

A BIBLIOMETRIC ANALYSIS OF RESEARCH ON OVERTOURISM: GLOBAL TRENDS, THEMES, AND CONTRIBUTIONS

UMA ANÁLISE BIBLIOMÉTRICA DA PESQUISA SOBRE O SOBRETURISMO: TENDÊNCIAS, TEMAS E CONTRIBUIÇÕES GLOBAIS

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Abstract

This study aims to map academic publications on overtourism in detail. To achieve this, a bibliometric analysis was conducted on August 1, 2024, for articles indexed in SSCI, ESCI, and SCI-Expanded within the Web of Science (WoS) database, with no time restrictions. The analysis explores the distribution of articles on overtourism over time, leading countries and their collaborative networks, journals with the highest publication output, most cited studies, notable authors, and relationships among commonly used keywords. Statistical analysis and mapping were conducted using R software, specifically designed for bibliometric analysis. Findings show that the concept of overtourism first appeared in 2016, gaining research attention from 2018 onward, with substantial growth in interest from 2019 to 2024, totaling 216 articles. High-tourism countries, including Spain (36 articles), the United Kingdom (27), China (19), the United States, and Italy (18), led in publication output. The International Journal of Tourism Cities ranked highest with 23 publications, followed by the Journal of Sustainable Tourism. Frequently used keywords in these studies include sustainability, urban tourism, social structures, quality of life, carrying capacity, and destination management.

Keywords: Overtourism. Bibliometric Analysis. Web Of Science.

Resumo

Este estudo visa mapear detalhadamente as publicações acadêmicas sobre turismo excessivo. Para isso, foi realizada uma análise bibliométrica em 1º de agosto de 2024, para artigos indexados no SSCI, ESCI e SCI-Expanded da base de dados Web of Science (WoS), sem restrições de tempo. A análise explora a distribuição de artigos sobre turismo excessivo ao longo do tempo, os principais países e suas redes de colaboração, os periódicos com maior produção de publicações, os estudos mais citados, os autores de destaque e as relações entre as palavras-chave mais utilizadas. A análise estatística e o mapeamento foram realizados utilizando o software R, desenvolvido especificamente para análise bibliométrica. Os resultados mostram que o conceito de turismo excessivo surgiu em 2016, ganhando atenção da pesquisa a partir de 2018, com um crescimento substancial do interesse de 2019 a 2024, totalizando 216 artigos. Países com alto fluxo turístico, incluindo Espanha (36 artigos), Reino Unido (27), China (19), Estados Unidos e Itália (18), lideraram a produção de publicações. O periódico International Journal of Tourism Cities ficou em primeiro lugar, com 23 publicações, seguido pelo Journal of Sustainable Tourism. As palavras-chave mais utilizadas nesses estudos incluem sustentabilidade, turismo urbano, estruturas sociais, qualidade de vida, capacidade de carga e gestão de destinos.

Palavras-chave: Excesso de Turismo, Análise Bibliométrica, Web of Science.



1 INTRODUCTION

Tourism activities and investments continue to develop and grow actively worldwide (Ivanov & Zhechev, 2012). The rapid growth in tourism has provided economic opportunities for emerging destinations, allowing these areas to expand. However, while growth presents a good opportunity for smaller destinations, it has become a threat for more developed and popular destinations, where the tourism capacity has reached a saturation point due to their existing appeal and tourist activities (Dodds & Butler, 2019a). This threat may manifest as the exceeding of the carrying capacity of tourism destinations, leading to a deterioration in tourist experiences and destination image. On the other hand, exceeding carrying capacity can decrease the quality of life for local residents, which may result in the development of anti-tourist sentiments among the local population (Seraphin *et al.*, 2018).

Such reactions, which have disturbed both the local population and tourism stakeholders in the area, were first reported in the media, leading to the emergence of the concept of overtourism (Koens & Thomas, 2016; Seraphin *et al.*, 2018). Overtourism is defined as a situation in which a destination receives far more visitors than its carrying capacity can support (2017). It signifies a level of tourist visitation that negatively impacts the destination and the local population (Dodds & Butler, 2019b). In destinations exposed to overtourism, the quality of life for host communities declines, and adverse effects are observed on the region's natural attractions. A review of the literature indicates that the issue of overtourism has been frequently discussed since 2018 (Organization *et al.*, 2018; Seraphin *et al.*, 2018; Singh, 2018). Studies on crowding in tourism regions (Turner & Ash, 1975), excessive visitors (R.W. BUTLER, 1980), and the exceeding of the capacity of tourist attractions and destinations (Milano & Mansilla, 2018), have been extensively replicated. However, there is a need for a study that comprehensively examines recent research on overtourism.

This study aims to provide a map that illustrates the level of engagement of countries or destinations in the literature, the keywords emphasized by researchers, the institutions and authors with the highest publication rates, and their citation frequencies. Based on this perspective, the study examines research articles on overtourism published

in the Web of Science (WoS) database, with 216 articles forming the focal point of this research.

2 LITERATURE REVIEW

Following the Industrial Revolution, increases in income, the ease of transportation, improvements in working conditions, and the expansion of vacation opportunities have led to global growth in the tourism sector. Tourism activities have become a major force for both national and local economies in developing and developed countries alike. This situation has encouraged countries to develop policies aimed at increasing tourism revenues and visitor numbers. However, in recent years, popular destinations exposed to an influx of tourists have begun to experience issues associated with overcrowding. This has led to the emergence of a new concept in tourism: overtourism. Although this concept has recently gained prominence, its roots extend back further. Since the 1970s, the conflict between local communities and overcrowding (Doxey, 1975), and the surpassing of tourism capacity (Richard W Butler, 1980) have been discussed in the literature. However, in recent years, factors such as the increase in paid vacation entitlements for employees, the rise of low-cost air travel, rapid communication due to technological advancements, and the proliferation of tourism advertisements via social media have accelerated tourism growth and spurred tourist visits to popular areas (Cheer *et al.*, 2019). The increased availability of these opportunities has led to situations in popular tourism regions where the existing carrying capacity of destinations is exceeded, and demand surpasses supply, bringing the concept of overtourism to the attention of both literature and policy circles.

This concept was first introduced in 2016 by a media outlet without a theoretical foundation (Ali, 2016). Indeed, Postma *et al.* (2020) addressed the circumstances surrounding the emergence of this notion in their study. The concept was later trademarked by the travel magazine *Skift* in 2018 (Koens *et al.*, 2018). Along with this trademarking, the United Nations World Tourism Organization (UNWTO) defined overtourism as “the impact of tourism on a destination, or parts thereof, that excessively influences the quality of life for local residents and/or the quality of visitors' experiences” (UNWTO, 2024). Subsequently, Cheung and Li (2019) described overtourism as an overwhelming influx of mass tourists to increasingly popular tourist areas, explaining it

as a term that diminishes the quality of life for both locals and visitors. A region, whether in terms of its tourism infrastructure or natural attractions, possesses a certain capacity to meet the needs of both locals and visitors. Any visit or activity beyond this capacity can endanger the area's resources, resulting in dissatisfaction for both groups. This situation is especially distressing for the local population (Butler, 2018). Destinations and tourism facilities have a certain capacity to simultaneously accommodate the needs of visitors and residents. Exceeding this capacity can disrupt service flow, leading to reduced quality of life in the destination and the deterioration of experience and service quality. (Parliament *et al.*, 2018; Peeters *et al.*, 2021).

In regions exposed to overtourism, issues such as declining quality of life, seasonal price increases, rising housing costs and rents, overburdened infrastructure (e.g., traffic congestion), damage to the destination's brand image, commercialization of culture, increased traffic congestion, and reduced public spaces are inevitable (Blázquez-Salom *et al.*, 2023; Milano, 2018). Naturally, the impacts and their intensity in these destinations may vary depending on visitor type, the destination itself, and the activities conducted in that area. Bouchon and Rauscher (2019) also note that the significance of overtourism differs depending on the perceptions and feelings of affected visitors or local residents. Individuals' perceptions of any issue can vary according to their location, current emotional state, and environmental variables. Therefore, when researching this concept, it should be examined with consideration of a specific destination. Perceptions of visitors and local residents can vary based on the destination (Postma & Schmuecker, 2017). This variation highlights the concept as a destination-specific phenomenon (Avond *et al.*, 2019).

Generalizing the effects, potential solutions, or preventative measures for overtourism is quite challenging. Thus, these solutions must be tailored to the specific characteristics and dynamics of each destination. When examining the impacts of overtourism, the focus is often on social effects. These impacts can include a decline in the quality of life for local residents, rising crime rates, increased rudeness (Khomsí *et al.*, 2020), and the overextension of hospital capacities due to visitor influx (TOSSERI, 2010). Such effects arise from the overwhelming number of tourists impacting local life and straining infrastructure. Additionally, overtourism has significant economic impacts on the region. Effects in destinations affected by overtourism can include inflationary increases due to visitor numbers, seasonal spikes in housing and rental prices, a reduction

in the purchasing power of locals due to rising costs, seasonal employment, and the privatization of public spaces for profit (Milano, 2018). These impacts become more pronounced as the flow of visitors surpasses the region's capacity. Beyond social and economic effects, overtourism also has adverse environmental impacts on tourism destinations. It can disrupt ecosystems, increase environmental pollution, and lead to higher levels of noise and visual pollution. Martin *et al.* (2018) emphasize that the environmental effects of overtourism can become visible within a short time.

Khomsı *et al.* (2020) propose three different indicators to measure the negative impacts of overtourism:

- **Physical and Ecological:** cultural heritage elements, tourism infrastructure, noise pollution, and mobility or immobility within the area
- **Socio-cultural:** experiences and satisfaction levels of tourists and local residents
- **Political and Economic:** tourism revenues, investments, governance, decision-making processes, and public expenditures.

In the face of such a significant phenomenon, it is inevitable that local communities and administrations adversely affected by overtourism will express some form of resistance. Consequently, this issue has become especially apparent in highly popular destinations that have reached peak tourism capacity. For instance, cities and sites such as Barcelona in Spain, Iceland, Venice, Mallorca, Dubrovnik, the Galapagos Islands, Boracay Island, Angkor Wat, Amsterdam, Machu Picchu, Bali, Thailand's islands, U.S. national parks, and Mount Everest have all been negatively impacted by overtourism (Cntraveler, 2015).

As these impacts intensify, destination managers have begun taking measures to mitigate overtourism. Effective management of these issues is critical for the sustainability of these destinations. Properly managed tourism mobility has been proven to be an effective countermeasure against the carrying capacity issues and the negative effects of overtourism (Fabian Weber, 2017). For example, in Barcelona, locals have protested by urging tourists to leave, disturbing tour buses, and putting up banners calling for the cancellation of Airbnb rentals. According to Doxey's Irridex model, the local community has progressed from the "Annoyance" stage to the "Antagonism" stage in their attitudes towards tourists (Doxey, 1975). In response, authorities have halted new licenses for Airbnb properties and introduced measures to limit the ease of obtaining these permits (Buckley, 2020). Similar actions have been taken in Venice, where fines are

imposed on tourists who violate regulations. Meanwhile, on Mount Everest, the accumulation of waste due to overtourism has prompted authorities to require tourists to clean up and dispose of their trash; the Chinese government even imposed an indefinite ban on access via Tibet (Cntraveler, 2015). When overtourism is not properly understood and managed, it poses significant risks for both communities and destinations. Identifying the damages overtourism inflicts on destinations is essential to devising preventive strategies, making research on this issue crucial. Consequently, this study conducts a bibliometric analysis of existing research on overtourism, outlining the primary findings in the field.

3 METHODOLOGY

This study employs the bibliometric analysis method, which enables a more systematic approach to exploring specific topics and research areas, identifying studied and unstudied issues, and detecting gaps and trends within the field (Momesso & Noronha, 2017). Żarczyńska (2012) describes bibliometric analysis as a quantitative technique that helps discover publication types within a discipline or field. This method is utilized to separate, examine, and measure information from large datasets. Bibliometric analysis was chosen to create a detailed map of academic studies related to overtourism. Additionally, the Web of Science (WoS) database, known as the most comprehensive resource for accessing bibliographic data from various disciplines, was selected for this study. WoS is a multidisciplinary and selective database that includes various specialized indices categorized by content theme and type (Pranckutė, 2021).

This study seeks to address the following research questions:

1. What is the distribution of articles on overtourism indexed in the WoS database over the years?
2. Which countries have contributed the most to overtourism literature, and which countries have they collaborated with?
3. In which journals are articles on overtourism most frequently published?
4. Which journals, studies, and authors have made the most cited contributions to the overtourism field?
5. What are the most commonly used keywords in studies on overtourism, and how are these keywords related to one another?

To achieve the research objectives, a search was conducted in the Web of Science (WoS) database using the keyword "overtourism." For the search, the "All Fields" option was selected, and additional keywords like "over tourism," "over-tourism," and "tourism" were included to refine the search for directly relevant articles, resulting in an initial total of 617 articles. To make the search more specific, several filtering steps were applied. First, the document type was set to "article," which narrowed the results to 519 articles. Then, the "Hospitality Leisure Sport Tourism" category within WoS was selected, reducing the count to 316 articles. By selecting broader categories such as Hospitality, Leisure, Sport, and Tourism at the macro (meso) level, the number of articles dropped to 277. Finally, at the micro level, the subject "Tourism" was chosen, bringing the count down to 276 articles. To ensure the quality of the articles included, only those indexed in the Social Sciences Citation Index (SSCI), Emerging Sources Citation Index (ESCI), and Science Citation Index Expanded (SCI-Expanded) were retained, reducing the article count to 227. Subsequently, only English-language articles were selected to avoid language-related challenges, leaving a total of 222 articles. However, upon reviewing the abstracts and contents of the articles from 2015 and 2017, it was determined that they were not directly related to overtourism, and they were therefore excluded from the study. The final analysis proceeded with 216 articles.

Open-source R software was used for the analysis and mapping of the obtained data. The R **language** was preferred due to its flexible structure capable of processing bibliometric datasets, its powerful visualization tools, and its specialized packages (e.g., bibliometrix, ggplot2). Compared to other software, R enhances the transparency and reproducibility of the analysis process. Furthermore, being open-source, it is widely used in academic circles and is recommended in terms of methodological reliability (Er & Sönmez, 2005). In this analysis process, various subtypes of analyses were conducted, such as keyword networks, publication distributions by year, collaboration networks, and citation analyses. These types of analyses aim to reveal the quantitative aspects of the overtourism literature in greater depth.

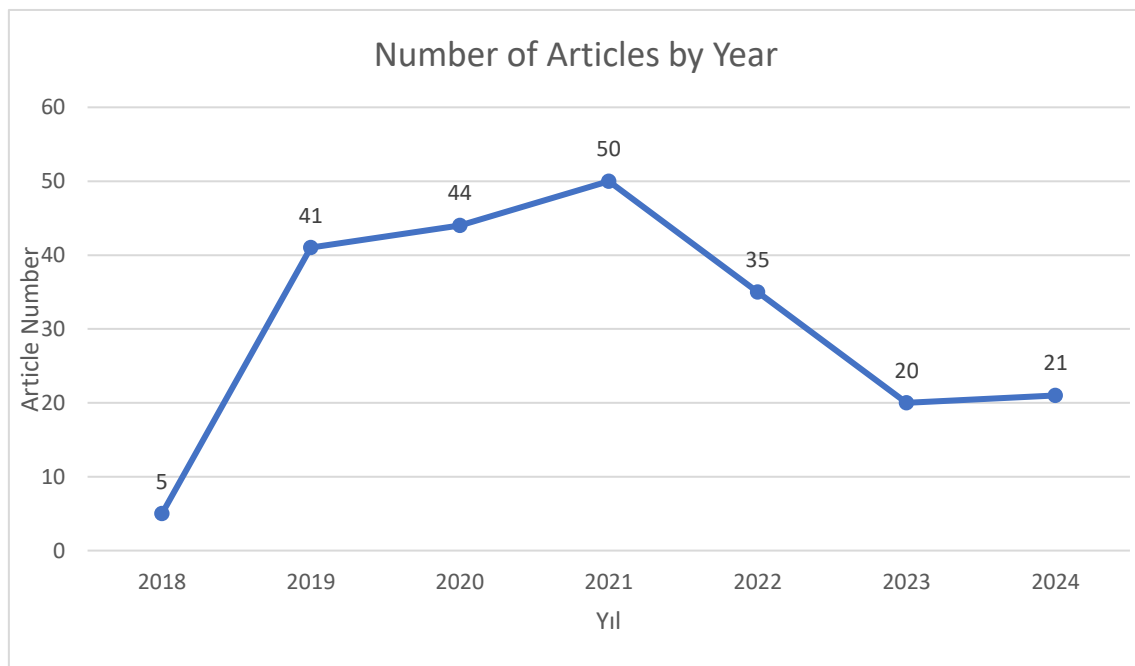
4 FINDINGS

The general information on the findings from the bibliometric study on overtourism is presented in Table 1.

Table 1*General Characteristics of Overtourism Bibliometric Data*

Time Range	2018-2024
Journal	49
Article	216
Number of Single-Authored Articles	37
Total Number of Authors	514
Average Number of Co-Authors per Article	2,84
Number of Author Keywords	789
Average Number of Citations per Document	22,51

As indicated in Table 1, a total of 216 articles from the period 2018-2024 were retrieved from the Web of Science (WOS) database. These 216 articles were published across 49 different journals, with an average citation rate per publication of 22.51. While there were 37 single-authored articles, the total number of authors was 514.

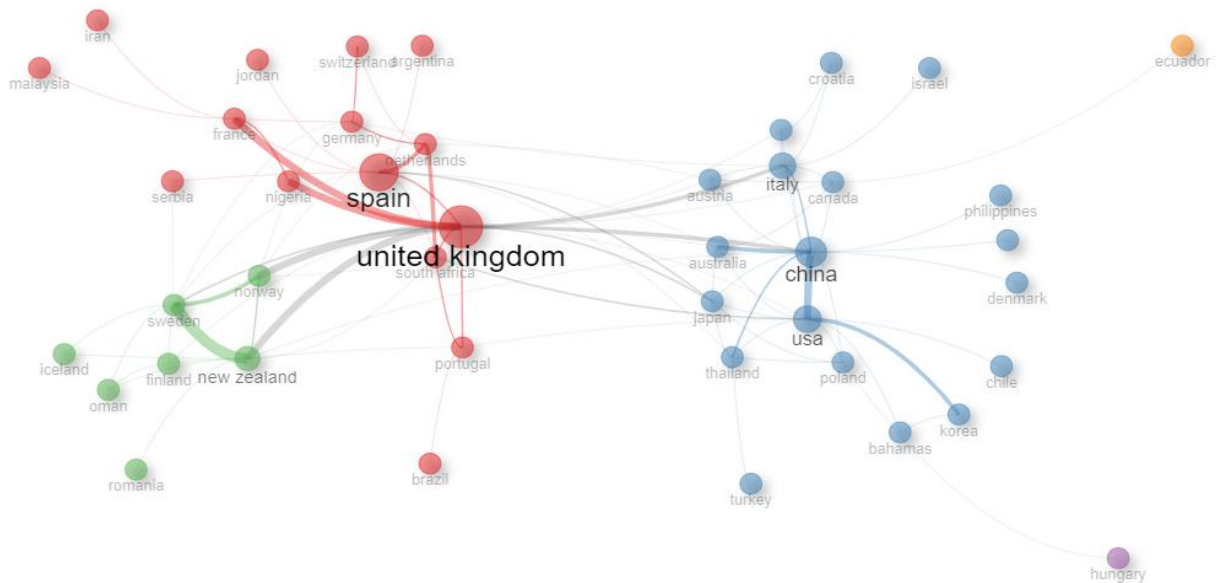
Figure 1*Distribution of Studies on Overtourism by Year*

Although tourism includes numerous terms, the term "overtourism" is relatively new and has been increasingly used in recent years. Figure 1 shows the distribution of studies on overtourism by year. The 216 publications related to overtourism, spanning from 2018 to 2024, were obtained from the Web of Science (WOS) database. Analyses

performed in the R program reveal that the first publications emerged in 2018 with 5 publications, and their number increased steadily, peaking at 50 publications in 2021. Although a downward trend was observed in subsequent years, a resurgence in the number of publications is evident in 2024. This trend may be attributed to the impact of the COVID-19 pandemic, which significantly altered tourist behavior, with a growing emphasis on social isolation. Following an extended period of isolation due to the pandemic, overtourism activities have surged, particularly in terms of marketing activities for destinations. These fluctuations in overtourism movements can be considered as a rationale for the changes in publication counts.

The analysis conducted with the R program also mapped the collaboration network among countries based on the 216 articles. Among the countries with high demand in tourism, Spain (36), the United Kingdom (27), China (19), the United States, and Italy (18) are identified as having the highest publication counts. The network map in Figure 2 illustrates the collaborative networks among these countries. It can be seen that authors in the United Kingdom frequently collaborate with those in Nigeria and France, while Chinese authors have significant collaborative efforts with researchers in the United States, Australia, and South Korea. The map suggests that these studies are more prevalent in countries with high tourism revenues and activities, likely due to increasing visitor numbers exceeding existing capacity in these destinations. In such popular destinations, the rise in challenges has led to a search for solutions within these countries (Seraphin *et al.*, 2018).

Figure 2
Collaboration Network of Countries Studying Overtourism



An examination of the collaboration network among countries studying overtourism reveals that destinations and countries currently experiencing the effects of overtourism are engaged in intensive cooperation focused on addressing and resolving these issues. Conversely, destinations not yet affected by overtourism appear to be less engaged in the topic, likely due to their focus on tourism growth rather than current challenges. It is observed that insufficient research has been conducted in these countries as they prioritize tourism expansion goals.

Following the analysis of country collaborations, Figure 3 provides information on the journals and the number of studies that have made the greatest contributions to the literature on overtourism.

Figure 3*Journals with the Highest Number of Publications on Overtourism*

Considering the publication counts, the *International Journal of Tourism Cities* ranks first with 23 articles, followed by the *Journal of Sustainable Tourism*. Publication counts among journals are relatively close, indicating no substantial disparities. Citation rates for these journals are presented in Figure 4. While the *International Journal of Tourism Cities* has the highest number of publications with 23 articles (as shown in Figure 3), the *Journal of Sustainable Tourism* leads in citation rates. This suggests that overtourism is significant for the sustainability of tourism destinations, making it a relevant topic for publication in the *Journal of Sustainable Tourism*.

A review of keywords associated with overtourism shows frequent associations with "sustainability" and "sustainable tourism," indicating that these terms are often explored in conjunction with overtourism. Figure 4 displays the journals that have received the highest citations for studies on overtourism.

An examination of journals reveals the most frequently cited journals, authors, and articles at the national level, as presented in Table 2.

Table 2*Most Cited Journals, Authors, and Studies (National Level)*

Author and Journal,	DOI	Year	National Citations	Global Citations
OKLEVIK O, 2019, J SUSTAIN TOUR	10.1080/09669582.2018.1533020	2019	39	151
NAMBERGER P, 2019, TOUR PLAN DEV	10.1080/21568316.2019.1595706	2019	34	91
SMITH MK, 2019, TOUR PLAN DEV	10.1080/21568316.2019.1595705	2019	30	82
CHEUNG KS, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1606815	2019	30	100
MILANO C, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1650054	2019	26	128
CAPOCCHI A, 2020, CURR ISSUES TOUR	10.1080/13683500.2019.1638353	2020	22	47
CHEER JM, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1578363	2019	21	97
PANAYIOTOPOULOS A, 2019, TOUR PLAN DEV	10.1080/21568316.2019.1569123	2019	20	57
PHI GT, 2020, CURR ISSUES TOUR	10.1080/13683500.2019.1618249	2020	20	63
ADIE BA, 2020, CURR ISSUES TOUR	10.1080/13683500.2019.1687661	2020	14	54

According to Table 2, the most cited document is the study by Oklevik *et al.*, published in *Journal of Sustainable Tourism* in 2019, which received 38 citations nationally and 152 citations globally. Another notable observation from the table is that a significant proportion of these publications were made in 2019, suggesting that studies published shortly after the emergence of the term served as foundational references for subsequent research.

Table 3*Most Cited Journals, Authors, and Studies (Global Level)*

Author and Journal	DOI	Year	Global Citation
SERAPHIN H, 2018, J DESTIN MARK MANAG	10.1016/j.jdmm.2018.01.011	2019	300
HIGGINS-DESBIOLLES F, 2020, J SUSTAIN TOUR	10.1080/09669582.2020.1803334	2019	192
MULER GONZALEZ V, 2018, TOUR REV	10.1108/TR-08-2017-0138	2019	176
OKLEVIK O, 2019, J SUSTAIN TOUR	10.1080/09669582.2018.1533020	2019	151
MILANO C, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1650054	2019	128
FLETCHER R, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1679822	2020	128
CHEUNG KS, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1606815	2019	100
CHEER JM, 2019, J SUSTAIN TOUR	10.1080/09669582.2019.1578363	2019	97

DEV	NAMBERGER P, 2019, TOUR PLAN	10.1080/21568316.2019.1595706	2020	91
RES	MIHALIC T, 2020, ANN TOURIS	10.1016/j.annals.2020.103025	2020	86

Table 3 provides information on the authors and journals with the highest citation counts globally. Here, the author with the most globally cited article is Seraphin H., whose 2018 publication in *Journal of Destination Marketing & Management* has accumulated 300 citations worldwide. Notably, Oklevik *et al.*'s 2019 study, which ranks highest in national citations, holds third place globally. The contents and details of these studies are as follows.

Seraphin *et al.* (2018) The study addresses overtourism issues in Venice, focusing on the ecological sustainability of this destination despite overtourism pressures. Recommendations are provided to destination managers, emphasizing the use of existing strategies to reduce the negative effects of overtourism (exploitation) and the necessity of developing new strategies to meet the needs of target markets.

Oklevik *et al.* (2019) Conducted in Fjord Norway, this study evaluates overtourism in terms of optimization and destination performance indicators. It suggests new approaches for destination managers aimed at sustainably enhancing activities without increasing tourist numbers. By developing activities for longer-staying tourists rather than those with high daily expenditure and short stays, the study posits that reducing visitor circulation could mitigate overtourism. Such approaches are considered conducive to developing tourism destinations that are more sustainable and resilient in economic, social, and environmental terms.

Namberger *et al.* (2019) The study examines the discomfort that overtourism and overcrowding cause to the local population in Munich, focusing on how to manage this issue. The findings suggest that the discomfort of local residents is not related to tourist behavior, place, or timing, but rather to the perceived volume of tourists. The study identifies two types of locals who feel discomfort: those sympathetic to tourists and those avoiding mass tourism.

Smith *et al.* (2019) This study investigates local resistance to overtourism in Budapest, examining the role of tourism in local resistance behaviors. The study is based on the adverse impacts that uncontrolled growth in tourism and nightlife have on the quality of life of local residents. In Budapest, overtourism has increased nightlife activities, resulting in higher house prices, uncontrolled growth in Airbnb properties, and

increased food and drink prices. The study further concludes that 18% of locals would like to move from the area, and that, contrary to expectations, tourism is not directly related to local resistance. Instead, factors such as political corruption, rising prices, and uncontrolled urban transformation affect locals' quality of life.

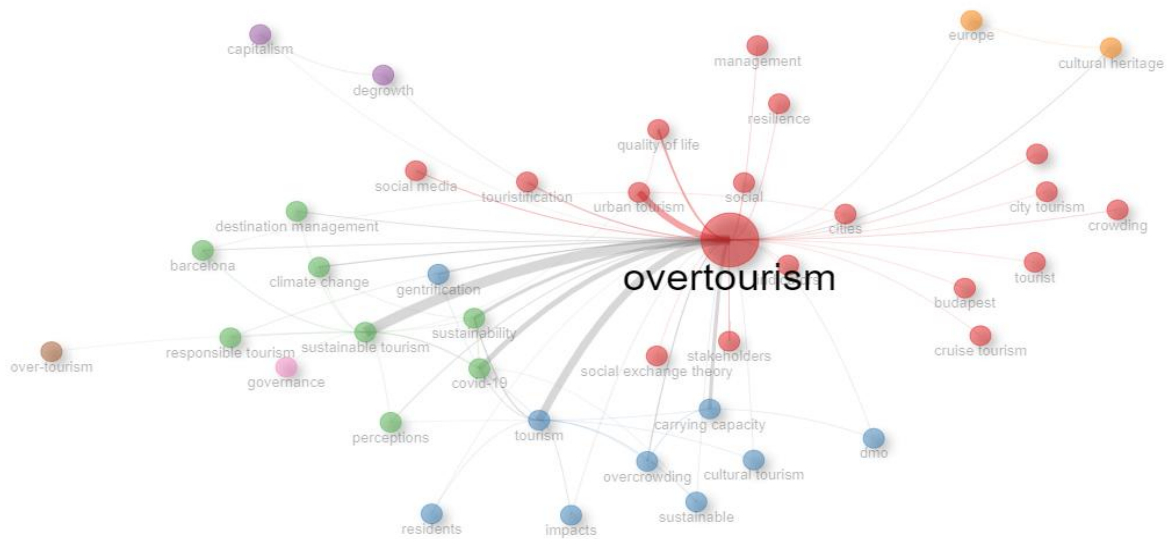
Cheung and Li (2019) this study finds that the issuance of multiple-entry permits for tourists from China to Hong Kong has led to a significant increase in single-day visits, which has the potential to damage relations between locals and visitors. The authors propose building tourism resilience and promoting sustainable downscaling as solutions.

Milano *et al.* (2019) Through semi-structured interviews, the study evaluates overtourism and downscaling from the perspective of social movements, emphasizing the role of destination managers and political authorities in addressing overtourism. It concludes that tourism downscaling could be achieved by involving these authorities.

Capocchi *et al.* (2020) The study investigates whether the term "overtourism" is a new term or simply a new definition of previously discussed concepts like carrying capacity and crowding. The authors conclude that overtourism is merely an updated form of these previous terms. Phi (2020) By examining news articles on overtourism, this study finds that the adverse effects of overtourism are largely ignored by destinations and managers, who tend to focus on the positive aspects of overtourism. The study argues for the need to develop alternative travel models, which could reduce or control the effects of overtourism. It asserts that taking radical action is the responsibility of management.

Following the review of the most-cited studies, it was observed that the concept of overtourism has been widely referenced using the terms "overtourism," "overtourism," and "over tourism." The network map in Figure 5 presents the keywords that authors frequently use alongside the concept of overtourism, along with the frequency of their usage.

Figure 5
Network Map and Relationships of Keywords



The clusters in Figure 5 are displayed in different colors, with the proximity between clusters representing relational connections. Additionally, the size of each cluster indicates its repetition frequency, and the thickness of the lines between spheres reflects the frequency with which the associated keywords are used together. When examining the frequency and clusters of keywords, it is evident that the red cluster, containing "overtourism" (145 occurrences), is closely associated with "urban tourism" (25), "stakeholders" (18), "quality of life" (15), "social change" (30), and "management" (19). In the blue cluster, terms like "carrying capacity" (17), "overcrowding," "sustainability" (26), "local population," and "cultural tourism" are prominent. In the green cluster, keywords include "responsible tourism," "destination management," "climate change," "sustainable tourism," "perception," and "Barcelona." The orange and purple clusters encompass terms like "Europe," "cultural heritage," "capitalism," and "downscaling." This demonstrates that the concept of overtourism is actively used in the relevant literature. The term is often associated with themes such as sustainable tourism, sustainability, tourism, and COVID-19, and is frequently discussed in the context of urban tourism. Researchers have increasingly associated these terms with overtourism, highlighting a growing need for further investigation in these areas.

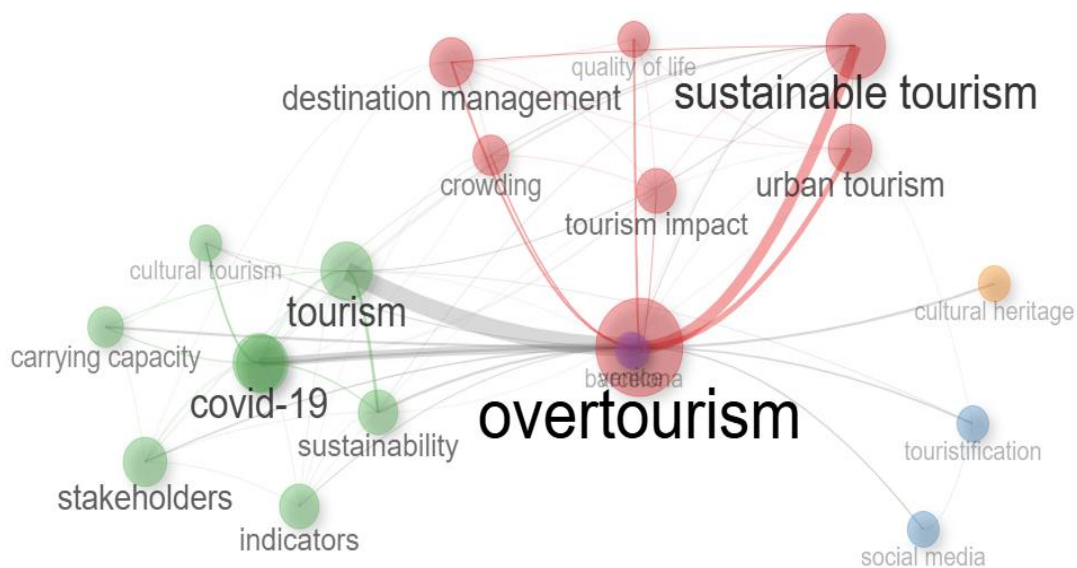
This has also led to changes in keyword trends over the years, with trends in keyword usage shown in Table 4.

Table 4
Annual Changes in Keywords

Year	Overtourism	Sustainable Tourism	Sustainability	Urban Tourism	Carrying Capacity	Destination Management
2018	3	1	2	2	0	0
2019	33	1	4	4	3	4
2020	58	7	10	5	6	6
2021	86	1	16	8	9	6
2022	110	5	19	11	10	9
2023	133	1	21	16	13	10
2024	145	6	24	18	15	10

When examining keyword trends, it is evident that during the early stages of overtourism research, few studies focused on overtourism and sustainability. In subsequent years, however, the concept of overtourism became more centered around sustainability, expanding to include issues related to the cities impacted by overtourism and the management challenges these cities face. This shift indicates that researchers have begun to explore overtourism in relation to various disciplines. In studying overtourism, researchers increasingly focus on specific themes to deepen their understanding of the topic. The evolution of these themes is illustrated in Figure 6.

Figure 6
Evolution of Overtourism Research Themes



When examining the themes, it is observed that four distinct themes have emerged under the main theme of overtourism. In the green theme, cultural tourism, carrying capacity, sustainability, and stakeholders stand out. In the red theme, there is a greater focus on life quality, destination management, sustainable tourism, urban tourism, overcrowding, and the impacts of tourism. The other two themes include cultural heritage, touristification, and social media. The thematic focus of the studies suggests a high degree of collaboration across these areas.

In the content analysis, the methods and content used in the studies were found to include media analysis (Phi, 2020), online news media narratives (Pasquinelli & Trunfio, 2020), interviews with tourism stakeholders (Koens *et al.*, 2018), panels and interviews (Jover & Díaz-Parra, 2022; Martín Martín *et al.*, 2018) and surveys conducted with local residents (Namberger *et al.*, 2019; Kim and Kang, 2020; Çakar and Uzut, 2020; Jover and Díaz-Parra, 2022). These studies show that overtourism is addressed from multiple perspectives. The various impacts of overtourism have been explored in connection with topics like tourism phobia (Veríssimo, Moraes, Breda, Guizi, and Costa, 2020), sustainability (Mihalic, 2020; Durán-Román, 2021; Blázquez-Salom, Cladera, and Sard, 2023; Jover and Díaz-Parra, 2022), and urban tourism. Recommendations for management to prevent sustainability issues and the development of tourism phobia among locals include the following:

- Reducing tourism within destinations and limiting accommodation duration (García Durán-Román, 2021; Martín *et al.*, 2018).
- Decreasing the number of visitors to destinations (Jacobsen *et al.*, 2019).
- Increasing the tourism capacity of destinations (Butler, 2018).
- Creating new tourism destinations (Jacobsen *et al.*, 2019).
- Imposing additional taxes on tourists in certain destinations (Seraphin, 2019).
- Targeting high-spending, short-stay tourists (Oklevik *et al.*, 2019).
- Increasing incentives to make destinations technologically smarter and developing a more responsible digital and effective economic system (Moreno-Izquierdo, 2018).
- Organizing festivals to promote interactions between tourists and locals (Seraphin *et al.*, 2019).
- Strengthening cooperation among tourism stakeholders (Koens *et al.*, 2018) and involving locals in the process (Moreno-Izquierdo, 2018).

- Educating tourists to raise awareness of their impact on destinations (Higgins-Desbiolles, 2019).
- Publicly promoting the improvement of infrastructure (Ivett, 2019).
- Limiting land use to protect the environment (Sarantakou, 2019).

5 DISCUSSION AND CONCLUSION

The number of tourists visiting tourism destinations is a crucial issue that requires close monitoring by both destinations and policymakers. In recent years, there has been a significant increase in tourist numbers worldwide (UNWTO, 2024). This surge has begun to generate various issues affecting local communities, visitors, destinations, and management authorities (Avond *et al.*, 2019). This issue, referred to as overtourism, has spurred efforts to find ways to manage its impacts (Dodds & Butler, 2019b). Accordingly, tourism researchers have sought to define overtourism, identify its causes, and examine its effects on local residents, destinations, their surroundings, and visitors. The aim has been to provide tourism stakeholders with insights and recommendations to address and mitigate these impacts.

In this study, we examined academic research related to overtourism, including the number of studies, publication rates by year, citation rates, collaboration networks among countries, and the relationships among keywords. Through this examination, we aimed to analyze the bibliometric trends in tourism research regarding the use of the term overtourism. The data were collected from WoS, and bibliometric mapping analyses were used to present the publication trends over the years, the most prolific authors and journals, and their citation rates.

The analysis of 217 studies reveals that research on overtourism saw a substantial increase in 2019, with 43 publications, and continued to grow, peaking at 60 publications in 2021. This increase in publications indicates a rising awareness of overtourism (Khomsí *et al.*, 2020) and the intention to inform stakeholders about potential consequences (Namberger *et al.*, 2019) r recommend preventive measures.

When examining the countries where these studies were conducted or the relationships among them, notable examples include the United Kingdom, Europe, the United States, Italy, Spain, South Korea, New Zealand, Sweden, and major tourist destinations such as Venice, Barcelona, Budapest, Dubrovnik, Seville, Landmannalaugar,

Maya Bay on Phi Phi Le Island in Thailand's Krabi province, Big Sur in California, Ihwa Mural Village in Seoul, Everest, and Bodrum. This suggests that rising visitor numbers have led to overtourism-related concerns in these regions (Postma *et al.*, 2020) prompting studies aimed at informing stakeholders (Smith *et al.*, 2019) or proposing solutions to address these concerns.

Considering the journals where overtourism studies have been published, the *International Journal of Tourism Cities* leads with 23 publications, followed by the *Journal of Sustainable Tourism*. The frequency and interrelation of keywords highlight the thematic relevance of these journals. Notably, overtourism frequently appears alongside terms such as sustainable tourism (Organization *et al.*, 2018), urban tourism (Buckley, 2020) and sustainability. A closer analysis of keywords shows a prevalence of terms like sustainable tourism, quality of life, urban tourism, social aspects, carrying capacity, and destination management (Capocchi *et al.*, 2019). indicating that these are the areas most impacted by overtourism, and solutions are primarily re

Research findings should be evaluated not only through statistical trends but also within social and administrative contexts. Particularly, when examining the impacts of overtourism on local communities within the framework of Doxey's Irridex model, it becomes evident that there is a marked progression in residents' attitudes toward tourism activities from irritation to antagonism (Doxey, 1975). This situation reveals the reflections of conflict theory in the context of overtourism. In parallel, the necessity of adopting sustainable policies in tourism destinations, when assessed within the framework of social responsibility theory, should be regarded as part of the ethical responsibilities of both businesses and local governments. Studies by Seraphin *et al.* (2018) and Oklevik *et al.* (2019) demonstrate that the orientation of destination managers toward practices that consider both environmental and social sustainability plays a significant role in mitigating the impacts of overtourismsearched in these contexts. Therefore, it is crucial for researchers to focus on these areas.

In terms of proposed solutions, prominent suggestions include promoting tourism downsizing in negatively affected destinations, encouraging luxury tourism, lengthening stay durations to reduce turnover, developing alternative destinations and tourism types to alleviate congestion, and increasing smart destinations(Blázquez-Salom *et al.*, 2023; Bouchon & Rauscher, 2019; Capocchi *et al.*, 2020; Dodds & Butler, 2019a; Khomsi *et al.*, 2020). Despite a surge in overtourism studies, it has been noted that research focusing

on non-overtourism destinations and concrete preventive strategies is lacking. Further studies are needed to develop conceptual models and provide policymakers with actionable solutions.

In light of these theoretical perspectives, managerial recommendations need to be made more concrete. For instance, the licensing restrictions imposed on Airbnb in Barcelona, entrance fees introduced in Venice to limit tourist density, and the obligation for tourists to collect waste on Everest can be cited as effective administrative measures (Buckley, 2020; Cntraveler, 2015).

Concrete recommendations for managers include:

- Real-time monitoring of visitor numbers and managing them according to capacity,
- Developing alternative tourism destinations to disperse tourist density,
- Encouraging long-stay tourists and limiting day-trippers,
- Developing policies that enhance communication with and participation of local communities,
- Digitizing destination management through technological solutions (e.g., smart city applications.)

These managerial steps not only mitigate the current impacts of overtourism but also provide a proactive framework for preventing similar issues in the future. Moreover, the effects of overtourism are not only socio-cultural but also entail serious environmental and economic consequences. Environmental threats such as traffic congestion caused by tourism, noise and air pollution, degradation of natural areas, disruption of ecosystems, and loss of biodiversity are frequently reported (Martin *et al.*, 2018; Blázquez-Salom *et al.*, 2023). These impacts necessitate the development of long-term policies aligned with the principles of sustainable environmental management. On the economic level, problems such as rising housing prices, seasonal employment, and the privatization of public spaces also reveal how overtourism transforms social structures. In this context, it is essential to develop multidimensional strategies within the framework of both social justice and environmental protection principles

Examining the thematic connections, "green" themes prominently feature cultural tourism, carrying capacity, sustainability, and stakeholders. Meanwhile, "red" themes emphasize quality of life, destination management, sustainable tourism, urban tourism, congestion, and tourism's impacts. Two other thematic categories include cultural

heritage, tourism commodification, and social media. Collaboration is high across these themes, indicating a need for studies that bridge the four thematic areas.

Research reveals that overtourism can cause severe, often irreversible, negative impacts on destinations and local communities. These effects include air pollution, greenhouse gas emissions (Kuščer, 2019) congestion and traffic issues (Oklevik, 2019; Muler, 2018; Namberger ve diğerleri 2019), environmental degradation, damage to natural and geological sites, local residents being displaced (Cardoso & Silva 2018), diminished quality of life, social disruption (Namberger ve diğerleri 2019), conflicts between tourists and locals (Higgins-Desbiolles, 2019; Carnicelli, Krolikowski, Wijesinghe ve Boluk 2019), growing inequalities and marginalization of local groups (Dubrovnik, Hırvatistan Goa, Routledge 2001), rising housing and rental costs (García López, Marchena Gómez, & Morilla Maestre 2018; Martín ve diğerleri 2018), and inflationary pressures (Muler Gonzalez ve diğerleri 2018) addressing or mitigating these impacts underscores the importance of overtourism research.

6 LIMITATIONS OF THE STUDY AND RECOMMENDATIONS FOR FUTURE RESEARCHERS

This study faces certain limitations due to the relatively recent emergence of the term "overtourism" and the corresponding scarcity of literature on the topic. The analysis results were obtained as of August 1, 2024, and as the literature evolves, more comprehensive mapping of the field from diverse perspectives will become possible.

For future researchers, it has been noted that existing studies predominantly focus on destinations currently experiencing high visitor volumes. Therefore, future research should prioritize smaller, emerging destinations to address potential issues before overtourism becomes problematic. Research on these developing regions can offer valuable insights and preemptive solutions that will help local communities, tourism stakeholders, destination managers, and policymakers develop a roadmap to mitigate the disruptive impacts of overtourism. Addressing these issues first through local and destination-specific strategies, and if necessary through radical policy measures, is essential to ensuring sustainable tourism. Future studies should also delve into the environmental and social impacts of overtourism, with a greater focus on environmental

sustainability. Additionally, this research relied solely on the Web of Science database. To produce a more comprehensive literature map, future researchers are encouraged to explore a wider range of databases, including Scopus, EBSCOHost, Google Scholar, CORE, the Public Library of Science (PLOS), and ScienceOpen, covering sources such as articles, theses, and conference proceedings.

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Authors' Contribution

All authors contributed equally to the development of this article.

Data availability

All datasets relevant to this study's findings are fully available within the article.

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