

COVID-19 Pandemic and the Future of Tourism and Hospitality Research: A Systematic Review of the Published Research During the Pandemic

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Abstract

The tourism and hospitality industry is considered one of the most vulnerable sectors during times of crises. The onset of the COVID-19 pandemic completely paralyzed this industry, drawing the attention of researchers specializing in this field. Scholars have investigated the pandemic from various perspectives. This study aims to identify gaps in the literature pertaining to this field, directing future research efforts to bridge these gaps and provide a framework for future research agendas. The study employed the Systematic Review Methodology, following the reporting checklist of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). Scopus, Emerald, ScienceDirect, and Google Scholar were searched using a protocol developed for this purpose. The identified records were exported to an Excel spreadsheet, which included all items for data extraction and analysis. The findings revealed a significant shift in the thematic focus and interest within tourism and hospitality research. The analysis yielded six major thematic areas: tourism transformation, sustainability, behavioral issues, technology, small and medium-sized businesses (SMEs), and tourism resilience. Furthermore, the study identified a gap in the current tourism literature and proposed a research agenda for tourism in the post COVID-19 era.

Keywords: Future of tourism and hospitality, tourism and hospitality research; Covid-19 pandemic; systematic review; sustainability

Introduction

The COVID-19 pandemic stands as one of the most influential crises of the twenty-first century. The global tourism and hospitality industry has been severely impacted by this

pandemic (Luo & Lam, 2020; Wojcieszak-Zbierska et al., 2020). The outbreak of the coronavirus has been closely linked to travel and tourism, with media attention focusing on the transmission of the virus through the movement of tourists from China, particularly from the Wuhan province, the epicenter of the virus's spread (Musavengane et al., 2020). The tourism and hospitality industry is widely recognized as one of the sectors most profoundly affected by the pandemic, with governments primarily implementing lockdowns and travel restrictions to contain the virus's spread (Cheer, 2020; Harb et al., 2020).

In the past two decades, the world has witnessed several pandemics such as SARS, Swine flu, Ebola, Middle East respiratory syndrome (MERS), and COVID-19 (Petrevska & Terzić, 2020). Studies conducted on previous pandemics have reported significant impacts on the tourism industry (Dwyer et al., 2006; Prayag, 2020). Unlike other pandemic diseases, the COVID-19 pandemic has had the most widespread and profound impact, affecting countries and sectors worldwide (Zenker & Kock, 2020). Moreover, most countries have taken this pandemic seriously and implemented similar protocols, indicating the potential for deep and long-term effects on the global tourism and hospitality industry (Hall et al., 2020). The new challenge is to collectively learn from this global pandemic (Gössling et al., 2021).

It is critical to investigate how the pandemic is affecting scientific research in the tourism and hospitality sectors. Furthermore, determining the potential impact of the pandemic on industry research topics of interest is important. Ultimately, identifying gaps in the literature related to this field can direct future research efforts to bridge those gaps and provide a framework for future studies. Therefore, the current study aims to investigate published research on COVID-19 pandemic issues in the tourism and hospitality industry during the first year of the pandemic. This study intends to conduct a systematic review of published papers to create a comprehensive picture of the views and opinions expressed by researchers interested in the effects of the pandemic on the industry's future.

Reviewing published research allows for mapping the existing body of knowledge (Weed, 2006) by identifying knowledge that is circulated in the public domain but has not been properly assessed or organized in a coherent manner (Tranfield et al., 2003). Grant and Booth (2009) identified 14 categories of examination procedures, with few specified and explicit methodologies, and many of them are not mutually incompatible. Traditional review methodologies face various constraints, such as lack of reliability, validity, objectivity (Grant and Booth, 2009), and scientific rigor (Noblit & Hare, 2018). According to Tranfield et al. (2003), applying the systematic review methodology to management research will aid in reducing bias by making explicit the values and assumptions underlying a review. The systematic review methodology has been developed in the medical field (Pahlevan-Sharif et al., 2019) and adopted by the social and behavioral sciences (Liberati et al., 2009), and more recently, by the tourism and hospitality field (Pahlevan-Sharif et al., 2019).

The main advantage of systematic review methodology is that it is based on systematic and comprehensive literature searches that utilize all available resources, minimizing selection bias and avoiding subjective selection bias (Pae, 2015). The primary distinction between systematic reviews and other types of reviews is the methodical procedures used in the synthesis of findings, which provide unbiased searches with a higher degree of efficiency and validity (Liberati et al., 2009).

Systematic review

A systematic review is a comprehensive, structured literature review designed to answer a specific research question. It involves collecting and analyzing data from multiple research studies to arrive at an evidence-based conclusion. The purpose of systematic reviews is to ensure that the best available evidence is utilized to address a research question effectively.

This approach is particularly useful when examining topics such as the impact of COVID-19 on the tourism industry or identifying current trends in tourism and hospitality industry research.

The methodology employed in systematic reviews follows a rigorous and transparent process of identifying, evaluating, and synthesizing relevant research evidence. The systematic review process comprises several key steps. First, the research question is established to provide a clear and focused direction for the review. Next, a search strategy is developed to identify the relevant databases and search terms necessary for locating pertinent studies. The identified databases are then searched using the predetermined search terms. Subsequently, studies are selected for inclusion based on predetermined eligibility criteria, and their quality is assessed using predetermined criteria as well. The data from the included studies are analyzed, synthesized, and conclusions are drawn. Finally, the results of the review are reported in a transparent manner.

Systematic reviews serve as a valuable tool for informing decision-making in the tourism and hospitality industry by providing evidence-based recommendations. By conducting a comprehensive and rigorous assessment of existing research, systematic reviews contribute to the understanding of various phenomena, trends, and impacts in these sectors. They enable stakeholders to make informed choices, develop effective strategies, and address pertinent challenges. Overall, systematic reviews play a crucial role in promoting evidence-based practices and enhancing the quality of decision-making processes within the tourism and hospitality field.

Methodology

This systematic review aimed to examine the impact of the COVID-19 pandemic on the tourism and hospitality industry. Its purpose was to provide a summary, analysis, and synthesis of COVID-19-related studies addressing issues within this field, with the goal of identifying research gaps and suggesting future research directions. The study adhered to the reporting checklist outlined by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Liberati et al., 2009).

To gather relevant literature, an extensive search was conducted across several databases, namely Scopus, Emerald, ScienceDirect, and Google Scholar. The search protocol employed was: TITLE-ABS-KEY ((COVID-19 OR coronavirus) and (Tourism* OR Hospitality)). This protocol aimed to retrieve papers published in the tourism and hospitality field that mentioned COVID-19 or coronavirus in their titles, abstracts, or keywords. The search was limited to English-language articles and excluded book chapters, review papers, conference papers, and articles accepted for publication in 2020. However, six articles published in early 2021 were included. The search was last conducted in January 2021.

By following this systematic approach, the review intended to provide a comprehensive overview of the existing research on the effects of COVID-19 on tourism and hospitality. The selected methodology and search strategy aimed to ensure that the most relevant and up-to-date literature in this field was considered, allowing for a robust analysis and valuable insights into the topic.

The authors' names and affiliations, title, abstract, year of publication, keywords, journal name, and citation details of the identified records were exported to an Excel spreadsheet. To ensure data accuracy, duplicate records were removed using the "remove duplicates" feature in Excel. The titles and abstracts of the remaining records were screened to exclude papers that were not conducted in the tourism or hospitality field or did not focus on COVID-19 pandemic issues.

Following the initial screening, a careful eligibility assessment was conducted by thoroughly reviewing the full text of the remaining articles. Given that the tourism and hospitality industry has been significantly impacted by the COVID-19 pandemic (Breier et al., 2021; Everingham and Chassagne, 2020; Couto et al., 2020), a notable number of papers were found that mentioned tourism or hospitality in their abstracts, but their focus extended beyond these specific sectors and encompassed other industries. Consequently, these papers were deemed ineligible for further analysis. Additionally, certain papers mentioned COVID-19 in their abstracts without actually focusing on COVID-19 or related issues, leading to their exclusion as well.

Ultimately, a total of 119 papers met the eligibility criteria and were considered eligible for further analysis. These papers formed the basis for the subsequent stages of the systematic review, enabling a comprehensive examination of the research literature on the effects of the COVID-19 pandemic on the tourism and hospitality industry. The Excel spreadsheet was updated to include additional items for collecting more data and themes for analysis. Specifically, the following elements were added to the spreadsheet: the research paper's focus, context, objectives, findings and contribution, methodological issues, theoretical perspective, and sampling issues. These additional data points were incorporated to facilitate a more comprehensive and in-depth analysis of the included research papers. By including these elements in the spreadsheet, the review process could effectively capture and organize key information necessary for the subsequent analysis and synthesis of the findings.

Results and interpretations

The study involved a review of 119 research papers, and the selection process is summarized in Figure 1.

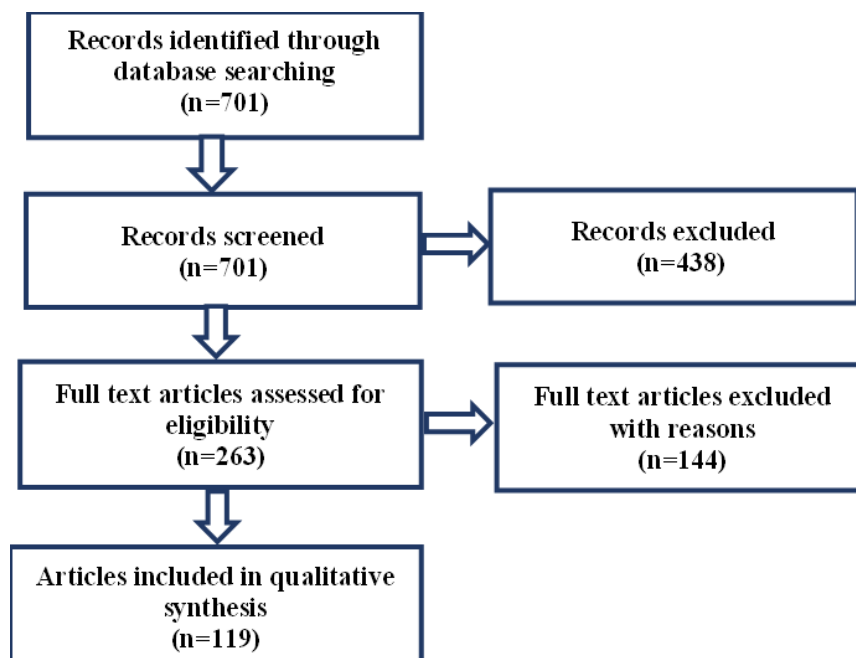


Figure 1. The flow chart of study selection process.

The initial literature search across the mentioned search engines and databases yielded 701 records. Out of these, 438 records were excluded as they did not address COVID-19 pandemic issues in the tourism and hospitality industry, despite mentioning the keywords specified in the systematic review protocol. The full text of the remaining 263 records was carefully screened,



resulting in the exclusion of 144 records that did not meet the eligibility criteria. Ultimately, 119 research papers from 42 different journals remained for further analysis.

Journals and citations

Table 1 presents the names of journals along with the corresponding number of articles published in each journal, as well as the total citations received by the articles.

Table 1 A List of the names of the journals and the number of articles and citations

No	Source title	No of Articles	Citations
1	Academica Turistica	1	2
2	African Journal of Hospitality, Tourism and Leisure	3	3
3	Agriculture (Switzerland)	1	0
4	Anatolia	1	0
5	Annals of Tourism Research	4	16
6	Cogent Social Sciences	1	0
7	Current Issues in Tourism	5	17
8	Development Southern Africa	2	1
9	Early Human Development	1	0
10	Entrepreneurship and Sustainability Issues	1	0
11	Geographica Pannonica	1	0
12	Geojournal of Tourism and Geosites	1	0
13	Humanities and Social Sciences Communications	1	0
14	Information Technology and Tourism	2	14
15	International Journal of Contemporary Hospitality Management	5	33
16	International Journal of Environmental Research and Public Health	4	8
17	International Journal of Hospitality Management	13	28
18	International Journal of Modern Physics C	1	0
19	International Journal of Tourism Cities	1	0
20	Journal of Hospitality and Tourism Management	1	0
21	Journal of Destination Marketing and Management	2	0
22	Journal of Environmental Management and Tourism	2	0
23	Journal of Islamic Marketing	1	0
24	Journal of Outdoor Recreation and Tourism	1	0
25	Journal of Service Management	1	10
26	Journal of Sustainable Tourism	4	190
27	Journal of Tourism Futures	3	4
28	Media International Australia	1	0
29	Problems and Perspectives in Management	1	2
30	Profesional de la Informacion	1	0
31	Resources, Conservation and Recycling	1	0
32	RISTI - Revista Iberica de Sistemas e Tecnologias de Informacao	2	0
33	Sustainability (Switzerland)	15	25
34	Systematic Reviews in Pharmacy	1	1
35	Tourism Economics	1	2
36	Tourism Geographies	23	257
37	Tourism Management	1	20
38	Tourism Management Perspectives	2	7
39	Tourism Recreation Research	3	9
40	Tourism Review International	1	2
41	Water (Switzerland)	1	0
42	Worldwide Hospitality and Tourism Themes	1	1
Total		119	652

The table highlights that 34% (n=41) of the articles were published in three specific journals: Tourism Geographies, Sustainability (Switzerland), and International Journal of Hospitality Management. On the other hand, the remaining 66% of articles were distributed among 39 different journals, with 25 of these journals having published only one article each. This distribution of articles across various journals underscores the diversity and breadth of

scholarly outlets contributing to the research on COVID-19's impact on the tourism and hospitality industry.

Figure 2 depicts the citations received by the articles categorized by their sources. The total number of citations for the 119 articles reviewed was 652. Specifically, the 23 articles published in *Tourism Geographies* accumulated 257 citations, resulting in an average of 11 citations per article. Furthermore, the *Journal of Sustainable Tourism* published four articles that received a total of 190 citations, averaging nearly 48 citations per article.

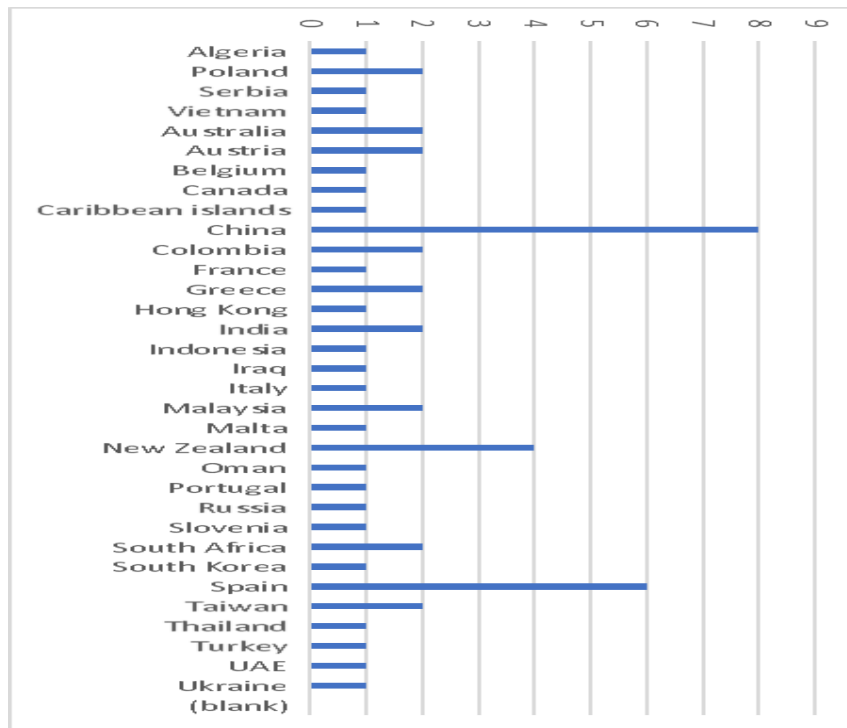


Figure 2 Citations of the articles classified by the source

The article titled "Pandemics, tourism and global change: a rapid assessment of COVID-19" authored by Gössling S., Scott D., and Hall C.M. in the *Journal of Sustainable Tourism* obtained the highest number of citations among the 119 articles, totaling 189 citations. Notably, these three authors (Gössling, Scott, and Hall) also published another article titled "Pandemics, transformations and tourism: be careful what you wish for" in *Tourism Geographies*, which received 44 citations. Consequently, the combined citations for these authors reached 233, accounting for approximately 37% of the total citations.

It is worth mentioning that in terms of citations per article, the only article published in *Tourism Management* stood out, as it garnered 20 citations, indicating its strong impact within the field. The data presented in Figure 2 provides valuable insights into the citation patterns and highlights the significant contributions made by specific articles, authors, and journals in the scholarly discourse surrounding the impact of COVID-19 on the tourism and hospitality industry.

Country

The results revealed that 51% of the studies (n=61) were conducted in a specific country, while less than half of the studies did not specify a particular country. As shown in Figure 3, the largest number of studies were conducted in China (n=8), the USA (n=6), and Spain (n=6).

These three countries accounted for 17% of the studies. In terms of regions, the largest number of studies were conducted in Asia (16%), Western Europe (13%), and North America (6%).

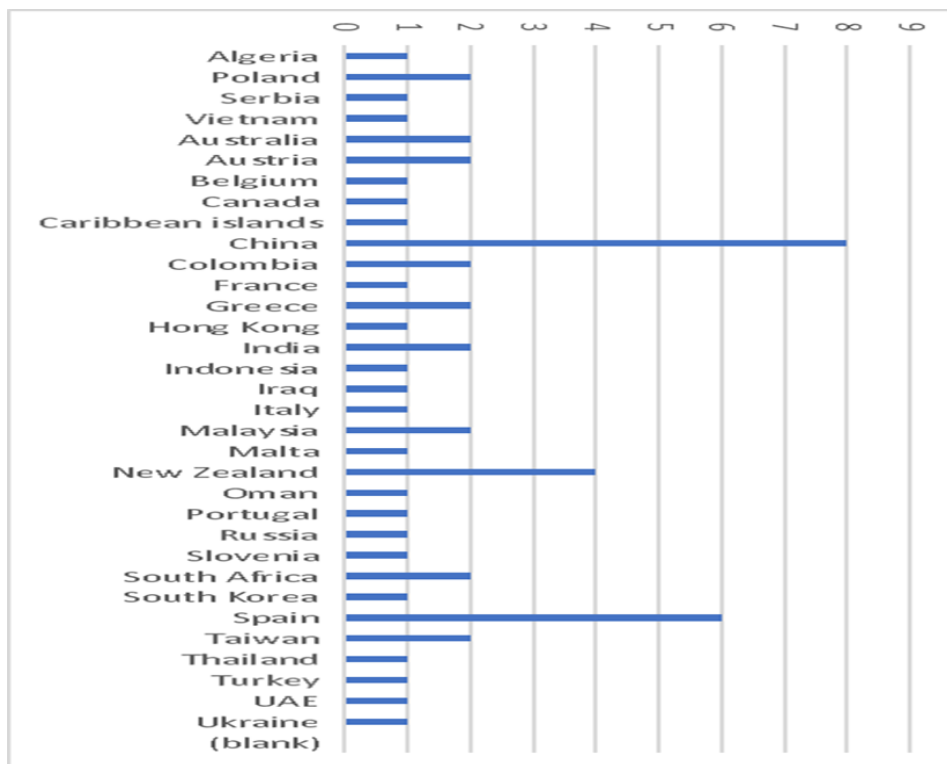


Figure 3: Published research classified by country

Focus and context

All published articles were classified according to their focus and context. The research focus refers to the general area or domain in which research issues are presented and addressed, while research context refers to the lenses through which the study can be viewed. This includes a careful evaluation of the main arguments, key findings, conclusions, implications, and recommendations of the study. The analysis revealed a significant shift in thematic focus and interest in tourism and hospitality research. The result of the analysis identified six main thematic areas, namely: Tourism Transformation, Sustainability, Behavioral Issues, Technology, Small and Medium-Sized Businesses (SMEs), and Tourism Resilience.

Tourism Transformation: The COVID-19 pandemic provides a great opportunity to transform tourism (Benjamin et al., 2020; Gössling et al., 2021; Higgins-Desbiolles, 2020) and reshape this industry into a more sustainable and responsible one for the stakeholders that rely on it (Rowen, 2020; Cheer, 2020).

The critical analysis of tourism revealed that, in many ways, tourism supports neoliberal injustices and exploits the rights and interests of local communities (Benjamin et al., 2020; Higgins-Desbiolles, 2020). Therefore, transformation must make tourism equitable and just, and shift towards a community-centered approach to protect the rights and interests of the local community and its people (Benjamin et al., 2020; Higgins-Desbiolles, 2020). The COVID-19 pandemic offers an opportunity for rethinking the future of tourism, such as using the concept of 'human flourishing' as an indicator to evaluate the impacts of tourism on host communities (Cheer, 2020). However, tourism transformation can only be achieved when sufficient innovation occurs on both the demand and supply sides of tourism services (Brouder, 2020).

The COVID-19 pandemic caused a fundamental transformation of the entire planet, providing a chance for a comprehensive shift towards a sustainable tourism system (Hall et al., 2020). Koh (2020) believes that this pandemic has been more effective in addressing certain environmental issues, such as pollution, than governmental and green initiatives. Koh also suggests that the transformation involves a shift in focus from gross domestic product to job creation and increased investment in environmentally friendly infrastructure.

Furthermore, the COVID-19 pandemic may turn out to be a boon for higher education in tourism. Edelheim (2020) refers to the substantial change that has been overdue for quite some time, and the pandemic has accelerated improvements in tourism education. According to Edelheim, these educational improvements should rid tourism higher education of neoliberal values and equip students with the skills and capacity to transform society.

As a result of the COVID-19 outbreak and lockdown, many researchers have called for collective action to address long-term issues such as global warming. One of the key tourism issues that needs to be reconsidered is the demarcation between guests and hosts. Instead of being seen as objects of strategy, the demarcation recognizes hosts and guests as spontaneous results of social conditions (Dikeç, 2002). The COVID-19 pandemic offers an opportunity for the complete removal of the demarcation between guests and hosts (Rowen, 2020).

Sustainability: The COVID-19 pandemic has provided a chance for a more sustainable tourism and hospitality industry. However, this vision could be a significant challenge for the industry, as well as many of its conventional clients (Jones and Comfort, 2020).

The pandemic has raised awareness of the vulnerability of the current tourism model and has opened the door for sustainable tourism options (Newsome, 2020). For instance, the crisis affected residents' expectations about tourism, influencing regional sustainable development decisions. It has become necessary to promote safe and natural destinations to attract tourists under the new circumstances (Couto et al., 2020).

Studies have emphasized the positive effect of COVID-19 in terms of providing an opportunity for a more sustainable tourism economy. The pandemic has created suitable conditions for the sports tourism landscape to seriously consider the balance between greenhouse gas emissions reduction and maintaining resilient local economies (Cooper and Alderman, 2020).

Furthermore, the pandemic has sparked a debate about city tourism, aiming to provide more eco-friendly options and increase the availability and accessibility of free spaces in metropolitan areas (Jiricka-Pürerer et al., 2020). It has been found that demand for sustainable tourism, such as agritourism farms, increased during the era of the COVID-19 pandemic (Wojcieszak-Zbierska et al., 2020). Moreover, the sustainability strategies of tourism destinations, particularly World Heritage destinations, should include public health goals (Alvarez-Sousa & Prados, 2020).

Behavioral issues: Many researchers have investigated the impact of the COVID-19 pandemic on individuals' behavior. The right to participate in hospitality and tourism was affected on an unprecedented scale due to the COVID-19 pandemic, particularly in Asia, Europe, and North America (Baum & Hai, 2020). Researchers are concerned about the extent to which these rights will be restored after the pandemic. Some researchers have used data from previous health crises to predict the impact on tourists' behavior (Matiza, 2020; Qiu et al., 2020). Turnšek et al. (2020) found gender differences in tourists' responses to the COVID-19 pandemic. They claimed that age affects only women's perceived threat and future travel avoidance. Additionally, they found that people who have traveled the most before the COVID-19 pandemic are the least likely to avoid traveling because of the pandemic. Furthermore, they found that people with lower education levels had a lower perceived risk of traveling.

The novel coronavirus has been inappropriately labeled the "Chinese virus" due to some media coverage that encouraged discrimination against Asian tourists (Wen et al., 2020; Zheng et al., 2020). Therefore, the COVID-19 pandemic provides an excellent opportunity for researchers to investigate how perceived discrimination during the crisis could affect individuals' mental health (Yang & Wong, 2021) and devastate travel-induced well-being by causing anxious feelings (Yang & Wong, 2021).

Qiu et al. (2020) found that most people are willing to pay to reduce the risk of travel during the COVID-19 pandemic. Assurances of health safety at the tourism destination are one of the main factors that affect tourists' behavior (Turnšek et al., 2020). This has triggered the need for employees with a greater sense of hygiene to have multi-skilling (Kaushal and Srivastava, 2021). As a consequence of the pandemic, not only guests but also hosts are concerned with safety. At the tourism destination, residents are more willing to pay extra on an individual basis to maintain public health and limit the danger of infection from tourism (Qiu et al., 2020).

The terms "second homes tourism" and "mountain tourism" have evolved due to the pandemic (Seraphin & Dosquet, 2020; Zoğal et al., 2020). The COVID-19 pandemic has contributed to the growth of second home tourism and mountain tourism. Both forms of tourism play the role of a placebo, but post-pandemic, the sustainability of these forms of tourism can be seriously threatened (Seraphin & Dosquet, 2020).

Technology: The studies have investigated technology from various perspectives. It has been argued that the COVID-19 era witnessed an escalation in the use of new technology (Khanra et al., 2021), which will continue even after the pandemic has passed (Khanra et al., 2021; Van et al., 2020). The tourism and hospitality industry is striving for survival during the COVID-19 pandemic crisis (Sánchez-Teba et al., 2020). The digital era has fundamentally altered the setting in which tourism and hospitality services are offered and experienced, as well as the decision-making processes for consumers and business models (Sánchez-Teba et al., 2020).

Post-COVID-19 pandemic, human-machine interactive devices will have a significant impact on the quality of tourism and hospitality services, leading to tourist satisfaction and loyalty (Van et al., 2020). It is expected that after the COVID-19 pandemic, the tourism and hospitality industry will experience greater use of mobile payment services that do not require physical interaction (Khanra et al., 2021).

Moreover, researchers have investigated the impact of technology on employees' interaction with their jobs in the tourism and hospitality industry. For instance, Chadee et al. (2021) claimed that digital work connectedness can lead to a loss of self-control, which is linked to disengagement from work. Furthermore, they found that working with digital technology can be draining, and relational energy mitigated this negative impact on employee withdrawal by reducing self-control depletion.

SMEs: Researchers have discussed various issues related to SMEs in the context of the pandemic. They have examined the impact of the pandemic on SMEs, measures to help them survive, their resilience, and their adaptation to new procedures.

The COVID-19 pandemic has had a devastating impact on SMEs in the hospitality and tourism industry, which employ a significant number of people (Al-Fadly, 2020; Lewis et al., 2021). Researchers have expressed serious concerns about the current and future viability of the tourism and hospitality sector (e.g., Kaushal and Srivastava, 2021). Investigations have found that 65% of the catering industry did not believe they would be able to keep their restaurants open if pandemic restrictions were extended until 2021 (Brizek et al., 2021). Therefore, multiskilling and professional development of personnel, increased awareness of hygiene and sanitation, optimism about industry recovery, media involvement, and enhanced

crisis preparedness are all necessary for the sector to thrive (Kaushal and Srivastava, 2021; Kruger and Viljoen, 2021).

Researchers have discussed several measures to help SMEs weather the pandemic. According to Al-Fadly (2020), government interventions such as stimulus funds, moratoriums, extended loans, and interest exemptions are needed to support surviving enterprises and restore lost businesses. On the other hand, more than a third of SMEs in 45 countries reported taking other measures to generate much-needed revenue sources and prepare for a new post-COVID-19 operational regime. Furthermore, 60% acknowledged implementing changes to their organization's day-to-day operations in response to immediate effects or in anticipation of a changing commercial and regulatory climate (Duarte Alonso et al., 2020).

The development of resilience has a direct and indirect positive impact on the business performance of SMEs in the tourism and hospitality sector (Setthachotsombut & Sua-iam, 2020). To achieve excellent company performance, SMEs in the tourism and hospitality industry should plan for crisis management by allocating resources, creating specialized organizational flowcharts, and considering the comprehensive application of a recovery model in a detailed approach (Setthachotsombut and Sua-iam, 2020). However, a significant percentage of tourism SMEs are unaware of strategic management techniques (Varelas & Apostolopoulos, 2020).

The COVID-19 outbreak has led to the implementation of numerous health and safety regulations and procedures in the tourism and hospitality industry (Hu et al., 2021). Some researchers are interested in investigating how SMEs can help their staff adhere to health and safety standards and procedures. For instance, Hu et al. (2021) suggested a four-stage psychological process that underpins employees' deep compliance with safety rules, and this process is supported by both management safety policies and organizational crisis strategies.

Tourism Resilience: Tourism resilience is defined as the potential for recovery from stress induced by tourism, providing an alternative to sustainable development and increasing sustainability following an ecological or environmental disaster (Petrevska & Terzić, 2020). Researchers in the tourism and hospitality industry have paid significant attention to tourism resilience and recovery from the pandemic. The rapid spread of a global pandemic has presented various opportunities for tourism academics to investigate the resilience of the tourism industry within a socioecological system context (Prayag, 2020).

It has been argued that sustainable development models have failed to address the social and environmental challenges of the 21st century (Galvani et al., 2020). The COVID-19 pandemic has exposed major flaws in the operating system of the tourism and hospitality industry (Cave & Dredge, 2020), resulting in significant failures, particularly among SMEs (Al-Fadly, 2020). The industry has experienced closures as a direct effect of the pandemic, and company failure rates have skyrocketed (Hsieh et al., 2020). Furthermore, critics have accused capitalism of hindering tourism destinations from fostering diversified economic activities that could strengthen resilient communities and promote regenerative tourism, due to capitalism's focus on resource exploitation, growth, and profit (Cave & Dredge, 2020).

Researchers have provided several examples and suggestions for tourism resilience and recovery. To remain competitive in the market, it is crucial to utilize digital media that facilitates adaptation (Salazar et al., 2020). Additionally, indigenous peoples have untapped potential in terms of understanding how to shape resilient responses to COVID-19 and other future challenges (Carr, 2020). Breier et al. (2021) found that business model innovations are being employed to create new revenue streams in the COVID-19 era. On the other hand, some companies have resorted to forcing employees to take unpaid vacations and postponing system maintenance during times of crisis (Lai & Wong, 2020). Moreover, governments may offer

stimulus packages to ensure the sustainability of the tourism industry (Foo et al., 2020).

Discussion

Through a comprehensive review of research conducted during the first year of the pandemic, it is evident that studies in the tourism and COVID-19 domain have focused on six main areas: tourism transformation, sustainability, behavior issues, technology, SMEs, and tourism resilience. The published research has highlighted weaknesses and vulnerabilities in the tourism and hospitality sector, exposing the failures of sustainability development models. There has been a lack of support for indigenous people's activities that can contribute to the resilience of the tourism and hospitality industry. These failures have become evident in the aftermath of the COVID-19 pandemic, and capitalism has been singled out as responsible for the sector's downfall. To address these challenges, the studies emphasize the importance of integrating and empowering indigenous peoples and local communities, as well as developing alternative income sources that align with the new circumstances. As a result, the studies call for a radical reevaluation of tourism education, shifting away from neoliberal and neo-colonial capitalist foundations toward non-Western alternatives that prioritize "human flourishing." Similarly, tourism higher education should foster awareness of aspirational and lived values, transforming the way it is currently conducted. Community well-being indicators should be employed instead of solely relying on tourist arrivals and revenue indicators.

In terms of sustainability, there is a need to reconsider the concept from a long-term perspective, taking into account the consequences of the COVID-19 pandemic and emphasizing security issues. Tourism attractions should strive for a balance between reducing greenhouse gas emissions, supporting resilient local economies, and providing more eco-friendly options. Several issues have emerged from the published studies, including human rights violations related to tourism and travel, shifts in tourists' needs and requirements due to the pandemic (with an emphasis on security and safety), changes in decision-making processes, the adoption of modern technology, and the significance of human-machine interaction devices. Some studies have also shed light on discrimination and mistreatment of certain tourists based on fears of spreading infection and blaming specific nationalities or races. Additionally, researchers have explored psychological aspects such as anxiety and their impact on tourists' experiences.

Technology has played a crucial role during the early stages of the pandemic, enabling remote work and facing the crisis head-on. The studies have discussed the extensive use of technology in the sector and its resulting benefits and drawbacks. Remote work has influenced employees' commitment to work, resulting in various emotions and feelings. It has also affected work behavior, such as withdrawal behaviors where employees feel detached from the organization. To mitigate these effects, studies suggest the use of clear work guidelines. SMEs have been significantly affected by the pandemic, raising concerns about the sector's viability. The studies have examined measures to support SMEs in overcoming the challenges posed by the pandemic. They have identified planning deficiencies among SMEs and provided recommendations for adapting to new safety procedures, ensuring deep compliance with administrative safety policies, and implementing organizational crisis strategies.

In summary, the COVID-19 pandemic has had a devastating impact on the global tourism and hospitality industry, resulting in substantial losses and widespread closures. Researchers have been actively investigating the effects of the pandemic on customer behavior, travel restrictions, and the industry's potential for recovery. Strategies for a post-pandemic world, such as reopening hospitality venues safely and encouraging travelers to resume activities while managing infection risks, have been a focus of study. Furthermore, technology has been explored as a key player in the industry's recovery, with research emphasizing

contactless technologies, digital platforms, and other innovative solutions to navigate the challenges. As the industry strives to recover, research will continue to play a vital role in shaping its future, leveraging technology's potential and informing effective strategies.

Future of tourism research

The current study has identified gaps in existing literature and suggests areas for further research, particularly in the post-COVID-19 era. These research topics align with the six thematic areas that emerged from the systematic review: tourism transformation, sustainability, behavioral issues, technology, SMEs, and tourism resilience. In terms of tourism transformation, future research should focus on rethinking and redefining tourism and hospitality for the post-COVID-19 era, with an emphasis on justice, resilience, and "human flourishing." This includes reconsidering alternative tourism models that involve local people and empower them in the tourism and hospitality industry. Furthermore, there is a need to explore non-western, non-neoliberal, and non-neocolonial capitalism-based tourism models that are context-specific, prioritize environmental and social well-being, and foster meaningful human connections. Evaluating alternative targeting and positioning strategies, as well as the role of information and communication technology (ICT) in transforming tourism operations and value chains, is also crucial. Additionally, research should investigate the role of the COVID-19 pandemic in driving improvements in tourism education, focusing on human prosperity and promoting awareness of aspirational and living values in tourism higher education.

Regarding sustainability, future research should examine the positive impact of the COVID-19 pandemic in terms of facilitating long-term economic and regional development decisions. The concept of sustainability needs to be reassessed for the post-COVID-19 era, considering critical issues such as security. It is essential to adopt initiatives that strike a balance between reducing greenhouse gas emissions and promoting local economies. Evaluating the effects of the pandemic on residents' tourism expectations and incorporating them into regional sustainable development decisions is also important. Furthermore, exploring the vulnerability of pre-COVID-19 tourism models and identifying potential sustainable tourism options should be investigated. The positive impact of COVID-19 in fostering a more sustainable tourism economy should be thoroughly explored, along with examining tourism options for cities and promoting environmentally friendly choices in the post-COVID era.

Behavioral issues related to tourists' expectations, perceptions, and needs following the COVID-19 pandemic require further investigation. Topics such as human rights violations in the travel and tourism industry, discrimination against tourists from specific ethnicities, and the impact of perceived discrimination on travel-induced well-being and anxiety should be explored. Research on tourism legislation and laws to protect tourists' rights, as well as discussions on The Global Code of Ethics for Tourism (GCET) and its relevance in the post-COVID-19 era, is recommended. Additionally, studying stereotypes surrounding races and cultures during crises and understanding the risks and consequences of racial discrimination is important.

The role of technology in the tourism and hospitality industry warrants further investigation, considering both customer and employee perspectives. The digital era and the context of offering and experiencing tourism and hospitality services should be explored. Research should assess the impact of contactless mobile payment services on tourist behavior and experiences. From an employee perspective, studies should investigate the effects of intensive technology use on commitment to remote work and associated feelings and emotions. Traditional systems, instructions, and policies should be evaluated for their suitability in remote

work scenarios. Investigating the compatibility of work systems with the changes brought about by the COVID-19 pandemic can help mitigate its negative effects on workers.

Research on SMEs should focus on their survival and preparation for future crises, including alternative income sources during similar situations. The impact of new health and safety regulations on SMEs in the tourism and hospitality industry should be further examined. Understanding how SMEs can support employees in complying with health and safety standards and procedures is crucial. Research can explore measures to assist SMEs in generating revenue and assess tourism SMEs' awareness of strategic management techniques.

Lastly, the resilience of tourism in the face of unusual crises requires further investigation. Research should assess the flaws in the operating system of the tourism and hospitality industry and explore its resilience within a socioecological system. The untapped potential of Indigenous peoples in shaping resilient responses to COVID-19 should be examined. Additionally, studying the major flaws in the tourism industry's operating system revealed by the pandemic and evaluating economic activities that strengthen resilient communities and regenerative tourism are important research topics. Future research in tourism should address gaps in the existing literature and focus on areas such as tourism transformation, sustainability, behavioral issues, technology, SMEs, and tourism resilience. By exploring these topics, researchers can contribute to the understanding of the post-COVID-19 era and help shape a more sustainable, inclusive, and resilient tourism industry.

Conclusion

The tourism and hospitality industry has faced several pandemic diseases in the last two decades, causing significant disruptions. However, the COVID-19 pandemic stands out due to its potential long-term consequences. Therefore, it is crucial to investigate the impact of the pandemic on the future of the industry, identify research gaps, and provide a framework for future studies. This study systematically reviewed published research on COVID-19 in the tourism and hospitality industry during the first year of the pandemic, following the PRISMA protocol. A total of 119 eligible studies published during the first year of the COVID-19 pandemic were analyzed. The findings indicated a notable shift in thematic focus and research interests within the tourism and hospitality field. Through the analysis, six major thematic areas emerged: tourism transformation, sustainability, behavioral issues, technology, SMEs, and tourism resilience. The study highlighted significant gaps in the existing research and proposed a research agenda for the post-COVID-19 era. It revealed structural issues within the industry that hinder effective crisis management, emphasizing the need to reconsider areas such as tourism education and sustainability to strengthen the industry's resilience in the face of future crises.

One limitation of this study is that it only included articles published during the first year of the pandemic, excluding subsequent studies. Data collection was completed by the beginning of 2021, making it impossible to incorporate studies published in 2021 without delaying the analysis phase. However, focusing on the initial reaction and impressions of researchers regarding the pandemic's impact on the industry during the first year was the intended scope. It is recommended to conduct a further systematic review after 2021 to track the evolving trends in COVID-19 research within the tourism and hospitality industry. This would provide insights into new developments in post-pandemic research in the field.

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