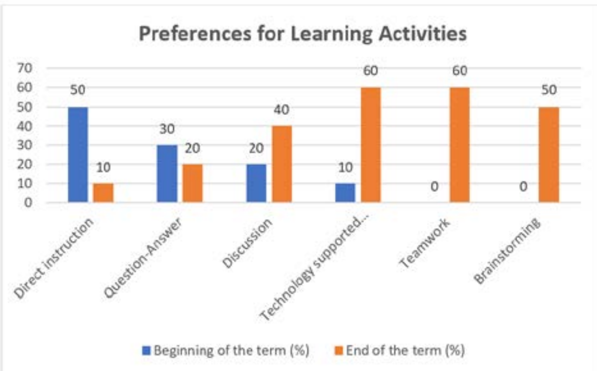

Figure 6. Preferences for Learning Activities (Source: Own research)

Another question posed within the scope of the needs analysis was, "In which environment do you feel better about the learning process?" Upon examining the data collected for this question, it was found that students preferred a blended learning approach. Therefore, it can be stated that most students preferred a combination of online and face-to-face learning environments. At the end of the semester, when this question was rephrased as "In which environment did the learning process make you feel better?", the preference for blended learning environments, along with the option of conducting lessons in computer laboratories, became more prominent. The fact that part of the lessons took place in computer laboratories during the design-based teaching process, meaning that students experienced learning through technology, can be seen as an influencing factor in this preference. This is reflected in Figure 7.

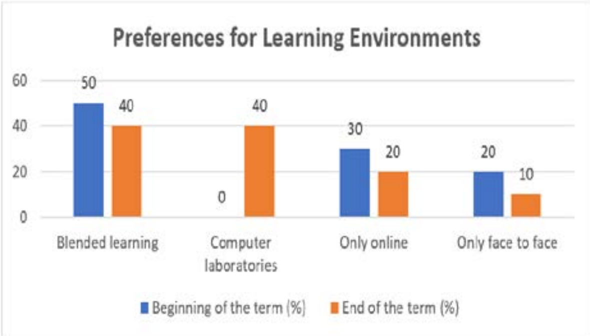

Figure 7. Preferences for Learning Environments (Source: Own research)

When examining the responses given by students to the question, "Which assessment and evaluation activities in the learning process would satisfy you the most?" posed at the beginning of the semester, it was found that the majority favored "midterm and final exams to be held at the end of the course." However, when the same question was asked at the end of the semester, rephrased as "Which assessment and evaluation activities in the learning process satisfied you the most?", the responses indicated a preference for more student-centered activities, such as "performance assignments" and "discussion forum activities." This shift in preference aligns with the design-based learning process, where learners are placed at the center and given responsibility for their learning. A summary of the student responses is shown in Figure 8.

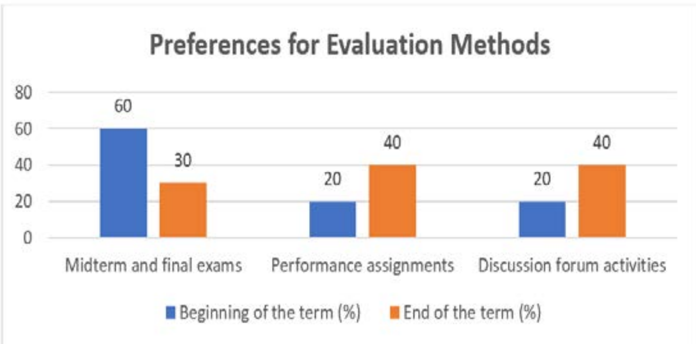

Figure 8. Preferences for Evaluation Methods (Source: Own research)

As part of the needs analysis conducted, another question was posed to students: "Which sources are most important for you to use as learning materials?" Upon reviewing the responses gathered at the beginning of the semester, it was found that the majority favored "textbooks" and "slides." As seen in Figure 9, however, when the same question was asked at the end of the semester, there was a noticeable shift toward preferences for "interactive content" and "technology-based software." Based on these findings, it can be concluded that the design-based teaching method, which places students at the center of the learning process and allows them to create content, has had a significant impact on students' preferences. In this context, students who initially preferred traditional learning materials shifted toward interactive and technology-driven materials by the end of the semester.

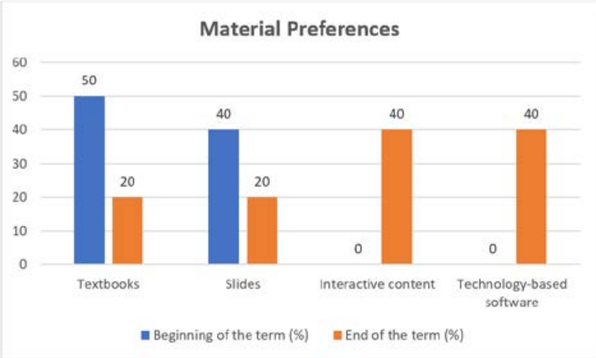

Figure 9. Material Preferences

In the study, when considering the responses to the question "What competencies have you managed to acquire by the end of this course?" which was posed only at the end of the semester, the following competencies were reported: "productive, questioning, entrepreneurial, problem-solving, applying learned knowledge, and team work." The proportional representation of these competencies is shown in Figure 10. According to the results of the learning activities carried out throughout the semester, 23% of students believe they developed teamwork skills, 21% developed problem-solving skills, 20% developed questioning skills, 19% developed teamwork skills, and 17% developed entrepreneurial skills. Thus, it has been determined that the design-based learning process has helped students acquire important competencies and supported them in developing the skills required by constructivist teaching techniques.

Figure 10. Acquired Competencies

Findings Related to Students' Learning Experiences

This section presents the findings obtained from analyzing student diaries. In this context, a table was created to include themes, codes, and sample quotations. The findings were then enriched with direct quotations and interpretations under the respective themes. The themes, codes, and sample quotes that emerged from the analysis of student diaries were as follows (Table 3):

Table 3.
Codes and Themes Regarding the Students' Diaries

Themes	Codes	Sample quotes
Learning Process	Feelings, fun, enjoy, motivating-motivational, easy, pleasurable, enjoyable, understandable, educational and informative, stress reducing, enthusiastic, reassuring, challenging, and complex	'…I enjoy the practical lessons more.' '…I am excited to learn a new application.' '…I felt good that we were doing something with the group.'
Technology Used	Software, learning technologies, program, Miro software, application	'…I saw the Miro software for the first time, and it was a little more complicated than I expected. I think I can handle it in time.'
Developing Skills and Individual Development	Group work, cooperation, active learning, foreign language, software learning, internalization of the subject, taking responsibility, leadership, problem determination and solving, analysis and synthesis, planning, developing ideas, empathy, creative thinking, scenario creation, fast decision making, time management, communication, individual development	'…I transformed the theoretical knowledge I learned about tourism into practice.' '…We created scenarios by thinking creatively.' '…I think my cooperation and teamwork skills have improved.' '…I think I have improved in solving problems and developing ideas.'
Learning Environment	Efficient, productive, constructive, problem-based, interactive, collaborative, applied	'…The classes are very productive and I feel that I am really improving.'
Instructor Engagement	Supportive, educational, mentor, mediator, relevant	'…The Miro application was a bit difficult, but with the support of our teacher, I learned the application better.'

Learning Process: The majority of students emphasized that the classes were conducted in an enjoyable manner, with the process far from boring. They also noted that this positively contributed to their motivation throughout the course.

'… It would be great if we could do our assignments on this application. It's easy to understand and fun to use.' 'While other classes were always monotonous, I was happy that this course was hands-on.' (Student diary)

It was observed that the constructivist approaches followed in the design-based learning processes by the course instructor also contributed to enhancing students' motivation.

'I am learning new features of the application and improving myself with every class.' 'This class was very enjoyable. It was nice to collaborate with my friends to create a 'Persona.' (Student diary)

Technology Used: In courses that utilized software throughout the semester, students reported that they benefited from instructional technologies during the lessons and became familiar with their use. This can be considered an important outcome in terms of enabling students to acquire the necessary competencies.

'Since they explained the application to us at the beginning of the course, I didn't have difficulty using it.' 'It was difficult for me when the system's usage was explained verbally in the first class. I understood much better when it was demonstrated practically.' (Student diary) 'The program helped me think quickly, but I wish I had been faster during the usage stage.' (Student diary)

Developing Skills: During the learning process, students stated that their skills such as group work, cooperation, active learning, foreign language, software learning, internalization of the subject, taking responsibility, leadership, problem identification and solving, analysis and synthesis, planning, empathy, creative thinking, scenario creation, quick decision-making, time management and communication were improved. Throughout the semester, students were divided into specific groups, and by completing performance tasks assigned to them, they were able to collaborate and actively participate in the learning process. In collaborative learning processes, students formed working groups among themselves and became part of the discussion process. The brainstorming activities conducted during these processes were considered particularly important in terms of giving students a voice and allowing them to share their ideas. It was observed that many students helped each other, and the group dynamics were positive due to the group work.

'I think the application contributed to my teamwork skills and my English.' (Student diary) 'I felt very good because I formed a group with my friends and worked on something together.' (Student diary)

The analysis of student journals revealed that students had a strong command of the topics covered in the learning process. The phrase "I have learned the topics very well" was frequently encountered in the student diaries.

'I believe I have taken my computer skills to the next level.' (Student diary) 'I think my creative thinking, problem-solving, collaboration, and teamwork skills have developed.' 'I believe I have developed more in teamwork and generating ideas.' (Student diary)

Another expression frequently encountered in student journals was "it was a very beneficial process for my individual development." Both the instructional technique used in the class and the instructor's interest were positively received by the students.

Another code derived from the student journals is the awareness of responsibility. It was observed that students, who were divided into groups and assigned leaders as part of their tasks, shared responsibilities within the group and fulfilled these responsibilities.

'As a group leader, I noticed that my leadership skills have improved. Seeing that I was achieving things made me feel good.' (Student diary)

Learning Environment: Students emphasized that throughout the semester, they felt they had a voice during lessons and contributed to the development of content. The steps of the design-based learning process enabled students to engage in the learning process within a constructivist environment. This can be considered an important factor in developing constructivist learning environments.

'The class was very productive because we stepped outside the traditional lesson framework and actively participated in the class. I was very happy about that.' (Student diary)

Based on the student journals, it was found that students developed problem-based learning experiences. The process of encountering and solving problems during the learning process helped support the development of students' algorithmic thinking skills.

'...in the class, we performed a personality analysis, determined the profile of visitors to the destination, and after establishing the profile, we developed the tourist product and the destination.' 'We identified the problems of a destination and worked in groups to develop solutions.' (Student diary)

Instructor Engagement: Upon reviewing the student journals, it became evident that the students did not remain indifferent to the instructor's engagement in the course. In this regard, students were quite satisfied with the attention they received throughout the course. This can be considered a crucial factor in enhancing learning outcomes.

CONCLUSION AND DISCUSSION

This study aimed to develop a design-based learning environment grounded in information and communication technologies and to evaluate students' learning experiences. In this context, students were invited to solve real-world problems within a collaborative work environment. The application of design thinking in tourism primarily occurs within the scope of service design innovation (Clack & Ellison, 2019). In this study, the focus was on developing students' problem-solving and creative thinking skills within the context of sectoral issues. Within this framework, students identified the weaknesses of the selected destinations using design-based thinking and developed various strategies for their improvement. The design of the course was based on the ‘Design Thinking’ process. Experiential learning methods, such as design-based learning, enable students to create and engage in real-life scenarios that apply their knowledge and theory (Doğantan, 2023). In this process, software was integrated that enabled students to develop creative ideas collaboratively, and practical lessons were conducted in the computer laboratory.

The needs analysis questions directed to the students guided the course design in the research. When the needs analysis was applied before the training and the results were evaluated, it was determined that students preferred learning techniques such as direct lectures, question-and-answer sessions, and measurement methods, including traditional final and midterm exams. Additionally, students preferred learning tools like presentations, textbooks, and a hybrid learning environment. In the course design, instead of traditional methods and tools, technology-supported collaborative applications in the computer laboratory, mentoring, and discussions were used, replacing direct lectures with interactive content and performance-based assignments. Thus, the perceptual changes in students before and after the training were focused on, and the effectiveness of the course design was evaluated. As a result of the research, the design-based learning environment, which prioritizes students' experiences, had an experiential impact on the students. Furthermore, it was determined that students who were introduced to technology during this process preferred interactive and technology-supported learning methods over traditional teaching methods, such as direct instruction and question-and-answer sessions. While traditional learning methods tend to focus more on structured and conceptual content (Hancock et al., 2002; Baker & Baker, 2012), the teaching method adopted in this study went beyond conventional approaches. In this process, instead of the classical midterm and final exams, performance assignments were given as an assessment and evaluation technique. The analysis of the data revealed that activities and methods centered around the students were preferred by them. Design thinking, as a learner-centered process that promotes higher-order thinking skills (Yao et al., 2024), and the integration of technology into this process, were key factors in meeting expectations.

At the end of the semester, students reported that they had shown development in areas such as "being productive, inquisitive, entrepreneurial, problem-solving, transforming learned knowledge into practice, and working collaboratively in teams." Other aspects that students believed they had developed include taking responsibility, content creation, mastering the use of technological tools, adapting to collaborative working environments, and actively participating in learning processes. These elements are crucial for students to acquire the learning skills they need to succeed in the 21st century. Furthermore, when compared to the learning outcomes of the course, these outcomes align with the competencies intended to be achieved, which enhances the approach's applicability.

Throughout the course, the students' motivation was increased by their role as active participants rather than passive observers, and the instructor's role as a learning facilitator rather than a traditional lecturer. In this regard, Sangpikul's (2020) research also suggests that the facilitator role of the instructor is a key factor in the success of implementing experiential learning projects for students.

The Tourism Education Handbook, published by the United Nations World Tourism Organization (UNWTO, 2022), recommends developing a sustainable and inclusive curriculum through innovative methods that aim to ensure quality in tourism education. Therefore, institutions offering tourism education with this awareness are transforming, not only focusing on traditional methods but also integrating experiential learning approaches such as creative drama, design-based learning, research-based learning, and project-based learning into their course content (Doğantan, 2020; Doğantan, 2023; Espinoza-Figueroa et al., 2021; Özoğul et al., 2015; Ruano-Borbalan, 2019). A review of the literature highlights the importance of integrating technology with education to enhance teaching and learning processes and prepare more qualified individuals for future generations (Lötter & Jacobs, 2020). Considering the importance of technology integration in contemporary tourism education, the research findings are expected to encourage the creation of learning environments that not only equip students with 21st-century skills but also integrate technology and design-based thinking into the processes.

The findings of this study highlight the effectiveness of design-based learning (DBL) in tourism education, particularly in integrating technology and fostering 21st-century skills. Based on these insights, the following suggestions for practitioners and policymakers can be made:

Curriculum Development: Higher education institutions should prioritize integrating DBL into tourism programs. Policymakers can incentivize universities to develop courses that emphasize experiential learning through technology-based applications.

Faculty Training and Support: Faculty members should receive training in DBL methodologies and digital tools to ensure the effective implementation of these approaches. Workshops and certification programs on design thinking for educators can be promoted.

Industry Collaboration: Practitioners in the tourism sector can collaborate with academic institutions to provide real-world problem scenarios for students, fostering a deeper understanding of industry challenges. Policymakers can facilitate partnerships between universities and tourism enterprises to enhance hands-on learning.

Technology Infrastructure: Governments and institutions should invest in digital learning environments, ensuring that students have access to software and platforms supporting interactive and collaborative learning.

Assessment and Accreditation: Educational policy frameworks should include performance-based assessments that align with DBL principles. Standardized guidelines for evaluating design-thinking-based projects in tourism education can be developed.

Limitations and Future Research

This study effectively demonstrates the benefits of DBL in tourism education, but has certain limitations that should be acknowledged:

Sample Size and Scope: The study was conducted with a limited number of students from a single university. Future research should investigate the effectiveness of DBL across various institutions and cultural contexts to enhance its generalizability and applicability.

Data Diversification: While student experiences were analyzed, the study does not incorporate the perspectives of instructors. Future studies could explore how educators adapt to and perceive DBL methodologies. Additionally, the reliability of the research can be increased through classroom observations.

Long-Term Impact: The research primarily evaluates short-term learning experiences, although its findings may have long-term implications. A longitudinal study tracking the long-term effects of DBL on students’ career success in the tourism sector would provide deeper insights.

Comparison with Traditional Methods: A comparative analysis between DBL and conventional teaching methods in tourism education could strengthen the argument for the effectiveness of DBL. Future research could implement experimental designs with control and experimental groups.

Scalability and Resource Constraints: Implementing DBL requires technological resources and trained faculty, which may not be available in all institutions. Further studies could investigate strategies for scaling DBL in resource-limited settings.

Technology Constraints: This study's technology integration is limited to software in the course design. In the design-based learning process, learning experiences can be enriched by receiving support from various technologies, including gamification, virtual simulations, artificial intelligence, and virtual and augmented reality.

By addressing these limitations, future research can refine and expand the applicability of DBL in tourism education, contributing to more robust educational frameworks.

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A systematic review of studies addressing the cost control process in food and beverage businesses

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ABSTRACT

This study aims to synthesize and evaluate research conducted on cost control in food and beverage businesses using the systematic review technique. This study employed the PICOS research question strategy, adhered to the PRISMA-P principles, and utilized the PRISMA-P flow diagram to guide the research process. Between May and July 2024, the databases DergiPark, EBSCOhost, and ResearchGate were searched using a search formula developed by the researchers. As a result of these searches, seven articles were identified as eligible for inclusion in the systematic review. The study's findings indicate that the number of research articles published on cost control in the food and beverage industry is limited. It was also found that cost control is generally conducted in food and beverage businesses or their departments, mainly on a monthly basis. However, differences exist in terms of food and beverage cost control methods, with simple cost control methods being the most commonly used for food and standard cost control methods being the most frequently applied for beverages. This study contributes to the literature by systematically evaluating the cost control process in food and beverage businesses.

KEYWORDS

Food and beverage cost control, food and beverage cost control process, systematic review.

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INTRODUCTION

Food and beverage businesses, which hold a significant position within the service sector, must prioritize cost control to sustain their operations in a highly competitive environment, enhance profitability and sales, and ensure customer retention and satisfaction. Compared to other businesses, cost control in food and beverage businesses is more challenging due to the labor-intensive nature of the sector, the perishable nature of food and beverages, and the limited storage duration of these products (Çam, 2009; Akbulut & Aslan, 2015; Dülgaroğlu, 2023). However, as in all profit-oriented enterprises, the ultimate goal of food and beverage businesses is to maximize profit. Achieving this goal requires not only increasing sales but also utilizing resources efficiently and effectively, as well as controlling costs. The primary function of cost control, which is a comprehensive process encompassing everything from procurement to revenue control in food and beverage businesses, is to achieve this objective. Therefore, integrating food cost control methods, beverage cost control methods, and the five fundamental cost control standards is recommended for effective cost management in food and beverage businesses (Çam, 2009; Bulut, 2014; Okutmuş & Gövce, 2015; Işık & Yılmaz, 2016).

In this context, the primary aim of this study is to systematically synthesize and evaluate research on cost control in food and beverage businesses. To achieve this, the study employs a systematic review methodology to address the research question: *"In the national literature, which cost control methods are studied in food and beverage businesses in terms of cost control, and what is the current state and trend of research on this topic?"* When the literature is examined, various systematic review studies are found in the fields of tourism (Gomezelj, 2016; Ye et al., 2020; Üner, 2021; Yıldırgan & Batman, 2023) and gastronomy (Rachão et al., 2019; Yong et al., 2022; Uçuk, 2023; Bayram, 2023; Rosin et al., 2024). However, there is no systematic review study on food and beverage businesses. Accordingly, this study contributes to the literature in two ways: it is the first systematic review of food and beverage businesses, and it addresses the cost control process from a systematic perspective. In addition, it aims to make a practical contribution by providing recommendations that will guide decision-making processes for managers of independent food and beverage businesses, as well as food and beverage departments in hotels and accommodation establishments.

CONCEPTUAL FRAMEWORK

Businesses operate in line with their predetermined goals to sustain their existence and increase profitability. However, the successful realization of these goals depends on the effective control of business processes (Ninemeier, 2000). Control encompasses the process of measuring the achievement of predetermined goals, identifying deviations, taking necessary corrective measures, and reporting them to management (Kutlan, 1998; Büyükmirza, 2021; Tiana et al., 2022). Today, increasing competition conditions have made it imperative for businesses to keep their costs under control. This is because the profit businesses achieve depends on the balance between costs and revenues. When cost control is effectively implemented, it enables efficient revenue management by addressing factors such as fixed capacity, market segments with similar characteristics, perishable inventory, fluctuating demand, and high fixed costs. In other words, proper cost control also allows businesses to optimize their revenues (Suklabaidya & Singh, 2017). Therefore, as costs decrease and revenue increases, profitability will also rise. For this reason, businesses must have a thorough understanding of cost elements and manage them effectively to reach their targeted profit levels (Atmaca & Yılmaz, 2011; Anasız, 2019).

Cost control is particularly significant for food and beverage businesses, which operate with high costs. Cost control in food and beverage businesses aims to eliminate excessive labor, food, and beverage costs (Dittmer & Keefe, 2005; Akbulut & Arslan, 2015). Therefore, continuously monitoring and controlling labor costs, material costs, and other operational expenses play a critical role in the profitability and sustainability of food and beverage businesses (Dopson & Hayes, 2016).

Food and beverage cost control is a process that extends from the purchasing stage to receiving control, storage, issuing materials from storage, production, and revenue control (Akbulut & Arslan, 2015; Özbirecikli & Güven, 2016; Anasız, 2019). Any disruption in this process can reduce the efficiency of cost control, negatively affect the accuracy of analyses, and complicate decision-making processes (Yılmaz, 2007). Food and beverage cost control aims to establish and maintain standards, conduct revenue and expense analyses, ensure accurate pricing, take measures against waste and theft, and inform management about this process (Aktaş, 2001; Erdinç, 2009; Köroğlu, Biçici, and Sezer, 2011; Akın & Akın, 2013). However, various factors complicate cost control in food and beverage businesses. The perishability of food and beverages, the unpredictability of customer preferences, the difficulty of sales forecasts, the necessity of processing and selling products within short periods, classification challenges, and the sale of products in small portions are some examples of these factors. Therefore, food and beverage businesses require effective cost control methods to monitor whether costs align with predetermined targets and ensure accurate cost tracking (Dönmez et al., 2011; Akyürek & Kızılcık, 2018).

Commonly used food cost control methods in food and beverage businesses include the simple food cost control method, the standard food cost control method, the detailed food cost control method, and the potential food cost control method (Uçma Uysal, 2015; Miller et al., 2005; Çiftci & Köroğlu, 2008; Erdinç, 2009; Çam, 2009; Özdoğan, 2010; Ojugo, 2010; Akın & Akın, 2013; Dönmez et al., 2011; Akbulut & Arslan, 2015; Sancar, 2016). The simple food cost control method, commonly used in small-scale food and beverage businesses, involves calculating daily and monthly food costs, comparing these costs with sales ratios, and analyzing trends from previous periods (Sancar, 2016). The standard food cost control method examines increases and decreases in past food costs in detail to determine which ingredients contribute to these changes, thereby providing more realistic data (Çiftci & Köroğlu, 2008). The detailed food cost control method aims to monitor daily cost variations effectively and identify which ingredients impact costs (Taşkın, 1997). The potential food cost control method (also known as pre-costing or pre-control) forecasts expected future food costs, takes necessary measures (such as adjusting food prices, menu planning, and controlling portion costs), and aims to improve operational efficiency (Akbulut & Arslan, 2015).

In addition to food costs, controlling beverage costs is also crucial for food and beverage businesses. Beverage cost control is crucial for increasing profit margins, preventing waste and theft, and providing clear information to relevant units. Food cost control methods can also be applied to beverage cost control. Additionally, commonly used beverage cost control methods include the percentage beverage cost control method, the sales price beverage cost control method, and the simple cost control method (Miller, 2005; Çiftci & Köroğlu, 2008; Özdoğan, 2010; Ojugo, 2010; Dönmez et al., 2011; Akbulut & Arslan, 2015; Boroğlu, 2016). The percentage beverage cost control method involves comparing predetermined beverage cost percentages with current percentages and can be applied on a monthly or daily basis (Çetiner, 2009). In the sales price beverage cost control method, beverages are taken from storage and evaluated based on their sales prices, then compared with actual sales revenues. It is essential to consider that beverage sales may occur in various forms, including bottles, cocktails, or neat, which can result in revenue variations (Dönmez et al., 2011). The simple cost control method for beverages is quite similar to the food cost control method, but the beverage cost percentage is generally expected to be around 20%. Like food costs, beverage costs can also be calculated on a daily and monthly basis (Çiftci & Köroğlu, 2008).

According to Çetiner (2009) and Rızaoğlu and Hançer (2005), to ensure effective cost control in food and beverage businesses, five basic standards should be established in addition to the cost control methods employed. These standards are the standard ingredient card, standard recipe, standard yield, standard portion, and standard food cost percentage. A standard ingredient card provides the identification of the characteristics of ingredients used in food and beverage businesses, such as shape, size, weight, color, durability, density, and taste. It facilitates the recognition of these ingredients by staff during the delivery of orders. A standard recipe is a fixed formula that ensures that a dish has the same quality, flavour, and appearance every time. This recipe offers convenience in food preparation and supports the standardization of meals (Gönen & Ergun, 2008). Standard yield is a standard that increases efficiency in food cost control by facilitating the planning of the products produced (Kahya, 2004). The standard portion is the determination of the standard amount of food to be served to the customer (Yılmaz, 2005). Standard food cost percentage is the ratio of the cost of food sold to the revenue from food sales (Schmidgall & Damitio, 1996; Köroğlu, 2007). These five standards, when applied in an integrated manner with the food and beverage cost control process, contribute to effective cost management. In this context, cost control, which is vital for preventing excessive costs, increasing profitability, and ensuring sustainability in the food and beverage industry, can be achieved through continuous monitoring and control of labor and material costs, as well as revenue and expense analysis, and the establishment and maintenance of standards.

METHODOLOGY

In this study, which aims to synthesize and evaluate the evidence on the concept of cost control in food and beverage businesses, a systematic review technique was employed as the research design. Systematic review, also known as research synthesis, research review, or research compilation (Cooper et al., 2019), can generally be defined as the process of synthesizing publications related to a specific research question by bringing them together within predetermined criteria to answer that question. Systematic review is a research method that has been used in fields such as health (Hussey et al., 2009; Zuhur & Özpancar, 2017), education (Alp & Şen, 2021; Montenegro-Rueda et al., 2023), business (Sánchez González et al., 2010; Tiftik, 2022), and management (Boon et al., 2019; Ataç et al., 2022), as well as, in recent years, in the fields of tourism (Gomezelj, 2016; Ye et al., 2020; Üner, 2021; Yıldırgan and Batman, 2023) and gastronomy (Rachão el al., 2019; Yong et al., 2022; Uçuk, 2023; Bayram, 2023; Rosin et al., 2024).

Systematic reviews are a structured and comprehensive synthesis of numerous studies conducted using similar methods to determine the best available research evidence by experts in the field (Burns & Grove, 2007; Dickson et al., 2014; Çınar, 2021). The application process of this technique consists of a series of procedural steps. These steps are as follows (Gough et al., 2012):

- Determination of the research question,
- Identification of inclusion and exclusion parameters,
- Conducting a literature review,
- Selection of studies to be reviewed,
- Data collection and analysis, and
- Interpretation and writing of the results.

This study was conducted by considering these procedural steps. However, the evaluation of a study's quality is generally shaped by the extent to which it is free from methodological biases (Karaçam, 2013). Therefore, to ensure a stronger methodology for the systematic review, the research process was carried out by adopting PRISMA-P (2020) (Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols). PRISMA-P is a 27-item guideline developed to ensure transparency and clarity in reporting systematic reviews (Moher et al., 2009) and is committed to by many journals (Bronson & Davis, 2011). Additionally, to structure the evaluation process more consistently, the approach proposed by Fish and Block (2018) was followed in the interpretation and analysis of the findings. This approach consists of six steps: 1) Motivating the topic and defining the research problem, 2) Systematically identifying relevant literature, 3) Structuring the review process, 4) Assessing methodological robustness, 5) Examining relationships among findings, and 6) Making the results meaningful. Therefore, in this study, the PRISMA-P was followed to ensure a stronger methodology that adheres to systematic review procedures. At the same time, the approach proposed by Fisch and Block (2018) was adopted for a more consistent evaluation.

The first step in conducting a good systematic review is to define the problem, which should be addressed as a clear, precise, and structured question. Since the search strategy is built upon the review question, formulating the review question is crucial for developing an effective search strategy (Çınar, 2021). Therefore, in this study, the PICOS model—stated to enhance the quality of literature reviews when used as a search strategy tool—was utilized to define the framework of the research question. The PICOS model is derived from the PICO concept, which was developed by Richardson, Wilson, Nishikawa, and Hayward (1995) to break down clinical questions into searchable keywords. Schardt et al. (2007) later extended this concept by incorporating the type of question and the references needed to answer it. According to the PICOS model, the framework of a research question should be clearly defined in terms of participants (P: population), interventions (I: interventions), comparison groups (C: comparators), outcomes (O: outcomes), and study designs (S: study designs) (Çınar, 2021). In this context, the research question formulated within the scope of this study is: *"In the national literature, which cost control methods are studied in food and beverage businesses in terms of cost control, and what is the current state and trend of research on this topic?"*

P: Food and beverage businesses
I: Cost control in food and beverage businesses
C: None
O: Cost control methods
S: Qualitative, quantitative, and mixed-method studies

The sub-research questions formulated within the scope of this study are as follows:

- What is the distribution of studies on cost control in food and beverage businesses in the national literature over the years?
- What are the objectives and benefits of cost control in food and beverage businesses?
- What are the challenges encountered in cost control in food and beverage businesses?
- Which methods are used for cost control in food and beverage businesses? Which of these methods is used the most?
- What are the standards that must be followed in terms of cost control in food and beverage businesses?

In systematic reviews, after determining the research question, relevant studies must be thoroughly examined based on predefined inclusion and exclusion parameters. However, the abundance of sources and studies in the social sciences that may affect the quality, objectivity, and outcomes of systematic reviews makes literature screening quite challenging. According to Reed and Baxter (2009) and White (2009), while the search should be comprehensive, it does not necessarily have to be overly detailed. For this reason, widely used electronic bibliographic databases were preferred for searching published and unpublished studies in systematic review research. The selection of studies that met the inclusion and exclusion parameters was conducted using the electronic databases DergiPark, EBSCOhost, and ResearchGate. Conducting searches across multiple databases was intended to minimize potential bias. Although the primary research focus was initially set on cost control in independent food and beverage businesses, the study also included food and beverage departments within hotels or accommodation businesses. This inclusion was based on the growing significance of food and beverage services in the hospitality sector in recent years (Chand & Kapoor, 2014) and the integrated operation of food and beverage departments within general accommodation services. Regarding publication types, books, theses, conference papers, and unpublished studies were excluded from the scope. In terms of publication language, only peer-reviewed journal articles published in Turkish were considered. In line with these inclusion and exclusion parameters, studies on cost control in food and beverage businesses were retrieved using the following search formula: ("maliyet kontrolü" OR "maliyet kontrol") AND ("yiyecek içecek işletmesi" OR "yiyecek içecek departmanı" OR "restoran" OR "konaklama" OR "otel"). These searches were conducted in the relevant electronic databases between May and July 2024. Table 1 below presents the inclusion and exclusion parameters for the articles examined within the scope of this systematic review.

Table 1.
Inclusion and Exclusion Parameters

Inclusion parameters	*Exclusion parameters*
Studies on cost control in food and beverage businesses Research articles Studies published in peer-reviewed journals	Studies with no full-text access Studies published in languages other than Turkish

As previously stated, this study employed the PRISMA-P approach. Therefore, the PRISMA-P flow diagram was used as a reference when selecting studies to be included in the research. Based on the inclusion and exclusion parameters presented in Table 1, the PRISMA-P flow diagram used to determine the studies included in the systematic review is shown in Figure 1 below.

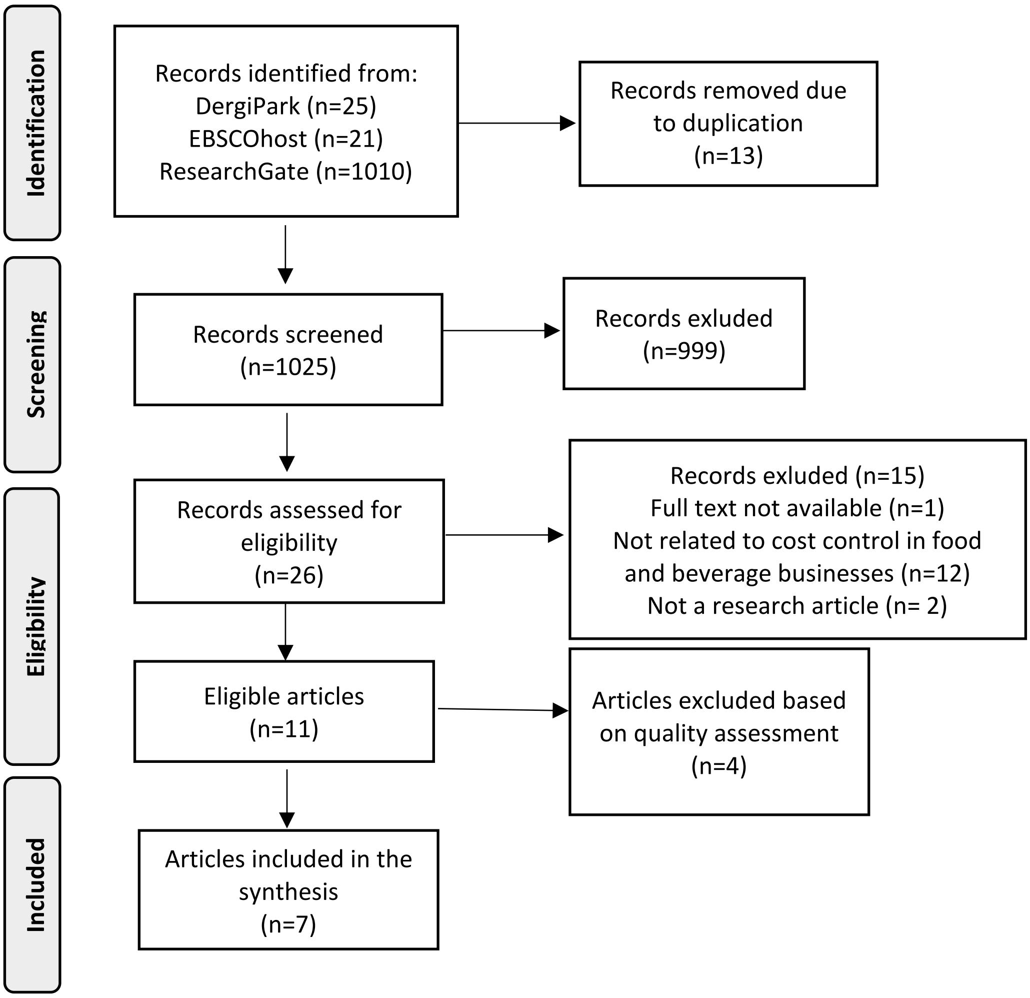

Figure 1. Identification of Studies through Databases According to the PRISMA-P Flow Diagram (Source: Own research)

Table 2 below presents the details of the searches conducted, based on the PRISMA-P flow diagram as a reference.

According to PRISMA-P (2020), the methods used in the study must be clearly specified to determine whether a record meets the inclusion and exclusion parameters. This includes details on how many reviewers screened each record, whether they worked independently, and the databases used in the process. Additionally, Bronson and Davis (2012) state that to prevent individual bias, studies should be evaluated independently by two or more researchers, following predetermined criteria, and then compared for eligibility. For this reason, in this study, two researchers independently conducted title screenings (n = 1056), followed by detailed reviews (n = 26) based on the established inclusion and exclusion parameters. After all independent evaluations were completed, the findings were compared, and in cases where consensus could not be reached, a third expert was consulted to resolve any uncertainties.

Table 2.
Selection Process of Studies Included in the Systematic Review

Database	Search date	Number of articles retrieved from the search	Total number of duplicate articles	Number of articles removed due to irrelevant titles	Number of articles reviewed according to inclusion and exclusion parameters	Number of articles found suitable for systematic review according to the inclusion and exclusion parameters	Number of articles excluded from the systematic review based on quality assessment
DergiPark	03.05.2024	25	13	7	7	5	4
EBSCOhost	25.05.2024	21		3	6	2	
ResearchGate	15.06.2024	1010		989	13	4	

According to Patole (2021), the article exclusion process, a significant aspect of systematic reviews, must be conducted with utmost care, as it can potentially alter the results. As shown in Figure 1, in line with this approach, a review based on inclusion and exclusion parameters was conducted, resulting in the exclusion of studies that lacked full-text access (n=1), were not related to cost control in Food and Beverage Businesses (n=12), or were not research articles (n=2). Consequently, taking into account the research objectives and inclusion-exclusion parameters, the articles deemed suitable for systematic review were identified (n=11). However, Bronson and Davis (2011) suggest that studies deemed appropriate for systematic review based on inclusion and exclusion criteria should first be assessed using a series of quality evaluation methods. Therefore, to enhance the research quality and methodological rigor, the Mixed Methods Appraisal Tool (MMAT) Version 2018 was employed in this study.

MMAT is an instrument designed to evaluate primary research studies based on experiments, observations, or simulations, specifically empirical studies (Abbott, 1998; Porta et al., 2014). In other words, it is a critical appraisal tool designed for the evaluation phase of systematic reviews that include qualitative, quantitative, and mixed-methods studies. MMAT consists of two sections: a checklist and criteria descriptions. For each study included in the evaluation, the appropriate study category is selected, and the assessment is conducted based on the criteria specific to that category. For example, if an article follows a qualitative research design, it is evaluated solely based on the five criteria designated for the qualitative category (Hong et al., 2018). In this context, all articles deemed suitable for the systematic review (n = 11) were evaluated using this tool in terms of research quality and methodological rigor. Following the evaluation, it was determined that four articles would not be included in the synthesis. These articles were identified based on a “No” or “I do not know” response to one or both of the MMAT screening questions (S1: Are there clear research questions? and S2: Do the collected data allow for addressing the research questions?). The seven articles determined to be included in the synthesis (systematic review) were identified by receiving a “Yes” response to both of these questions, as MMAT does not recommend calculating an overall score based on individual criterion ratings or excluding studies solely due to low methodological quality.

The study has certain limitations. These include: 1) the inclusion of only articles published in Turkish within the national literature, 2) the inclusion of only full-text research articles from peer-reviewed journals indexed in DergiPark, EBSCOhost, and ResearchGate, and 3) the limited number of articles on the research topic within the national literature.

FINDINGS

In this part of the study, evaluations of the articles (n = 7) are presented in terms of research quality and methodological soundness, using the MMAT, and are included in the systematic review in line with the sub-research questions. Before evaluating the studies, a data extraction form was created. This form includes the databases, colophons, keywords, objectives, research methods or costing methods, data collection tools, and results of the articles included in the systematic review. The data extraction form is shown in Table 3 below.

As a result of the systematic review, it is evident that the number of published research articles on cost control in the food and beverage industry is extremely limited. This can be attributed to the fact that owners or managers of food and beverage businesses are generally reluctant to share accounting data due to concerns about competition, confidentiality, and security.

As seen in Table 3, the articles were published in 2011, 2013, 2014, 2015, 2016, and 2019. This situation suggests that the number of articles published on cost control in food and beverage businesses increased after the 2008 global economic crisis. Following the crisis, businesses may have felt the need to manage their costs more effectively in order to maintain profitability and ensure long-term sustainability. For this reason, the increase in research on cost control in the food and beverage industry during the post-2008 period can be considered a natural result. The fact that digitalisation and technological developments in recent years have enabled businesses to monitor cost data more easily and in detail may have contributed to the increased interest in food and beverage cost control methods in academic research. In addition, the fact that issues such as sustainability and resource efficiency have also increased during this period may have led to an increase in research focused on reducing waste and optimising costs in food and beverage businesses.

The articles mention several objectives and benefits of cost control in food and beverage businesses. These objectives and benefits are as follows:

- Conducting revenue-expense analysis,
- Setting standards and ensuring their continuity,
- Establishing a foundation for pricing,
- Preventing theft and waste,
- Informing management,
- Ensuring profitability and sustainability,
- Identifying deviations and taking corrective actions,
- Gaining a competitive advantage,
- Improving service quality,
- Increasing customer satisfaction,
- Reporting data,
- Analyzing reports,
- Developing sales policies.

Income and expenditure analyses should be performed to monitor the financial status of food and beverage businesses and guide management decisions. Standards should be established and consistently maintained to enhance consistency and efficiency in operational processes. A basis for pricing should be established to support the accurate costing of products and services, and theft and waste should be prevented to ensure the efficient use of resources and minimize losses. Provide the necessary data and analyses for management to make informed and timely decisions, ensuring the long-term sustainability of profitability and increasing the business's financial success. Deviations should be identified, and corrective measures should be taken to identify the causes of performance problems and develop solutions. In addition, it should aim to increase the competitiveness of the business through strategies suitable for market conditions, to provide better customer experiences by improving service quality, and to increase loyalty by enhancing customer satisfaction. Therefore, it can be stated that effective cost control in food and beverage businesses enables them to achieve sustainable success by increasing their business volume.

Table 3.
Data Extraction Form

No	Database	Citation	Keywords	Aim	Research method	Data collection tool	Result
1	DergiPark	Dönmez, A., Arıcı, A. & Angay Kutluk, F. (2011). Research on food and beverage cost control applications and pricing in five-star hospitality enterprises in Antalya. International Alanya School of Business Journal, 3(1), 201-222.	Hospitality enterprises Food and beverage Pricing Cost control	To present the practices related to food and beverage cost control systems and pricing systems in accommodation businesses, including 5-star hotels and 1st class resorts operating in Antalya.	Quantitative	Survey	It has been observed that the majority of food and beverage businesses have established cost systems and place importance on food and beverage cost control.
2	DergiPark	Okutmuş, E. & Gövce, G. (2015). Comparatively analysing standard recipe at the cost control phase of food businesses and an application. Niğde University Journal of the Faculty of Economics and Administrative Sciences, 8(2), 79-90.	Food businesses Cost control Standard recipe	To demonstrate how cost control and efficiency in food businesses can be achieved by using standard recipes and balancing product quantities comparatively.	Quantitative	Secondary data	It has been observed that effective cost control and, consequently, cost efficiency have not been achieved in the business, resulting in issues of fraud and losses.
3	EBSCOhost	Köroğlu, Ç., Biçici, F. ve Sezer, D. (2011). The effects of cost control on superiority of competitiveness. Journal of Business Research, 3(1), 33-48.	Competition Cost control Cost control method	Explaining the relationship between cost control and the competitive advantage that can be achieved in hotel businesses operating in Marmaris.	Quantitative	Survey	As the star rating of hotels increases, the food and beverage cost and labor cost control methods they use differ. It has been observed that as the star rating increases, businesses gain a competitive advantage over other businesses operating in the same sector.
4	EBSCOhost	Işık, I. & Yılmaz, B. B. (2016). Food and beverage cost control in accommodation enterprises: an examination of food and beverage cost control methods of a hotel. Journal of Entrepreneurship & Development, 11(1), 60-83.	Accommodation enterprises Cost control Food and beverage cost control	Through the examination conducted in a selected hotel business as an example, the importance of cost control is demonstrated by analyzing which cost control method is applied through which process and whether this process is aligned with the intended purpose.	Mixed	In-depth interview (Secondary data)	It has been observed that the hotel business needs to revisit the processes starting from menu planning and including purchasing, receiving, storage, issuing goods from the warehouse, production, and sales activities, and continue its operations with a cost control method that supports these processes.

5	ResearchGate	Akın, A. & Akın, A. (2013). A study for detection of cost control systems applied in food and beverage organizations: Example of Gaziantep. Journal of Academic Perspective, (36), 1-16.	Food and beverage sector Cost Cost control Gaziantep	Identifying the cost control methods applied in food and beverage businesses with tourism operation certificates in Gaziantep and determining the current status of businesses regarding cost control.	Quantitative	Survey	It was observed that the businesses in the sample, which are classified as restaurants using à la carte menus, generally implement detailed cost control systems; that the menu type and business resources are important factors in the application of these systems; however, the owners and managers of the businesses were unsure whether their educational background has an impact on the cost control systems.
6	ResearchGate	Tandoğan, U. & Şahin, Ö. (2014). An implementation in using standard recipes and target costing on strategic decisions of food and beverage business. Niğde University Journal of Economics and Administrative Sciences, 7(1), 242-259.	Target costing Strategic costing Food and beverage cost Standard recipe	Determining how cost reduction or contribution margin increase strategies will be implemented in a food and beverage business in line with cost and profit targets, without compromising customer expectations, and how products will be designed with a focus on both customer and profit.	Quantitative	Interview (Secondary data)	It has been observed that a food and beverage business can control its targeted costs on a product basis by using standard recipes and can apply the target costing method in its strategic decisions.
7	ResearchGate	Büyükşalvarcı, A. & Şener, G. (2019). International five-star chain hotel facilities cost control applications in food and beverage department and the case of Ankara province. Journal of Social and Humanities Sciences Research,6(47), 4187-4197.	Cost Cost control Hotel management Food and beverage	Analysis of the cost control and operation of food and beverage departments in 5-star accommodation businesses with international chain status in Ankara province.	Qualitative	Face-to-face interview	It has been observed that hotel businesses need to effectively control food and beverage costs and implement cost control systems that are suitable for their operations to ensure sustainability.

The articles mention several challenges faced in cost control within food and beverage businesses. These challenges can be summarized as:

- Daily demand fluctuations,
- The impact of menu changes,
- Products used in multiple menu items,
- Stock diversity,
- Sales irregularities,
- Small portion sales,
- Stock turnover rates,
- Versatile use of materials,
- Lack of staff knowledge,
- Selection of an appropriate cost control system,
- The influence of indirect workers,
- Environmental factors.

As can be seen, several factors contribute to the difficulty of cost control in food and beverage businesses. While daily demand fluctuations make it challenging to maintain stock levels while preserving product freshness and quality, menu adjustments may be necessary if the estimated demand is not met. However, this may adversely affect the effectiveness of cost control. The use of purchased products in more than one menu item complicates portion costing. In contrast, the inability to track stocks of raw, semi-processed, or fully prepared products in the kitchen has a negative impact on cost control. Sales irregularities, as well as the sale of food and beverages in portions or by the glass, further complicate cost control processes. High inventory turnover rates make it challenging to track purchases made in varying quantities and at different prices, especially during peak periods. Additionally, the use of food and beverage ingredients in different meals and drinks creates further difficulties in portion costing. Additionally, the fact that personnel responsible for cost control and other personnel lack sufficient knowledge of costing, pricing, and service issues significantly reduces the effectiveness of control processes. The preference for cost control systems that are not suitable for the enterprise's structure and policy may cause the control to lose its effectiveness. At the same time, it is very difficult to measure the contributions of indirect employees, such as cleaning staff. Additionally, unexpected developments in economic, social, political, and technological spheres may adversely affect the enterprise's cost control system. Especially in inflationary environments, maintaining consistent cost control becomes even more challenging.

The articles mention some methods used for cost control in food and beverage businesses. These are simple cost control method, detailed cost control method, standard cost control method and estimated (potential) cost control method for food. For beverages, the percentage control method, the sales price control method, and the standard cost control method are used. However, the articles also mention the use of sub-methods, modern cost methods, and control tools related to these methods in terms of cost control in food and beverage businesses. These are daily simple cost control method, monthly simple cost control method, the Harris, Kerr and Forster method, the target costing method, standard recipes and product quantity balance tables. In the articles, it is mentioned that the most commonly used cost control methods in food and beverage businesses are the monthly simple cost control method for food and the standard cost control method and the percentage control method for beverages.

The articles mention several standards that should be followed in cost control for food and beverage businesses. These standards are as follows:

- Regular internal control and cost control of food and beverage items.
- Creating standard material and purchasing cards, and acting in accordance with them.
- Purchasing food and beverage items based on actual needs to prevent waste.
- Performing quality and quantity checks when food and beverage items are delivered.
- Tracking daily sales reports and maintaining statistics to determine menu preference indexes.
- Creating a standard menu list.
- Producing according to standard recipes.

- Monitoring production with comparative product quantity balance sheets.
- Tracking price changes in raw materials and goods and developing effective cost strategies.
- Implementing effective measures in purchasing, receiving, storage, production, revenue control, and personnel costs.
- Analyzing actual results in line with profitability expectations and forecasts, investigating the reasons for deviations, and taking corrective actions if necessary.
- Emphasizing menu planning and efficiently utilizing business resources.
- Using contemporary cost methods like target costing.
- Applying cost control methods that positively affect financial performance to gain a competitive advantage.
- Creating independent units for cost control in food and beverage departments.
- Continuously training accounting and audit staff on cost and control issues.
- Paying attention to cost control for profitability and sustainability in food and beverage departments of hotels or accommodation businesses.
- Managing the control of even small-scale costs like staff meals, considering them as part of the overall business expenses.

These standards include 1) Standards in terms of internal control and audit, 2) Standards for purchasing and materials management, 3) Standards for production and menu management, 4) Standards for efficiency and waste prevention, and 5) Standards in terms of competition and sustainability.

CONCLUSION, DISCUSSION, AND RECOMMENDATIONS

This study aims to synthesize and evaluate the evidence related to the concept of cost control in food and beverage businesses. Therefore, studies from the national literature addressing cost control in food and beverage businesses were reviewed using the systematic review technique. By presenting the trends and the current state of these studies, a framework has been outlined.

Food and beverage businesses, which are an important part of the service sector, face challenges in cost control due to factors such as daily demand fluctuations, the impact of menu changes, products used in multiple menu items, stock diversity, sales irregularities, small portion sales, stock turnover rates, multi-purpose use of materials, lack of staff knowledge, choosing the appropriate cost control system, the impact of indirect workers, and environmental factors, according to the findings of the studies included in the systematic review. However, like any other business, food and beverage businesses must understand and control cost elements to survive in this highly competitive environment (Dimitrantzou et al., 2024). This is where cost control in food and beverage businesses comes into play, a process that spans from the purchasing process, including receipt control, storage, material withdrawal from stock, production, and revenue control. According to the findings from the studies included in the systematic review, cost control in food and beverage businesses aims to carry out income-expense analysis, establish and maintain standards, form the basis for pricing, prevent theft and waste, inform management, ensure profitability and sustainability, identify deviations and take corrective actions, gain competitive advantage, improve service quality, enhance customer satisfaction, report data, analyze reports, and develop sales policies. However, various factors make cost control in food and beverage businesses more difficult. Therefore, food and beverage businesses need effective cost control methods that allow them to track costs by determining them in advance and checking whether they align with the set goals.

According to the results obtained from the studies included in the systematic review, cost control is generally implemented in food and beverage businesses or departments, and this control is mainly carried out on a monthly basis (Dönmez et al., 2011; Köroğlu et al., 2011; Işık & Yılmaz, 2016; Büyükşalvarcı & Şener, 2019). While similarities exist among the studies in this regard, notable differences are observed in the food and beverage cost control methods employed. In the study by Dönmez et al. (2011), it was found that the most commonly used method for food was the simple cost control method, while for beverages, the standard cost control method was employed. In the studies by Köroğlu et al. (2011) and Işık and Yılmaz (2016), they found that the simple cost control method was used extensively for both food and beverages without differentiation. However, in the study by Akın and Akın (2013), they concluded that the most commonly used method for both food and beverages, regardless of differentiation, was the detailed cost control method on a daily basis. These differences are believed to be related to the scope of the studies. Specifically, Dönmez et al. (2011), Köroğlu et al. (2011), and Işık and Yılmaz (2016) focused on food and beverage cost control in hotels or accommodation businesses, while Akın and Akın (2013) addressed food and beverage cost control in tourism-certified food and beverage businesses. This situation also aligns with the results of other studies in the literature. For example, in the studies conducted by Kutluk (2003), Çiftci and Köroğlu (2008), and Bulut (2014), which focused on food and beverage cost control in hotels or accommodation businesses, it was determined that the simple cost control method or the standard cost control method was most commonly used. On the other hand, a study by Akyürek and Kızılcık (2018) examining food and beverage cost control in independent food and beverage businesses found that the most commonly used method for food was the detailed cost control method. For beverages, it was the simple cost control method.

The frequent use of the simple cost control method or standard cost control method in hotel or accommodation businesses can be associated with the fact that the organizational structure of these businesses is more complex compared to food and beverage businesses. As a result, these businesses may require a more systematic approach to cost management. On the other hand, the widespread use of the detailed food cost control method in food and beverage businesses can be linked to the method's ability to overcome difficulties in product classification and facilitate the categorization of foods into groups such as vegetables and fruits, seafood, meats, and meat products.

According to some studies in the literature (Zainol et al., 2017; Cengiz et al., 2018; Pradiptha et al., 2018), in order to ensure effective cost control in food and beverage businesses, it is necessary to define not only cost control methods but also five fundamental standards: standard recipes, standard yields, standard portions, standard material cards, and standard food cost percentages. Particularly, the standard recipe is the most important tool in the food and beverage preparation and production process. Without standard recipes, it is not possible to control costs effectively. This is because the production of a menu item using different methods and materials will result in cost variations within each production cycle. The results of the studies included in the systematic review also indicate that food and beverage businesses should use standard recipes in their production process and monitor them through product quantity balance tables (Okutmuş & Gövce, 2015). If the product quantity balance is not adhered to, excessive use of materials will result in increased costs, or problems such as defective or substandard production, production losses, or theft may occur. In the study conducted by Okutmuş and Gövce (2018), excessive usage was detected, and it was reported that this excessive use seemed to be aimed at hiding unregistered sales or unreported production and sales. As a result, the study identified that the business was unable to effectively manage cost control and efficiency. Additionally, the studies included in the systematic review also highlighted the importance of using standard recipes in terms of contemporary costing methods, such as target costing (Tandoğan & Şahin, 2014). Target costing is a method used in the early stages before the production methods of a new product are designed and developed. In this method, operations are customer-oriented, production design is focused on, and the product's entire life cycle is considered. The goal of the method is to create a production process that generates the desired profit (Kaya, 2010). The standard recipe is a fundamental tool in the target costing process. The material quantities and prices specified in the standard recipe allow for the calculation of the unit cost of the product. At the same time, cost calculations made from the recipe enable adjustments to the product's components or quantities if the targeted profitability is not achieved. Therefore, preparing standard recipes with accurate and up-to-date information enhances the effectiveness of target costing.

The trend in research on cost control in food and beverage businesses in the national literature, although the number of published research papers on this topic is quite limited, generally focuses on survey studies aimed at identifying the cost control methods used in the business. This situation may be due to the difficulty of accessing secondary sources related to food and beverage businesses compared to primary sources. Examining the current situation, it is evident that cost control in food and beverage businesses has not been thoroughly explored, both in terms of the calculations related to the cost control methods used and from the perspective of contemporary costing methods.

In future studies, examining articles from peer-reviewed journals indexed in multiple databases in the international literature and contributing their findings to the literature will provide significant contributions.

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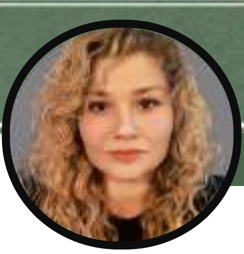

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Bibliometric analysis of studies on gastronomy education in Turkiye

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ABSTRACT

This study aims to conduct a bibliometric analysis of academic studies on gastronomy education in Turkiye. In the study, a total of 87 studies – 40 articles, 33 conference paper, 12 theses, and two books – were examined as a result of searches in Turkish and English using the Council of Higher Education Academic Search (YOK Academic) database with the keywords "gastronomy education" and "gastronomy and culinary arts education". Studies that were repetitive, off-topic, and whose full texts could not be accessed were systematically eliminated and excluded from the analysis. The data were analyzed using frequency and percentage analyses in Microsoft Excel. The studies were classified according to parameters such as publication type, scope, subject headings, research methods, keyword distribution, journals in which the articles were published, and events in which the reports were presented. The findings show that the most common publication type was articles, comprising 45.98%, followed by conference papers (37.93%), theses (13.79%), and books (2.30%). It was determined that the distribution between national and international publications was nearly equal (52.87% national, 47.13% international). Among the research topics, "Current Status, Problems and Solution Proposals of Gastronomy Education" was the most frequently studied area. In terms of research methods, it was observed that 49.41% of the studies employed qualitative methods, 40% used quantitative methods, and 10.59% used mixed methods. Additionally, "gastronomy" and "gastronomy education" were the most frequently used keywords. It was revealed that the less frequently used keywords reflected the multidisciplinary structure and different subfields of gastronomy.

KEYWORDS

Gastronomy, gastronomy education, bibliometric analysis.

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INTRODUCTION

Gastronomy education holds an important place today as a multifaceted academic field that encompasses food culture, culinary skills, and restaurant management from an interdisciplinary perspective (Burke & Danaher, 2018). Gastronomy education encompasses not only cooking techniques and culinary arts but also covers topics such as food science, menu design, nutrition, food safety, and food management (Zahari et al., 2009). Gastronomy education emphasizes to students that food should be studied in its cultural, historical, and socio-economic context, thus developing an understanding that food is not only an object of consumption but also a form of cultural expression (Hegarty, 2011). Gastronomy education is a process that aims to gain knowledge and skills in the preparation and presentation of food in a disciplined manner (Kuhn et al., 2024). In addition to teaching students culinary techniques, this education includes important elements such as enhancing the perception of flavor, fostering creativity, understanding cultural diversity, and staying informed about gastronomic trends (Santich, 2004). In Turkiye, gastronomy and culinary education continued in the framework of a master-apprentice relationship until the 1960s. After this period, the education process gained a formal structure. Culinary education, which was previously offered at the associate degree level in the 1980s, was elevated to the undergraduate level as of 2000 and began to be offered in universities through both formal and distance education methods (Şat et al., 2023). In the department of gastronomy and culinary arts, students are trained in subjects such as food, beverage, kitchen, cafe, and bar management. Competent personnel and expert chefs are also trained in the field of kitchen management, acquiring the knowledge and skills necessary to compete in the sector (Ekincek et al., 2017). The number of gastronomy and culinary arts departments is gradually increasing in Turkiye (Şimşek et al., 2020). Achieving sustainable competitive advantage in the field of gastronomy depends on the existence of qualified human resources and practical managerial elements. This situation reveals the importance of educational activities in the field of gastronomy (Sökmen & Karamustafa, 2024).

In recent years, the increase in the number of gastronomy departments in universities and the increasing popularity of this field have led to a significant increase in the number and diversity of academic studies on gastronomy education. This situation necessitates a systematic review and analysis of the existing literature in the field. The aim of this study is to identify current trends, research topics, and development processes in the field, as well as to provide potential directions for future research by conducting a bibliometric analysis of studies in the field of gastronomy education. This research aims to evaluate existing studies and identify gaps in the literature comprehensively.

RELATED LITERATURE

History of Gastronomy Education and Development Processes in Turkiye

Gastronomy education has undergone a significant transformation over time, aligning with both cultural and commercial needs (Maberly & Reid, 2014). Early gastronomy education practices were generally aimed at teaching culinary arts among a limited group of people, and this process was widespread in palace kitchens and among the elite classes in Europe (Santich, 2004). The foundations of modern gastronomy education were laid in the 19th century under the influence of French culinary culture (Corrado, 2022). French cuisine was a pioneer of the professionalization process, and renowned chefs such as Marie-Antoine Carême and Auguste Escoffier began to teach culinary arts in a more systematic manner (Mac Con Iomaire, 2013). In the 20th century, particularly with the rise in the number of restaurants and hotels, gastronomy education became increasingly institutionalized. Culinary schools started to open in France in the early 1900s, and this model spread to other European countries and North America (Gillespie & Cousins, 2012). Gastronomy education has expanded to encompass not only culinary skills but also a multidisciplinary approach, including food science, nutrition, and restaurant management (Hegarty, 2011).

Gastronomy education in Turkiye is offered at state and foundation universities as well as private culinary schools. Gastronomy education in our country began in 1997 with the launch of a two-year culinary program at Bolu Mengen Vocational School. Subsequently, in 2003, Yeditepe University became the first university to offer undergraduate-level education by establishing a gastronomy department under the Faculty of Fine Arts. Following this development, there has been a rapid increase in the number of universities offering gastronomy education (Beyter et al., 2019). In state universities, gastronomy education began with the establishment of the "Gastronomy and Culinary Arts." However, in earlier periods, partial culinary education was provided in programs such as "Food and Beverage Management," "Tourism Management," and "Family Economics and Nutrition Teaching" (Öney, 2016). Since then, the number of universities offering gastronomy education has increased rapidly.

According to 2023 YÖK data, the culinary arts program is offered at 77 state and 27 foundation universities, while the gastronomy and culinary arts department is offered at 60 state and 35 foundation universities (YOK 2023; cited in (Bişiren & Gençer, 2023). The gastronomy and culinary arts undergraduate program in Turkiye is an eight-semester education program that generally provides students with both theoretical knowledge and opportunities to develop practical skills (Yılmaz, 2019). Students are required to complete internships ranging from 60 to 150 days to graduate, and after completing these internships, they gain real-world work experience in the sector, increasing their potential for finding employment after graduation (Şat, Sezen & Doğdubay, 2023). Despite its relatively short history in our country, gastronomy education has quickly become a sought-after field of study, with various educational institutions and departments now offering programs in gastronomy education. In particular, the number and capacity of associate and bachelor's degree programs in culinary arts and gastronomy have been increasing every year (Öney, 2016).

Bibliometric Studies Published in the Field of Gastronomy

Bibliometric research is a quantitative approach to analyzing scientific literature and scientific publications to gain insights into various aspects of scientific research. It involves the application of statistical and computational techniques to bibliographic data such as publication records, citations, co-authorship networks, and keywords, to examine patterns, trends and relationships within the scientific community (Donthu et al., 2021). Bibliometric analysis also has practical applications such as assessing research productivity, measuring academic performance and shaping research policies (McBurney & Novak, 2002). These studies contribute to our understanding of the flow of knowledge in the academic world by providing valuable insights into scientific productivity. It is also critical for identifying emerging topics in research fields and possible future research directions (Ellegaard & Wallin, 2015). Bibliometrics employs a range of techniques and tools to analyze aspects of the literature. These methods include techniques such as analyzing the number of publications, calculating the number of citations, identifying collaborations between authors and determining the frequency of keywords and topics (Ellegard, 2018). Bibliometric studies typically aim to reveal changes and developments over time by comparing the literature with that of previous periods. In this way, it is possible to identify which topics are researched more frequently, which researchers stand out, and which journals have the most influence in the scientific field (Choudhary & Datta, 2024).

When bibliometric studies in the field of gastronomy are examined, postgraduate studies related to gastronomy tourism (Çuhadar & Morçin, 2020; Ercan, 2020; Aras, 2024; Gülcan, Ercan, Katlav, 2021; Tekeli & Tekeli, 2020), postgraduate studies in the field of gastronomy (Şahin et al., 2018; Şeyhanlıoğlu, 2023; Eşitti & Bay, 2023; Acar, Güldemir, Aksöz, 2020; Öztürk & Koç, 2024), studies on geographical indications (Arslan, 2022; Köşker, 2020; Cankül, Aydın, Erşahin, 2021; Fazlıoğlu, Başaran, Gülen, 2024; Adabalı, 2023). Additionally, there are studies on slow food (Coşkun & Gençer, 2024), fusion cuisine (Kaya, Ercan, Erdoğan, 2024), neurogastronomy (Sarı et al., 2024), the Michelin Guide (Temizkan & Aktepe, 2024), molecular gastronomy (Ceylan & Sarıışık, 2018), regional foods (Ayaz & Türkmen, 2018), and street foods (Kargiglioğlu, 2021).

As a result of the literature review, two studies examining research related to gastronomy education were found. First, Eşitti and Bay (2023) conducted a bibliometric analysis of theses on gastronomy education. The second study, by Sökmen and Karamustafa (2024), was limited to seven national and ten international studies, which were identified through a systematic literature review conducted in the Web of Science (WoS) and Scopus databases. This situation indicates that the academic literature in the field of gastronomy education in Turkiye has not yet been thoroughly examined. The originality of this study lies in its extensive literature review, including published papers, articles, books, and theses related to gastronomy education. Although the study examined theses related to gastronomy education, it was re-examined using different parameters to ensure the integrity of the subject and the originality of the study.

METHOD

This study aims to examine the existing literature by conducting a bibliometric analysis of studies on gastronomy education in the YOK Academic database, to identify trends and deficiencies in this field. The study aims to contribute to the understanding of the current situation in the field and to guide future research by providing a general framework of research in the field of gastronomy education. Bibliometric studies are an important research method that helps to understand the scope, trends, interactions, and development processes of research in a particular subject, field, or discipline by systematically examining the literature in the academic and scientific field (Donthu et al., 2021). Bibliometric studies use numerical and statistical data to analyze the overall structure and key themes of the literature, allowing researchers to track the progress of science and the diffusion of knowledge (Alsharif et al., 2020).

Table 1.
Bibliometric Analysis Process and Distribution of Studies Included in the Analysis (Source: Own research)

Stage	Description	Article	Conference Paper	Book	Thesis
1. Database Search	Total number of works found in the YOK Academic database using the keywords "gastronomy and culinary arts education" and "gastronomy education".	69	44	3	12
2. Removal of Duplicates	21 duplicate articles and 7 duplicate papers were removed.	48	37	3	12
3. Exclusion of Irrelevant Works	Eight articles, one paper, and one book that did not match the keywords and topic content were excluded.	40	36	2	12
4. Removal of Inaccessible Works	3 inaccessible papers were excluded.	40	33	2	12
5. Studies Included in the Review	Final studies included in the review.	40	33	2	12

Table 1 shows the bibliometric analysis process and the distribution of the studies included in the analysis. The data were obtained by searching the Council of Higher Education Academic Search database (akademik.yok.gov.tr) on January 2, 2025, using the keywords "gastronomy education" and "gastronomy and culinary arts education" in both Turkish and English. No year restriction was made during the search. The reason for using this database is that it is a platform where researchers share their publications extensively, and it is an official database that hosts academic studies established by the Council of Higher Education. A total of 69 articles, 44 papers, three books, and 12 thesis studies were identified in the research. These studies were passed through the elimination stages in the table, and the publications included in the final review were determined. In the review, a total of 28 studies –comprising 21 articles and seven papers – were excluded from the analysis due to the repetition of studies with multiple authors in the database system, such as authors entering the system separately. Eight articles and one paper were excluded from the analysis because they did not match the keywords or the content of the study subject, as determined by a thorough examination of the entire study. The full texts of 3 papers uploaded to the database could not be accessed and were not included in the bibliometric analysis. Frequency and percentage analysis were performed on the data Microsoft Excel. The studies were analyzed according to the following parameters: distribution by year, type of publication, scope, study topics, research method, keyword distribution, distribution of journals in which articles were published, and distribution of events in which papers were published.

FINDINGS

The findings obtained from the bibliometric analysis of the studies are presented below.

Table 2.
Distribution of Studies by Publication Type (Source: Own research)

Publication Type	***f***	***%***
Article	40	45.98
Conference Paper	33	37.93
Thesis	12	13.79
Book	2	2.30
Total	**87**	**100**

When Table 2 is analyzed, it is evident that articles have the highest share, at 45.98%, followed by papers at 13.79%, books had the lowest share among publication types with 2.30%.

Table 3.
Distribution of Publications by Scope (Source: Own research)

Scope	**Article**	**Conference Paper**	**Thesis**	**Book**	**Total**	*%*
National	23	11	12		46	52.87
International	17	22	-	2	41	47.13
Total	40	33	12	2	87	100

According to their scope, national publications have a rate of 52.87% with 46 studies. 41 studies include international publications accounting for 47.13%. It is observed that the distribution between national and international publications is relatively close.

Table 4 shows the distribution of study topics. There are a total of 13 different study topics related to gastronomy education. Among these, 5 study topics include studies on gastronomy students. The current status, Problems, and Solution Suggestions of gastronomy education stand out as the most researched area, with nine articles, six papers, two thesis studies, and 17 studies in total. Technological approach applications in gastronomy education ranks second as a research topic with five articles, three papers, one thesis, and one book from all types of publications. The least number of studies on the research topic of "History and Development of Gastronomy Education," with only one article.

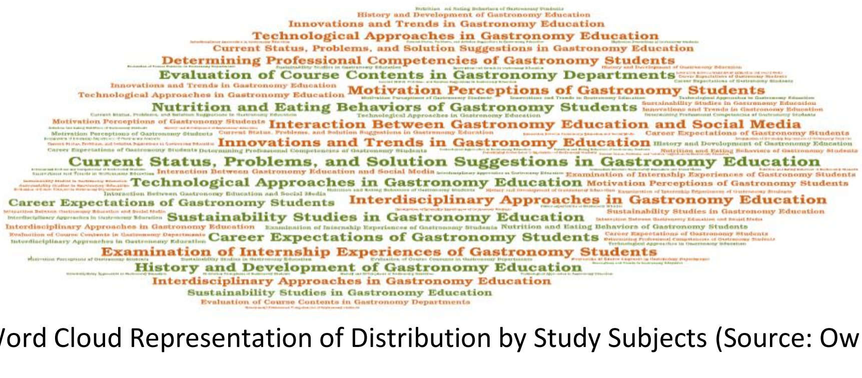

Figure 1. Word Cloud Representation of Distribution by Study Subjects (Source: Own research)

Table 4.
Distribution According to Study Subjects (Source: Own research)

Study Topics	**Article**	**Conference Paper**	**Thesis**	**Book**	**Total**
Current Status, Problems, and Solution Suggestions in Gastronomy Education	9	6	2	-	17
Technological Approaches in Gastronomy Education	5	3	1	1	10
Interdisciplinary Approaches in Gastronomy Education	4	3	2	-	9
Innovations and Trends in Gastronomy Education	4	5	-	-	9
Sustainability Studies in Gastronomy Education	2	2	1	1	6
Interaction Between Gastronomy Education and Social Media	3	3	-	-	6
Career Expectations of Gastronomy Students	3	2	1	-	6
Nutrition and Eating Behaviors of Gastronomy Students	3	3	-	-	6
Motivation Perceptions of Gastronomy Students	2	3	1	-	6
Examination of Internship Experiences of Gastronomy Students	2	1	2	-	5
Evaluation of Course Contents in Gastronomy Departments	2	1	-	-	3
Determining Professional Competencies of Gastronomy Students	-	1	2	-	3
History and Development of Gastronomy Education	1	-	-	-	1
Total	**40**	**33**	**12**	**2**	**87**

Examining the distribution of publications by year (Figure 2), it is evident that the highest number of publications in the article type is six studies, as seen in 2019, and the highest number of publications in the paper type is also six studies, as observed in 2023. Thesis studies started in 2018, and it was determined that most publications were in 2020 and 2022. A total of 2 books were published in 2022 and 2023. In 2013, there were no studies in any publication type.

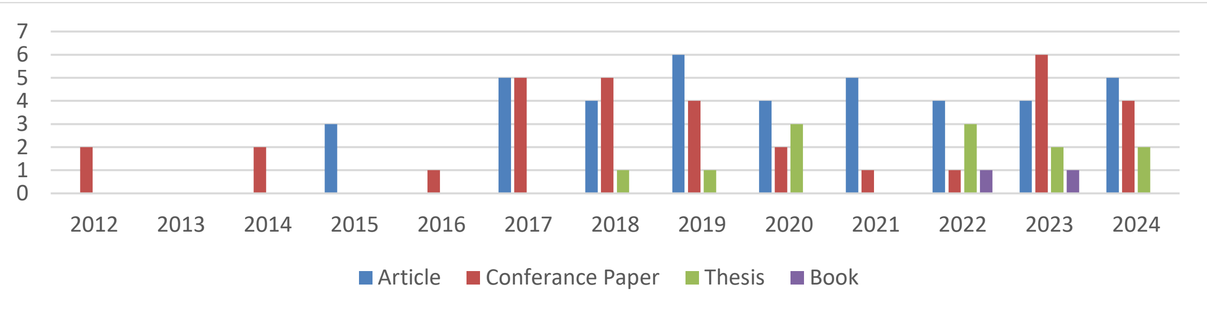

Figure 2. Distribution of Publications by Year (Source: Own research)

Table 5 shows the types of methods used in the studies. The most common method type was qualitative research, with a rate of 49.41% with a total of 42 studies (22 articles, 18 papers, two theses). In the second place, the quantitative research method was preferred by 40.00% with 16 articles, 14 papers, and four theses, and in the last place, the mixed method was preferred by 10, with two articles, one paper, and six theses.

Table 5.
Distribution of Studies by Method Type (Source: Own research)

Method Type	**Article**	**Conference Paper**	**Thesis**	**Total**	**%**
Qualitative	22	18	2	42	49.41%
Quantitative	16	14	4	34	40.00%
Mixed	2	1	6	9	10.59%
Total	40	33	12	85	100%

When the distribution of the studies according to the number of authors was examined (Table 6), it was determined that 49.35% (17 studies) had two authors. 17 studies (nine articles, eight papers) had one author with a rate of 22.08%, 13 studies had three authors (16.88%), and five studies had four authors (6.49%).

Table 6.
Distribution of Articles and Papers by Number of Authors (Source: Own research)

Number of Authors	**Article**	**Paper**	**Total**	**%**
Single Author	9	8	17	22.08%
Two Authors	21	17	38	49.35%
Three Authors	9	4	13	16.88%
Four Authors	1	4	5	6.49%
Total	40	33	73	100%

When Table 7 is analyzed, "Journal of Tourism and Gastronomy Studies with 12 articles, it was the journal with the highest number of studies published. ''International Social Science Studies Journal'' ranks second with four articles, and ''Turkish Tourism Research Journal'' ranks third with three articles. Two studies were published in the "OPUS International Journal of Community Studies" and the "Electronic Journal of Social Sciences." Other articles were published in different journals.

Table 7.
Distribution of the Journals in which the Articles were Published (Source: Own research)

Journal Name	**n**
Journal of Tourism and Gastronomy Studies	12
International Social Science Studies Journal	4
Turkish Tourism Research Journal	3
OPUS International Society Research Journal	2
Electronic Journal of Social Sciences	2
Anatolia Tourism Research Journal	1
Eurasian Tourism Research Journal	1
International Turkish World Tourism Research Journal	1
European Journal of Research on Education	1
GSI Journals Serie A: Advancements in Tourism Recreation and Sports Sciences	1
International Journal on New Trends in Education and Their Implications	1
Business Research Journal	1
Journal of Global Tourism and Technology Research	1
Journal of Sivas Interdisciplinary Tourism Research	1
Procedia Social and Behavioral Sciences	1
Selçuk University Social Sciences Institute Journal	1
Travel and Hotel Management Journal	1
The Journal of International Social Research	1
Tourism and Recreation	1
Trakya University Social Sciences Institute Journal	1
Tourism Academic Journal	1
Tourism Research Journal	1
Total	**40**

The distribution of papers in Table 8 shows that the "International Congress on Gastronomy Tourism Research with 11 papers takes the first place, followed by the "National Tourism Congress" with five papers. The following event is the "International Necatibey

Education and Social Sciences Research Congress," featuring two studies, and the other papers were presented in separate events.

Table 8.
Distribution of Papers According to the Event Presented (Source: Own research)

Congress / Conference/ Symposium	***f***
International Gastronomy Tourism Research Congress	11
National Tourism Congress	5
International Necatibey Education and Social Sciences Research Congress	2
International Balkan Education and Science Congress	1
Eastern Mediterranean Tourism Symposium	1
International Social Sciences Symposium	1
International Youth Research Congress	1
International Conference on Educational Programs and Teaching	1
International Eurasian Tourism Congress	1
Tourism Council	1
Tourism Education Conference	1
Sustainable Living Congress	1
International Travel and Tourism Dynamics: Overtourism	1
International Sustainable Tourism Congress	1
International Congress of Educational Research	1
International Conference on Social Sciences	1
International Conference on Educational Technology and Online Learning	1
International Turkish World Tourism Symposium	1
Total	**33**

When the distribution is examined (Table 9), it is seen that there are a total of 12 theses. Three of these theses belong to Balıkesir University, and there is only one thesis at each of the other universities. This situation indicates that Balıkesir University has a relatively higher academic output on the subject, whereas the work has been addressed at a limited level at other universities.

Table 9.
Distribution of Theses by University (Source: Own research)

University	**f**
Balıkesir University	3
Necmettin Erbakan University	1
Istanbul Okan University	1
Çanakkale Onsekiz Mart University	1
Karamanoğlu Mehmetbey University	1
Akdeniz University	1
Iskenderun Technical University	1
Eskişehir Osmangazi University	1
Nevşehir Hacı Bektaş Veli University	1
Sakarya University Of Applied Sciences	1
Total	**12**

According to the graph in Figure 3, the distribution of theses by year follows a fluctuating trend. The year 2020 saw the highest production with three theses. It is noteworthy that no theses were registered in 2021. Similarly, two theses were published in 2018, 2022, 2023, and 2024, while only one thesis was published in 2019. This situation indicates that academic interest in the subject increased significantly in 2020 but has since continued at a stable yet limited level in recent years.

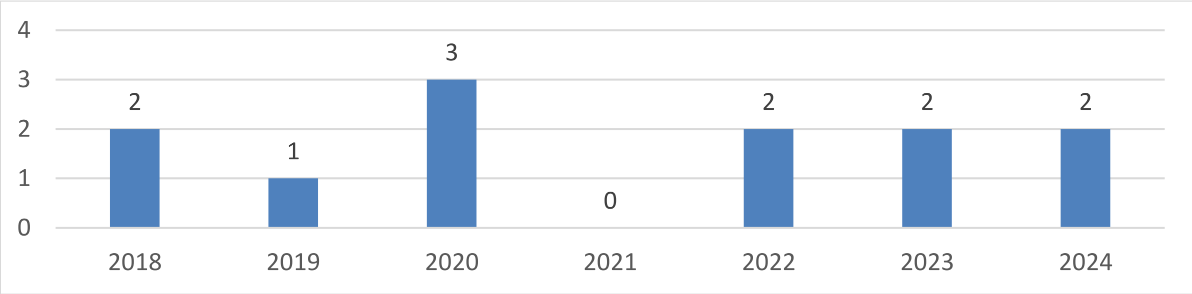

Figure 3. Distribution of Studies by Year (Source: Own research)

When the keyword distribution in Table 10 is examined, it is evident that the three most frequently used keywords are "Gastronomy," "Gastronomy and Culinary Arts," and "Gastronomy Education." These are followed by the words "Education," "Cookery," "Kitchen," and "Fine Dining," respectively. In addition to these, 48 different keywords were used.

Table 10.
Distribution According to Keywords (Source: Own research)

Keyword	**Frequency**
Gastronomy	71
Gastronomy and Culinary Arts	32
Gastronomy Education	21
Education	15
Culinary Arts	12
Kitchen	8
Fine Dining	4
Gastronomy History, Gastronomy Engineering, Gastronomy Applications, Sustainability, Conceptual Errors, Gamification, Virtual Reality Technologies, Overview, TV Cooking Programs, Celebrity Chefs, Curriculum, Academic Staff, Graduate, Culinary Culture, Social Responsibility, Chef, Professional Culinary Schools, Mobile Augmented Reality, Covid-19, Hatay Gastronomy, Metaphor Analysis, Cinema, Eating Habits, Distance Education, Internship, Food and Beverage Industry, Experience, Image Perception, Gastronomy Cinema, Boilingpoint, Andragogy, Systematic Review, Artificial Intelligence, ChatGPT, Social Responsibility Project, Mengen National Culinary Camp, Adult Education, In-Depth Interview, Qualitative Research, Kitchen Workshop-Equipment, Fear of Innovation in Food, Fear, Fusion Cuisine, Molecular Gastronomy, Teaching Staff Competency, Secondary Gastronomy Education, Graduate Thesis, Bibliometric Analysis	1

CONCLUSION AND RECOMMENDATIONS

In this study, a bibliometric analysis of the studies on gastronomy education in Turkiye was conducted through the Higher Education Council Academic Search (YOK Academic) database. When the type of publication was analyzed, it was determined that most studies were in the article type. In the bibliometric study conducted by Bayram and Arıcı (2021), the result coincides with the finding that the most common type of publication in the field of gastronomy is an article. Book and thesis studies remained low compared to other types of publications. Of the theses, 10 were master's theses and 2 were doctoral theses. Increasing the number of books and thesis studies may contribute to a more comprehensive and detailed approach to gastronomy education. In particular, thesis studies can focus on more comprehensive and specific topics, allowing the development of innovative approaches and solutions to gastronomy education. When the distribution of publications at the national and international levels is analyzed, it is evident that national studies account for 52.87% and international studies for 47.13%. This situation highlights the existence of academic interaction on a global scale in the field of gastronomy education. Enhancing this interaction may offer a valuable perspective for comparing gastronomy education in Turkiye with international standards and identifying its areas for improvement. It was observed that the first publication related to the study was published in 2012 as a conference paper, and that the number of conference papers has increased in specific periods since then. In his study, Yılmaz (2017) found that the number of conference papers in the field of gastronomy has increased steadily. This result coincides with the findings of this study. It was determined that the number of studies has increased since 2017, diversifying into different types of publications. In the findings related to the number of authors, it was seen that in a total of 77 studies in articles and papers, 72% of them preferred multi-authorship. This finding aligns with the results of a bibliometric study conducted by Sandıkçı and Mutlu (2019), which indicates that multi-authorship is preferred in studies published in the field of gastronomy. The qualitative method was preferred the most (49.41%) in 42 publication types. A mixed-methods approach, which is the least preferred method type (utilizing both quantitative and qualitative research), was employed in 9 studies, accounting for 10.59% of the studies.

When the study topics are analyzed, 17 studies (19.5%) on the current status, problems, and solution suggestions of gastronomy education are the most common topic among the 87 studies analyzed. This situation shows that the problems encountered in the development process of gastronomy education are accepted as an important research area. Issues such as the course contents of gastronomy departments, the compatibility of education programs with sectoral expectations, and the balance between theoretical and practical education are frequently examined. Problems such as deficiencies in the educational infrastructure (insufficient kitchen equipment and limited practical training areas), the lack of sectoral experience among academic staff, difficulties faced by graduates in finding employment, and the inability to fully establish a balance between theory and practice in the educational process are the focus of these studies. Secondly, 10 studies (11.5%) on technological approach applications in gastronomy education address the integration of digitalization and technological innovations into gastronomy education. This shows that the impact of technology on gastronomy education is becoming increasingly important. Opinions on the use of virtual kitchen simulations, augmented reality (AR), and virtual reality (VR) applications in gastronomy education, as well as their applicability, are discussed. Modern kitchen technologies (sous vide devices, industrial kitchen robots, food design with 3D printers) and their role in the educational process, the practical skills that students gain from working with technological equipment, and compliance with industrial kitchen standards were examined in detail. Another area of research among the study subjects was on students studying gastronomy. These studies aim to understand students' educational processes, career goals after graduation, sectoral expectations, internship experiences, competence levels in kitchen practices, and their predictions about working life. Such studies play a crucial role in planning gastronomy education more effectively and developing programs that cater to the needs of students. It is thought that increasing the number of such studies will help determine which areas the gastronomy education curriculum should be updated.

When the distribution of the journals in which the articles were published is analyzed, it is seen that a total of 40 articles were published in 22 different journals. The Journal of Tourism and Gastronomy Studies ranks first with 12 articles. The majority of the journals are in the field of social sciences. In the papers, 33 conference papers were presented in 18 different events. With 11 conference papers, ''International Congress on Gastronomy Tourism Research'' ranks first. A total of 298 keywords were used in 87 studies. There are 3.4 keywords per study. The most used keyword in keyword distribution was "Gastronomy" with 72 repetitions. The concepts used 1 time in keywords reflect the interdisciplinary perspective of gastronomy education and sectoral trends. These keywords encompass a diverse range of topics, including gastronomy engineering, culinary culture, the food industry, education, and academic studies. Topics focus on the historical, technological (mobile augmented reality, virtual reality, artificial intelligence), cultural (celebrity chefs, TV cooking programs, gastronomy cinema), educational (curricula, lecturer competence, distance education) and applied dimensions of gastronomy (sustainability, innovation, molecular gastronomy, fusion cuisine), while areas such as social responsibility and internships are also included. In addition, some studies examine gastronomy education from a psychological perspective (misconceptions and image perception). These keywords can help researchers who want to conduct studies on gastronomy education to identify the themes and subject gaps. Although the exclusion of repetitive studies and access problems to some publications limited the scope of the study, the fact that such problems were encountered during the study process highlights the need for improved accessibility and standards of academic databases in Turkiye.

In conclusion, this study has identified gaps in the literature and provided a roadmap for future academic research. It is believed that future studies on strengthening gastronomy education and sectoral collaborations, as well as enriching applied education with research that incorporates changing sector dynamics and consumer demands, will contribute to both enhancing the academic literature and enabling gastronomy education in Turkiye to better respond to sectoral needs.

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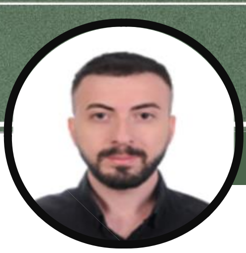

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Relational analysis of publications on the use of geographic information systems in tourism - Recreation planning and management

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ABSTRACT

This study aims to comprehensively examine the use of geographic information systems (GIS) in tourism planning and management. The role of GIS in the tourism sector is becoming increasingly important, especially in areas such as spatial data analysis, decision support systems, and sustainable tourism planning. In this study, a bibliometric analysis of academic studies was conducted, examining current trends, thematic clusters, international collaborations, and citation networks in detail. The methodology of the study is based on bibliometric analysis using VOSviewer software. These analyses reveal the methods and areas in which GIS is utilized in tourism planning, as well as the prominent topics and countries that have collaborated more in this field. Based on articles in the Scopus database, the research visualized and analyzed the issues on which publications focus, the collaboration networks between authors, and the most cited studies. The findings demonstrate that GIS is effectively utilized in tourism planning, particularly in areas such as sustainable tourism, infrastructure planning, and environmental impact assessments. However, topics such as big data analytics and intelligent city planning have not yet been sufficiently explored. In addition, international collaborations are concentrated among countries such as the United States, China, the United Kingdom, and Türkiye. The most frequently cited authors and studies were those related to sustainable tourism and its environmental impacts. In conclusion, this study offers a deeper understanding of the versatile applications of GIS in the tourism sector and provides important insights for future research. In particular, it is emphasized that issues such as integrating GIS with big data and artificial intelligence should be further explored.

KEYWORDS

Geographic information systems (GIS), tourism planning, recreation planning, bibliometric analysis, academic collaboration

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INTRODUCTION

The tourism sector continues to proliferate as one of the main drivers of economic, cultural, and environmental development worldwide (Anis et al., 2023; Jeong et al., 2023). For sustainable growth, aligning with shifting tourism alternatives in response to environmental challenges (Borysova et al., 2020), the integration of modern technologies in planning and management processes plays a crucial role. In this context, GIS has become an essential tool for spatial data analysis, suitability assessment, impact identification, decision-making, and achieving sustainable development goals in tourism planning and management. GIS provides powerful tools for planning and managing tourism destinations, leveraging its advanced capabilities in spatial data collection, analysis, and visualization (Magige et al., 2020).

Recent studies have highlighted the use of GIS in various areas, including monitoring the environmental impacts of tourism destinations, infrastructure planning, site selection, and enhancing tourist experiences (Vukovic, 2022). Particularly, tourism planning requires a comprehensive understanding and analysis of geospatial data, which is complex and dependent on a diversity of factors (Allheeib et al., 2022). Still, proper and effective adoption of GIS technologies in the tourism sector remains limited compared to their strong potential and significant role (Chen, 2007; Lepetiuk et al., 2023). Research in the literature provides examples of GIS-based implementations and focuses on reviewing previous studies, while a comprehensive and holistic analysis of the current state of the scientific field is lacking.

From this perspective, the primary objective of the research is to gain a deeper understanding of the current impacts and future potential of GIS technology on tourism planning. To achieve this goal, the study undertakes a comprehensive review of publications on GIS and tourism planning, conducted through a bibliometric analysis using VOSviewer software. In this context, inter-author collaborations and citation networks are determined by the analyses and spatial distribution of factors such as the country, language, and journal of the study. The results have been organized into clusters and maps, showing the popular research topics and their relationships to each other, which helps identify the contribution of GIS to the tourism sector and the research gaps (i.e., areas that are insufficiently explored or left unexplored) in this field. The results of the study provide an important data source, especially for academics working on the use of GIS in tourism planning. Citation analyses, which identify the most influential studies and authors in the field, offer valuable guidance for future studies and provide essential resources for researchers seeking to understand the impact of GIS on the tourism sector.

The novelty of this study lies in its comprehensive and systematic bibliometric analysis of the scientific literature on the use of GIS in tourism planning and management. While previous studies have generally examined specific applications of GIS and recommended fields to benefit from GIS capabilities, this study approaches the literature from a broader perspective. It systematically analyzes the multifaceted use of GIS in the tourism sector. The bibliometric analysis, performed using VOSviewer software, identifies the main trends and existing knowledge gaps in the field, revealing thematic clustering, international collaborations, citation analysis, and research gaps. Furthermore, the geographical distribution of international collaborations, along with a detailed analysis of the most cited authors and studies, makes this study distinct from other literature reviews.

LITERATURE REVIEW

The bibliometric analysis is a commonly used method for determining particular studies and their context, focusing on selected areas or topics. Different software and methodologies are utilized to perform bibliometric analysis, while some researchers develop new tools to perform the process. Among these is the Bibliometrix tool, developed using the R programming language by Aria and Cuccurullo (2017), which provides comprehensive science mapping analyses across various scientific fields. VOSviewer, on the other hand, is one of the most preferred tools. Shah et al. (2019) analyzed the issue of presumption using tools such as HistCite and VOSviewer. The findings of this study are considered an example of VOSviewer's capacity to visualize research themes in the literature. Moral-Muñoz et al. (2020) evaluated software tools used in scientific research from an up-to-date perspective. This study considered the advantages and limitations of various software tools and provided guidance on which software is more effective in which situations.

Bibliometric analyses are conducted in a broad range of fields. For example, in their bibliometric analysis of international competitiveness, Capobianco-Uriarte et al. (2019a, 2019b) analyzed the distribution and thematic trends of publications in this field. Guo et al. (2019) conducted a bibliometric analysis focusing on smart city research and identified the general trends in publications in this field. The study by Kokol et al. (2020) examined the historical development of bibliometric analysis in the medical field. These methods used in medical research provide general analysis methods that can be extended to other scientific fields. Tomaszewska and Florea (2018) evaluated the themes and trends in the scientific literature on urban smart transportation through a bibliometric analysis. Similarly, Winkowska et al. (2019) examined the literature on the smart city concept and mapped its place in scientific research using bibliometric methods. Finally, Yeung et al. (2021) analyzed the applications of virtual and augmented reality in the medical field, while Zyoud and Al-Jabi (2020) examined scientific developments in the early phase of COVID-19 research through bibliometric analysis. These studies offer valuable insights into analyzing the literature in rapidly evolving fields, such as emerging technologies and pandemics.

Bibliometric analyses on tourism and GIS-related studies are relatively uncommon. Bibliometric analyses in the field of tourism focus on studies in tourism management, gastronomy, tourism, and accommodation management. These studies provide a systematic review of the body of knowledge in this field by revealing different aspects and research trends in the tourism sector. For example, Dahiya et al. (2022) analyzed research trends in the tourism and hospitality sector in India and presented a bibliometric analysis of studies conducted between 2000 and 2021. The research revealed the increase and central themes of publications in the industry during this period. Del Río-Rama et al. (2020) emphasized the importance of cultural and natural resources in island tourism and analyzed this issue with the bibliometric mapping method. The research by García-Lillo et al. (2018) mapped the "intellectual structure" of academic research on human resource management and tourism. By analyzing key authors and themes in this field, the study illustrated the impact of human resources on tourism management. Jiang et al. (2017) analyzed research on tourism crises and disaster management using bibliometric visualization techniques, revealing scientific developments in this field. Kim and So (2022) examined the last two decades of customer experience research, evaluating the main trends and thematic developments in the field of hospitality and tourism through a bibliometric analysis. Koseoglu et al. (2016) systematically analyzed bibliometric studies in the field of tourism, examining the methods and themes of these studies.

In addition to the aforementioned studies, bibliometric analyses have been extensively applied to various subfields within tourism research, revealing key trends and thematic developments. For instance, Koseoglu, Sehitoglu, and Parnell (2014) conducted a bibliometric analysis of academic studies published in leading tourism and hospitality journals in Turkey, shedding light on the evolution of research trends in this region. Similarly, Leong et al. (2020a, 2020b) explored the advancements in tourism research by assessing the growth of academic publications over time and identifying the primary research areas that have shaped the field. Mulet-Forteza et al. (2019) provided a comprehensive bibliometric analysis of publications in tourism, leisure, and hospitality, highlighting the dominant themes and their contributions to the broader literature.

Focusing on niche areas, Naruetharadhol and Gebsombut (2020) examined food tourism studies in Southeast Asia, uncovering emerging trends and key themes through bibliometric methods. In the context of cultural and religious tourism, Suban et al. (2021) analyzed the growth of halal and Islamic tourism research, identifying significant trends and contributions in this specialized field. Furthermore, Szpilko (2017) investigated the tourism supply chain literature, mapping out the primary studies and trends that have influenced this area of research. These studies collectively demonstrate the versatility of bibliometric analysis in uncovering the intellectual structure and thematic evolution of diverse tourism subfields, providing valuable insights for future research directions.

METHOD

This study employs bibliometric analysis to examine the literature encompassing the fields of GIS and tourism planning. The analysis encompasses studies retrieved from the Scopus database. The keywords "tourism planning," "recreation planning," and "GIS" were used as keywords. In the first stage, 133 studies were listed in the review without time limitation. In addition, a table was created for all the articles included in the evaluation. In this table, the name of the article, purpose, method, authors, and the analysis method used were compiled. Only the articles written in English were then filtered, and the remaining 83 articles were used for further analysis. The articles used in the study, along with information about these articles, are provided in Appendix 1. A previous study (Çalış & Duman, 2023) was utilized in the implementation of the procedures of the method, and the details of the preliminary research are presented in Table 1.

Table 1.
Preliminary research procedures (Source: Scopus.com)

Database researched	Scopus
Content explored	Article
Language	English
Date Range	All times
Search fields	Title, abstract, and keywords
Search categories by field	There are no field limitations.
Keywords	"tourism planning" or "recreation planning" and "GIS"

Additionally, a systematic literature review (SLR) was conducted on the articles in Appendix 1, following the procedures outlined in Table 1. The SLR method is a rigorous and structured approach used to synthesize existing research on a particular topic. This methodology is characterized by transparent, repeatable, and scientific processes that aim to minimize bias and increase the reliability of findings. According to Kitchenham's (2004) guidelines, the SLR process can be divided into several phases: planning, conducting, and reporting. The planning phase involves defining a straightforward research question and selecting appropriate databases and keywords for the literature review (Sevgi, 2021; Faisal et al., 2021). Following this, the conducting phase involves applying systematic review methods and identifying relevant studies, which may include both practical and methodological considerations (Sevgi, 2021; Sulistyowati & Ahmar, 2023; Samara et al., 2020). Ultimately, the reporting phase facilitates evidence-based decision-making by synthesizing findings in a clear and reproducible manner (Choo, 2023; Jacobs et al., 2019).

Within the scope of the systematic literature review, all 83 studies on the subject were examined and classified to answer the following questions.

- Question 1: Write the purpose of the study in one sentence.
- Question 2: What are the method(s) used in the study?
- Question 3: What are the analyses and techniques used in the study?

The VOSviewer application was used for these analyses. VOSviewer is a crucial software for visualizing and analyzing bibliometric data, including scientific research, authors, and keywords. One of the most remarkable features of this software is that it allows the creation of clusters based on the relationships between data. Clustering involves grouping items with the same theme, and these items are typically closer to each other than to items in other clusters. VOSviewer uses an advanced algorithm to analyze data. By examining the relationships between items, this algorithm identifies groups with dense connections. For example, in a keyword network, words that are frequently used together are included in the same cluster. In a co-authorship network, researchers who frequently publish together are grouped. Citation networks cluster articles that cite similar sources. In co-citation analysis, studies that are frequently cited together are brought together. Similarly, bibliographic match analysis clusters articles that use the same sources. In this process, clusters are formed around particular themes or keywords. In the analysis, clusters are typically represented in different colors, allowing each group to be easily distinguished visually. Items within clusters are usually close to each other, while items in different clusters have more distance between them. The size of the items in the network is also important; larger circles usually indicate that an item is used more frequently in the analysis or is centrally located. These clusters often reflect a particular topic or theme. For example, when conducting research in the field of tourism and GIS, terms related to "sustainable tourism" may be clustered in one cluster, while terms related to "recreation planning" may be in another. Similarly, collaborating authors or articles on the same topics may be included in the same cluster.

Clustering facilitates a deeper understanding of the primary themes and research trends within a field. This provides researchers with the opportunity to examine the overall structure of the existing literature and understand the connections between different topics. Furthermore, the level of granularity of the cluster can be adjusted through the VOSviewer software, allowing analyses to be carried out more in-depth or more generally. In conclusion, cluster analysis with VOSviewer software is a highly effective method for uncovering hidden structures in the scientific literature. In this way, researchers can visually analyze which topics are related to one another and identify which authors tend to collaborate more frequently. This type of analysis is beneficial for understanding general trends and subtopics in the research field.

The analyses in this study were conducted using VOSviewer software, and the relationships between publications, keyword co-occurrences, and collaborations between authors were examined. First, keyword clustering was performed. VOSviewer revealed that frequently used keywords, such as "GIS," "sustainable tourism," and "recreation planning," were clustered together. This reveals that these topics are often discussed together in research. Author clustering was based on the collaboration of authors working in the field of tourism planning and GIS. Authors who frequently work together in the same research area formed a separate cluster, revealing the collaboration networks in this field. In the study, the clustering feature of VOSviewer was utilized to identify the primary patterns and relationships within the data. This analysis helped us understand which themes are prominent in the research field and which topics scientific publications are concentrated on. Finally, the level of detail of the clusters was adjusted by changing the resolution settings in VOSviewer. By using high resolution, more clusters were created with finer details, while low resolution resulted in fewer but more comprehensive clusters. In this way, the basic structure and sub-areas in the analyzed data were revealed. This method enabled the visualization and examination of scientific relationships, prominent trends, and sub-themes in the fields of GIS and tourism planning through bibliometric analysis.

In the final stage of the study, spatial distribution maps were prepared to present the findings obtained with the support of geographic information systems. The findings obtained with the help of these maps were visualized. These maps were created based on the countries of the authors of the publications and the number of citations for each publication. All maps produced in this framework were created according to countries and continents. Produced maps are;

- Distribution of publications by country
- Distribution of publications by contributing authors
- Distribution of publications according to the number of citations
- Distribution of publications by continent
- Distribution of authors contributing to publications by continent
- Distribution of publications on a continental basis according to the number of citations.

FINDINGS

The findings of this study are presented under two main headings. First, the bibliometric analysis outlines the primary trends in the literature on the application of GIS in tourism planning, identifies the most cited authors, and examines research collaborations. This analysis contributes to the body of knowledge in the field by identifying prominent topics and under-explored research areas. Second, spatial distribution analyses examine the geographical distribution of studies using

GIS worldwide. These findings enable us to understand which regions utilize GIS more intensively and the spatial implications of this technology in tourism planning.

Findings based on bibliometric analysis

The distribution of studies by year and field category, the distribution of articles by country, and the ranking of authors by the number of articles were obtained from the Scopus database. Figure 1 illustrates the distribution of studies by year using a line graph. It is noteworthy that the number of studies has increased, especially since 2012. When the distribution of published studies by field category is analyzed, it is evident that Environmental Science (22%) and Social Sciences (22%) carry a significant weight. This duo is followed by Business, Management, and Accounting (15.5%). Earth and Planetary Science (10.1%), Computer Science (5.4%), and Agricultural and Biological Sciences (5.4%) are the three other fields with the highest weight. There are also studies in other fields, such as Engineering, Energy, Materials Science, etc., although with less weight. There are also other fields classified under the "other" category, but with very low weights. A pie chart summarizing the field category is presented in Figure 2.

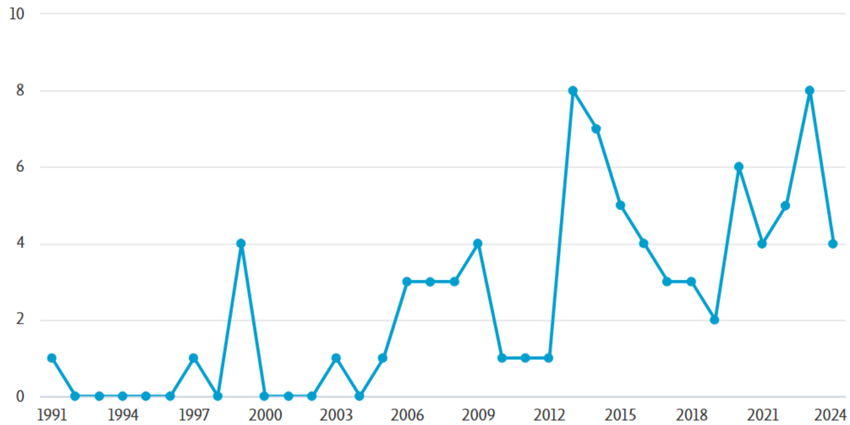

Figure 1. Distribution of studies by years (Source: Scopus.com)

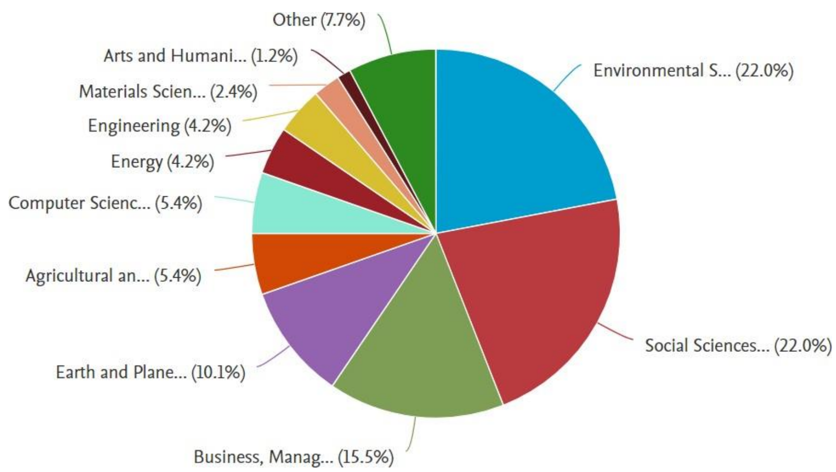

Figure 2. Distribution by field categories (Source: Scopus.com)

The distribution of articles by country is presented in Figure 3. China and the United States lead the way, followed by Turkey, Iran, Malaysia, and the United Kingdom.

In Figure 4, where the authors are ranked according to the number of articles, it is seen that Aminu and Matori are in first place with four articles each, followed by Yusuf and Zainol with three articles each.

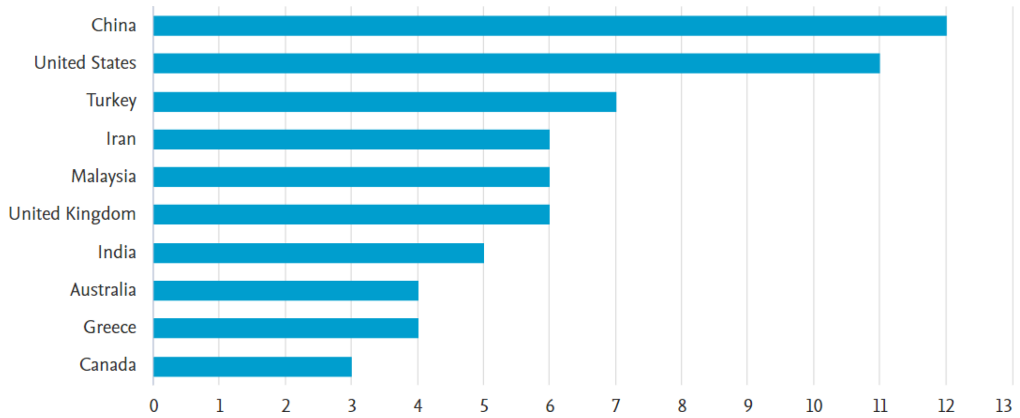

Figure 3. Ranking of the number of articles by country (Source: Scopus.com)

Figure 5 shows the network visualization of the publications in the Scopus database, illustrating the relationships between keywords (minimum of 2) that the authors use most frequently together. The circle of the keywords most frequently used by authors is shown as larger.

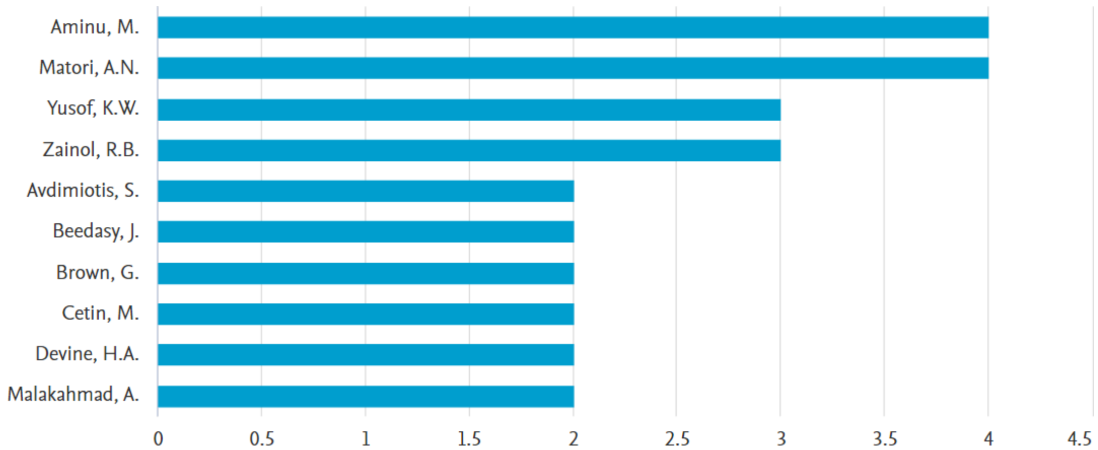

Figure 4. Ranking of authors according to the number of articles (Source: Scopus.com)

The VOSviewer program grouped the keywords that the authors used together most frequently (a minimum of two words used together) and created five clusters. Table 2 shows these clusters.

Table 2.
Keyword clusters (Source: Authors)

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
Carrying capacity	Big data	Ecotourism	Social media	AHP	Nature conservation	Multiple criteria evaluation
Outdoor recreation planning	GIS	MCE	Tourism	Sustainable tourism	Protected area	Spatial planning
SDSS	Open source	Recreation planning	Tourism planning			
Sustainable development	Recreation opportunity spectrum	Suitability analysis				
Trail planning						

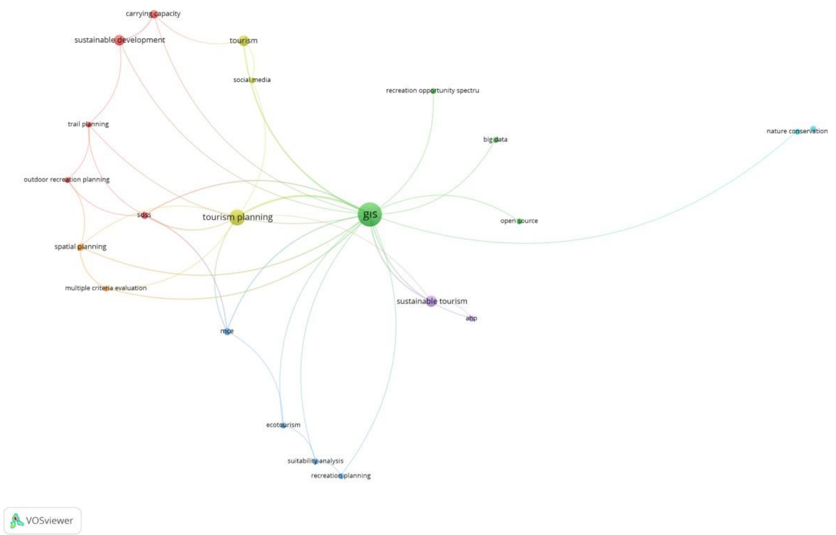

Figure 5. Network Visualization of Publications in Scopus Database Showing the Associations of the Words (Min 2) Mostly Used Together by the Authors (Types of Analysis: Co-Occurrence/Unit of Analysis: Author Keywords) (Source: Vosviewer)

The list of authors of the studies with over 100 citations is given in Table 3.

Table 3.
Authors of the most cited studies (Source: Authors)

Id	Author	Citations
1	Bahaire, T., Elliot-Wite, M.	403
2	Cetin, M., Sevik, H.	232
3	Lee, S. H., Choi, J. Y., Yoo, S. H., Oh, Y. G.	200
4	Raymond, C., Brown, G.	189
5	McAdam, D.	164
6	McIntyre, N., Moore, J., Yuan, M.	155
7	Beedasyl, J., Whyatt, D.	135
8	Gül, A., Örücü, M.K., Karaca, Ö.	114

The sources where the most cited articles were published are listed in Table 4, with at least 1 document and at least 100 citations in the Vosviewer program. Journal of Sustainable Tourism ranked first with three publications and 756 citations.

Table 4
Sources where the most cited articles were published (Source: Authors)

Id	Source	Documents	Citations
1	Journal of Sustainable Tourism	3	756
2	Environmental Monitoring and Assessment	1	232
3	Tourism Management	1	200
4	Society and Natural Resources	1	155
5	International Journal of Applied Earth Observation and Geoinformation	1	135
6	Environmental Management	1	114

The institutions where the authors of the most cited articles work are listed in Table 5, with at least 1 document and at least 100 citations. It was observed that all seven institutions listed consisted of different departments.

Table 5.
Institutions where the authors of the most cited articles work (Source: Authors)

Id	Organization	Documents	Citations
1	Department of Tourism and Environment, University of Lincolnshire, and Humberside	1	403
2	Department of Landscape Architecture, Faculty of Architecture and Engineering, Kastamonu University	1	232
3	Department of Rural Systems Engineering, Seoul National University	1	200
4	Research Institute for Agriculture & Life Sciences, Seoul National University University	1	200
5	School of Natural and Built Environments, University of South Australia	1	189
6	Natural Resource Management, Green Mountain College	1	189
7	Department of Finance & Business Information Systems, Nottingham Business School, Nottingham Trent University	1	164
8	Center for Tourism and Community Development, Lakehead University	1	155
9	Faculty of Engineering, University of Mauritius	1	135
10	Department of Geography, Lancaster University	1	135
11	Department of Landscape Architecture, Süleyman Demirel University	1	114
12	Department of Eğirdir Vocational College, Süleyman Demirel University	2	114

The countries with the highest number of citations are listed in Table 6, which includes at least one document and a minimum of 100 citations. With 11 documents and 319 citations, the USA ranked first. The United Kingdom and Turkey followed the USA.

Table 6.
Countries with the highest number of citations (number of articles/number of citations) (Source: Authors)

Id	Country	Documents	Citations
1	United Kingdom	2	567
2	Turkey	2	346
3	Korea	1	200
4	Australia	1	189
5	Canada	1	155
6	Mauritius	1	135

Findings based on GIS analysis according to spatial distributions

This section presents the findings obtained through GIS-based spatial distributions and geographical analysis. Figure 6 presents a world map illustrating the spatial distribution of studies on GIS and tourism planning across various countries. This map illustrates the countries that utilize GIS more extensively and visualizes the geographical distribution of studies on GIS. Fig. 2

shows that China is the leader among the countries using GIS in tourism planning, with nine studies. Turkey follows this with seven studies, Iran with 6, Malaysia with six, and India with 5. Although they are developed countries, the United Kingdom, with four studies, the United States, with four, Greece, with four, Australia, with four, and New Zealand, with three, are the countries with the fewest publications. However, another striking factor is that Egypt, Jordan, Italy, Spain, Canada, Japan, and South Africa, which are among the most popular countries in the world in terms of historical, natural, and cultural tourism, each have two publications. Another striking result is that New Zealand 1,

Mexico, Nepal, Portugal, Iceland, Denmark, Romania, Serbia, and Korea have the fewest publications. In addition to all this, it is a significant finding that there are no publications in the vast majority of the rest of the world.

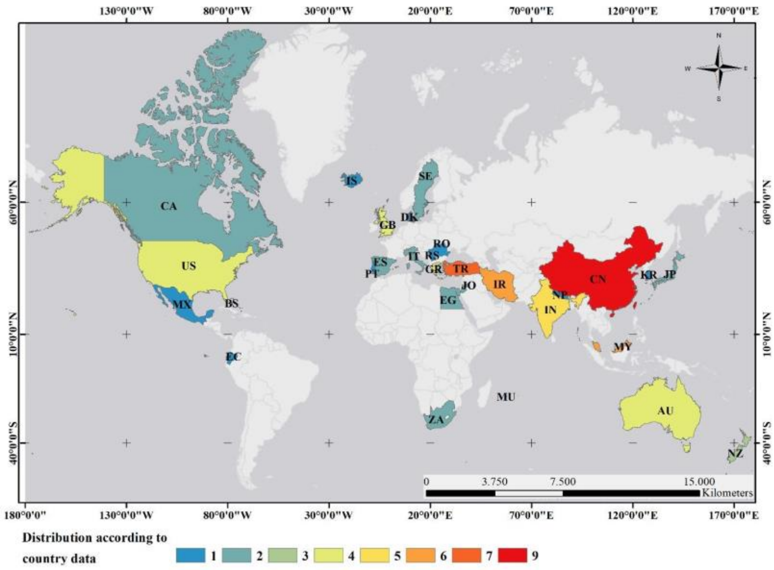

Figure 6. Distribution of publications by country (Source: Authors)

Figure 7 illustrates a world map showing the spatial distribution of authors who have contributed to studies on GIS and tourism planning across various countries. Fig. 3, China, a country rich in history, culture, and nature, ranks first with 38 authors, followed by Malaysia with 27, the United States with 23, India with 22, Turkey with 19, Iran with 18, Italy with 11, Australia with 10, Greece 9, Romania 8, United Kingdom 8, Spain 7, Canada 6, New Zealand 6, Portugal 6, Jordan 5, South Africa 5, South Korea 4, Sweden 4, Ecuador 4, Japan 3, Bahamas 2, Denmark 2, Mauritius 2, Mexico 2, Serbia 2. Germany and Iceland maintained their presence with 1 and 1 author, respectively. Many other countries, which constitute a significant part of the world, do not have an author who meets the criteria. Fig. The spatial map obtained in Fig. 3 was also evaluated within the scope of international cooperation networks. Spatial data on which countries are more frequently involved in academic collaboration were analyzed. The striking factor in the joint studies is that authors from the same country mostly worked together. China 7, Portugal 1, Jordan 1, Sweden 2, Turkey 7, New Zealand 2, United Kingdom 3, Spain 1, Iran 3, South Africa 2, India 4, Greece 4, Malaysia 5, Australia 4, United States 3, Spain 1, Denmark 1, Korea 1, Mauritius 1, Egypt 2, Serbia 1, New Zealand 1, Italy 2, Canada 1, Iran 2, Mexico 1, Canada 1, Japan 1, Romania 1. Studies conducted with the cooperation of different countries: Mauritius- United Kingdom 2, India- Saudi Arabia- United States 1, Ecuador-Canada-Spain 1, Malaysia-Nigeria 1, Jordan-Germany 1, Nepal-Thailand-Japan 1, Iceland-Sweden 1, United Kingdom-United States 1, Japan-China 1, China-Belgium 1, China-United States 1, United States-Greece 1, the Bahamas-United States 1, Iran-Italy 1. As a result, this study shows that the number of publications on the use of GIS in tourism planning and the number of collaborations between countries on this issue are significantly low.

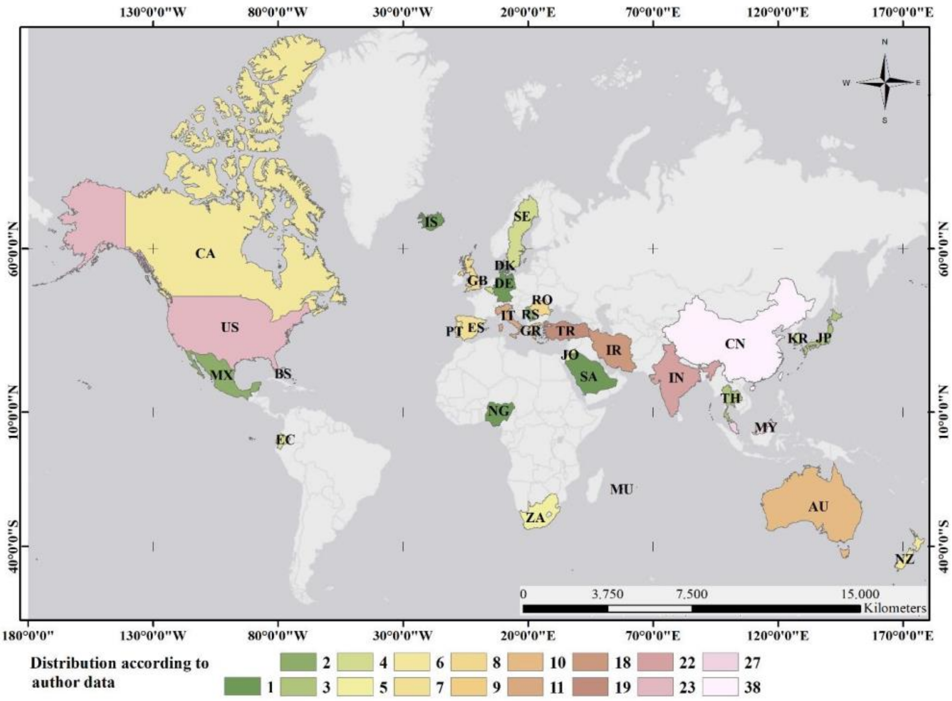

Figure 7. Distribution of publications by contributing authors (Source: Authors)

Figure 8 shows a scatter map showing the distribution of citations across countries. This map shows which countries produce the most cited research on GIS and tourism planning. Considering the number of citations, the United Kingdom leads the list of countries using GIS in tourism planning with 575 citations, while Turkey ranks second with 492 citations. Mauritius follows with 270 citations, New Zealand with 233, South Korea with 200, and Australia with 213. Canada 195, Malaysia 186, Iran 129, China 116, United States 99, Iceland 82, India 63, Sweden 62, Italy 60, Nepal 59, Greece 57, South Africa 53, Bahamas 44, Denmark 31, Jordan 31, Ecuador 16, Serbia 14, Portugal 9, Mexico 9, Spain 6, Romania 5, Japan 1. Very few publications from other countries were not cited at all. Figure 9 illustrates the distribution map of regions where studies are concentrated on a continental basis within the scope of the reviewed literature. This map reveals which continents use GIS more in research on tourism planning. According to Figure 9, Asia ranks first among the continents, with 32 publications. Europe ranks second, with 26 publications. North America ranks third, with eight publications. Australia ranks fourth, with seven publications. Africa ranks fifth, with six publications. South America ranks sixth, with one publication. There are no publications on the Antarctic continent. In terms of the number of countries publishing in this field by continent, it has been determined that Asia is the most influential continent. Europe and North America follow this.

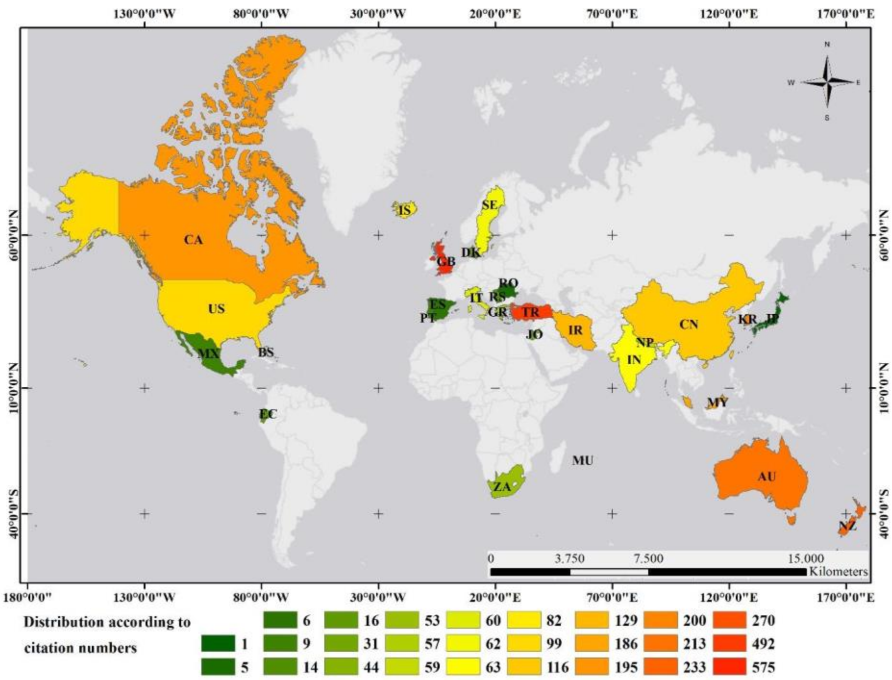

Figure 8. Distribution of publications according to the number of citations (Source: Authors)

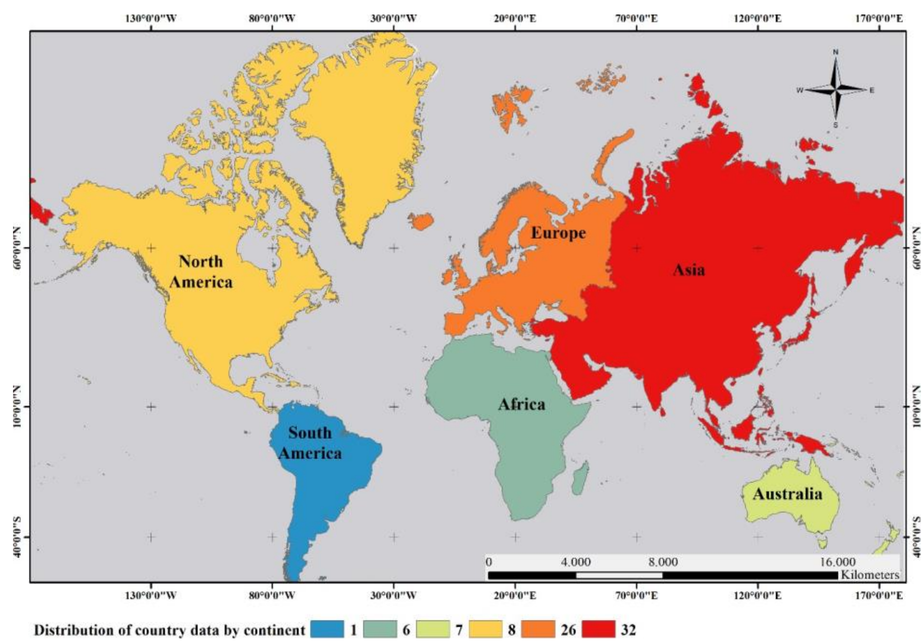

Figure 9. Distribution of publications by continent (Source: Authors)

Figure 10 shows the distribution of the authors who contributed to the publications within the scope of the reviewed literature. In this context, Asia stands out as the continent that has worked the most on the research topic, with 121 authors. Europe ranks second, with 82 authors; North America ranks third, with 33 authors; Australia ranks fourth, with 16 authors; Africa ranks fifth, with eight authors; and South America ranks sixth, with four authors. Examining the distribution of authors by continent, it is evident that Asia is the most influential continent in terms of the number of authors. Europe and North America follow this. Figure 11 shows a map of the distribution of citations to publications within the scope of the analyzed literature. According to Figure 11, Europe ranks first with 1393 citations, Asia ranks second with 785 citations, Australia ranks third with 446 citations, North America ranks fourth with 347 citations, Africa ranks fifth with 323 citations, and South America ranks sixth with 16 citations. When the number of authors and the number of citations are compared, it is found that authors and publications from the European continent are much more influential. This is followed by Asia and Australia, respectively.

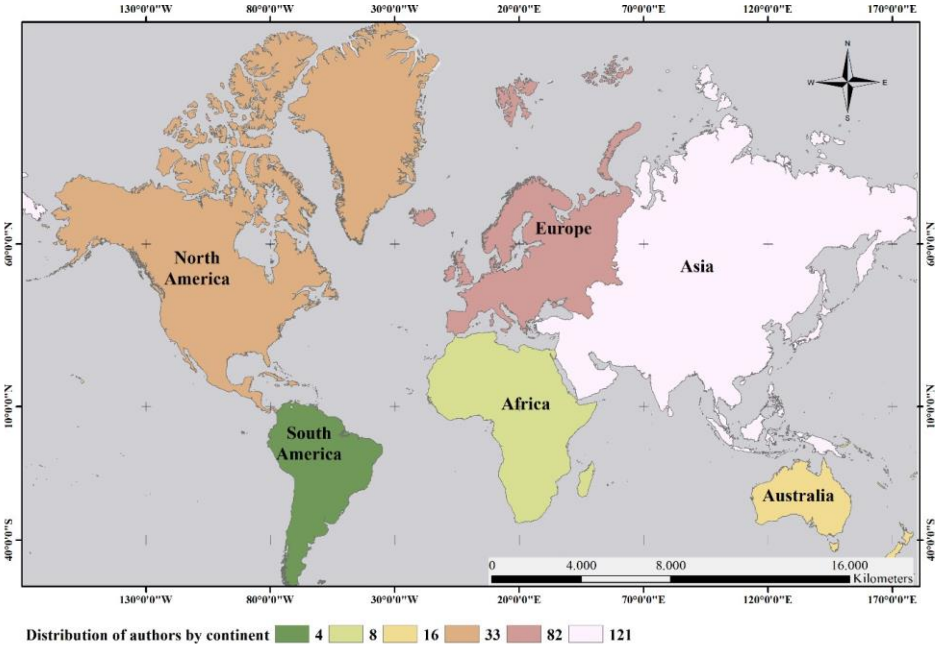

Figure 10. Distribution of authors contributing to publications by continent (Source: Authors)

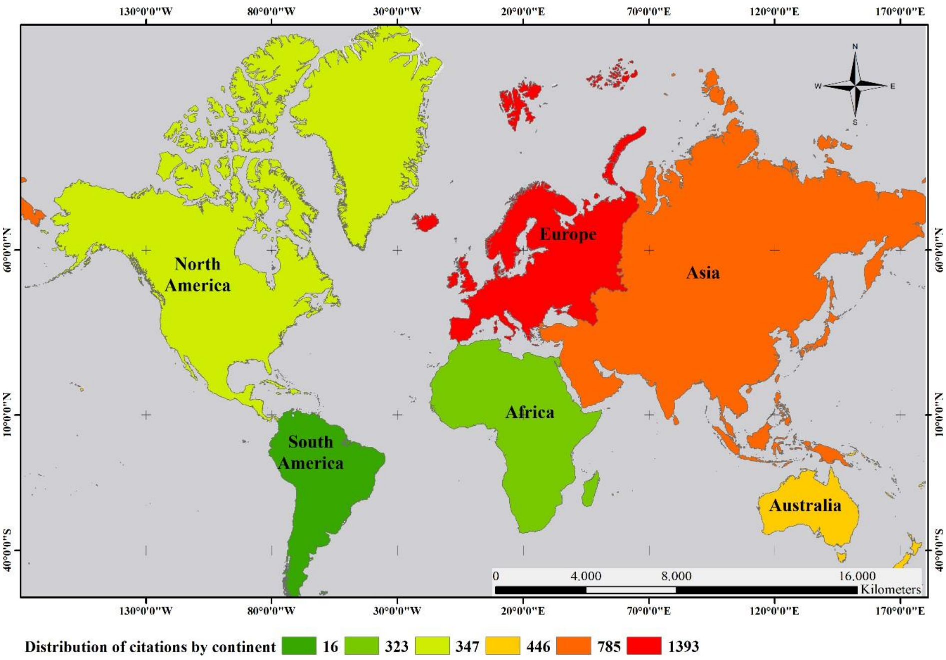

Figure 11. Continental distribution of publications according to the number of citations (Source: Authors)

RESULTS

This study conducted a comprehensive review of the scientific literature on the use of GIS in tourism planning using VOSviewer software. Bibliometric analysis systematically revealed the relationships between publications, authors' collaborations, number of citations, and keyword matches. The analysis reveals that GIS plays a crucial role in tourism planning, encompassing both spatial analysis and decision support systems. The main areas of research are sustainable tourism, recreation planning, infrastructure management, and environmental impact assessments. In particular, it is seen that sustainable tourism is predominantly examined in studies on how GIS technologies are used in environmental management and resource planning. However, areas such as smart cities, big data analytics, and spatial analysis of tourist behavior that have not yet been addressed in sufficient depth leave the door open for future studies in this field.

In the thematic cluster analysis conducted with VOSviewer software, three main themes emerged in the studies on the use of GIS in tourism planning. The first theme is sustainable tourism and environmental management. This thematic cluster includes studies on the sustainable management of natural resources, ecotourism projects, and monitoring the environmental impact of tourist destinations. The emphasis on sustainability focuses on research into the long-term preservation of tourism destinations and their impact on local communities. The second theme is recreation and infrastructure planning. This theme encompasses the planning and management of the physical infrastructure in tourist areas, utilizing GIS. The use of GIS in infrastructure projects primarily focuses on optimizing transportation networks and determining the layout of tourist facilities. The third theme is spatial analysis of tourism data and decision support systems. This cluster encompasses studies on the development of decision support systems in the tourism sector, utilizing GIS-based analysis and the application of spatial data. Data-driven management of tourism destinations enables more efficient use of resources. These themes illustrate the multidimensional and multifaceted applications of GIS in the tourism sector, revealing research trends in the field. In particular, how GIS supports sustainability and infrastructure planning highlights the wide range of uses for this technology.

The analysis revealed that international academic collaborations are concentrated among countries such as the United States, China, the United Kingdom, Turkey, and Germany. These countries are pioneers in the use of GIS technologies in tourism planning and actively participate in joint projects and research. The United States and China, in particular, stand out as the countries with the highest number of publications and citations in the academic literature. Turkey, on the other hand, is one of the countries producing an increasing amount of work in this field and is involved in collaborative projects, especially in infrastructure planning and the spatial analysis of tourism data. The international cooperation network accelerates knowledge transfer between countries and contributes to the development of innovative solutions in the tourism sector.

Citation analysis helps to identify the most influential studies and authors in this field. Tim Bahaire, Martin Elliott-White, Mehmet Çetin, and Clare Gunn are among the most cited authors on the use of GIS in tourism planning. In particular, studies on sustainable tourism and environmental impact assessments have been frequently cited by other researchers and have become key reference points in this field. The most cited publications are typically studies that demonstrate the application of GIS in tourism destination management and spatial analysis. This reinforces the importance of GIS in tourism planning and shows how this technology plays a critical role in strategic decision-making processes.

This study also identified existing research gaps in the use of GIS in tourism planning. According to the analysis results, topics such as big data analytics, spatial analysis of tourist behavior, the impacts of climate change on tourism destinations, smart city planning, and innovative GIS solutions in tourism have not been adequately addressed. Further studies in these areas will further advance the use of GIS in tourism planning.

In particular, topics such as modeling the impacts of climate change on tourism using GIS and forecasting tourism demand with big data offer important opportunities for future research. These areas will contribute to the development of sustainable tourism solutions by addressing new challenges facing the tourism sector. Additionally, striking results were obtained from the study's findings, which were analyzed using spatial analysis. The findings reveal that the use of GIS in tourism planning is unevenly distributed on a global scale. The results of the study show that China is the country with the highest number of studies on GIS and tourism planning. Turkey, Iran, Malaysia, and India were among the other countries that made significant contributions to this field. The developed countries of the United Kingdom and the United States are noteworthy, with few studies. Likewise, the limited number of GIS-based studies in some countries rich in historical and touristic aspects stands out as a striking finding.

When analyzed on a continent basis, Asia ranked first in terms of both the number of publications and author contributions. Europe and North America were the other continents following Asia. However, in terms of the number of citations, Europe was identified as the continent with the highest impact. This suggests that studies conducted in Europe hold a strong position in terms of scientific impact, with a higher number of references. Another noteworthy finding is that the studies were generally conducted with few international collaborations, and mostly authors from the same country worked together. These findings provide a basis for future studies to expand the integration of tourism planning and GIS to wider geographical areas.

In summary, the theoretical contributions of this study extend the existing body of knowledge in the literature on the use of GIS in tourism planning, systematically identifying the main themes and trends in the field. The bibliometric analysis provides a deeper understanding of the impact of GIS on the tourism sector. From a theoretical perspective, this study, through thematic cluster analysis, examines the relationship between GIS in tourism planning and various issues, including sustainability, infrastructure management, and environmental impact assessments. Furthermore, the identification of issues that have not yet been adequately addressed in the literature, such as big data analytics and the impacts of climate change on tourism, provides an important direction for future theoretical work. This study offers new theoretical perspectives on the current and potential roles of GIS in tourism planning.

In terms of practical contributions, this study provides a guide for the more effective use of GIS in the tourism sector. The analysis demonstrates how GIS is applied in practical settings, such as decision support systems and spatial analysis, and identifies areas where it has the most potential. In particular, the contributions of GIS in applications such as sustainable tourism planning, infrastructure development, and spatial analysis of tourist behavior are detailed. In this context, the advantages of GIS for tourism managers, urban planners, and policymakers are presented, along with practical suggestions on how to use this technology more effectively in the future. The study also provides strategic insights for further development of international cooperation by showing the countries in which international cooperation is concentrated.

DISCUSSIONS

This study provides a comprehensive bibliometric analysis of the scientific literature on the use of Geographic Information Systems (GIS) in tourism planning and management. The findings underscore the crucial role of GIS in collecting, analyzing, and informing decision-making processes within the tourism sector. While the study confirms the widespread use of GIS in areas such as sustainable tourism, infrastructure planning, and environmental impact assessments, it also identifies significant research gaps. It provides a comparative perspective in relation to existing literature.

The findings of this study align with and extend previous research on the use of GIS in tourism planning. For instance, similar to the work of Bahaire and Elliott-White (1999), who emphasized the role of GIS in sustainable tourism development, this study also identifies sustainable tourism as a dominant theme in the literature. However, unlike previous studies that often focus on specific applications of GIS (e.g., environmental monitoring or site suitability analysis), this study provides a holistic overview of the field, revealing the interconnectedness of themes such as sustainability, infrastructure planning, and spatial analysis.

In contrast to Chen's (2007) study, which highlighted the underutilization of GIS in tourism planning, this research demonstrates that the adoption of GIS has increased significantly over the past decade, particularly in countries such as China, Turkey, and the United States. This shift suggests a growing recognition of the value of GIS in addressing complex challenges in tourism planning. However, the uneven geographical distribution of GIS-based studies, as revealed in this analysis, indicates that developing countries and regions with rich tourism potential (e.g., Africa and South America) are still lagging in the adoption of this technology.

Another key distinction of this study is its focus on international collaborations and citation networks. While previous bibliometric analyses in tourism (e.g., Koseoglu et al., 2016; Leong et al., 2020a) have examined research trends and thematic developments, they often lack a detailed exploration of collaborative networks. This study reveals that collaborations are predominantly concentrated among developed countries (e.g., the United States, the United Kingdom, and Germany), with limited involvement from developing nations. This finding underscores the need for more inclusive international partnerships to bridge the knowledge gap and promote the global adoption of GIS in tourism planning.

One of the most significant contributions of this study is the identification of underexplored areas in the literature. While previous studies have extensively covered traditional applications of GIS, such as environmental impact assessments and recreation planning, this analysis highlights emerging topics that warrant further investigation. For example, the integration of GIS with big data analytics and artificial intelligence (AI) remains largely unexplored, despite its potential to revolutionize tourism planning through real-time data analysis and predictive modeling. This gap is particularly evident when compared to studies in other fields, such as urban planning and transportation, where the integration of GIS with advanced technologies has already yielded significant advancements.

Similarly, the impacts of climate change on tourism destinations, though recognized as a critical issue, have not been adequately addressed in GIS-based tourism research. While studies like Raymond and Brown (2006) have explored the use of GIS in environmental management, there is a lack of focused research on how GIS can be leveraged to model and mitigate the effects of climate change on tourism. This study calls for more interdisciplinary research that combines GIS with climate science to develop sustainable tourism strategies.

Practical Implications and Future Directions

The findings of this study have important practical implications for tourism planners, policymakers, and researchers. First, the integration of GIS with big data and AI technologies offers a promising avenue for enhancing decision-making processes in tourism planning. For instance, predictive models based on real-time data can help optimize resource allocation, improve visitor experiences, and mitigate overcrowding in popular destinations. Future studies should explore the technical and operational challenges of implementing such integrated systems, particularly in resource-constrained settings.

Second, the uneven adoption of GIS across different regions highlights the need for capacity-building initiatives, especially in developing countries. Training programs and knowledge-sharing platforms can help bridge the gap between developed and developing nations, fostering a more inclusive global research community. International organizations and academic institutions should play a proactive role in facilitating these efforts.

Ultimately, the study highlights the significance of interdisciplinary research in addressing complex tourism challenges. By combining GIS with fields such as climate science, cultural heritage management, and biodiversity conservation, researchers can develop innovative solutions that balance tourism development with environmental and social sustainability. For example, GIS can be used to map and monitor cultural heritage sites, ensuring their preservation while promoting sustainable tourism practices.This study conducted a comprehensive bibliometric analysis of the scientific literature on the use of GIS in tourism planning and management. The findings reveal that GIS is an important tool for collecting, processing, and analyzing spatial data in the tourism sector. The study shows that the use of GIS is widespread, especially in areas such as sustainable tourism, infrastructure planning, and environmental impact assessments. However, some research gaps remain unaddressed. For example, although big data analytics and smart tourism applications are other increasingly important uses of GIS technology, they have not been thoroughly examined in the literature.

In light of these findings, important questions arise about the impact of GIS on tourism planning. On the one hand, the spatial analysis and decision support tools offered by GIS enable tourism destinations to be managed more effectively. On the other hand, how this technology can further contribute to sustainability goals is an area that still needs to be explored. Additionally, issues related to technological access and training must be addressed to enable GIS technology to be effectively utilized by a broader audience. At this point, the use of GIS, particularly in developing countries, and its role in tourism planning should be further explored.

This study highlights the significance of GIS in tourism planning and provides recommendations for future research and applications. First, the integration of big data and artificial intelligence technologies with GIS has the potential to provide more advanced decision support systems and forecasting models for the tourism sector. Therefore, it is suggested that future studies should focus on how this integration can be achieved. The combination of big data analytics and GIS can provide significant benefits in areas such as predicting tourist behavior and forecasting tourist demand. Secondly, the impacts of climate change on tourism destinations should be further investigated. In this context, GIS can be used to conduct detailed spatial analyses on how tourism activities can be managed in regions sensitive to climate change. This is especially critical for sustainable tourism planning. Finally, international cooperation needs to be strengthened. There should be greater cooperation between different countries further to expand the use of GIS in tourism planning and generate innovative solutions. These collaborations have great potential for both academic research and tourism policy development. Therefore, international academic projects and collaborations should be encouraged, and necessary steps should be taken to expand the use of GIS on a global level. The findings of this study offer important insights into how GIS technology can be utilized more effectively in tourism planning, paving the way for new horizons in future research.

By providing a comprehensive bibliometric analysis of the use of GIS in tourism planning, this study deepens the existing knowledge in the field. It provides an essential foundation for future research. The findings not only reveal the multifaceted use of GIS in tourism planning and the research trends in this field but also reveal topics that have not yet been sufficiently explored. In this context, the study serves as a strategic guide for future research on the interactions between GIS and tourism.

One of the most important contributions of this study is to systematically analyze the main trends and research gaps in the literature and identify topics that future studies can focus on. In particular, the existing studies, centered around themes such as sustainable tourism, recreation planning, and environmental impact assessments, emphasize the importance of GIS in these fields and provide a solid foundation for further investigation in the future. In addition, the data on international collaborations shows which countries' academic collaborations are concentrated with and how these collaborations can be developed in the future. In this context, researchers can contribute to a broader understanding of this technology by conducting comparative studies on how GIS is utilized in tourism planning across different geographical regions.

Future studies should be conducted to complement the findings of this study. Firstly, studies examining the integration of advanced technologies, such as big data analytics and artificial intelligence, with GIS are needed. The combination of these technologies can produce more innovative and data-driven solutions in tourism planning. For example, issues such as real-time monitoring and forecasting of tourist movements can be addressed more effectively with the integrated use of big data and GIS. Additionally, studies on the impacts of climate change on tourism destinations are crucial for sustainable tourism planning. Detailed analysis of climate change-sensitive regions using GIS can provide strategic solutions to minimize the environmental impacts of tourist activities. This study reveals the need for further research in climate change-sensitive regions.

Finally, interdisciplinary studies on the tourism sector and the use of GIS should be encouraged. It should explore how GIS technology can be applied not only in tourism planning but also in other areas, such as smart cities, cultural heritage management, and biodiversity conservation. Such interdisciplinary approaches will contribute to the development of more comprehensive and innovative solutions in the tourism sector. In conclusion, this study presents a comprehensive literature review on the application of GIS in tourism planning, offering valuable insights for future research. Further exploration of these findings, combined with various technologies, will enable the expansion and development of GIS use in the tourism sector.

CONCLUSION

In conclusion, this study presents a comprehensive and systematic analysis of the application of GIS in tourism planning, providing valuable insights into current trends, research gaps, and future directions. By comparing its findings with existing literature, the study highlights its unique contributions, including the identification of emerging themes, the exploration of international collaborations, and the emphasis on underexplored areas such as big data integration and the impacts of climate change. These findings not only deepen our understanding of the role of GIS in tourism planning but also provide a roadmap for future research and practical applications. As the tourism sector continues to evolve, the integration of GIS with advanced technologies and interdisciplinary approaches will be crucial for achieving sustainable and inclusive tourism development.

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Memorable tourism experience: A study of hospitality tourism in Japan and Indonesia (Bali)

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ABSTRACT

Research on Memorable Tourism Experience (MTE) is becoming increasingly important as the highly competitive market drives tourist destinations and service providers to seek innovative ways to attract and retain tourists. This study aims to address gaps in previous research on hospitality, specifically the lack of focus on integrating eudaimonic principles and hospitality practices to enhance guest experiences. This study employs a constructivist paradigm, which posits that reality is relative and contingent upon individual perspectives. Data were collected through semi-structured interviews with 20 participants from Japan and Bali. Thematic analysis was used to analyze the transcribed interview data. MTE is built on local culture, hedonism, refreshment, novelty, involvement, knowledge, non-human hospitality, atmosphere, ambiance, and eudaimonia. The findings indicate that these components are essential in creating MTE. Omotenashi emphasizes sincere service with attention to detail, and the philosophical concepts of chanoyu (wa, kei, sei, jaku) can be integrated into omotenashi. Meanwhile, Tri Hita Karana emphasizes the importance of acceptance and respect for guests, harmony with nature, and environmentally friendly practices. Both philosophies contribute to creating a harmonious and comfortable atmosphere, enhancing the overall tourist experience. This study emphasizes the significance of genuine service, meticulous attention to detail, and harmony in social and environmental relationships within the context of Omotenashi and Tri Hita Karana. The implementation of these principles in tourism practices may encounter practical challenges, such as incurring additional costs or requiring specialized staff training.

KEYWORDS

Ambience, atmosphere, eudaimonia, hospitableness, non-human hospitality, Omotenashi, Tri Hita Karana

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INTRODUCTION

In the last decade, research on tourism experiences has become increasingly significant. This is due to the highly competitive market, which drives tourist destinations and service providers to seek new and innovative ways to attract and retain tourists (J.-H. Kim & Ritchie, 2014). Pine B. and James H (1998) proposed that experiences represent the fourth economic offering, coming after commodities, goods, and services. They argued that in the progression of economic value, experiences provide a higher level of engagement and personal connection, as businesses create memorable events for their customers, which go beyond the mere provision of products or services. In the context of tourism, this means that destinations and service providers must create deep and meaningful experiences to attract and retain tourists. The Memorable Tourism Experience (MTE) has become increasingly important in tourism, as tourists seek meaningful and memorable experiences (H. Zhang et al., 2018). MTE and destination image are closely related; memorable tourism experiences can create a positive image of the destination. Conversely, a good destination image can motivate tourists to seek more memorable experiences (Zeithaml et al., 1996; Xu & Ye, 2018; Yu et al., 2019; Zhou et al., 2023). Destination image plays a crucial role in creating Memorable Tourism Experiences (J. H. Kim, 2014).

A positive destination image, formed by various aspects such as natural beauty, unique culture, hospitality of the locals, and good infrastructure, can encourage tourists to choose that destination. When tourists have positive expectations of a destination, they are more likely to create memorable experiences during their visit (Turner & Reisinger, 1999; K. Kim et al., 2012; Crouch & Ritchie, 1999; Dwyer et al., 2003). Conversely, the experiences that tourists have at a destination, including MTE, will shape and strengthen the destination's image. Positive MTEs will enhance the destination's image in the eyes of tourists, encouraging them to revisit and recommend the destination to others (word-of-mouth) (J. J. Kim and Fesenmaier, 2015; Beerli & Martín, 2004; K. Kim et al., 2012).

Destination attributes that contribute to MTE, such as local hospitality, diversity of activities, unique local culture, good infrastructure, and effective environmental management, are also crucial components in building a positive destination image (Crouch & Ritchie, 2006; Das & DiRienzo, 2009; Crouch, 2011). Destination managers need to ensure consistency between the projected destination image and the experiences tourists have. Discrepancies between expectations and reality can lead to disappointment and a negative impact on the destination's image (Cox & Cox, 1988; Lee & Ang, 2003). Destination managers can leverage a positive destination image to create and promote MTEs by highlighting unique local culture, providing diverse and memorable activities, and ensuring the quality of services and infrastructure (Sipe & Testa, 2017; O'Dell, 2005). Local culture, diversity of activities, hospitality, and superstructure are rated higher than other destination attributes. This indicates that tourists consider these attributes more important in forming a positive MTE (K. Kim et al., 2012; J. H. Kim et al., 2010; Echtner & Ritchie, 2003; Crouch, 2011). Local hospitality can be a significant differentiating factor for a destination. Destinations with a reputation for high hospitality will find it easier to attract tourists (Cox & Cox, 1988; Lee & Ang, 2003). Friendly locals who smile easily and warmly welcome tourists will create a positive impression and make tourists feel accepted. Locals who are willing to help tourists, such as giving directions, recommending places to eat, or assisting in times of difficulty, will be greatly appreciated and enhance the tourism experience (Driscoll et al., 1994; Machlis & Burch, 1983; Chandralal & Valenzuela, 2013).

Locals open to sharing information about their culture, traditions, and daily lives will provide a richer and more memorable experience for tourists. Positive encounters and interactions with friendly locals can create pleasant and memorable impressions, ultimately strengthening the destination's positive image (Chandralal & Valenzuela, 2013).

Tourist destinations can be evaluated based on hospitality criteria that emphasize making guests feel welcome (Andrews, 2001). According to Blain and Lashley (2014), hospitality involves creating a welcoming environment and offering services that enhance guest experience, ensuring comfort, satisfaction, and a sense of value. Hospitality involves creating a welcoming atmosphere where guests feel valued and cared for, which extends beyond the mere provision of accommodation, food, and beverages. This broader understanding of hospitality highlights the importance of human connection, trust, and reciprocity, as hosts and guests engage in meaningful exchanges that foster a sense of community and belonging. These social dimensions of hospitality are crucial in shaping the overall experience and satisfaction of guests, making it a multifaceted concept that integrates both economic and social aspects (Lynch, Molz, Mcintosh, Lugosi, et al., 2011b).

The common view considers hospitality as human behavior focused on interactions, exchanges, or relationships that occur between hosts and guests. However, some researchers have suggested that there are non-human factors that also demonstrate hospitality. The ability to provide comfort and well-being is essential, encompassing amenities and services that cater to the needs and preferences of guests, such as comfortable seating, clean facilities, and accessible information. Together, these elements create a holistic experience that fosters a sense of belonging and satisfaction, making visitors more likely to return and recommend the place to others (Brotherton, 2017; Pijls et al., 2017).

Customer experience is a key component in business strategy within the tourism industry (H. Kim and So, 2022). Therefore, this topic has been extensively researched in various hospitality contexts, for example, at high occupancy levels, guest experience during service interactions decreases (Liu et al., 2022). In addition to service quality and infrastructure, emotional factors also shape hospitality experiences. For instance, nostalgia plays a significant role in shaping the perceptions and experiences of hospitality in long-established restaurants (Song et al., 2021). Hospitality is a crucial aspect of host-guest interactions (G. Zhang et al., 2022). The research by Chau and Yan (2021) implements the theory of Prooijen and Wiegerink (2012), which develops hospitality into a set of indicators encompassing three main aspects: behavior, infrastructure, and atmosphere.

The process of fulfilling or realizing one's true nature (Waterman, 1993), as well as personal growth and self-actualization, is an essential element of eudaimonic actualization (Deci & Ryan, 2006). The freedom to make choices and live according to personal values emerges as a central theme in achieving eudaimonia (Ryan & Deci, 2000). This study aims to address the gaps in previous research on hospitality, specifically the lack of focus on how eudaimonic principles can be integrated into hospitality practices to enhance guest experiences. By examining the application of eudaimonia in the hospitality industry, this research seeks to offer deeper insight into creating meaningful and fulfilling experiences for guests. The study of eudaimonia is also an important aspect in understanding customer experiences in the tourism industry. Eudaimonia, centered on the pursuit of a meaningful and fulfilling life, provides valuable perspectives for creating tourism experiences that combine hedonistic pleasure with psychological depth and significance (Knobloch et al., 2017).

This research introduces a new concept consisting of MTE dimensions that encompass various essential aspects of memorable tourism experiences. A scholarly effort has been undertaken to conceptualize additional dimensions beyond those identified by Kim (2014), which encompass hedonism, local culture, refreshment, novelty, involvement, and knowledge. Additionally, this research integrates destination attributes that influence MTE, based on the Crouch & Ritchie (2011) model, which comprises infrastructure, accessibility, local culture, physiography, activities, quality of service, hospitality, place attachment, and superstructure. One of the important destination attributes, hospitality, was further developed by Chau & Yan (2021) into hospitableness, non-human hospitality, and atmosphere & ambiance. Eudaimonia, one of the perspectives on well-being (Deci & Ryan, 2006; Waterman, 1993; Ryan & Deci, 2001), is also part of the new dimensions identified in this research. Eudaimonia encompasses a deep sense of well-being and meaningful life satisfaction. The novelty of this research lies in the combination of these dimensions to create a comprehensive framework for understanding and enhancing memorable tourism experiences. The dimensions that represent this novelty are local culture, hedonism, refreshment, novelty, involvement, knowledge, non-human hospitality, atmosphere & ambiance, and eudaimonia. This research also highlights the importance of the principles of omotenashi and Tri Hita Karana in shaping these dimensions, which are expected to provide new insights for destination managers in creating more meaningful and satisfying tourist experiences.

LITERATURE REVIEW

This study expands the conceptual framework of Memorable Tourism Experience (MTE) by integrating new dimensions that are not explicitly covered in existing MTE scales. The MTE scale, developed by Kim et al. (2010) and Kim and Ritchie (2014), includes seven core dimensions: hedonism, refreshment, local culture, meaningfulness, knowledge, involvement, and novelty. While these dimensions remain relevant, this study enriches the understanding of MTE by introducing four additional dimensions: hospitableness, non-human hospitality, atmosphere & ambiance, and eudaimonia. The dimension of hospitableness emphasizes the emotional and relational interactions between hosts and guests, deepening the aspects of meaningfulness and local culture. Non-human hospitality introduces service and comfort elements that do not involve direct human interaction, such as physical facilities and technology, thereby extending the scope of refreshment and knowledge. Atmosphere & ambiance highlights the importance of environmental aesthetics and mood in shaping tourist perceptions, reinforcing the dimensions of hedonism and novelty. Meanwhile, eudaimonia offers a deeper perspective on well-being, focusing on personal growth, self-reflection, and life purpose, which significantly expands the dimension of meaningfulness. Thus, this new framework complements the existing MTE scale while providing a more holistic and contextually grounded approach to understanding memorable tourism experiences, particularly within the cultural settings of Japan and Bali.

Memorable Tourism Experience

The importance of providing memorable experiences has been well documented in the literature (K. Kim et al., 2012). Personal memories of purchase experiences are valuable sources of information for future decision-making. Travelers tend to make choices based on their past experiences and recall those experiences when deciding to travel and seeking information about specific destinations (Echtner & Ritchie, 2003). Recognizing the significant mediating effect of memories on future behavior, some tourism researchers have studied Memorable Tourism Experience (MTE) and developed the MTE Scale (MTES) consisting of seven dimensions: hedonism, refreshment, local culture and social interaction, meaningfulness, knowledge, involvement, and novelty (J.-H. Kim, 2013). J. H. Kim (2014) identified 10 destination attributes, including local culture, variety of activities, hospitality, infrastructure, environmental management, accessibility, service quality, physiography, place attachment, and superstructure. Dimensions and attributes can be combined and interacted with MTE. Attributes are specific elements that facilitate the formation of MTE. These attributes can then influence various dimensions of the experience, ultimately determining whether an experience will be remembered and considered memorable.

Local Culture

Tourism experiences are co-created through social interactions with residents, enhancing understanding of local culture and achieving global citizenship (Funk & Bruun, 2007; Sharpley & Sundaram, 2005). Experiencing local culture is an important motivation for travel. Trends like volunteer tourism allow travelers to learn and interact with local people. Research indicates that local culture enhances the memorability of travel experiences, with learning about the local culture and language significantly contributing to the creation of memorable tourism experiences (Tung & Ritchie, 2011).

Hedonism

Tourism researchers acknowledge that tourism activities often have a dominant hedonic component, where individuals seek pleasure and enjoyment. The emotional component is a significant aspect of tourism experiences. Research indicates that intense emotional stimuli influence memory, leading to a greater likelihood of remembering emotional events (Bohanek et al., 2005). Hedonic experiences enable tourists to create lasting memories. For example, hedonism is a significant determinant of the perceived value of cruise travel, and positive emotions, such as happiness and excitement, are important components of MTE (Duman & Mattila, 2005).

Refreshment

Refreshment, or relaxation and renewal, is a fundamental aspect of tourism activities. Turner & Ash (1975) highlight that refreshment distinguishes travel experiences from daily life. The temporary distance from regular environments allows tourists to suspend daily norms and values, offering a new perspective on their lives and societies. Empirical research supports the importance of escapism and refreshment in travel experiences. For instance, Leblanc (2004) found that rest, relaxation, and recuperation are primary motivations for tourists attending special events and festivals. J. H. Kim (2010) suggests that feeling refreshed positively influences travel memories, a notion supported by Morgan & Xu (2004), who found that relaxing on the beach is a highly memorable holiday experience.

Novelty

Novelty-seeking is a significant aspect of the tourism experience and a common motivation for travel. Travelers often choose destinations with different cultures and lifestyles to experience something new that is not available in their home countries. Chandralal & Valenzuela (2013) confirmed that perceived novelty, derived from new experiences such as culture, food, and accommodation, is a key component of memorable tourism experiences (MTEs).

Involvement

People tend to remember experiences that are personally relevant and meaningful more than those that are not. Research indicates that involvement in an activity enhances memory of the experience. Pine & Gilmore (1998) suggest that immersion in an activity leads to more memorable experiences. Other studies support that involvement in customer experience strengthens emotional responses and stimulates deep cognitive analysis (Bloch & Richins, 1983; Blodgett, J.G., & Granbois, 1992; Swinyard, 1993; Craik & Lockhart, 1972).

Knowledge

Tourism researchers have found that people often seek to learn new things and develop new insights and skills through their tourism experiences. Studies suggest that a key motivation for travel is the desire to gain knowledge, particularly about the geography, history, language, and culture of destinations. Tung & Ritchie (2011) identified intellectual development as a significant component of memorable tourism experiences, with many respondents indicating that gaining new knowledge about the destination was among the most memorable aspects of their travels.

Hospitality

Hospitality is a broad term that encompasses various aspects, ranging from the provision of physical services to social and emotional interactions (Tasci & Semrad, 2016; Lashley, 2008; Ottenbacher & Harrington, 2009; Slattery, 2002). It involves providing food, drink, and accommodation to guests, especially those who are not regular household members (J. Blain, 2012; Lashley, 2008; Sweeney & Lynch, 2006). Telfer (1995) argues that genuine hospitality can only be realized if driven by the right motivation, namely a sincere desire to care for and please others. Acts of hospitality performed for personal gain or ulterior motives are not considered genuine hospitality. Hospitality can be examined in three domains: cultural/social, personal/domestic, and commercial (Lashley & Morrison, 2000), with a particular emphasis on how cultural or social aspects of hospitality influence the tourist experience. Domestic hospitality is often considered more authentic because personal relationships and social obligations drive it. Commercial hospitality is often criticized for being less authentic and more profit-oriented. However, commercial hospitality can be enhanced by studying and applying traditional hospitality values (Lashley et al., 2006).

Hospitality can facilitate meaningful interactions between tourists and locals, leading to greater understanding and appreciation of different cultures (Ritzer, 2007). This can occur through various means, such as sharing food, stories, and traditions (Lynch, Molz, Mcintosh, Lugosi, et al., 2011a). The principles of hospitality can encourage the development of more responsible tourism, where the needs and well-being of residents and the environment are prioritized (Aramberri, 2001; Bell, 2007; Smith, 1994; Derrida, 2020; Kunwar, 2017). The essence of hospitality lies in the host-guest interaction, which goes beyond mere service provision (Ottenbacher & Harrington, 2009). This interaction serves as a prism reflecting social norms, values, beliefs, and ideologies (Lashley et al., 2006).

Hospitality is a complex and multifaceted concept with significant social, cultural, and economic implications. Contemporary studies on hospitality in its social and commercial manifestations have sought to understand the relationships between these different perspectives (Lynch et al., 2011). The concept of hospitality is closely connected to the tourism experience. Hospitality itself is not just about providing services such as accommodation and food, but also plays a crucial role in shaping tourists' perceptions and experiences during their travels (Lugosi, 2016). The quality of hospitality at a tourist destination greatly influences the level and type of tourism that can develop there. The availability of quality accommodation and food services, as well as the friendliness of the local population, are important factors in attracting tourists (Bell, 2007).

Hospitableness

Hospitableness has become an important differentiating factor for hospitality companies, especially with the rise of the experience economy. Customers no longer judge quality based solely on products and services, but also on hospitableness, authenticity, and the meaningfulness of the experience (Manfreda et al., 2024; Golubovskaya et al., 2017; Manfreda, 2023). There are various definitions of hospitableness, often discussed alongside “hospitality” and “service,” which can be confusing. Some researchers define hospitableness as the disposition or innate nature of friendly individuals, a form of emotional engagement that occurs between host and guest (Telfer, 2010; Tasci et al., 2016; Lugosi, 2007). Hospitableness is seen as the essence of hospitality or the “outer layer” that underpins the efforts of service providers to meet guest needs (Telfer, 2007; Golubovskaya et al., 2017; Blain & Lashley, 2014)

In various studies, the concept of “hospitableness” has been elaborated through various dimensions that encompass important aspects of the interaction between host and guest. These dimensions reflect various qualities and actions that create a welcoming and friendly experience for guests. Researchers have identified several primary dimensions, including lenience, grace, compassion, politeness, proficiency, and truth (Tasci et al., 2021); welcoming, acceptance, invitation, attentiveness, appreciation, and the act of making guests feel valued (Beldona et al., 2020); genuine host-guest connection, proactive and reactive behavior of the host, surprise (Medema & Zwaan, 2020), sociability, attentiveness, willingness to help, generosity (Cetin & Okumus, 2018), employee-customer contact moments, exceeding expectations, personality traits, power inequality (Golubovskaya et al., 2017), inviting, attentiveness, comfort (Pijls et al., 2017), heartwarming, soothing (Tasci et al., 2016), customer personalization (Skandrani & Kamoun, 2014), desire to prioritize guests, desire to make guests happy, desire to make guests feel special (Blain & Lashley, 2014b), guest personalization, warm welcome, special relationship, from the heart, comfort (Ariffin & Maghzi, 2012).

Several approaches are employed to gain a deeper understanding of the practice of hospitableness. One of these is the ‘Hospitable Service Mindset’ (HSM). is a type of service mindset that instills hospitableness into the provision of services in a commercial environment. This means that HSM is not just about providing efficient and professional service, but also about creating meaningful and memorable experiences for customers through genuine hospitality and attention (Manfreda et al., 2024). It identifies six important dimensions of hospitableness: hostship, meaningful connection, memorable experience, altruism, comfort, and inclusivity.

Non-human Hospitality

Adequate infrastructure and facilities such as tourist information centers, official tourism websites, signposts, tourist maps, and convenient public transportation contribute to positive tourist experiences (Chau & Yan, 2021). The availability of adequate hotel rooms depends not just on the number of rooms available, but also on the quality of service and the overall experience provided to guests. (Blain & Lashley, 2014). Self-service check-in kiosks in hotels offer significant benefits for both guests and hotel managers. They improve operational efficiency while simultaneously offering a better and safer experience for airport passengers.

Accessible parks and recreational facilities refer to spaces designed to be inclusive and usable by people of all abilities, including those with physical and cognitive disabilities. According to Lugosi (2016) and Pijls et al. (2017), these facilities aim to remove barriers that might prevent individuals from enjoying recreational activities. According to Rest and Hague (Chavez & Rest, 2014) and Santos et al. (2016), a convenient public transportation system has several characteristics: it is accessible, timely, comfortable, safe, and efficient. Good road and highway conditions have several important characteristics that contribute to the safety, comfort, and efficiency of transportation (Santos et al., 2016). Accessible parks and recreational facilities are designed to be inclusive and usable by everyone, including those with physical and cognitive disabilities (Pijls et al., 2017).

Gastronomic areas serve dual purposes: they provide dining facilities and act as tourist attractions featuring rich and diverse culinary experiences (Blain & Lashley, 2014b; Mand & Cilliers, 2013). Shopping centers or malls have several key characteristics that make them popular destinations for consumers (Bell, 2007a; Lashley, 2017). Providing adequate public seating contributes to the comfort and accessibility of public spaces (Bell, 2007b; Lynch, Molz, Mcintosh, and Lugosi, 2011). Quality and adequate public restrooms can enhance community comfort and health (Santos et al., 2016). Modern, efficient airports offer quick customs processes, timely luggage transfers, taxi queue management systems, effective emergency services, efficient complaint channels, well-established lost-and-found systems, free Wi-Fi, and smart city initiatives (Chau & Yan, 2021).

Atmosphere and Ambience

The atmosphere and ambiance of a destination have a significant influence on tourists' perceptions of how welcoming the place is. This dimension includes elements that create certain impressions and feelings for tourists during their stay at the destination (Chau & Yan, 2021). Safety and Security are the most important elements in the atmosphere dimension, protecting tourists from potential dangers or risks is a crucial element in hospitality. Tourists need to feel safe and comfortable during their stay to fully enjoy their travel experience (Brotherton, 2016). Salott Chau (2021) discusses simplified visa procedures and visa waivers to facilitate international travel, emphasizing the importance of a clean city environment for the mental and physical well-being of residents. Road signs in multiple languages can enhance the tourist experience by helping them navigate the city more easily and understand the local cultural context.

Bell (2007b) emphasizes the importance of creating comfortable environments both inside and outside hotels to enhance guest experiences and highlights the importance of aesthetic views in and around hotels. Public spaces should be designed to support social interaction, provide a sense of security, and promote community well-being (Santos et al., 2016). Blain and Lashley (2014b), Mand and Cilliers (2013) emphasize the importance of creating a relaxed and comfortable atmosphere to enhance customer experiences. Fair pricing is a complex process that requires a deep understanding of market conditions and the value of the goods or services offered (Telfer, 2007). Attractive architecture engages the visual senses while fostering a positive emotional response in users (Bell, 2007a; Lashley, 2017).

Eudaimonia

Eudaimonia is a perspective on well-being that differs from hedonism (Deci & Ryan, 2006; Waterman, 1993; Ryan & Deci, 2001). While hedonism centers on happiness marked by the presence of positive affect and the absence of negative affect, eudaimonia emphasizes living life in a deeply fulfilling and satisfying way by actualizing human potential (Deci & Ryan, 2006; Waterman, 1993). Eudaimonia is not about achieving a final state but rather about the process of fulfilling or realizing one’s “true nature” or “true self”—fulfilling virtuous potential and living according to inherent purpose (Waterman, 1993).

In tourism and well-being, eudaimonia focuses on personal growth and optimal functioning, contrasting with hedonism's emphasis on happiness and pleasure (Uysal et al., 2018). Tourism experiences that foster eudaimonia go beyond momentary enjoyment, encompassing meaningful journeys, self-development, and reflection on one's inner nature—such as pilgrimage and residential tourism (Cai et al., 2020; Hao and Xiao, 2021).

Deci and Ryan (2006) define and measure eudaimonia using questionnaires that assess fulfillment and self-expression, as well as life narrative analysis focusing on personal growth, relationships, and social contribution. Meanwhile, Chang et al. (2022) associate eudaimonia with self-transformation and the achievement of meaning in the context of tourism.

Figure 1 illustrates how Omotenashi and Tri Hita Karana serve as two foundational cultural philosophies that influence four key dimensions of the tourism experience: hospitableness, non-human hospitality, atmosphere & ambiance, and eudaimonia. These dimensions collectively shape and enrich the overall Memorable Tourism Experience (MTE) by integrating cultural values into both tangible and intangible aspects of hospitality.

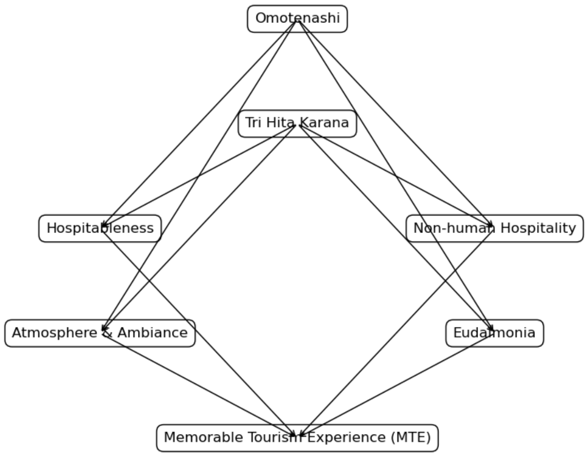

Figure 1. Conceptual Framework of Cultural Philosophies Influencing Memorable Tourism Experience (Source: Own research)

From this literature review, the novelty found in the dimensions of Memorable Tourism Experience (MTE) includes local culture, hedonism, refreshment, novelty, involvement, knowledge, non-human hospitality, atmosphere & ambiance, and eudaimonia. These dimensions are further explained in Figure 2.

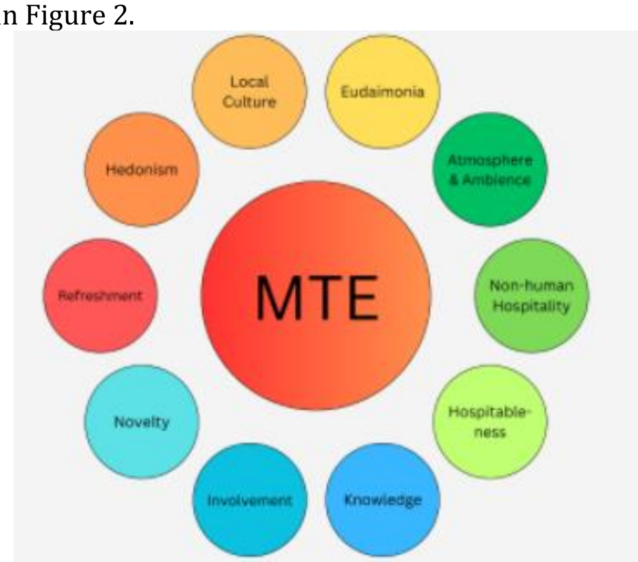

Figure 2. Conceptualisation of MTE (Source: Own research)

METHODOLOGY

The constructivist paradigm assumes that reality is relative and depends on individual perspectives (relativist ontology). Knowledge is considered the result of subjective interactions between the researcher and the research subjects (subjectivist epistemology). Therefore, the research methods used in this paradigm tend to be naturalistic, meaning that the research is conducted in natural contexts without strict manipulation or control, allowing for a deep understanding of the phenomena being studied (Denzin & Lincoln, 1994). This research also uses an inductive approach, meaning that researchers develop themes and patterns from the collected data, rather than from predetermined hypotheses (Silverman, 2013).

Semi-structured interviews were chosen as the data collection method. This method provides researchers with the flexibility to adjust questions during the interview, allowing them to delve deeper into participants' responses and explore their perspectives on hospitality more richly. Purposive sampling is a sampling technique where researchers select participants based on specific criteria relevant to the research objectives (Rai & Thapa, 2019). In this context, participants were chosen because they have specific characteristics or experiences relevant to the research topic, namely hospitality in Japan and Bali. Data saturation was reached when no new themes or insights emerged from the interviews, which occurred after 20 interviews had been conducted.

Research participants were selected through convenience sampling. Participants in Japan were recruited from hotel staff, particularly in ryokan (traditional Japanese inns) and hostels. Staff at these places are considered more representative in providing in-depth answers about the hospitality world in Japan. Additionally, interviews were also conducted with alumni working in a ryokan to gain a richer perspective. Participants in Bali were selected from homestay hosts in tourist villages. Furthermore, interviews were also conducted with hotel staff, homestay owners, and active tourism managers in the field. Language barriers did not hinder interviews in Bali as the researcher is from Indonesia. While these sampling methods allow for practical access to knowledgeable participants, they also introduce potential biases and limitations. Convenience sampling may limit the diversity of perspectives, as participants are selected based on accessibility rather than randomization. Similarly, purposive sampling, though helpful in targeting relevant individuals, may reflect the researchers' subjective judgment in participant selection. These factors may affect the generalizability of the findings; therefore, the results should be interpreted with consideration of these methodological constraints.

Interviews were conducted directly in Japanese. This was possible because the first researcher is a Japanese language lecturer with a focus on tourism and had attended a chanoyu school at Urasenke for one year. Interviews were also conducted with Urasenke alumni and teachers to gain a deeper understanding of the concept of Japanese hospitality. Informant data will be presented without mentioning names to maintain confidentiality, as shown in Table 2. To ensure the diversity and representativeness of the data, a combination of convenience sampling and snowball sampling was used in recruiting participants. The invitation provided to participants included the title and aim of the research, as well as participant information and a consent form detailing the rationale for the research, expected benefits, the nature of their participation, foreseeable risks and mitigation strategies, and information related to data security and confidentiality. No information regarding the definition, interpretation, or characterization of hospitableness was provided before, during, and after the interviews to avoid bias (Decrop, 1999).

Details of the participants have been provided as recommended. A total of 20 participants were interviewed for this study. The breakdown is as follows: 2 participants from K's House Nikko - Kinugawa Onsen Hostel, 1 participant from Dormitory Sandanya Guesthouse in Shirahama, 3 participants from Musashi in Shirahama Onsen, 1 participant from Guest House Kobe Yamatomusubi, 2 participants from Hyoe Koyokaku in Kobe, Hyogo, 1 participant from K's House Kyoto - Travelers Hostel, 1 participant from Kyo no Minshuku Ohara no Sato in Kyoto, 1 participant from Daiwa Roynet Hotel Kyoto Hachijoguchi, 1 participant from Urasenke Foundation, 3 participants from Homestay Panglipuran, 2 participants from Tirta Empul Temple, and 2 participants from Tanah Lot. Additionally, 3 participants from Japan and 2 participants from Bali were contacted but chose not to participate.

Table 1.
Participants' characteristics (Source: Own research)

Location	Age	Job Types	Experience	Language
K's House Nikko Kinugawa Onsen Hostel Kinugawa Onsentaki	25-35	Front Desk Staff Security Staff	Experience in traditional Japanese hospitality practices.	Japanese
	55-65	Front Desk Staff	Experience in traditional Japanese hospitality practices	Japanese
Dormitory Sandanya Guesthouse, Shirahama	55-65	Host	Hosting guests from various countries and sharing Japanese culture, traditions, and customs.	Japanese
Musashi, Shirahama onsen	55-65	General Affairs Department	Ensuring the maintenance and upkeep of the ryokan's facilities. undergoing training	Japanese
	25-35	Staff from Indonesia Staff from Indonesia	Housekeeper, waitress/waiter	Indonesia Indonesia
Guest house Kobe Yamatomusubi 651-0056 Hyogo, Kobe, Chuo-ku Kumochi-cho	25-35	Front Desk Staff	Experience in traditional Japanese hospitality practices	Japanese
Hyoe Koyokaku, Kobe, Hyogo	55-65	Training Coordinator	Organizes training programs for staff to ensure high standards of service.	Japanese
K's House Kyoto - Travelers Hostel	25-35	Front Desk Staff	Experience in traditional Japanese hospitality practices	Japanese
Kyo no Minshuku Ohara no Sato Kyoto	55-65	Host	Hosting guests from various countries and sharing Japanese culture, traditions, and customs	Japanese
Daiwa Roynet Hotel Kyoto Hachijoguchi	35-45	Housekeeper	Sharing Japanese culture	Japanese
Urasenke Foundation	55-65	Teacher of Chanoyu	Sharing wa, kei, sei, jaku and ichigo ichie	Japanese
Hyoe Koyokaku. Kinugawa onsen	25-35	Housekeeper, waitress/waiter Staff from Indonesia	Experience before becoming staff and undergoing training	Indonesia
Homestay Panglipuran 059	45-55	Host	Sharing Tri Hita Karana	Indonesia
Tirta Empul Temple	35-45	Tour Guide	Sharing Pawongan	Indonesia
Tanah Lot	45-55	Market Vendors	Sharing Tri Hita Karana	Indonesia

Observations were made by reviewing places related to non-human hospitality, such as facilities and services that do not involve direct human interaction but still provide a hospitality experience. Literature studies were conducted to understand better the concepts of Omotenashi (Japanese hospitality) and Tri Hita Karana (a Balinese philosophy emphasizing balance between humans, nature, and God).

Thematic analysis was used to analyze the transcribed interview data. In thematic analysis, data are organized and coded to identify recurring themes and patterns (Braun and Clarke, 2012). Two researchers independently analyzed the data and then used researcher triangulation to ensure credibility by comparing and combining their codes and themes.

RESULTS

The conceptualization of MTE emerged inductively from the analysis of the data, where MTE is built from local culture, hedonism, refreshment, novelty, involvement, knowledge, non-human hospitality, atmosphere & ambiance, and eudaimonia. The study findings were synthesized into a framework to depict MTE holistically.

The components that make up hospitality include hospitableness, which refers to the friendly attitude and behavior shown by individuals in providing services. This includes friendliness, attentiveness, and the desire to make customers feel welcomed and appreciated. Non-Human Hospitality encompasses service elements that do not involve direct human interaction, such as technology, facilities, and automated services designed to enhance customer comfort and satisfaction. Atmosphere and Ambience refer to the atmosphere and physical environment created to provide a pleasant experience for customers. In hospitality, eudaimonia involves crafting experiences that combine physical enjoyment with emotional and psychological satisfaction, ultimately providing guests with a profound sense of fulfillment and happiness.Omotenashi and Tri Hita Karana in the Dimension of Local Culture.

Japan's rich and diverse local culture significantly contributes to creating memorable tourism experiences for visitors. Engaging with these cultural elements enhances tourists' knowledge and understanding and contributes to the creation of profound and lasting memories. Traditional festivals such as Gion Matsuri in Kyoto and the Sapporo Snow Festival offer grand parades, traditional music, and spectacular ice sculptures, providing tourists with the opportunity to experience the local community spirit and the unique winter atmosphere of Japan. Local cuisine like Kaiseki Ryori in Kyoto and Tsukiji Fish Market in Tokyo allows tourists to enjoy seasonal dishes and fresh sushi. Interaction with residents through homestays in villages like Shirakawa-go and craft workshops in Mashiko or Okinawa provides insights into daily life and local traditions. Tea ceremonies in Kyoto and visits to temples such as Fushimi Inari and Meiji offer profound experiences of Japanese art, philosophy, and spirituality. "*Japan's local culture offers unique and profound experiences for every tourist. From lively traditional festivals to serene tea ceremonies, each cultural element is designed to provide deeper insights into the life and values of Japanese society. We invite you to interact with residents, try traditional cuisine, and enjoy the beauty of our arts and crafts*" (Front Desk Staff).

Bali, with its rich culture and deep traditions, offers unforgettable tourism experiences for visitors. Each element of Bali's local culture, from traditional ceremonies to arts and cuisine, provides unique and profound insights into the life and values of Balinese society. Traditional ceremonies and religious rituals in Bali, such as Ngaben (cremation ceremony) and the Galungan and Kuningan celebrations, offer tourists a deep insight into Balinese spirituality and traditions. Traditional dances like the Kecak dance at Pura Uluwatu and the Legong dance in Ubud offer profound aesthetic experiences. Tourists can also learn about handicrafts through batik and ikat weaving in Tenganan village and see wood carvings in Mas village. Local cuisine, such as participating in cooking classes in Ubud or Jimbaran, and visiting traditional markets like Ubud Market, enriches culinary knowledge and creates unforgettable memories. "*As the host of a homestay in Bali, we are very proud to provide authentic and profound experiences for tourists. Staying at our homestay allows visitors to experience the daily life of the Balinese people directly. Guests can participate in traditional ceremonies such as Ngaben and the Galungan and Kuningan celebrations, which offer deep insights into our spirituality and traditions. Additionally, we offer opportunities to learn traditional crafts such as batik and ikat weaving, as well as enjoy local cuisine through cooking classes. We believe that direct interaction with the local culture will create unforgettable memories and enrich the tourists' experience in Bali" (*Host).

Omotenashi and Tri Hita Karana in the Dimension of Hedonism

In Japan, the concept of hedonism has long been a part of the culture, especially during the Edo period with the phenomenon of "ukiyo" or "floating world," which depicted the pleasure-seeking culture among the rapidly growing merchant class. Places like the Yoshiwara district in Tokyo became centers of entertainment and pleasure, offering various forms of art, theater, and entertainment that pampered visitors. These experiences create deep and memorable impressions for tourists, which is the essence of MTE. “*We offer comfortable and luxurious accommodations at hotels such as The Ritz-Carlton Tokyo and Park Hyatt Tokyo. Our comprehensive facilities include an indoor swimming pool, a modern fitness center, and 24-hour room service to ensure the comfort and satisfaction of our guests*” (Training Coordinator).

In Bali, hedonism is very evident in various luxury resorts and entertainment venues. For example, the Hedonism Lounge at El Kabron Bali offers a hedonistic experience with an infinity pool overlooking the Indian Ocean, sunset parties, and exclusive services that pamper guests. These facilities provide an unforgettable experience for tourists, supporting the concept of the MTE by creating enjoyable and memorable memories. “*In Bali, we proudly provide luxurious accommodations at resorts such as The Mulia Bali and Four Seasons Resort Bali at Sayan. Guests can enjoy complete facilities such as an infinity pool, a fitness center equipped with the latest equipment, and 24-hour room service for an unforgettable stay experience” (*Market Vendors*).*

Omotenashi and Tri Hita Karana in the Dimension of Refreshment

Japanese gardens such as Kenrokuen Garden in Kanazawa and Ritsurin Garden in Takamatsu offer peaceful places for strolling and enjoying the beauty of nature. The tea ceremony in Kyoto also provides a profound and calming experience, where tourists can enjoy the tranquility and beauty of traditional Japanese art. All these elements reflect the principle of Omotenashi, where every detail is attended to ensure the comfort and satisfaction of tourists. “*We also hold tea ceremonies that provide a profound and calming experience. Guests can enjoy the tranquility and beauty of traditional Japanese art during these ceremonies. All these elements reflect the principle of Omotenashi, where every detail is attended to ensure the comfort and satisfaction of guests”* (Training Coordinator).

Spa and wellness centers in Bali, such as those in Ubud and Seminyak, offer various treatments that combine traditional Balinese techniques with natural ingredients. Engaging with these cultural elements enhances tourists' knowledge and understanding and contributes to the creation of profound and lasting memories. Yoga and meditation amidst Bali's natural surroundings, such as by the rice fields or on the beach, provide a profound refreshing experience, helping tourmemories.e balance and inner peace. “*Tourists can enjoy the natural beauty of Bali through jungle trekking, cycling in the countryside, or strolling along the beach. Interaction with residents through homestays also provides insights into daily life and Balinese traditions, creating refreshing and enriching experiences. All of this reflects the principle of Tri Hita Karana, where harmony and balance are key to achieving happiness and refreshment”* (Tour Guide).

Omotenashi and Tri Hita Karana in the Dimension of Novelty

In Japan, seeking novelty encompasses both the discovery of new elements and the immersion in diverse cultural experiences. Tourists can enjoy unique experiences such as wearing traditional kimonos, participating in tea ceremonies, and trying Japanese specialties like sushi and ramen. Traditional festivals such as Gion Matsuri in Kyoto and the Sapporo Snow Festival offer different and exciting experiences, where tourists can see grand parades, traditional music, and spectacular ice sculptures. “*When visiting Shirahama, don't forget to visit the stunning Sandanbeki Cave with its beautiful ocean views and significant historical value. This attraction offers a unique and exciting new experience for visitors, making it a novelty that should not be missed during your stay here”* (Staff from Indonesia).

In Bali, seeking novelty encompasses the exploration of new experiences alongside immersion in diverse cultural traditions. Tourists can enjoy unique experiences such as participating in traditional ceremonies, learning Balinese dance, and trying Balinese specialties like babi guling and lawar. Traditional festivals such as Ogoh-Ogoh and the Kite Festival offer different and exciting experiences, where tourists can see grand parades and spectacular art performances. "*Make sure to explore the breathtaking rice terraces in Tegallalang. Their picturesque landscapes and rich cultural significance provide a unique and captivating experience for visitors. This remarkable attraction is a must-see and promises to be a highlight of your stay*" (Market Vendors).

Omotenashi and Tri Hita Karana in the Dimension of Involvement

Obon Matsuri, a traditional festival held to honor the spirits of ancestors. During Obon Matsuri, tourists can participate in various activities such as dancing Bon Odori, visiting temples, and lighting lanterns to honor the spirits. This festival offers tourists the opportunity to engage directly with Japanese traditions and culture, creating deep and meaningful experiences. "*The Obon dance is very popular among tourists. They are enthusiastic about participating, as the movements are easy to follow, and the music is captivating*" (Staff from Indonesia).

Tourists can participate in various activities that involve direct interaction with the local culture, such as attending religious ceremonies, learning Balinese dance, and trying Balinese specialties like babi guling and lawar. Tourists can also learn about traditional crafts such as batik and ikat weaving in Tenganan village, as well as see wood carvings in Mas village. These experiences reflect the principle of Tri Hita Karana, where harmony and balance are key to achieving happiness and deep involvement. "*We are very pleased to see the enthusiasm of tourists in participating in local cultural activities. They greatly enjoy learning Balinese dance and attending religious ceremonies*" (Host).

Omotenashi and Tri Hita Karana in the Dimension of Knowledge

Many tourists visit historical places such as Osaka Castle, Kinkaku-ji Temple, and the Hiroshima Peace Memorial. In Bali, seeking novelty encompasses the exploration of new experiences alongside immersion in diverse cultural traditions. The Japanese language attracts many tourists due to its complexity and beauty. Learning Japanese is often considered a way to better understand Japanese culture and values. For example, the writing systems of kanji, hiragana, and katakana reflect the history and way of thinking of the Japanese people. Tourists can participate in various cultural experiences such as traditional flower arranging, trying on kimono, and attending tea ceremonies. "*These activities provide opportunities to learn about Japanese culture and language directly. If you truly want to delve into Japanese history and culture, it is very important to understand the Japanese language first*" (Staff from Indonesia).

Omotenashi and Tri Hita Karana in the Dimension of Hospitableness

The basic concepts of the philosophy of chanoyu, namely wa, kei, sei, and jaku, can be integrated into hospitality (Genshitsu Sen, 2004). Omotenashi includes unique factors based on tradition, such as "mutual trust," "equality," "ichigo ichie" (once in a lifetime), "role exchange," "sensitivity and education of the recipient," and "reading the atmosphere," which are not found in ordinary hospitality (Takeda et al., 2016). Service cannot be delivered through "mental attitude" or "slogans" alone. It is essential to express it through words, attitudes, and actions to ensure the message reaches the customer.

Omotenashi in the dimension of hospitableness includes: 1. gratitude and good service attitude towards customers, 2. take pride in serving customers, 3. always remember the 5S (誠実, 親切, 正確, スマイル, スピード - sincerity, kindness, accuracy, smile, speed), 4. have peace of mind and serve with a smile, 5. think and act from the customer's perspective, 6. perform daily preparations without neglecting duties, 7. be responsive to guests' desires to rest and relax, 8. work with the attitude of introducing traditional Japanese culture to guests, 9. understand the usefulness and limitations of manuals, 10. strive to provide fair yet flexible service, 11. always be prepared to answer customer questions, 12. ensure to always fulfill promises to customers, and if possible, do so with speed and quality that exceed expectations, 13. maintain customer safety and cleanliness with full responsibility, 14. always be aware that teamwork is crucial in providing service, 15. do not forget to show gratitude to business partners, 16. "improving starting tomorrow" does not apply to customers, 17. be aware of the dangers of "negative reviews".

Genuine hospitality is not just about providing hospitality but stems from a deeper motivation to make guests feel welcome and safe (Blain and Lashley, 2014c), relevant to the statements from the interview results: Service cannot be delivered through ‘mental attitude’ or ‘slogans’ alone. Make sure to express it through words, attitudes, and actions so that the message reaches the customers*. “Customer satisfaction is achieved only if there is ‘peace of mind and a smile’ from the service provider. Realize this and perform your duties well” (*Training Coordinator*). “Even if guests do not directly express their desires, it is important to be sensitive to what they expect and provide appropriate service subtly and anticipatively. This is the essence of ‘service’ and the goal of it. Focus on the needs of the guests and avoid prioritizing personal or lodging interests over the guests’ needs”* (Host). This aligns with the chanoyu philosophy of 敬 respect*. “For lodging, it is important to be prepared for risks such as fires, earthquakes, food poisoning, norovirus, legionella, and SARS infections. “Conduct regular initial response training and implement preventive measures immediately after an incident or accident to avoid future issues.” (General Affairs Department, Teacher of Chanoyu; Housekeeper).*

Customers seek authenticity, personalization, and genuine human connection, while managers focus on delivering quality, consistency, and adherence to standards (Cetin and Okumus, 2018). In line with this definition, a respondent explained: Recognize and take pride in work that demands attention to detail and quick responses. Additionally, be aware that “performance” greatly influences customers’ evaluations*. “Even if customers do not directly express their desires, it is important to be sensitive to what they expect and provide appropriate service subtly and anticipatively. This is the essence of ‘service’ and its goal. Focus on the needs of the customers and avoid prioritizing personal or lodging interests over the needs of the guests”* (Host, General Affairs Department).

Managers emphasize professionalism and adherence to service standards, while guests value genuine interactions, personalization, and the willingness of staff to go above and beyond to meet their needs. Staff who are knowledgeable about the local area may be able to provide better recommendations on dining, tourist attractions, or transportation. This can enhance the sense of “care” and “comfort” for customers (Pijls et al., 2017), as explained by staff from Indonesia: Having an attitude to introduce traditional Japanese culture to customers through a stay at a quiet and elegant Japanese inn. Strive to ensure that customers can fully enjoy the atmosphere and culture. *“Therefore, it is essential to pay attention to appearance, behavior, local knowledge, and language use, and continuously improve their quality”* (Waitress/Waiter from Indonesia).

The Balinese community uses the philosophy of Tri Hita Karana, which emphasizes balance and harmony, to regulate tourism development and cultural preservation. Parahyangan refers to cultural tourism in Bali, which often involves religious ceremonies and visits to sacred sites. The Balinese community ensures that tourism activities do not disrupt the sanctity of these places and respect religious traditions. Pawongan refers to the active involvement of the Balinese community in the tourism industry, providing services such as accommodation, food, and tour guides. This ensures that the economic benefits of tourism are distributed fairly and strengthens social bonds. Palemahan emphasizes the principle of Tri Hita Karana in promoting the preservation of Bali’s natural environment. The Balinese community recognizes that the island’s natural beauty is an asset for tourism, and they strive to protect natural sites, promote sustainable tourism practices, and maintain environmental cleanliness (Pitana, 2010).

In line with the definition by Skandrani and Kamoun (2014) that culture views hospitality as a process of accepting strangers and treating them as guests, not strangers, this can be seen from the explanation of the homestay manager in Panglipuran: In line with the concept of Rwa Bhineda, the community must accept strangers and treat them as respected customers, serving them so they feel welcomed like family, not just as customers. Bali places great emphasis on preserving local culture through various religious ceremonies, traditional dances, and cultural festivals. Tourists are often invited to participate in these activities, providing them with an authentic experience of Balinese life and traditions. Hotel staff and tour guides are often trained to understand and appreciate local culture, enabling them to convey accurate and engaging information to tourists. This includes knowledge about sacred sites, customs, and the history of

Bali. While hospitality and authenticity are very important, managers in Bali also emphasize professionalism and adherence to service standards. This ensures that tourists receive consistently high-quality service. *Staff in Bali are often trained to provide personal and proactive service. "They strive to understand the needs and desires of tourists, even before being asked, to ensure a pleasant and satisfying experience. Staff working in the tourism sector in Bali usually have in-depth knowledge of the local area. They can provide good recommendations on dining, tourist attractions, and transportation, enhancing the sense of "care" and "comfort" for tourists"* (Host).

Omotenashi and Tri Hita Karana in the Dimension of Non-Human Hospitality

The provision of good facilities, such as comfortable accommodation or quality food and beverages, can contribute to the overall hospitality experience (Blain and Lashley, 2014c): The relationship with omotenashi from this theory is that omotenashi emphasizes deep attention to detail to ensure every aspect of the guest experience is perfect. This includes providing high-quality facilities such as comfortable accommodation and quality food and beverages. This attention to detail ensures that guests feel valued and cared for, enhancing the overall hospitality experience. *"The main principle of omotenashi is to make guests feel comfortable and satisfied. Providing good facilities, such as clean and comfortable rooms and delicious food, is an integral part of this principle. By ensuring that all guests' needs are met, omotenashi creates an environment where guests can feel relaxed and enjoy their time*" (General Affairs Department; Host).

Omotenashi involves sincere and selfless service, where the host strives to give their best without expecting anything in return. This aligns with Blain and Lashley's theory that the quality of facilities can enhance the hospitality experience. *"This sincere service is often manifested through the provision of facilities designed for the comfort and satisfaction of guests. Providing good facilities is an important part of creating this experience, as it helps ensure that every aspect of the guest's visit is enjoyable and stress-free"* (Training Coordinator; Host).

The concept of Tri Hita Karana, particularly the aspect of Palemahan, is highly relevant to Blain and Lashley's theory, where Palemahan emphasizes the importance of a harmonious relationship between humans and the natural environment: In the context of tourism, this means that the facilities provided should be environmentally friendly and support nature conservation. For instance, accommodations incorporating natural, sustainable materials and locally sourced food contribute to guest comfort and promote environmental sustainability. Providing good facilities, such as comfortable accommodation and quality food, aligns with the principles of Palemahan, which prioritize human well-being and comfort concerning to nature. Facilities designed with consideration for the surrounding environment will create a more enjoyable and satisfying experience for guests, as they can enjoy the natural beauty without harming it. By integrating the principles of Palemahan, the provision of good facilities becomes part of the holistic experience offered to guests. *"For instance, accommodations incorporating natural, sustainable materials and locally sourced food contribute to guest comfort and promote environmental sustainability"* (Host).

Omotenashi and Tri Hita Karana in the Dimension of Atmosphere and Ambience

The elements that contribute to the formation of a destination's atmosphere are architecture, color, sound, smell, orderliness, and cleanliness (Chau and Yan, 2021). The concept of omotenashi is highly relevant to the theory that elements such as architecture, color, sound, smell, orderliness, and cleanliness contribute to the formation of a destination's atmosphere: Omotenashi emphasizes attention to detail, which relates to the philosophy of chanoyu, specifically 和 (wa), meaning harmony. For example, ryokan (traditional Japanese inns) often uses traditional architecture that creates a calm and comfortable atmosphere for guests. *"The choice of colors in decoration and interior design is also part of omotenashi. Soothing and harmonious colors are used to create a pleasant and calming environment for guests, aligning with this concept*" (Training Coordinator, Teacher of Chanoyu). *"Natural sounds or traditional Japanese music are often used in omotenashi settings to create a relaxing and enjoyable atmosphere. For instance, the sound of flowing water or koto/traditional Japanese musical instruments music can enhance the guest experience"* (Host). *"Distinctive aromas such as cherry blossoms or green tea are often used in* *omotenashi to evoke feelings of comfort and nostalgia. These scents help create a pleasant and inviting atmosphere"* (Teacher of Chanoyu). Cleanliness and orderliness are important aspects of omotenashi. A clean and well-organized environment reflects care and respect for customers, creating a comfortable and pleasant atmosphere*. "This aligns with the chanoyu philosophy of 清 'purity'"* (Housekeeper, Front Dest Staff).

The concept of Tri Hita Karana is related to the theory by Chau and Yan (2021) and they are interconnected: It is explained that architectural design should be in harmony with the surrounding nature. The use of natural materials and eco-friendly designs in buildings fosters a comfortable environment and simultaneously promotes environmental conservation. Natural colors used in decoration and interior design can create a sense of calm and comfort for tourists, in line with the principle of Palemahan, which prioritizes human well-being in relation to nature*. "Natural sounds such as the murmur of water or birdsong can create a soothing and pleasant atmosphere. Natural aromas such as flowers or local plants can evoke feelings of comfort and nostalgia. A clean and well-organized environment reflects care for nature and human well-being"* (Host).

Omotenashi and Tri Hita Karana in the Dimension of Eudaimonia

The eudaimonic effect can result from activities that are not particularly enjoyable now but have delayed positive effects that occur when the outcomes are achieved. Examples include skill improvement or achieving goals. This can lead to personal growth and development (Knobloch et al., 2017). Integrating Eudaimonia into Omotenashi means that the goal of this sincere service is to achieve true well-being for both the giver and the receiver of the service. As an example, the training coordinator stated that Customer satisfaction can only be achieved if there is 'peace of mind and a smile' from the service provider. Realize this and perform your duties well. The host mentioned that even if guests do not directly express their desires, it is important to be sensitive to what they expect and provide appropriate service subtly and anticipatively. This is the essence of 'service' and its goal.

Service performed with a sincere and attentive heart brings not just temporary happiness, but also fosters deep and lasting well-being. 寂 (Jaku) is one of the principles in Chanoyu (Japanese tea ceremony) which means tranquility or inner peace. This principle emphasizes the importance of achieving a calm and peaceful state of mind through attentive practice and meditation (Kimiecik, 2019). There are various tourism practices that can help you achieve true well-being, such as Onsen (Hot Springs), Shinrin-Yoku (Forest Bathing), Zazen (Zen Meditation), Ryokan (Traditional Japanese Inns), Shojin Ryori (Buddhist Vegetarian Cuisine), Yoga, and Meditation in Nature. "*Our guests can experience true tranquility and well-being during their stay at our ryokan. We are committed to providing a sincere and attentive service to ensure a profound and memorable experience*" (Host).

Eudaimonia emphasizes the importance of a meaningful and balanced life (Deci and Ryan, 2006; Ryan et al., 2008). In the context of Parahyangan, this means achieving true well-being through a deep and meaningful spiritual relationship with God. Religious practices and meditation can help achieve inner peace and spiritual well-being. Eudaimonia encompasses holistic well-being, including relationships with nature. In tourism, this can be applied through ecotourism activities such as trekking, snorkeling, and cycling in the open air. Tourists can learn about environmental conservation and participate in preservation activities, which help create ecological balance and environmental well-being. Ubud, Pura Besakih, Jatiluwih Rice Terrace, and Nusa Penida are tourist destinations where one can achieve eudaimonia. "*Tourists can experience true peace and well-being during their visit to Bali. We are committed to providing meaningful and sustainable ecotourism experiences to ensure holistic well-being for all parties involved"* (Host).

Table 2 presents a thematic summary based on qualitative data analysis, highlighting the main themes, sub-themes, representative codes, and illustrative participant quotes. The themes reflect key dimensions of MTE influenced by the principles of Omotenashi and Tri Hita Karana.

Table 2.
Summary of Themes Derived from the Research Findings (Source: Own research)

Main Theme	Sub-Theme	Example Code	Participant Quote
Local Culture	Traditional festival, tea ceremony, local cuisine, crafts	Gion Matsuri, Sapporo Snow Festival, tea ceremony, Kaiseki Ryori, homestay, crafts	Japan's local culture offers unique and profound experiences for every tourist. From lively traditional festivals to serene tea ceremonies, each cultural element is designed to provide deeper insights into the life and values of Japanese society. We invite you to interact with residents, try traditional cuisine, and enjoy the beauty of our arts and crafts. (Front Desk Staff)
	Traditional ceremonies	Ngaben, Galungan, Kuningan, Kecak dance, Legong dance, batik, ikat weaving	Staying at our homestay allows visitors to experience the daily life of the Balinese people directly. Guests can participate in traditional ceremonies such as Ngaben and the Galungan and Kuningan celebrations..." (Host)
Hedonism	Luxury and indulgence	The Ritz-Carlton Tokyo, Park Hyatt Tokyo, spa, fine dining, 24-hour service	We offer comfortable and luxurious accommodations at hotels such as The Ritz-Carlton Tokyo and Park Hyatt Tokyo. Our comprehensive facilities include an indoor swimming pool, a modern fitness center, and 24-hour room service to ensure the comfort and satisfaction of our guests. (Training Coordinator)
		Infinity pool, sunset parties, exclusive services, luxury resorts	In Bali, we proudly provide luxurious accommodation at resorts such as The Mulia Bali and Four Seasons Resort Bali at Sayan... (Market Vendors)
Refreshment	Tranquility and nature	Tea ceremony, Japanese gardens, onsen	We also hold tea ceremonies that provide a profound and calming experience. Guests can enjoy the tranquility and beauty of traditional Japanese art during these ceremonies. All these elements reflect the principle of Omotenashi, where every detail is attended to ensure the comfort and satisfaction of guests. (Training Coordinator)

Main Theme	Sub-Theme	Example Code	Participant Quote
	Wellness and nature	Spa, yoga, meditation, jungle trekking, beach walks	Tourists can enjoy the natural beauty of Bali through jungle trekking, cycling in the countryside, or strolling along the beach… (Tour Guide)
Novelty	Unique cultural experiences	Kimono, sushi, ramen, Sandanbeki Cave	When visiting Shirahama, don't forget to visit the stunning Sandanbeki Cave with its beautiful ocean views and significant historical value. This attraction offers a unique and exciting new experience for visitors, making it a novelty that should not be missed during your stay here. (Staff from Indonesia)
	Unique cultural experiences	Ogoh-Ogoh Festival, Kite Festival, rice terraces in Tegallalang	Make sure to explore the breathtaking rice terraces in Tegallalang. Their picturesque landscapes and rich cultural significance provide a unique and captivating experience… (Market Vendors)
Involvement	Cultural participation	Obon Matsuri, Bon Odori, temple visits	The Obon dance is very popular among tourists. They are enthusiastic about participating, as the movements are easy to follow, and the music is captivating. (Staff from Indonesia)
	Cultural participation	Learning Balinese dance, attending ceremonies, traditional crafts	We are very pleased to see the enthusiasm of tourists in participating in local cultural activities. They greatly enjoy learning Balinese dance and attending religious ceremonies. (Host)
Knowledge	Cultural and historical learning	Osaka Castle, Kinkaku-ji, Hiroshima Peace Memorial, Japanese language	These activities provide opportunities to learn about Japanese culture and language directly. If you truly want to delve into Japanese history and culture, it is very important to understand the Japanese language first. (Staff from Indonesia)
	Cultural and environmental learning	Environmental conservation, sacred sites, local history	They strive to understand the needs and desires of tourists, even before being asked… Staff working in the tourism sector in Bali usually have in-depth knowledge of the local area. (Host)
Hospitableness	Sincere and anticipative service	5S principles, guest-centered mindset, attention to detail	Customer satisfaction is achieved only if there is ‘peace of mind and a smile’ from the service provider. Realize this and perform your duties well. (Training Coordinator)

Main Theme	Sub-Theme	Example Code	Participant Quote
	Sincere and proactive service	Treating guests like family, understanding unspoken needs	The community must accept strangers and treat them as respected customers, serving them so they feel welcomed like family… (Host)
Non-Human Hospitality	Quality facilities	Clean rooms, delicious food, attention to detail	Providing good facilities, such as clean and comfortable rooms and delicious food, is an integral part of this principle. By ensuring that all guests' needs are met, Omotenashi creates an environment where guests can feel relaxed and enjoy their time. (General Affairs Department)
	Eco-friendly facilities	Sustainable materials, local food sourcing, nature-integrated design	In addition to physical comfort, guests experience a meaningful connection with nature and local culture, enhancing the richness of their stay. (Host)
Atmosphere & Ambience	Harmony and sensory design	Traditional architecture, calming colors, natural sounds, cleanliness	The choice of colors in decoration and interior design is also part of Omotenashi. Soothing and harmonious colors are used to create a pleasant and calming environment for guests, aligning with this concept. (Training Coordinator)
	Natural harmony	Natural sounds, aromas, clean and organized environment	Natural sounds such as the murmur of water or birdsong can create a soothing and pleasant atmosphere… A clean and well-organized environment reflects care for nature and human well-being. (Host)
Eudaimonia	Inner peace and fulfillment	Onsen, Zazen, Ryokan, Shojin Ryori, Chanoyu (Jaku)	Our guests can experience true tranquility and well-being during their stay at our ryokan. We are committed to providing a sincere and attentive service to ensure a profound and memorable experience. (Host)
	Holistic well-being	Spiritual connection, ecotourism, meaningful experiences	Tourists can experience true peace and well-being during their visit to Bali. We are committed to providing meaningful and sustainable ecotourism experiences… (Host)

DISCUSSIONS AND CONCLUSIONS

This study examines the integration of the concepts of Omotenashi and Tri Hita Karana within the dimension of MTE. Omotenashi encompasses various unique factors rooted in Japanese tradition, such as mutual trust, equality, and the concept of "ichigo ichie" (once in a lifetime). Service in Omotenashi goes beyond mere mental attitudes or slogans; it must be demonstrated through words, behavior, and actions to effectively communicate its essence to the customer. The dimension of hospitableness in Omotenashi includes gratitude, pride in serving, and attention to detail and customer needs. This reinforces the importance of sincere service, attention to detail, and balance in social and environmental relationships within the context of (Ota et al., 2017; Cetin and Okumus, 2018; Bain and Lashley, 2014; Pijls et al., 2017).

The concept of Rwa Bhineka in Bali's tourism practices demonstrates how genuine hospitality and attention to detail can create profound and meaningful experiences for tourists. It also emphasizes the importance of balancing the preservation of local culture with professionalism in delivering high-quality services (Tasci et al., 2021). This combination contributes to both increased tourist satisfaction and the long-term sustainability of tourism in Bali.

Tri Hita Karana, a Balinese philosophy that emphasizes balance and harmony, also plays an important role in tourism development and cultural preservation. This philosophy encompasses three main aspects: Parahyangan (relationship with God), Pawongan (relationship among humans), and Palemahan (relationship with the environment). The Balinese people use these principles to ensure that tourism activities do not disrupt the sanctity of sacred sites, distribute economic benefits fairly, and preserve the natural environment (Pitana, 2010).

True hospitality, whether in the context of Omotenashi or Tri Hita Karana, is not just about providing services but also about a deeper motivation to make guests feel welcomed and safe (Tasci et al., 2016). This is reflected in interviews with various parties who emphasize the importance of calmness, a smile, and sensitivity to the needs of guests (Skandrani and Kamoun, 2014). Managers and staff in the tourism sector also stress the importance of professionalism, adherence to service standards, and the ability to provide personal and proactive service (Cetin et al., 2015).

The concepts of Omotenashi and Tri Hita Karana in the dimension of non-human hospitality emphasize the importance of providing high-quality facilities to enhance the overall guest experience. Omotenashi emphasizes deep attention to detail to ensure every aspect of the guest experience is perfect. This includes providing comfortable accommodations and high-quality food and beverages. This attention to detail ensures that guests feel valued and cared for, which enhances the overall hospitality experience (Blain and Lashley, 2014c).

The integration of Omotenashi and Tri Hita Karana in the dimension of atmosphere and ambience demonstrates how genuine hospitality and attention to detail can create profound and meaningful experiences for tourists. Omotenashi emphasizes the importance of providing high-quality facilities and creating a harmonious environment through meticulous attention to detail. Tri Hita Karana, particularly the aspect of Palemahan, highlights the importance of designing facilities that are in harmony with nature and support environmental preservation.

The integration of Eudaimonia in the practices of Omotenashi and Tri Hita Karana demonstrates that sincere service and attention to detail can create deep and sustainable true well-being. Omotenashi emphasizes the importance of providing attentive and sincere service, while Tri Hita Karana emphasizes balance in spiritual, social, and environmental relationships.

The findings of this study have practical implications, namely that both Omotenashi and Tri Hita Karana emphasize the importance of providing sincere and attentive service. This approach ensures that guests feel valued and cared for, enhancing their overall experience and satisfaction. The meticulous attention to detail in both concepts ensures that every aspect of the guest experience is perfect. This includes providing high-quality facilities, comfortable accommodations, and high-quality food and beverages, which collectively enhance the hospitality experience. Tri Hita Karana emphasizes balance in spiritual, social, and environmental relationships. This principle can be applied in tourism to ensure that activities do not disrupt the sanctity of sacred sites, distribute economic benefits fairly, and preserve the natural environment.

The concept of Rwa Bhineka in Bali's tourism practices demonstrates the importance of integrating local culture into the hospitality experience. This approach fosters meaningful tourist experiences and simultaneously contributes to the preservation of local traditions and customs. Managers and staff in the tourism sector emphasize the importance of professionalism and adherence to service standards. This ensures that tourists receive consistent, high-quality service, which is crucial for maintaining satisfaction and loyalty. The integration of Eudaimonia in the practices of Omotenashi and Tri Hita Karana demonstrates that sincere service and attention to detail can create deep and sustainable true well-being. Through this holistic approach, customers experience physical comfort alongside a meaningful connection to the local culture and natural surroundings.

Although this paper provides practical insights, the implementation of Omotenashi and Tri Hita Karana principles in tourism practices may face practical challenges, such as additional costs or the need for specialized staff training. The concepts of Omotenashi and Tri Hita Karana are closely tied to the cultural contexts of Japan and Bali. The implementation and interpretation of these concepts may differ in other cultures, which could limit the relevance of the findings outside these contexts. The data used in this paper may be limited to interviews or observations from a small number of respondents or locations. This could limit the scope and depth of the analysis.

This study has several limitations that should be acknowledged. First, the findings may not be generalizable to all tourism contexts or to cultures outside Japan and Bali. The concepts of Omotenashi and Tri Hita Karana are deeply rooted in their respective cultural and philosophical traditions, Japanese hospitality and Balinese cosmology. As such, their direct application to other regions with different cultural, social, and religious backgrounds may be limited or require significant adaptation. Caution should be exercised when attempting to replicate or implement these principles in different settings.

Second, the study employed convenience and purposive sampling, which, while effective for accessing knowledgeable and relevant participants, introduces potential selection bias. Participants were selected based on accessibility and their relevance to the research topic, which may have excluded other valuable perspectives. This non-probability sampling approach limits the representativeness of the sample and, consequently, the generalizability of the findings. The insights presented here should therefore be interpreted within the specific cultural and contextual boundaries of the study.

Future research could address these limitations by employing more diverse and randomized sampling strategies, as well as by conducting comparative studies across different cultural destinations. Such studies could help develop more comprehensive and culturally sensitive frameworks for understanding hospitality and its impact on tourist satisfaction and experience.

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Food waste research in hospitality, leisure, and tourism: A bibliometric approach with VOSviewer

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ABSTRACT

This study presents a comprehensive bibliometric analysis of food waste research within the hospitality, leisure, and tourism domains using the Web of Science (WoS) Core Collection. A total of 127 English-language articles published between 2012 and 2025 were analyzed. Data were retrieved using the keyword "food waste" across all indexers and refined by language, document type, and WoS subject category filters specific to hospitality, leisure, and tourism. VOSviewer software was employed to conduct co-occurrence, co-authorship, and bibliographic coupling analyses. The findings reveal a sharp increase in food waste research post-2020, with peak activity in 2024. Core journals include the International Journal of Hospitality Management and the Journal of Sustainable Tourism. Thematic clusters highlight three dominant research strands: (1) sustainability practices such as circular economy models and resource-efficient operations, (2) consumer behavior, including plate waste, portion size, and behavioral nudges, and (3) food waste management strategies addressing pre-consumer and post-consumer waste. This interdisciplinary mapping highlights the intersection of environmental sustainability, managerial interventions, and consumer actions in the context of food waste research. The study provides valuable insights for scholars and practitioners seeking to reduce food waste and align industry practices with global sustainability objectives.

KEYWORDS

Food waste, bibliometric analysis, VosViewer

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INTRODUCTION

Food waste has emerged as one of the most pressing global challenges, intersecting with environmental sustainability, economic efficiency, and social equity. From buffet overproduction and portion misalignment to inefficient inventory management and consumer behavior, the sector's operational dynamics pose unique challenges and opportunities for waste reduction. The growing urgency to reduce food waste has prompted a proliferation of academic studies exploring both upstream and downstream factors, including consumer attitudes, managerial interventions, technological innovations, and policy frameworks. Despite the increasing body of literature, there is a lack of structured knowledge synthesis specific to food waste within hospitality, leisure, and tourism domains. While several systematic reviews and thematic analyses exist, they often focus on broader sectors such as agriculture, household waste, or urban food systems, thereby overlooking the nuanced and service-oriented characteristics of hospitality-related food waste.

To address this gap, the current study employs a bibliometric approach to systematically map and analyze the intellectual landscape of food waste research within hospitality, leisure, and tourism. Using data from the Web of Science Core Collection and visualization tools like VOSviewer, this research identifies key publication trends, influential journals, prolific authors, thematic clusters, and global research contributions. The novelty of this study lies in its exclusive focus on hospitality, leisure, and tourism sectors—a scope that has not been comprehensively examined through bibliometric techniques to date. By doing so, this research not only uncovers the evolution of academic thought but also highlights emerging trends, interdisciplinary linkages, and underexplored areas, offering a valuable reference for scholars, practitioners, and policymakers aiming to design targeted interventions for sustainable food practices in service-oriented contexts.

LITERATURE REVIEW

Food Waste

The issue of food waste in out-of-home consumption was acknowledged as both an ethical and economic concern during the post-World War II years of scarcity (Antonschmidt & Lund-Durlacher, 2021). The United Nations has identified food waste as a significant global societal issue, as it undermines the sustainability (both business and environmental) of the food supply chain, exacerbates food insecurity, and worsens social inequality (Filimonau et al., 2021). Defining food waste is challenging, as there is frequently no clear distinction, particularly from a managerial perspective, between food waste and food loss (Filimonau et al., 2020). The primary distinction between *food loss* and *food waste* lies in their origins: food loss typically occurs unintentionally, whereas food waste results from both unintentional and intentional human actions. Food loss typically occurs from harvest, slaughter, or catch through distribution, excluding retail. Food waste, conversely, occurs at the retail and consumption stages (Matzembacher et al., 2020; Pirani & Arafat, 2016), referring to food intended for human consumption that is used for non-consumptive purposes, diverted to animal feed, or discarded despite being edible. It encompasses both edible and inedible food parts removed from the supply chain, which can be recovered or managed through disposal (Dhir et al., 2020). Food waste is classified into three categories based on the degree of human involvement: avoidable, unavoidable, and potentially avoidable (Filimonau & De Coteau, 2019).

According to the United Nations (UN) Food and Agriculture Organization (FAO), about one-third of the global food produced annually for human consumption, roughly 1.3 billion tons, is either lost or wasted. Out-of-home consumption accounts for at least 15% of global food waste (Global Sustainable Tourism Council, 2024). The hospitality and tourism industry generates substantial food waste due to the high volume of food production and service. World Sustainable Hospitality Alliance (2024) estimates that the industry contributes 3% of global food waste, with hotels, restaurants, and catering services producing significant waste through overproduction, preparation losses, and plate waste. In the hospitality and tourism industry, food waste can be divided into categories based on the preparation stage: (a) unavoidable losses, which include inedible food parts like bones or peels, and (b) avoidable losses, referring to food prepared for consumption but rendered unusable and no longer consumable (Munir, 2022). Food waste occurs during various processes, including food storage, meal preparation, serving, and consumption. The literature commonly categorizes it into storage waste, preparation waste, buffet leftovers, and plate waste (Leverenz et al., 2021). Roy et al. (2023) classify food waste into pre-consumer (e.g., kitchen errors, spoilage) and post-consumer (e.g., uneaten food), emphasizing the need for stage-specific interventions. Overproduction often results from inaccurate demand forecasting, while plate waste is linked to oversized portions and guest preferences (Dhir et al., 2020).

Bibliometric Analysis

Bibliometric analysis is a specialized method for objectively evaluating bibliometric data. It enables researchers to explore the evolution of a discipline and gain insights into emerging trends within that field (Han et al., 2023; Knani et al., 2022; Pelit & Katircioglu, 2022). Bibliometric methods enable a rigorous quantitative evaluation of a specific field's literature (Ülker et al., 2023). The primary methods involve evaluative approaches, which focus on productivity and impact metrics, and relational approaches, such as analyzing co-citation, co-authorship, keyword co-occurrence, and bibliographic coupling. While bibliometrics offers descriptive insights, it is effective for studying extended timeframes, revealing the dynamic evolution, academic, conceptual, and social structure of a scientific field (Coll-Ramis et al., 2024; Okumus et al., 2018). Bibliometric analysis involves utilizing various bibliographical databases, such as ProQuest, Google Scholar, and Scopus; however, Web of Science (WoS) is widely recognized as the primary database for this purpose. With over a century of extensive coverage and more than one billion cited reference links, WoS enables researchers to reliably explore the whole citation network within a research field (Kim & So, 2022). The purpose of the research is to explore how studies have examined food waste in the field of hospitality, leisure, and tourism.

Bibliometric Studies on Food Waste

Bibliometric Studies on Food Waste

Bibliometrics is a research approach that employs qualitative, quantitative, and statistical techniques to analyze academic studies within a particular discipline, identifying relationships and distinctions among them. Widely applied in the social sciences, bibliometric analysis is a favored method for thoroughly investigating and evaluating scientific data, making it ideal for tracing the evolution of research fields (Kement, 2024). To date, a total of 16 studies have been identified that include bibliometric or bibliometric aspects related to *food waste* in their titles in the Web of Science (WoS) database. Research trends highlight consumer behavior, sustainable management, and valorization strategies, with a growing emphasis on circular economy principles and technologies, such as anaerobic digestion and biorefineries, to address the environmental and economic impacts of food waste.

Zhang & Jian (2024) analyzed student food waste research (2000–2023), identifying three phases: starting (2000–2010), exploration (2011–2015), and development (2016–2023). Hotspots included quantification, influencing factors, and behavioral interventions, with the U.S. leading in output. Silva et al. (2024) conducted a bibliometric analysis of Anaerobic Digestion Model No. 1 (ADM1) for dry anaerobic digestion of food waste, identifying adaptations for fruit, vegetable, and municipal waste. Kostakis et al. (2024) explored food waste and sustainable development via a bibliometric review of 761 papers. Findings highlighted the role of effective waste management in environmental sustainability, identifying gaps in research on consumer and entrepreneurial behavior. Danya et al. (2024) reviewed food waste management via biorefineries, finding that microbial and enzymatic technologies transform food waste into biofuels, biochemicals, and bio-based materials, reducing greenhouse gas emissions. Baybars et al. (2024) reviewed food waste in the context of sustainability and circular economy, noting its intersection with economic, social, and environmental goals. The study found increased research interest in consumer-driven avoidable waste, aligning with SDGs 12 and 13.

Syafrudin et al. (2023) performed a bibliometric analysis to examine sustainable food waste management using multicriteria decision-making (MCDM). The study highlighted the role of MCDM in evaluating interventions across environmental, economic, and social dimensions, thereby promoting interdisciplinary collaboration. Findings emphasized that sustainable strategies reduce avoidable food waste (e.g., edible food discarded due to consumer behavior) and enhance resource efficiency. Pilone et al. (2023) conducted a bibliometric review of 111 papers to investigate household food waste behaviors. They identified four research strands: antecedents of food management behavior (using the Theory of Planned Behavior), economic impacts, COVID-19 effects on consumer behavior, and environmental/the effects of COVID-19 on consumer behavior, and environmental and social effects. Łaba & Olech (2023) analyzed Polish food waste research, finding a focus on ex-post management (e.g., bioenergy) rather than ex-ante prevention, which tends to prioritize energy security over food security. Elgarahy et al. (2023) reviewed sustainable food waste management, finding that pre-treatment strategies enable the conversion of food waste into green fuels, bioplastics, and enzymes. The study confirmed the economic feasibility of transforming both avoidable and unavoidable food waste produced by the hospitality and tourism industry.

Sridhar et al. (2022) conducted a bibliometric analysis on the conversion of food waste to hydrogen energy, finding a 50-fold increase in publications over the past two decades. Five research hotspots were identified, including fuel delivery and environmental impacts. The study focuses on valorizing both avoidable and unavoidable food waste produced by the hospitality and tourism industries to address the global statistic of 33% food waste. Kumar et al. (2022) conducted a bibliometric analysis of 2,498 publications (2000–2022) to explore food waste linked to consumer behavior. They found a 500% increase in publications since 2015, highlighting consumer behavior as a key driver of avoidable food waste, which aligns with the FAO's estimate that 33% of food produced globally (1.3 billion tons) is wasted, often due to deliberate consumer actions. Jia & Qiao (2022) utilized CiteSpace to analyze global food waste research, highlighting a shift from treatment processes to quantification, environmental impacts, and interventions targeting consumer behavior. Restaurant waste was higher per capita than household waste, with meat having a larger environmental footprint. Assis & Gonçalves (2022) reviewed anaerobic digestion for food waste valorization, finding co-digestion as a key optimization strategy. Ideal conditions for methane production included a pH of 7, a solids content of 4–15%, and a C/N ratio of 25. The study addresses both avoidable and unavoidable food waste produced by the hospitality and tourism industry. Bertocci and Mannino (2022) investigated the utilization of plant waste in aquaculture, revealing positive impacts on fish growth, immune systems, and antioxidant defenses. The study highlights the potential of valorizing unavoidable food waste produced by the hospitality and tourism industries (e.g., peels) for sustainable food production.

Zhang et al. (2018) analyzed food waste research (1991–2015), noting a significant publication increase post-2012. Anaerobic digestion and fermentation were mainstream disposal methods, with life cycle assessment gaining popularity. The study addresses both unavoidable and avoidable waste. Chen et al. (2017) conducted a bibliometric analysis of food waste research over 18 years using the WoS database, focusing on 2,340 articles published in 801 journals across 161 WoS subject categories. It found a significant increase in food waste research, particularly over the last eight years, reflecting growing academic interest. Key research themes identified through keyword analysis included clean energy, treatment and valorization, and management innovation, which have gained traction over the past decade.

METHODS

This study employs a science mapping approach within bibliometric analysis, incorporating co-word analysis, co-authorship, citation, and co-citation techniques, primarily visualized through VOSviewer (van Eck & Waltman, 2010). Co-occurrence analysis was used to identify and map keywords and abstract terms. Following the guidelines by Donthu et al. (2021), a co-occurrence threshold of 10 was set to strike a balance between comprehensiveness and interpretability.

Data Source

This study employed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) protocol to ensure transparency and replicability of the bibliometric process

(Moher et al., 2009). The PRISMA flow diagram (Figure 1) illustrates the four-step process of identification, screening, eligibility, and inclusion used for document selection.

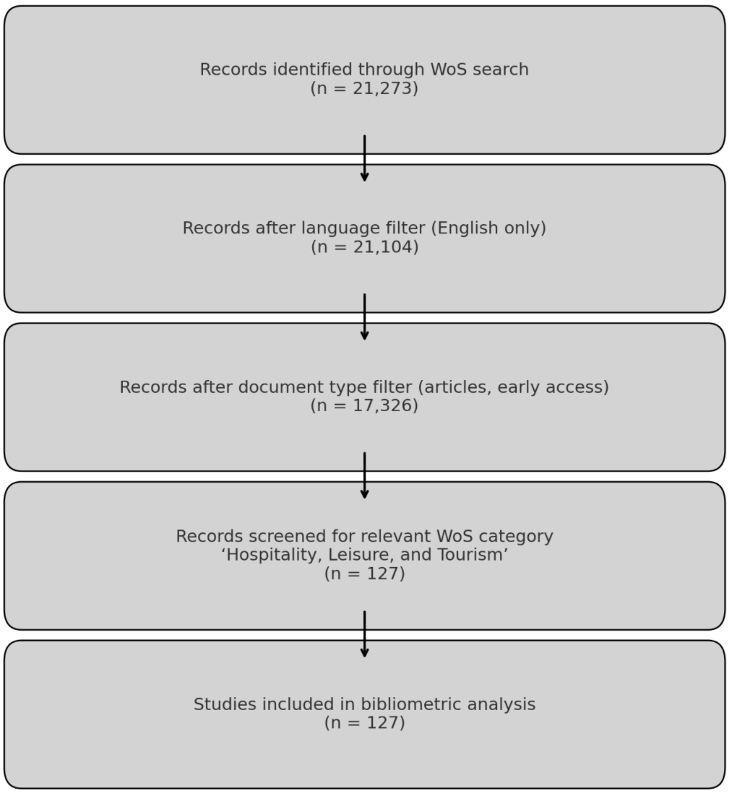

Figure 1. PRISMA Flow Diagram (Source: Moher et al., 2009)

The initial search was conducted in the Web of Science Core Collection on May 1, 2025, using the keyword "food waste" across all the WoS indexes. While broader terms such as *food loss* or *plate waste* are conceptually related, they were excluded to maintain consistency in scope and conceptual clarity, as these terms often refer to distinct stages and causes of food inefficiency (Filimonau & De Coteau, 2019; Roy et al., 2023). Future studies could adopt a broader set of terms for more inclusive coverage.

A total of 21,273 documents were retrieved. After filtering by English language, document type (articles and early access), and disciplinary category (limited to hospitality, leisure, and tourism), the final sample was narrowed down to 127 publications. The rationale for using this specific category lies in the study's objective to map food waste scholarship within service-based, tourism-oriented environments, rather than industrial or household contexts. While alternative databases, such as Scopus or ProQuest, offer broader indexing, the WoS was chosen due to its curated high-impact journals and standardized citation indexing, which are widely accepted in bibliometric research (Han et al., 2023; Ülker et al., 2023).

Data Analysis

The VOSviewer software was employed for data analysis. VOSviewer is a software tool designed for constructing and visualizing networks, with a focus on graphical representation and aiding in the interpretation of extensive bibliometric maps. These networks can encompass journals, authors, or institutions, built on relationships such as citations, bibliographic coupling, co-citations, or co-authorships. In the visualizations, circles represent analyzed items, labeled accordingly, with larger circles indicating greater weight in the network. The proximity between items reflects their degree of relatedness, while thicker connecting lines signify stronger ties. Items are grouped into clusters using location and color (Palácios et al., 2021; Pelit & Katircioglu, 2022).

FINDINGS

Descriptive Findings

Publication by Year

The frequency distribution of publication years reveals a growing academic interest in food waste research within the hospitality and tourism fields. While publication activity was relatively modest in 2020—likely due to the disruptions caused by the COVID-19 pandemic—it began to recover in 2022 and 2023. A significant surge occurred in 2024, with the number of studies doubling compared to previous years, indicating heightened scholarly attention likely driven by global sustainability goals and increased institutional or policy support. Publication levels remain high in 2025, suggesting that food waste has become a well-established and maturing research area. This trend highlights the field’s responsiveness to contemporary environmental challenges and its alignment with broader responsible consumption and production agendas. Figure 2 illustrates the upward trajectory of food waste research in the hospitality, leisure, and tourism domain.

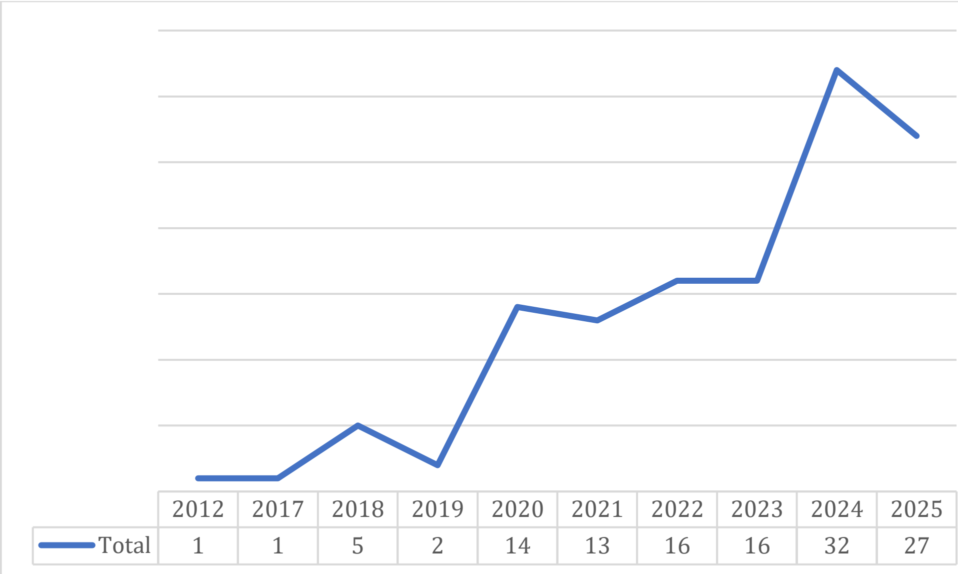

Figure 2. Publication Trend (Source: Own research)

Publications by Journal

Research on food waste is highly concentrated in a few key academic journals, particularly those focused on hospitality and sustainability. The International Journal of Hospitality Management leads with 28 publications, followed closely by the Journal of Sustainable Tourism with 25, demonstrating that food waste is being addressed both from an operational hospitality perspective and a broader sustainable tourism lens. These journals serve as primary outlets for scholars exploring food waste issues, suggesting a strong alignment between journal scopes and the interdisciplinary nature of food waste topics. Other journals, such as the Journal of Quality Assurance in Hospitality & Tourism and the International Journal of Contemporary Hospitality Management, also appear with fewer but notable contributions, indicating a secondary tier of interest among hospitality-focused journals. The presence of multiple specialized journals reflects a healthy diversification of publication venues; however, the dominance of a few core outlets suggests an emerging consolidation of authority in this research space. Overall, the source title distribution highlights the field's integration into mainstream hospitality and tourism research, while also underscoring its relevance to sustainability-driven academic discourse. Figure 3 shows the frequency of journals.

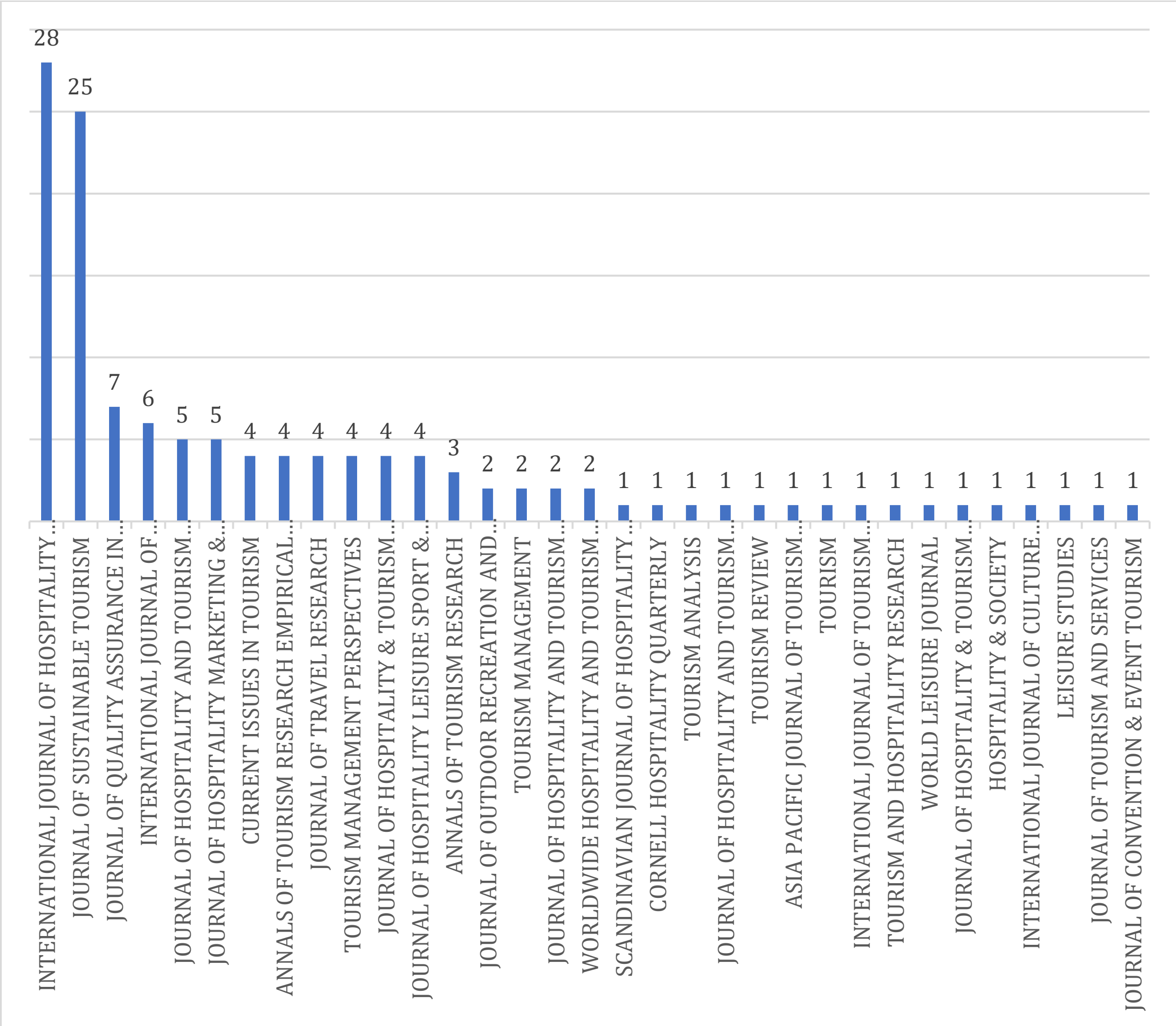

Figure 3. Journals (Source: Own research)

Publications by Country

The bibliometric analysis encompassed publications from 33 countries worldwide (Figure 4). The USA leads in food waste research publications (19 articles), closely followed by Australia (17). This demonstrates a strong research presence from English-speaking countries in the Global North. England and the People's Republic of China each contributed 10 publications, highlighting the engagement of both developed Western and major Eastern economies in this area. Countries such as Spain, Türkiye, Taiwan, and Austria also demonstrate substantial involvement, indicating a broader geographic presence within Europe and Asia. The presence of emerging economies and developing nations, such as South Africa, Kenya, and Indonesia—although with lower frequencies—indicates a growing awareness and engagement in sustainability issues on a global scale. The wide distribution across over 30 countries underlines the global relevance of food waste as a research topic and its connection to policy, sustainability, and hospitality industry practices across diverse socio-economic contexts.

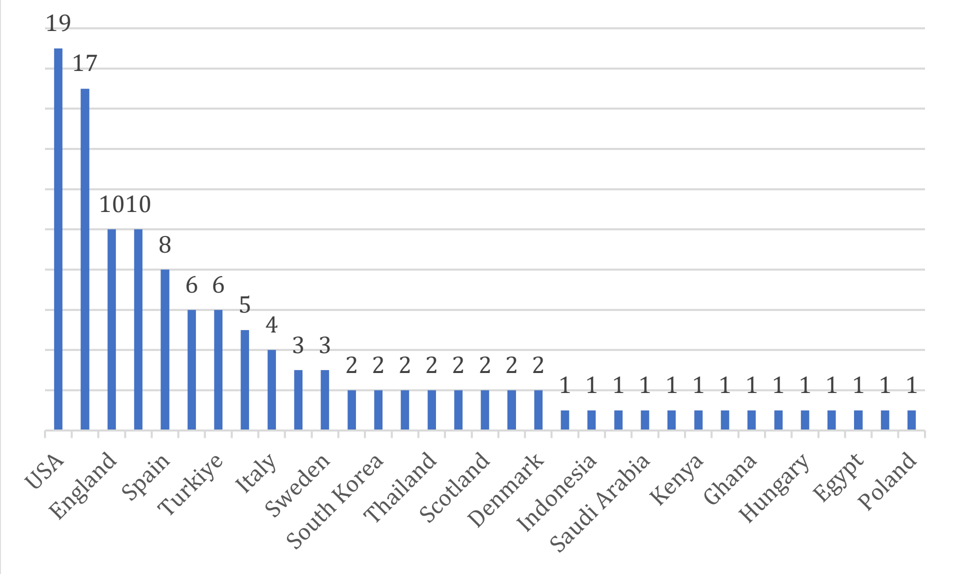

Figure 4. Countries (Source: Own research)

Publications by Research Approach

Researchers employed qualitative or quantitative approaches, striking a balance between in-depth exploration (e.g., interviews) and statistical modeling (e.g., structural equation modeling, or SEM). Experimental and quasi-experimental studies are also common, indicating a focus on testing interventions to reduce food waste. Reflective and review studies highlight theoretical contributions and literature syntheses in the field (Figure 5).

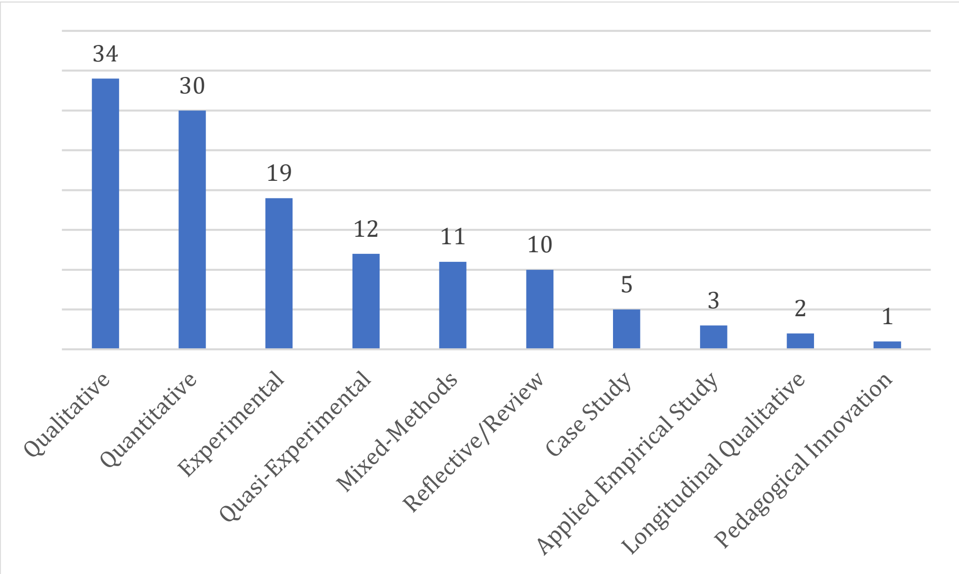

Figure 5. Research Approach (Source: Own research)

Publications by Data Collection Method

Interviews are the most common data collection method, reflecting the qualitative focus on understanding the perspectives of stakeholders (e.g., managers, chefs). Surveys are widely used in quantitative studies, often to collect data from diners or employees for SEM or statistical analysis. Experiments are prevalent, particularly for testing interventions such as nudging or message framing, in both controlled and field settings. Literature reviews support reflective and review studies, while observation is employed in specific contexts, such as naturalistic studies or field experiments (Figure 6).

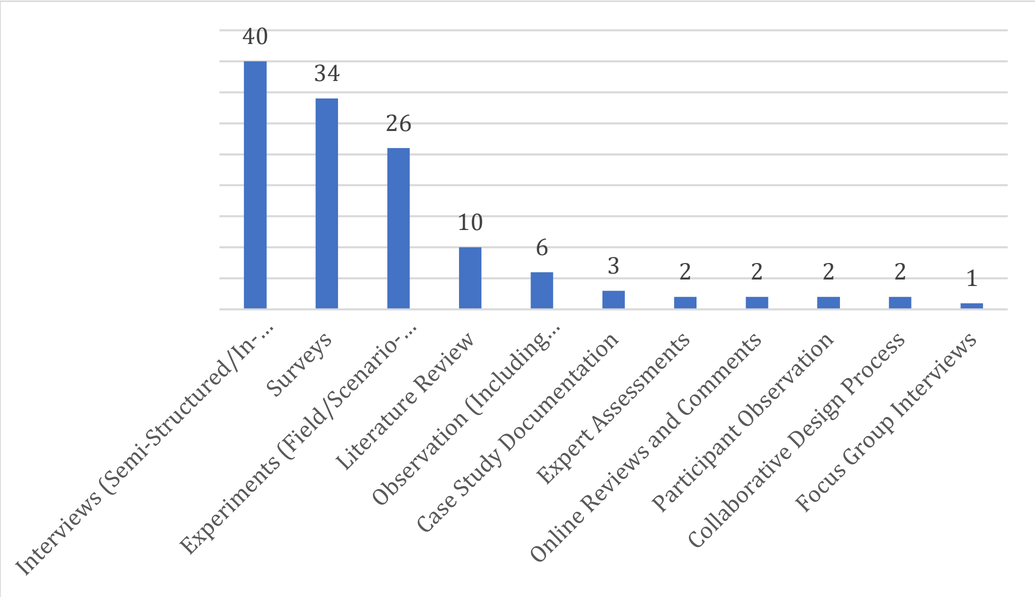

Figure 6. Data Collection Method (Source: Own research)

Mostly Used Abstracts

Co-occurrence analysis is a method that identifies word pairs appearing together in the titles, keywords, or abstracts of scholarly articles, enabling the grouping of topics into related but distinct categories. This approach quantifies the frequency of keyword co-occurrences in academic literature, providing a structured overview of a research field's knowledge landscape (Liao et al., 2025). The VOSviewer software was used for this analysis, as it thoroughly examines all words in the titles and abstracts, computes their co-occurrence frequencies, and visualizes relationships through network mapping. When filtered to include terms with at least 10 occurrences each, the total number of the most frequently used words was 30. A visual map depicting these most frequently used keywords is shown in Figure 7.

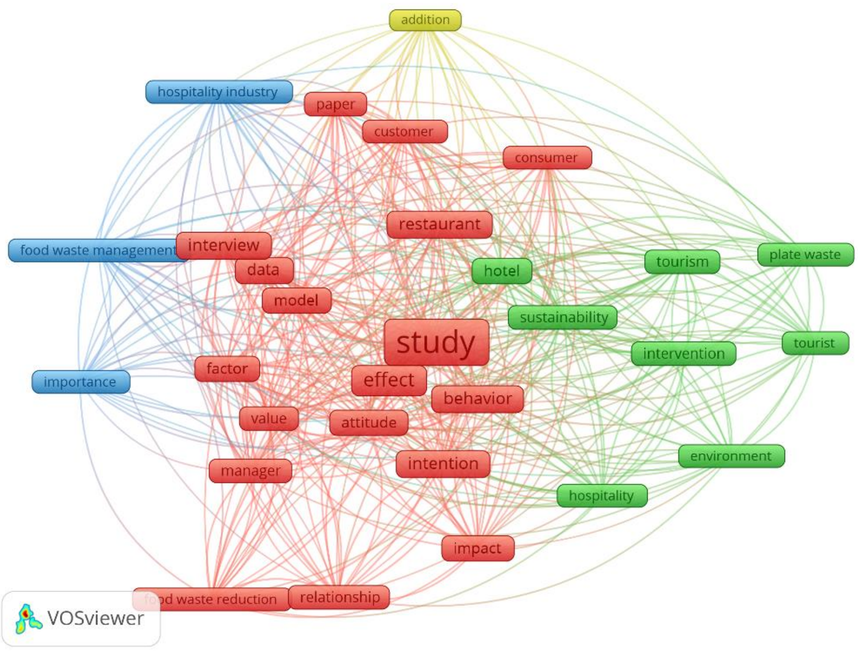

Figure 7. Most Commonly Used Words in Abstracts (Source: Own research)

Figure 7 illustrates that food waste research in hospitality and tourism is primarily centered on behavioral and empirical themes, with key terms such as *study, effect, behavior,* and *intention* highlighting a strong focus on understanding consumer actions and the outcomes of interventions. The field is interdisciplinary, with one cluster focusing on sustainability and tourism-related topics, including the environment, tourism, and food waste. At the same time, the other focuses on operational and managerial contexts within the hospitality industry, including topics such as food waste management and sustainability in the hospitality sector. The strong interconnectivity among clusters indicates that researchers are linking behavioral insights with sustainability practices and industry applications, reflecting a holistic and solution-oriented approach to addressing food waste.

Most Commonly Used Keywords

The VOSviewer software was employed again, and when filtered to include terms with at least 10 occurrences each, the total number of the most frequently used keywords in the studies was 22. The results identify three primary keyword co-occurrence networks: Food waste generation and reduction (blue), sustainability and management (green), and consumption and behavior (red). A visual map depicting these most frequently used keywords is shown in Figure 8.

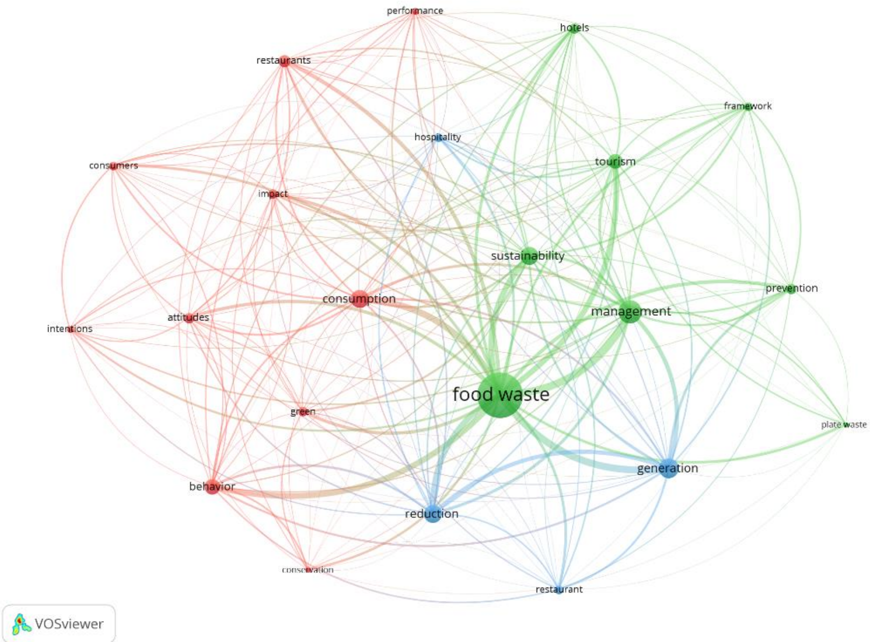

Figure 8. Most Commonly Used Keywords (Source: Own research)

The green cluster integrates food waste with sustainability goals, emphasizing management strategies in hotels and restaurants to achieve environmental outcomes, often through waste reduction and circular economy practices. It focuses on the broader ecological and managerial aspects of food waste in the hospitality industry, emphasizing sustainable practices and operational strategies. The Blue Cluster focuses on the sources of waste and direct mitigation strategies, highlighting operational challenges that arise from these sources. It captures the *what* and *how* of food waste generation and immediate reduction tactics. Red Cluster addresses the human element, exploring how consumer behaviors, social norms, and communication strategies influence food waste, with a focus on fostering pro-environmental actions. It examines the human and social aspects of food waste, concentrating on consumption patterns and behavioral factors.

DISCUSSIONS

This study contributes to the literature by providing the first focused bibliometric mapping of food waste research within the hospitality, leisure, and tourism sectors, a gap previously overlooked by broader food waste reviews that primarily emphasize agriculture, household settings, or industrial contexts (Dhir et al., 2020; Kumar et al., 2022). It uniquely bridges bibliometric science mapping with a service-sector lens, revealing thematic clusters around consumer behavior, sustainability practices, and operational management, thereby advancing knowledge on how food waste is conceptualized and tackled in service-intensive industries.

The findings from this bibliometric study reveal that research on food waste in hospitality, leisure, and tourism has gained remarkable momentum over the past decade, particularly since 2020. The temporal distribution of publications suggests that global environmental concerns, coupled with the Sustainable Development Goals (e.g., SDG 12), have significantly influenced scholarly attention. The dominance of journals such as the International Journal of Hospitality Management and Journal of Sustainable Tourism emphasizes the dual lens through which food waste is studied—both as an operational inefficiency and a broader sustainability challenge. The most frequently cited terms and keywords indicate three core thematic areas: the behavioral dimensions of consumption and waste, strategic waste management practices, and the environmental impacts of food systems. Furthermore, the co-occurrence networks of abstract terms and keywords depict a highly interdisciplinary knowledge structure where psychological theories, managerial practices, and ecological models intersect. Countries such as the USA, Australia, and China lead in research output, highlighting a geographic concentration of academic resources and a policy emphasis on food sustainability. The bibliometric mapping also reveals a gradual shift from waste quantification and processing technologies to prevention-oriented approaches, which involve consumer engagement and operational innovation. This trend aligns with the hospitality industry's broader shift toward circularity, ethical responsibility, and environmental accountability. The interconnectivity among clusters suggests a holistic approach, where sustainability goals drive management strategies that, in turn, target consumer behavior to reduce waste generation.

One noticeable finding in this study is the relatively low emphasis on technology-related themes in the current body of research. For example, the keyword *technology only* appeared a few times across all the analyzed articles. This underrepresentation could be due to several reasons. First, food waste research in hospitality has traditionally focused on human behavior and operational practices—such as portion sizes, consumer choices, or buffet design—rather than digital solutions (Filimonau & De Coteau, 2019). Second, many hospitality businesses, particularly small and independent ones, may not yet have the resources or infrastructure to adopt advanced technologies like AI or IoT, which makes these topics less prominent in both practice and academic inquiry (Liao et al., 2025). It is also worth noting that the integration of technology into sustainability efforts is a relatively new area, meaning research is just beginning to explore these possibilities (Kement, 2024).

IMPLICATIONS

This study provides valuable insights for both industry professionals and policymakers. For hospitality managers, the findings reinforce the value of practical strategies, such as right-sizing portions, more accurate forecasting of guest demand, and training staff to minimize waste during service. These are low-cost, practical steps that can make a real difference. On the other hand, the current research's lack of focus on digital tools suggests a significant opportunity for businesses willing to adopt innovative technologies, such as AI-powered kitchen systems or real-time waste tracking apps, to stand out as leaders in sustainability.

For policymakers, the study highlights the need for increased support in this area. Offering financial incentives, grants, or sustainability certifications that reward innovation could help businesses, especially in developing regions, invest in food waste technology. Promoting these tools more broadly can also help the industry move closer to achieving global sustainability goals, such as those outlined in SDG 12.

LIMITATIONS

This study offers a novel contribution by systematically mapping the intellectual structure of the field and identifying sustainability-centered thematic clusters, such as consumer behavior, operational management, and circular economy strategies, using advanced visualization techniques. By focusing specifically on the service-oriented dimensions of food waste, this research provides clarity to an area that broader studies on agricultural or household waste have often overshadowed.

However, several limitations must be acknowledged. The analysis was restricted to the Web of Science Core Collection, which, despite its academic rigor, may exclude relevant literature indexed in other databases such as Scopus, Google Scholar, or ProQuest. Additionally, only English-language publications were considered, which may have introduced language bias and limited the global representativeness of the findings. Finally, while VOSviewer is a powerful tool for identifying structural relationships between keywords, authors, and sources, it does not provide qualitative content analysis or interpretive depth. Future research could complement this study by incorporating thematic analysis or full-text reviews to capture nuanced insights and evolving discourse in the field.

FUTURE RESEARCH DIRECTIONS

This bibliometric analysis identifies several promising directions for future research on food waste in the hospitality, leisure, and tourism field.

First, while the field has made meaningful progress in exploring consumer behavior and operational management, technological solutions remain notably underrepresented. Given the rise of AI, IoT, and smart kitchen innovations, future studies could explore how these tools enhance forecasting, inventory control, and waste monitoring. Big data analytics, machine learning algorithms, and systematic implementation case studies could offer valuable insights into scalable tech-based interventions.

Second, the green cluster, which centers on sustainability goals and management strategies (e.g., circular economy, waste reduction practices in hotels and restaurants), would benefit from comparative case studies or action research to assess the effectiveness of different organizational practices across cultural and economic contexts.

Third, the red cluster, which emphasizes consumption and behavior, including topics such as plate waste, social norms, and pro-environmental actions, presents an opportunity for experimental designs, longitudinal studies, or cross-cultural surveys to evaluate how different interventions perform over time and in various hospitality settings.

Fourth, the current geographic distribution of research is concentrated in developed countries. Expanding food waste studies to developing regions, particularly in Africa and Latin America, through qualitative fieldwork, ethnographic studies, or participatory approaches, could yield more inclusive and culturally relevant findings.

Finally, while prevention and reduction dominate the conversation, the concept of food valorization—turning waste into resources—is emerging. Here, design science, pilot projects, or collaborative research with engineers and food scientists could help bridge gaps between hospitality practices and circular economy innovations.

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A bibliometric analysis of reputation management in the hospitality industry: Trends and future directions

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ABSTRACT

This research examines papers on reputation management in the hospitality industry using bibliometric techniques. The study obtained information from the Web of Science (WoS) database, renowned for its interdisciplinary citation coverage. The search strategy involved using keywords such as "reputation management," "hospitality," "leisure," and "tourism" to narrow down articles published between 2000 and 2023, a period marked by the increasing influence of digitalization in the hospitality industry. We compiled a dataset comprising 1,859 peer-reviewed articles selected for bibliometric analysis using the Bibliometrix R package and its interactive Biblioshiny tool, for data manipulation and presentation purposes. The findings highlighted the influence of media and online reviews on developing strategies for managing reputation,, with "word of mouth" and "customer satisfaction" standing out as pivotal concepts. China and the United States stand out as the nations, with Hong Kong Polytechnic University recognized as a top institution in this field of study. The research indicates a rising trend in studies since 2010, aligning with the evolution of the hospitality industry and the surge in platform usage. These discoveries provide insights for both academia and industry professionals, laying the groundwork for strategic directions and further research in managing hospitality reputation. This research underscores the importance of devising innovative strategies to bridge research gaps and explore emerging areas of interest.

KEYWORDS

Reputation management, hospitality, bibliometric analysis, trends, future directions

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INTRODUCTION

Reputation management is of prime importance for the sustainable success of businesses in the modern-day environment. However, despite its growing importance, there is a lack of a comprehensive overview that maps the evolution and structure of academic research on this subject within the hospitality industry. Reputation management plays a crucial role in the rapidly evolving digital landscape, particularly in highly competitive sectors such as hospitality, where guest satisfaction and loyalty are paramount (Morrone et al., 2021; Yao et al., 2024; Yaşarsoy et al., 2022). Guest trust and a strong, positive reputation have a significant influence on a hotel or restaurant's market positioning and long-term success (Keh & Xie, 2009; Stravinskienė et al., 2021). As guest feedback becomes increasingly visible through digital platforms and social media, hospitality firms are pressed to pursue strategic approaches to reputation management. Despite the growing volume of literature, a systematic and quantitative assessment of how the field has evolved over time—its trends, key contributors, and emerging themes—remains limited. This gap constitutes the core problem addressed by this study.

Accordingly, this study aims to fill this gap by conducting a comprehensive bibliometric analysis of academic research on reputation management in the hospitality industry. This study aims to present a bibliometric analysis of academic research on reputation management in the hospitality field, providing an overview of the literature on this subject. The primary objective is to identify the intellectual structure, thematic evolution, and key research patterns that have shaped the field between 2000 and 2023. The leading themes, dominant methods, and other recent trends emerging in the development of reputation management are envisaged. Several spots in the literature are identified, along with suggestions for future study. This study is based on an extensive review of academic literature, focusing on publications from the Web of Science database between 2000 and 2023.

The scope of this study is limited to the distribution of research on reputation management in the hospitality industry by year, the most cited publications, prominent authors, countries, and journals. In this context, strategic insights and recommendations are provided to benefit both academic and industry professionals. Structurally, the study begins by reviewing the existing literature on reputation management in the hospitality industry, followed by an explanation of the bibliometric analysis methods. The findings are presented, and future trends and research suggestions are discussed in light of the results.

THEORETICAL FRAMEWORK

Concept for Reputation Management

Reputation management has become a crucial concept within the strategic management processes of businesses. Particularly in the service sector, reputation is a critical factor for businesses seeking to gain a competitive advantage and ensure sustainability in the eyes of guests, stakeholders, and society at large. Today, reputation is often described not as an isolated evaluation of an individual's or an organization's past actions or future behaviors but rather as a perception shaped by what others think (Adeosun & Ganiyu, 2013). Moreover, reputation has been regarded as a tool that facilitates trust among organizations, enhancing the efficiency and effectiveness of online services and communities (Hendrikx et al., 2015). Therefore, reputation management refers to the active process of managing and enhancing this perception.

The disciplines inform the theoretical foundations of corporate reputation management and strategic management. Reputation management is often explained through various theories, including social capital, the resource-based view, and stakeholder theory. Social capital refers to the networks of relationships through which businesses build trust, loyalty, and opportunities for collaboration (Kay & Hagan, 2003). According to social capital theory (Bourdieu, 1986), a business's reputation is closely tied to its ability to foster a positive image within social and institutional networks (Ferrer et al., 2013; Lin, 2017). In this framework, reputation serves as a form of social capital, essential for building trust, cultivating strong relationships with guests, and encouraging collaborations. This perspective highlights the importance for businesses to enhance their social networks and develop strategies that foster positive engagement with stakeholders.

According to the resource-based view (Wernerfelt, 1984), a company's ability to achieve a sustainable competitive advantage depends on its resources being valuable, rare, hard to imitate, and non-substitutable (Kristandl & Bontis, 2007). In this light, reputation is regarded as one of the most vital intangible assets a business can have (Ortakarpuz & Doğanalp, 2024). A well-maintained reputation generates value that is challenging for competitors to duplicate, providing the business with a lasting competitive edge. The resource-based view emphasizes that reputation is a strategic resource that should be actively managed to strengthen the business's market position (Sohn & Lariscy, 2012). Freeman's (1984) stakeholder theory advocates a philosophy that prioritizes the interests and evolving needs of employees, guests, suppliers, and shareholders alike (Ertuğrul, 2008). It argues that businesses are responsible not only for their shareholders but also to all stakeholders. In this context, reputation management involves establishing healthy, sustainable, and trust-based relationships with all stakeholders (Wierzbinski & Potocki, 2013). According to stakeholder theory, a business's reputation is the sum of the perceptions held by its stakeholders (Helm, 2007). Consequently, a successful reputation management strategy requires a deep understanding of stakeholder expectations and the execution of strategic actions that meet these expectations.

While the literature recognizes various dimensions of reputation, one of the most commonly used scales is the Reputation Quotient (RQ). Developed by Harris Interactive and C. J. Fombrun, this scale assesses an organization's reputation across six key dimensions: emotional appeal, products and services, financial performance, vision and leadership, workplace environment, and social responsibility. The scale measures whether organizations are perceived as beloved, trusted, and responsible toward society (Oktar & Çarıkçı, 2012). These dimensions shape the perceptions of various stakeholder groups and define the core elements that constitute a business's overall reputation. Therefore, businesses must effectively manage these reputation dimensions to achieve their strategic goals.

In recent years, digitalization has ushered in a new era of reputation management. Social media, online platforms, and digital networks can instantly impact a business's reputation (Koçyiğit, 2017; Süllü, 2019a; Yağmur, 2019). The integration of reputation management with digitalization involves managing guest feedback, monitoring online reviews, and promptly addressing and mitigating negative perceptions. Coombs and Holladay's (2012) Situational Crisis Communication Theory provides a valuable framework for managing the impact of crises on reputation in digital platforms (Coombs, 2017; Jamal & Abu Bakar, 2017).

Reputation management also plays a significant role in the context of sustainability and social responsibility (Saylı & Uğurlu, 2007; Süllü, 2019b). A business's capacity to fulfill its environmental, social, and ethical responsibilities has a direct influence on its reputation. Today, businesses are expected not only to explain their financial performance but also to account for the value they provide to all stakeholders, society, and the environment. The sustainability approach evaluates not only a business's financial success but also its contributions to society and the environment, with these contributions directly impacting reputation (Altınay, 2016). In this context, reputation management is closely linked to sustainability, requiring businesses to address their social responsibility policies strategically for long-term success.

Reputation is a critical strategic resource not only for businesses to gain a competitive advantage but also to build social trust and develop healthy relationships with stakeholders. Based on these theoretical foundations, businesses should approach reputation not merely as a perception to be managed but as an integral part of a holistic strategy. Reputation in the hospitality industry is a ubiquitous concept that transcends boundaries, encompassing diverse themes ranging from guest satisfaction to environmentally sustainable practices (Satar & Güneş, 2017; Yusof et al., 2017). The reputation is the direct path to guest trust; through it, word-of-mouth spreads positive experiences, which will create long-term loyal customers (Jalilvand et al., 2017). Therefore, hospitality businesses need to place reputation management not from the perspective of short-term gains or crisis management but as a holistic strategy with service quality, social responsibility, and environmental sensitivity as its core foundation.

Reputation Management in the Hospitality Industry

The hospitality industry, which is directly based on guest experience, places a critical emphasis on reputation. Guests' perceptions of a business, shaped by factors such as service quality, hospitality, cleanliness, safety, and overall satisfaction, play a decisive role in the long-term success of such businesses (Mmutle & Shonhe, 2017). Reputation management is the process by which a business controls its external perception and seeks to enhance it positively (Perez-Aranda et al., 2019). In the hospitality industry, several factors influence this process, including direct communication with guests, maintaining consistent service quality, and managing online reviews. A strong reputation is essential for gaining a competitive edge and fostering guest loyalty. It plays a crucial role in attracting new guests, retaining existing ones, and safeguarding the business during challenging times (Akgöz & Solmaz, 2010). A positive reputation can significantly improve financial performance (Korkmazer & Saydan, 2018). Guests tend to trust businesses with a solid reputation, which leads to increased revenue through repeat visits and positive reviews (Kim et al., 2004).

The rise of digital technology and social media has made reputation management more complex in the hospitality industry (Morrone et al., 2021). Online hotel review platforms, social media interactions, and user feedback have become essential elements that impact businesses' reputations in real-time (Baka, 2016). The rapid sharing of guest experiences on digital platforms compels businesses to adjust their reputation management strategies to keep up with these changes. As a result, managing online reputation has become a crucial part of digital marketing efforts.

Effective reputation management in the hospitality industry relies on several key factors, including consistent service quality, customer satisfaction, open communication, and social responsibility (Benavides-Velasco et al., 2014; Kim & Kim, 2016). Service quality is the most significant factor influencing guests' perceptions of the business. Clear and consistent communication fosters customer trust and helps protect the business's reputation during times of crisis. Additionally, engaging in social responsibility initiatives and adopting environmentally friendly practices are important strategies that enhance reputation.

Reputation management is also closely linked to crisis management. In the hospitality industry, adverse service quality incidents can quickly harm a business's reputation (Mmutle & Shonhe, 2017). Therefore, crisis management strategies are essential to minimize potential reputational damage. Establishing prompt and effective communication during a crisis, understanding guest concerns, and taking solution-oriented actions play critical roles in protecting reputation (Griffin, 2014). Furthermore, the appropriate post-crisis period allows the business to rebuild its reputation (Ulmer et al., 2007).

In recent years, sustainability and social responsibility have become important aspects of reputation management in the hospitality industry. Factors such as environmental sensitivity (Gabarda-Mallorquí et al., 2018), social justice (Morgan & Huertas, 2011), and contributions to local communities (Alvarado-Herrera et al., 2020) directly shape businesses' reputations. Businesses that adopt environmentally friendly practices gain a positive reputation both in the eyes of guests and within the industry. Sustainability has become an integral part of reputation management, responding to modern consumer demands (Jones et al., 2015).

Reputation management in the hospitality industry is a complex and multifaceted process that shapes guest perceptions. Elements such as digitization, crisis management, sustainability, and guest satisfaction must be addressed through an integrated approach to form the foundation of an effective reputation management strategy. To create and maintain a strong brand that stands out above others in the industry, businesses must realize that service quality will only take them so far. There is no substitute for strategic initiatives that enhance the guest experience. The more businesses commit to the three areas of brand standards mentioned above, the better their ability to stand out and the greater success they will enjoy.

METHOD

Source of Data

This work presents a bibliometric study of academic publications related to reputation management in the hospitality industry. The study relied on the Web of Science to collect most of its data, as it is recognized as one of the most important scientific citation indexes worldwide (Wang et al., 2017). Well accepted are WoS among other databases, as it covers a broad spectrum of disciplines that permits, in many cases, a cross-relational analysis of research trends and developments in reputation management in hospitality. At the outset, the inclusion criteria indeed specified four key search terms, namely, "reputation management," "hospitality," "leisure," and "tourism"; these were searched for in the titles, abstracts, and keywords of articles. The period for data collection spanned from 2000 to 2023, capturing the growth in the importance of reputation management in academic discussions and the heightened impact of digitalization on the industry. The decision to begin data collection from the year 2000 is rooted in the observable onset of digital transformation in the hospitality and tourism sectors around that time. Starting in the early 2000s, the growing influence of online customer reviews, social media engagement, and electronic word-of-mouth began to shape the discourse on reputation management. Furthermore, a noticeable increase in academic attention to these developments emerged after 2000. Therefore, setting 2000 as the initial year for analysis allows for a more comprehensive reflection of both industry practices and evolving scholarly interest in reputation management.

An attempt to review theme-based academic journals identified relevant journals concerning the articles. The articles were indeed peer-reviewed, fully available in text format, and were selected according to the defined criteria for inclusion. Additionally, the selectivity of the analysis allowed only English peer-reviewed, complete-text articles to be included. Of these, 1,859 unique articles were picked from the WoS database for further analysis. The retrieved bibliographic details contained information such as the author's name, article title, year of publication, journal name, country, institution, citation number, and keywords. The collected data were cleaned and processed in large quantities to ensure data coherence and consistency. Duplicate entries and irrelevant papers were deleted, alongside correcting data inconsistencies, as recommended in the Still-Act (Buttrey & Whitaker, 2017). That is to say, it is vital for bibliometric analysis.

Data Analysis

For purposes of this study, a quantitative-oriented bibliometric analysis of the literature on reputation management in the hospitality industry was performed. Bibliometric analysis is the use of quantitative analysis and statistics in the systematic examination of the scope and growth of a certain area of literature (Guleria & Kaur, 2021). The Bibliometrix R package and its graphical interface application, Biblioshiny, for data analysis and visualization. Biblioshiny is a web-based application designed for easy use by non-programmers, eliminating intimidation when performing detailed bibliometric analyses of citations on academic materials (Aria & Cuccurullo, 2017).

The analytical process was divided into two major sections: descriptive analysis and bibliometric mapping. The descriptive analysis provided a general overview of the research output regarding reputation management, with a particular emphasis on the hospitality industry. Research output characteristics, including annual publication output, the names of the most prolific authors, the most productive journals, and the countries with the most active researchers, were examined to reveal trends in research output as well as the leading players in this field. Citation analysis was also conducted to identify highly cited works that served as the basis for pinpointing core studies in reputation management within the hospitality sector. This phase also yielded critical information, such as how attention shifted over time, who the original authors in this area were, and which authors produced significant works in this field. These findings offer insight into the field's evolution over time.

In the second phase, bibliometric techniques were employed to investigate the intellectual structure of the domain and its thematic areas. The Bibliometrix R package, combined with

Biblioshiny, further enabled the generation of maps and network views that reveal underlying research patterns within the field. Coauthorship analysis assessed the collaboration among authors and institutions, revealing research networks and knowledge dissemination hubs. Such network analysis helped to create a picture of academic leadership and how key players within it exerted influence (Kim & Jung, 2016). Additionally, it demonstrated the level of international collaborative research and the regions in which such collaborations took place (Baker-Doyle & Yoon, 2011).

To capture the research topics and new directions that emerge, co-occurrence analysis focused on identifying word clusters that were used most frequently. The keyword analysis provided valuable insights into the interrelated research topics and identified areas that require further research (Kadirhanogullari & Köse, 2024). Most such analyses are crucial in detecting research trends and establishing the core knowledge structure of the discipline. A conceptual network map was created to group and plot the relationships among central themes and concepts related to reputation management research. Its different areas, such as “customer behavior”, “digital communication”, and “the role of social media in reputation”, were identified by clusters illustrating various streams of research.

Trend analysis focused on the temporal analysis of publication and citation patterns, aiming to study shifts in scholarly attention (Akhavan et al., 2016). Such an evolution was employed to trace specific thematic developments in detail over time. The content examined also included word frequencies and distribution over time, specifically the words “word-of-mouth,” “online reviews,” and “COVID-19,” to determine how industry changes and international events had shaped research agendas. This analysis is crucial for exploring new terrains and developing responses to current issues. A citation context analysis was conducted to identify seminal authors, publications, and theories that have shaped the research agenda over the years. This analysis highlighted periods of aggressive citation impacts, indicating changes in the research focus.

This paper provides an extensive survey of the existing literature, outlining the principal research areas, active authors, and prospects of reputation management research in the hospitality industry. The systematic nature and sound methods of analysis in this study safeguard the validity and reliability of the results, which are quite helpful for scholars and practitioners seeking to identify ways of developing the field of reputation management studies.

FINDINGS

Descriptive Analysis

The annual publication output provides a longitudinal perspective on the growth of academic interest in reputation management within the hospitality industry. Although the number of publications remained relatively modest in the early 2000s, a noticeable increase occurred after 2010. This upward trend aligns with the digital transformation of the industry, the rise of online review platforms, and the growing relevance of e-reputation in strategic management discussions. The consistent growth in publication volume over the last decade reflects an expanding scholarly engagement with the complexities of managing organizational reputation in a digitally driven service environment.

In Figure 1, attention is paid to the research output of notable contributors in hospitality, tourism, and management studies. Out of all, Law is the most proficient, with a record of 50 publications, which is quite impressive in the realms of hospitality technology and customer experience management, among others. Following him in this rank are Li and Zhang, whose outputs are 34 and 28 publications, respectively. They are recognized for excellence in areas such as service, customer satisfaction, and destination management, which are core precepts of the discipline, both theoretically and empirically. Other notable contributors, such as Yang and Liang, have bridged the gap between hospitality management and related social science concepts by exploring issues beyond management, including consumer understanding and organizational performance. In addition, several authors, including Kim, Liu, and Schuckert, introduce geographic diversity, thereby advancing research in the fields of hospitality and tourism.

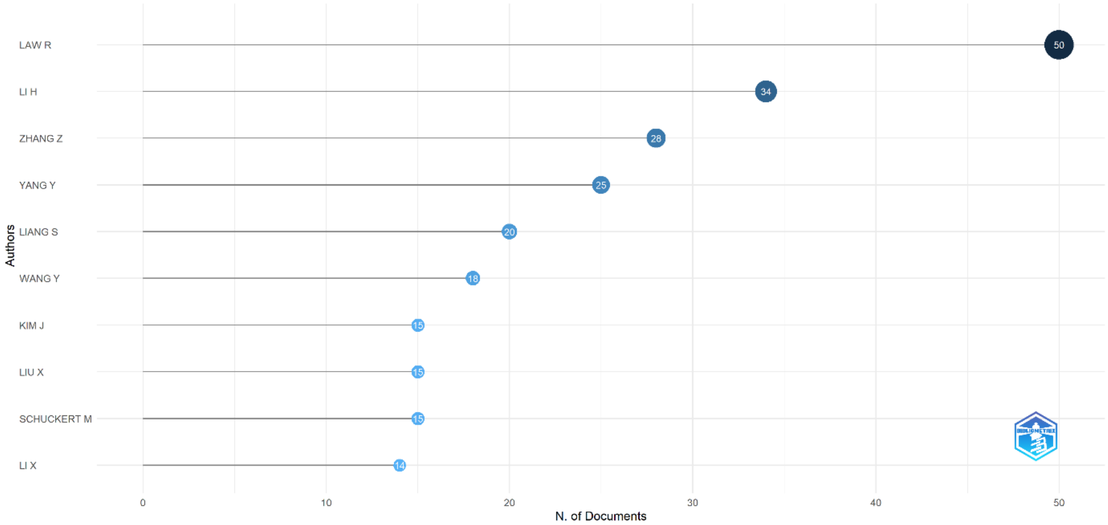

Figure 1. Most Relevant Authors (Source: Own research)

This analysis was conducted to identify the key contributors shaping the scholarly landscape of reputation management in the hospitality industry. Understanding who the most active authors are helps reveal dominant research perspectives and provides direction for future collaboration opportunities. The results indicate a strong academic presence from scholars such as Law, Li, and Zhang, whose works have laid the important theoretical and empirical foundations.

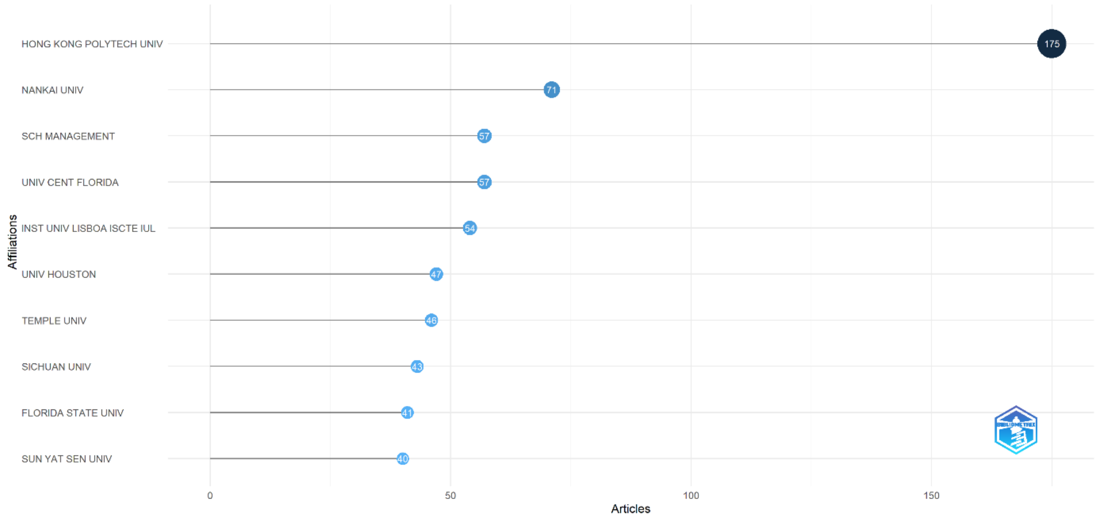

Figure 2. Most Relevant Affiliations (Source: Own research)

Figure 2 illustrates the top academic institutions contributing to the research output in hospitality and tourism management. The top position is occupied by the Hong Kong Polytechnic University, with 175 papers, which indicates a significant commitment and structure in this area. Nankai University and the School of Management follow with 71 and 57 papers, respectively, indicating their significant contributions to hospitality management research, particularly in China. Furthermore, both the University of Central Florida and the University of Houston are notable institutions that reflect the well-established inclination of the US towards tourism studies. Also of great interest is ISCTE-IUL and the University of Lisbon, where the increase in hospitality research in Europe can be appreciated, with efforts from Portugal in this regard, tilting towards more academic input.

This analysis highlights the institutional distribution of research productivity. Identifying leading universities allows us to assess where institutional knowledge clusters are formed and where future academic partnerships may be developed. The results reveal Hong Kong Polytechnic

University as the most productive institution, signaling its significant role in hospitality reputation research.

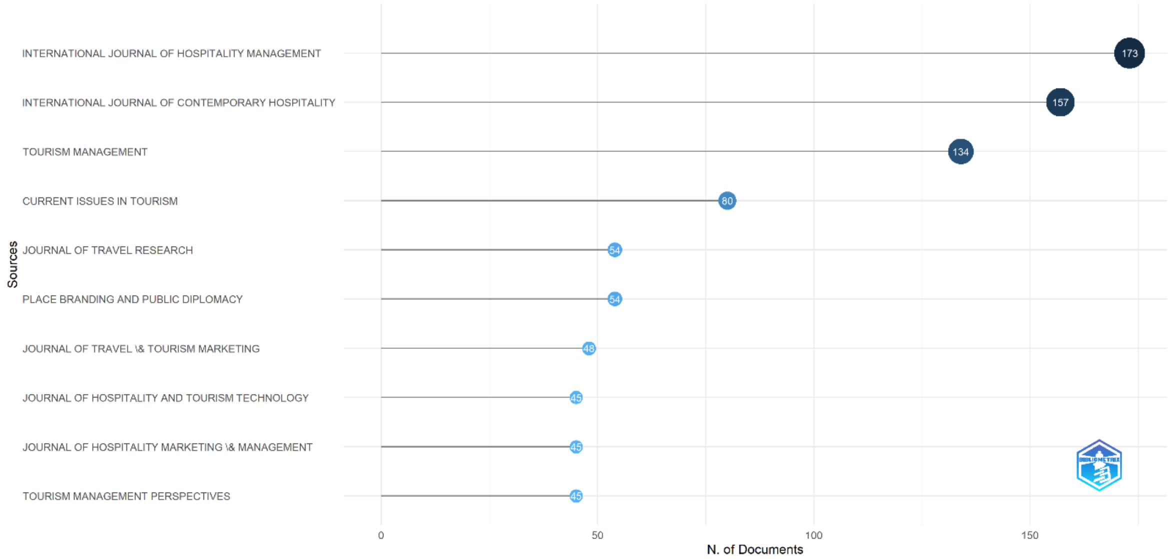

Figure 3. Most Relevant Sources (Source: Own research)

Figure 3 highlights the top academic journals publishing research on hospitality and reputation management. Leading the list are the International Journal of Hospitality Management and the International Journal of Contemporary Hospitality Management with 173 and 157 articles, respectively, emphasizing their critical role in shaping hospitality management research and theory. Tourism Management, with 134 articles, bridges the gap between hospitality management and broader tourism studies, contributing to a multidisciplinary understanding of reputation management, customer experience, and service quality. Other notable journals, such as Current Issues in Tourism (80 articles) and the Journal of Travel Research (54 articles), focus on emerging trends and challenges affecting corporate reputation and customer management. Additionally, journals such as Place Branding and Public Diplomacy and the Journal of Hospitality Marketing and Management reflect specialized interests in destination image, place branding, and strategic marketing, highlighting the growing emphasis on linking reputation management with broader marketing strategies in the hospitality sector.

This analysis aims to identify the most influential academic journals in publishing research on reputation management in hospitality. This information helps scholars identify the most suitable outlets for disseminating their work. The results indicate the dominance of the International Journal of Hospitality Management and the International Journal of Contemporary Hospitality Management, reflecting their significant role in shaping the discourse.

As shown in Figure 4, the countries most frequently cited in studies on hospitality and tourism are presented, indicating their academic contributions. China leads the ranking with 12,179 citations, followed closely by the United States with 11,483 citations, and topics in the discipline explain these statistics. The United Kingdom, Australia, and Spain are also among the most published, indicating that they support the research. The fact that China ranks first among authors indicates that hospitality and tourism-based studies are gaining popularity as a field of study, driven by the rapid growth of the country’s tourism market and the increasing academic focus on the subject. The high citation index attributed to the U.S. contributes to the country's well-developed research apparatus. Other European countries, such as the UK and Spain, also participate actively in this study. This image illustrates the gradual improvement of regional research centers and networks, showcasing variations in productivity and research presence.

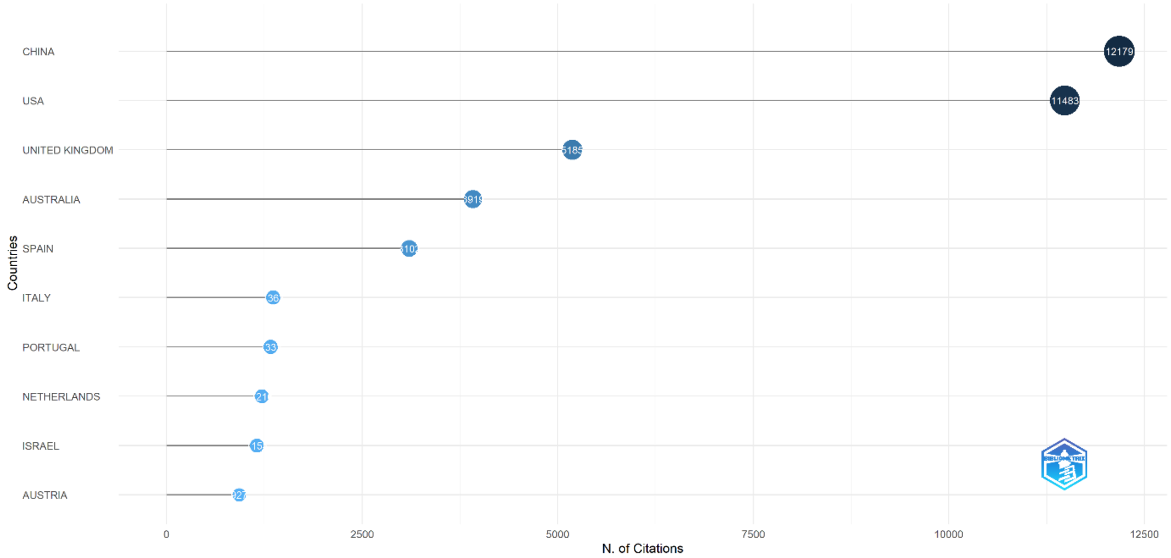

Figure 4. Most Cited Countries (Source: Own research)

The purpose of this analysis is to understand the geographical distribution and influence of research output. Highly cited countries often reflect strong institutional support, research funding, or active collaboration networks. The results show that China and the United States have emerged as global leaders, suggesting a regional dominance that may shape future research agendas.

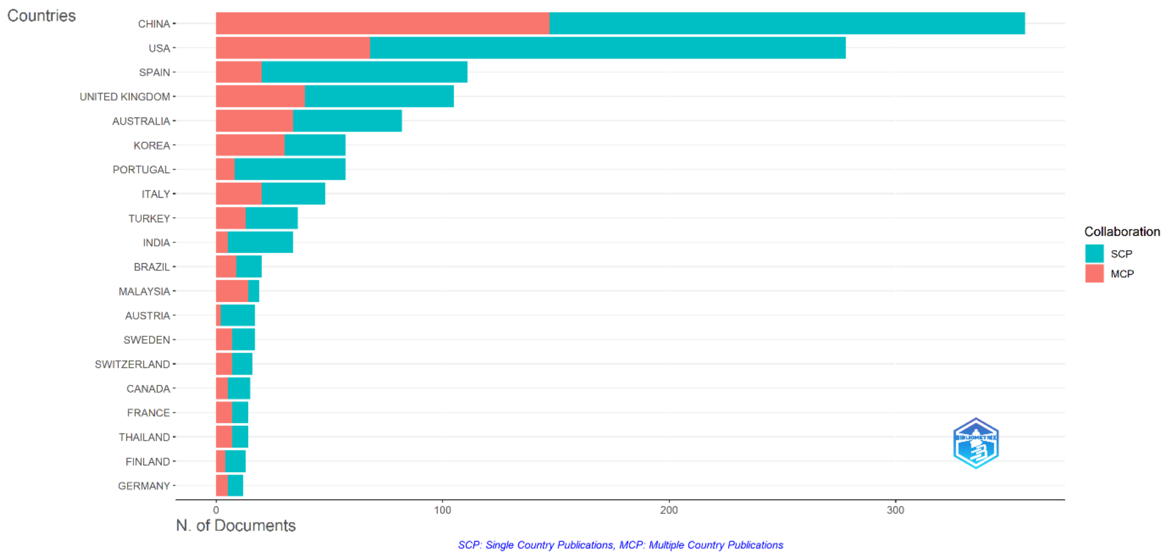

Figure 5. Corresponding Author Countries (Source: Own research)

The 'Distribution and Collaboration Patterns among Corresponding Authors' of hospitality and tourism research by country perspective is presented in Figure 5. It also presents Single Country Publications (SCP) in turquoise and Multiple Country Publications (MCP) in Red. In terms of volume and international collaboration in publications, China and the United States remain the top countries, as evident by the high percentage of MCPs, which suggests their extensive overseas connections in conducting research. While Spain, the UK, and Australia incorporate a fair share of SCPs and MCPs, this narrows the possibility of performing qualitative research without the need for external partnerships. In contrast, there are examples of countries such as Korea and Portugal, which are geographically-restrained and smaller in their academic outputs, that are also heavily reliant on multi-country research publications in order to enhance their international presence. A relatively higher percentage of publications in the form of Single Country Papers (SCPs) in Turkey and India could indicate that these countries are pursuing more domestically focused research, possibly due to high levels of state funding or the implementation of national strategies. The picture illustrates, however, that there is a growing importance of multi-country publications in addressing issues in hospitality and tourism, with an increasing number of international collaborations being undertaken.

This analysis was conducted to examine patterns of international collaboration in research on hospitality reputation. The distinction between Single Country Publications (SCP) and Multiple Country Publications (MCP) helps reveal how knowledge exchange occurs globally. The results demonstrate that countries like China and the U.S. lead both in volume and international collaborations, which reinforces their influence in the field.

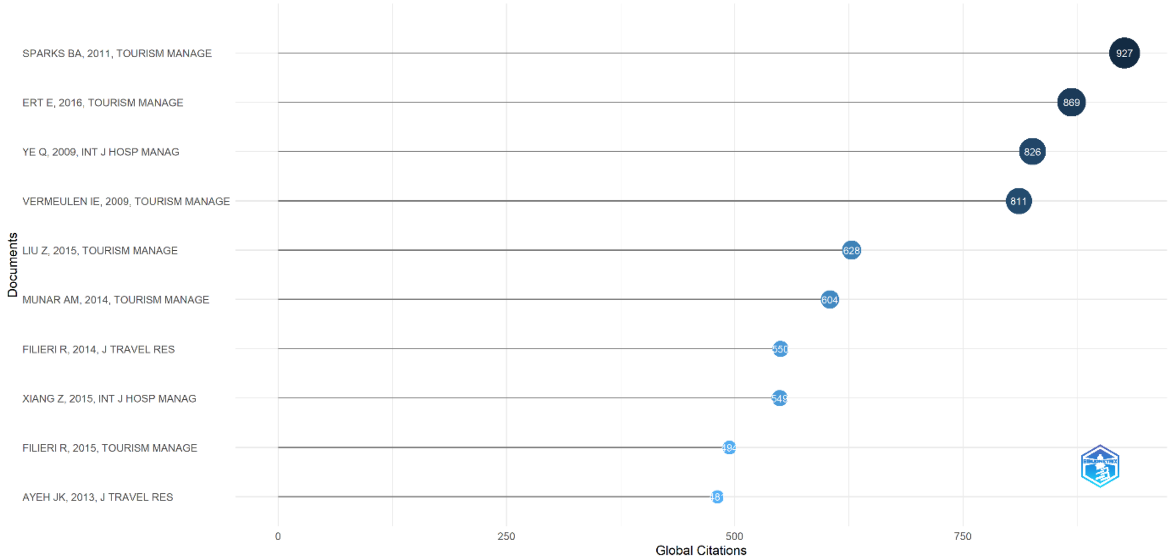

Figure 6. Most Cited Papers (Source: Own research)

In hospitality and tourism-related literature, the most influential articles are represented in Figure 6. Several key studies that have contributed to the area to some extent have been presented. The first entry on the list is Sparks (2011), which has 927 citations, making it a beneficial article for studying customer behavior and service quality. The second one is Ert (2016), with 869 citations, which investigates the role of social media in shaping consumer trust. Three studies are then introduced; Ye et al. (2009) attracted 826 citations, whereas Vermeulen and Seegers (2009) attracted 811 citations due to their study, which focused on online reviews, composition, and management of the economy's reputation regarding hospitality. These studies emphasize the significance of eWOM marketing in attracting and engaging consumers. Other relevant articles, for instance, those authored by Liu and Park (2015) and Munar and Jacobsen (2014), emphasize the importance of the internet and social networks in the development of strategies and behaviours in the hospitality industry. Filieri et al. (2015) have a significant influence on the field of research regarding online users and their consumption patterns, as evidenced by two of their works appearing among the top 10 articles. As mentioned earlier, the works in Figure 6 that have received the highest citations address relevant issues such as customer behavior, service quality, social media, and digitalization, which have significantly impacted scholarship and practice, particularly in the fields of hospitality and tourism management.

This analysis identifies foundational studies that have shaped the intellectual core of the field. Recognizing the most cited works helps researchers understand the theoretical and methodological underpinnings of reputation management in hospitality. The findings highlight the critical importance of digital trust, customer behavior, and online reviews as leading research concerns.

Bibliometric Mapping

Co-authorship analysis provides insights into the structure of collaborative networks and the distribution of scholarly influence in the field. Although no visual representation is included in this study, preliminary analysis showed that co-authorship patterns are concentrated among a few prolific authors and institutions, particularly those from China and the United States. These countries not only produce the highest volume of research but also engage in frequent international collaborations, contributing to the dissemination of knowledge across borders. Key institutions, such as the Hong Kong Polytechnic University and the University of Central Florida, demonstrate strong connectivity with other global research centers, acting as knowledge hubs. However, the analysis also indicates a gap in collaboration among emerging regions, suggesting potential for future network development. Strengthening collaborative ties between developing and developed research communities could enhance innovation and increase research visibility in underrepresented regions. Such findings underline the importance of collaborative research in expanding the intellectual boundaries of reputation management in hospitality, promoting interdisciplinary integration, and fostering cross-national scholarly exchange.

Figure 7. Word Cloud of Author Keyword (Source: Own research)

Figure 7 displays a word cloud that highlights key terms identified in the literature on reputation management within the hospitality industry. Prominent terms such as 'word-of-mouth,' 'satisfaction,' 'impact,' and 'hospitality' highlight their significance in this area. Word-of-mouth is essential in shaping how consumers perceive businesses and affects their online reputation. At the same time, satisfaction serves as a vital measure of service quality and a key indicator of favorable results. The term 'impact' illustrates the effect of reputation on organizational performance. Additionally, the inclusion of 'social media' and 'online criticism' points to the growing reliance on digital platforms for reputation management in the hospitality industry.

This keyword co-occurrence analysis aims to uncover the major thematic areas emphasized in the literature. Identifying frequently used keywords reveals the core interests and evolving trends within the field. The prominence of terms such as ‘word-of-mouth’ and ‘satisfaction’ highlights their central role in reputation strategies.

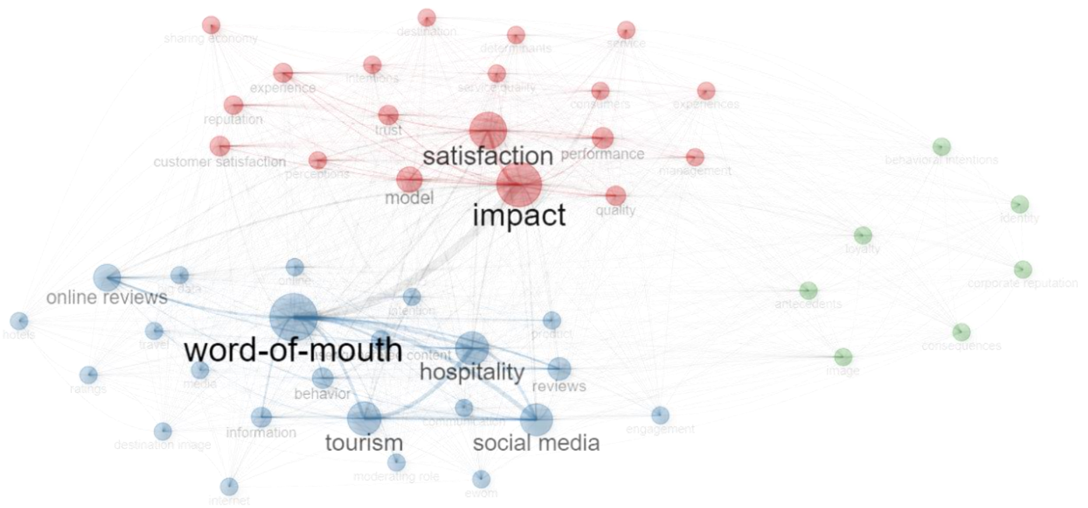

Figure 8. Conceptual Network Visualization (Source: Own research)

In Figure 8, the main aspects of the network, which are divided into the red cluster (Satisfaction and Performance), the blue cluster (Social Media and Endorsement), and the green cluster (Behavioral Intentions and Corporate Reputation), are illustrated. Regarding the red cluster, it addresses issues such as satisfaction, impact, and performance, where service quality, customer satisfaction, and organizational performance are interconnected. The blue cluster, on the other hand, encompasses the communication aspects, including word-of-mouth, social media, and online reviews, as well as their respective roles in shaping a company's image as perceived by consumers themselves. The green cluster features subjects such as behavioral intentions, loyalty, and corporate reputation, which deal with one aspect: customer loyalty and reputation management post-purchase. The clusters are connected through varying degrees of connections, some illustrating existing research areas while others strengthen developing ones, thereby enhancing the understanding of both existing and potential theoretical frameworks.

This analysis maps the relationships between major research themes in reputation management. By examining keyword clusters, the analysis uncovers how different topics are interconnected and which areas are receiving focused academic attention. The three main clusters represent performance, digital communication, and behavioral reputation—core constructs in understanding hospitality brand management.

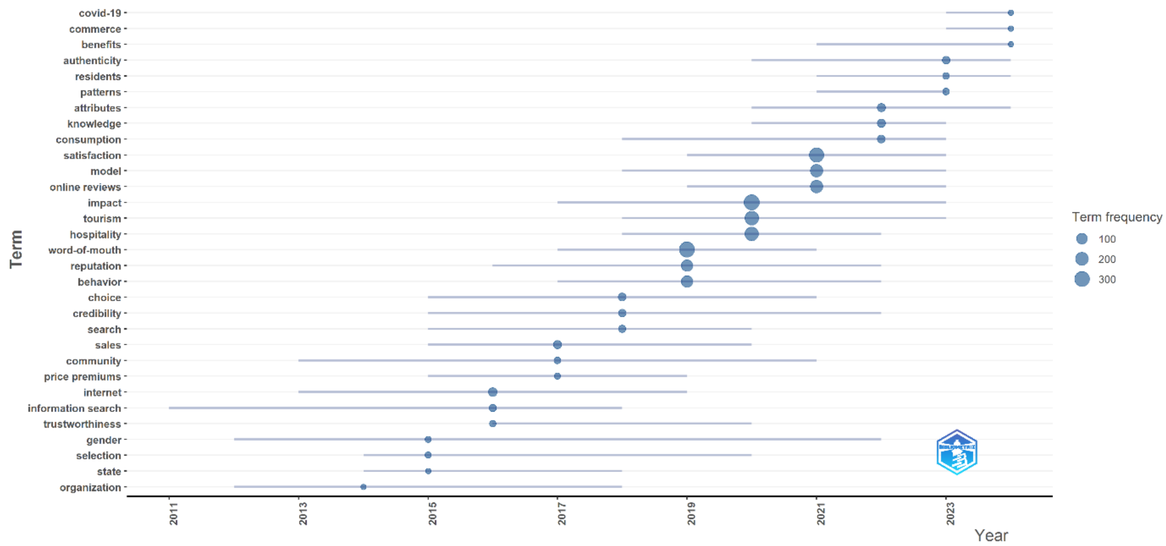

Figure 9. Trend Topics (Source: Own research)

Several popular topics in hospitality and tourism have been researched over the last decade, as shown in Figure 9. The size of each circle denotes how often a subject has been researched, while the horizontal bars illustrate the period in which studies on that particular subject have been conducted. Recently, salient areas such as 'COVID-19,' 'commerce,' and 'benefits' have emerged, reflecting the impact of the pandemic on the determinants of actions, economic activities, and the services offered, respectively. This demonstrates that the researchers understood the threats posed by the pandemic very well and quickly. Older subjects, such as 'word of mouth,' 'reputation and behavior,' started to become popular around the year 2014, thanks to the emergence of social media and online reviews, which in turn transformed the relationship that consumers had with hospitality brands. Additionally, the impact of viral marketing through digital word of mouth has been the focus of studies, along with managing the reputation of target consumers to influence their trust and purchasing behavior. The surge in topics such as 'trustworthiness,' 'gender,' and 'community' around 2016 indicates a growing awareness and concern about ethical and socio-cultural issues within hospitality, particularly regarding inclusivity and engagement aspects. At the same time, enduring themes, for example, 'tourism,' 'satisfaction,' and 'impact' remained important through the decade, highlighting their persistent importance in the discipline. This pattern of information also reveals the multifaceted and evolutionary nature of research on hospitality and tourism, which adapts to societal, technological, and industrial changes, and provides insights into potential areas for future research.

This analysis tracks the evolution of research focus over time. Understanding trend topics helps reveal how the field has adapted to external influences such as technology, pandemics, or social issues. The data confirm that while enduring topics like satisfaction and service quality remain central, newer issues such as COVID-19, sustainability, and community engagement are gaining ground.

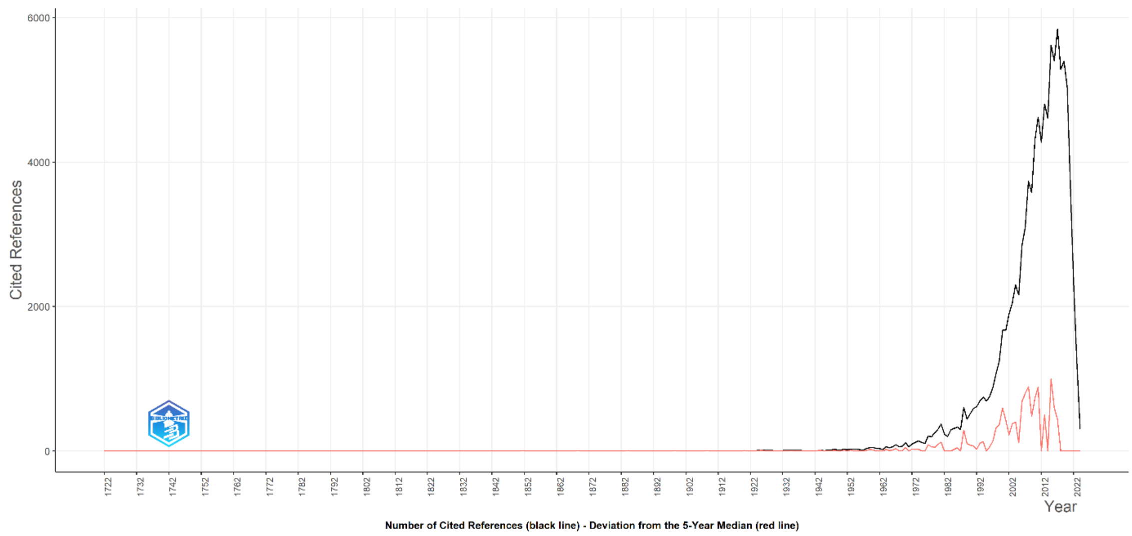

Figure 10. Reference Publication Year Analysis (Source: Own research)

Figure 10 illustrates the historical timeline of citations of reference sources, providing further insight into the trends in hospitality and reputation management studies over the years. The RPYA indicates that the terms experienced a gradual increase in citations during the early parts of the 20th century, followed by a notable concentration of references in the 21st century, which coincided with an increase in academic engagement. This rapid expansion, which began in 2000, is most likely due to the effects of technology, particularly the rise of the internet and globalization, as well as innovations such as social networking and e-WOM, which have transformed the practice of managing reputations. The upsurge in citations around this period is indicative of the need for existing principles and studies that seek to explain these developments. The red line, which represents deviations from the 5-year average, indicates specific time frames with high citation indexes, such as after significant scientific developments or shifts in perspective. Over the past twenty years, the rise in the number of citations highlights how the discipline has expanded and developed, as new, encompassing theoretical designs and methods have been incorporated to address digital challenges.

This analysis was conducted to examine historical citation patterns and intellectual development in the field. The distribution of citations over time reveals the growing interest and diversification of research topics since 2000. The rise in citations reflects the influence of digital transformation and the relevance of earlier foundational theories.

Citation context analysis was conducted to identify foundational studies, influential authors, and dominant theoretical approaches within the field of study. As previously discussed in the descriptive section, works by Sparks (2011), Ert (2016), and Ye et al. (2009) emerged as pivotal, particularly in relation to digital trust, online reviews, and consumer behavior. These studies not only received high citation counts but also shaped conceptual discussions around reputation management in the digital hospitality landscape. Their widespread adoption reflects their pivotal role in shaping the theoretical foundation of the discipline and informing subsequent research directions.

DISCUSSION

The bibliometric analysis of 1,859 articles revealed a significant growth in the field of reputation management within the hospitality industry, particularly after 2010. This trend aligns with the rapid digital transformation of the industry, suggesting that the proliferation of online review platforms and social media significantly influenced both academic and practical attention to reputation management. These findings confirm earlier assertions by Morrone et al. (2021) and Baka (2016) that digital technologies have revolutionized consumer engagement and brand perception.

The dominance of countries like China and the United States in terms of publication output and citation impact highlights the regional concentration of academic leadership in this area. This observation is consistent with Liu and Park (2015), who emphasized the role of advanced digital infrastructure in facilitating research innovation. However, the relative underrepresentation of developing regions suggests a gap that should be addressed through international collaborations.

Another notable finding was the prominence of topics such as “word-of-mouth,” “online reviews,” and “customer satisfaction” in keyword analyses. These results reaffirm the enduring importance of consumer feedback mechanisms as core components of reputation management strategies, as also noted by Sparks and Browning (2011). Additionally, the emergence of recent topics such as "COVID-19" and "sustainability" suggests an evolving research agenda that is responsive to global disruptions and ethical concerns.

In summary, the findings demonstrate that research in hospitality reputation management is becoming increasingly data-driven, interdisciplinary, and oriented toward digital and sustainable practices. Future studies should explore these emerging themes through qualitative inquiries or mixed-method approaches to provide a richer understanding of the complexities involved.

From an academic standpoint, the findings of this study make significant contributions to the literature in several meaningful ways. First, by mapping the intellectual structure of reputation management research in the hospitality sector, this study provides a comprehensive overview of dominant themes, influential scholars, and existing knowledge gaps. This serves as a valuable reference point for future empirical research and theoretical development. Second, the identification of emerging topics, such as sustainability and digital trust, expands the academic discourse to contemporary and future-oriented issues. Third, the study introduces a systematic approach through bibliometric mapping that can be replicated in other service industries, thereby enhancing methodological rigor in tourism and hospitality research. In this regard, the study not only enriches the existing literature but also guides both new and experienced scholars in navigating this growing academic domain.

CONCLUSION

In this work, the authors conducted a bibliometric review to trace the studies that have explored reputation management in the hotel industry, presenting a functional evolution of key concepts, trends, including digitalization, word-of-mouth, customer satisfaction, and online reviews. The review highlights a significant scholarly focus in this field over the past decade, particularly since 2010, coinciding with an academic shift toward business ethics and the digital revolution in business management. This shift has underscored the increasing significance of Web 2.0 and Web 3.0 interfaces in operational and ethical management practices. Findings indicate that, with the advent of smart technologies and interconnected networks, reputation management has evolved into a complex activity, encompassing elements such as service quality, customer service, and social media engagement, and has even raised concerns about its legitimacy in some scholarly discussions. More importantly, the findings emphasized the role of digital technology, particularly the concept of e-word of mouth, which has changed the position of consumers and impacted business performance. The content analysis also revealed that China and the United States are the leading countries in terms of sophistication and volume of research work in this field, with the Hong Kong Polytechnic University being the most notable institution in this regard. On the one hand, this suggests the transnational nature of research on reputation and management in the hospitality industry. On the other hand, it highlights the need for more research efforts from the majority of under-researched world regions. These findings are consistent with previous bibliometric studies conducted by Koseoglu et al. (2016) and Xu & Li (2018), which also identified a concentration of research efforts in East Asia and North America and underlined the growing influence of digital reviews and online reputation in hospitality marketing. Moreover, in alignment with Park et al. (2022), the dominance of topics such as customer satisfaction, trust, and online review management was similarly highlighted, supporting the thematic clusters found in this study. These parallels validate the reliability of the conceptual structure uncovered in our analysis. Furthermore, prior research by Sun et al. (2020) highlighted the emergence of web-based customer engagement and its strategic implications, which align with our study’s conclusion regarding the growing importance of digital interaction in shaping corporate reputation. This study validates the need for hospitality businesses to adopt all-inclusive approaches to managing reputation, encompassing all relevant digital platforms. It asserts the importance of the academic sphere in providing both principles and practices for realistically managing reputation in the increasingly complex sector.

This study is specifically aimed at and directed toward personnel engaged in hospitality management, highlighting the strategic importance of digital interaction in protecting a company's goodwill. The results have shown the importance of online customer reviews, consumer satisfaction, and positive word of mouth. Therefore, businesses should promote their activities on the Internet and also manage what people say about them. Effective mechanisms for addressing negative reviews and enhancing the customer experience should be implemented within the organization to maintain or improve the brand's status. Additionally, the impact of global crises, such as COVID-19, on international reputation management suggests that businesses must formulate flexible strategies that can withstand the effects of external factors. Practical implications also include respecting social codes and promoting sustainable development in a company's image management. As consumers become increasingly aware of environmental and social issues, companies that take these aspects seriously will enhance their image and cultivate loyal customers.

Conceptually, the present research contributes to the body of knowledge on managing one’s reputation in the virtual social world. It advocates for an investigation into the complex interactions between digital space, consumer behavior, and firms' market standing in the years to come. The bibliometric analysis indicates that, although progress is commendable, there is a notable lack of knowledge on the impact of different cultural environments on reputation management strategies, particularly in the context of countries in the East. Furthermore, the research highlights the need for more sophisticated theories to explain the evolving dynamics of reputation systems. The dominance of studies based in the US and China currently illustrates the importance of conducting reputation management research across different regions of the world to provide a more comprehensive understanding of how various societies and economies approach reputation management.

The findings may enhance our understanding of the intricacies of the hospitality industry's reputation management practices, but the research also has its limitations. First, the methodology relies solely on data from the Web of Science, which, although extensive, may overlook some studies from other databases and languages. There should be an effort to expand the databases covered in undertakings of this nature, in order to provide a more detailed coverage of the topic. This study addresses particularly relevant issues, including the impact of COVID-19 on the hospitality sector, as well as several other important topics. It would be beneficial to extend this research into longitudinal study designs that examine consumer behavior and businesses' reputation trends in the context of global disruptions over an extended period. Moreover, further exploration is warranted on the ways businesses from various regions across the globe are responding with modifications to their reputation management in the age of technology and the presence of external threats. The last point the researcher makes is that a multidisciplinary approach, incorporating marketing, psychology, and technology, will be required to enhance both theoretical and practical knowledge in the discipline, given the rapid pace of change within it. These perspectives should be incorporated in future studies, as also noted by Zhang et al. (2021), who emphasized the value of interdisciplinary approaches in enhancing adaptive reputation strategies in the hospitality industry.

Overall, this research advances the academic understanding of reputation management in hospitality by providing a systematic bibliometric foundation, identifying critical research clusters, and proposing new pathways for theory-driven inquiry.

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