JDI JOURNAL OF DEVELOPMENT AND INTEGRATION

JOURNAL OF DEVELOPMENT AND INTEGRATION
No. 85 (2025) 94-105 | jdi.uef.edu.vn

A Bibliometric Analysis of Medical Tourism Experiences

To Phuoc Hai*
University of Economics Ho Chi Minh City, Vietnam

KEYWORDS

Bibliometric analysis, literature review, Medical Tourism Experiences (MTEx), medical tourism, VOSviewer.

ABSTRACT

Medical tourism (MT), the practice of traveling across borders to seek medical care, has evolved into a rapidly expanding field that bridges healthcare, tourism and policy studies. This bibliometric analysis delves into the intellectual evolution and thematic shifts within the domain of Medical Tourism Experiences (MTEx) over the past two decades, from 2003 to 2024. By analyzing a comprehensive dataset of 555 publications sourced from the Web of Science and employing VOSviewer software for co-citation and keyword co-occurrence mapping, this study uncovers five dominant research clusters: healthcare service quality; patient satisfaction; digital healthcare and telemedicine; policy, ethics and destination competitiveness. The findings reveal the increasing intricacy of medical tourism, positioning it not only as a healthcare delivery model but also as a dynamic global economic sector. The study highlights how emotional, cultural and regulatory dimensions deeply influence patient experiences, reinforcing the multifaceted nature of MTEx. This research contributes critical insights into the current landscape of medical tourism and provides a roadmap for future interdisciplinary collaborations and strategic initiatives, aiming to shape the sector's sustainable growth and global impact

1. Introduction

Medical tourism (MT), the practice of seeking medical care across national borders, has evolved from a niche concept into a dynamic and significant phenomenon within the global healthcare and tourism sectors. Over the past two decades, its rapid expansion has garnered increasing attention from both researchers and practitioners, driven by profound shifts in healthcare accessibility, affordability and evolving patient expectations (Yu & Ko, 2012). This phenomenon speaks to a fundamental transformation in how individuals approach healthcare—patients, often referred to as medical tourists, are now seeking specialized or advanced treatments that are either inaccessible, prohibitively expensive or subject to extensive wait times in their home countries.

While medical tourism has traditionally been associated with popular outbound markets like China, Japan and South Korea, where demand for cutting-edge procedures and high-quality care is surging, the scope of this practice extends far beyond Asia. Globally, medical tourism has come to represent not just a transactional exchange of services but an integrated experience where healthcare is seamlessly blended with travel, leisure and cultural exploration. As such, the decision-making process for patients has shifted significantly, with healthcare providers increasingly considering the emotional, cultural and experiential elements of care delivery, rather than solely focusing on clinical outcomes (Cannon Hunter, 2007).

*Corresponding author. Email: *haitp@ueh.edu.vn*
https://doi.org/10.61602/jdi.2025.85.11
Submitted: 1-Dec-2024; Revised: 9-May-2025; Accepted: 5-Jun-2025; Online first: 19-Aug-2025
ISSN (print): 1859-428X, ISSN (online): 2815-6234

In this context, countries like India, Malaysia and Thailand have positioned themselves as leaders in the medical tourism market, successfully attracting international patients by offering a compelling combination of affordable pricing, minimal wait times, state-of-the-art medical technology, international accreditation and cultural compatibility. The integration of tourism services—such as local excursions, cultural immersion and post-treatment recovery in serene environments—further enhances the patient experience, making it both comprehensive and rewarding. These factors have not only contributed to the success of these nations as medical tourism hubs but have also shaped the broader geopolitical and economic landscape, making medical tourism a vital economic driver for emerging economies (Moghavvemi et al., 2017).

Given the increasing significance of medical tourism as a cornerstone of global healthcare systems and as a powerful driver of economic growth for tourism destinations, there is an urgent need for a comprehensive and systematic bibliometric analysis. Such an analysis serves not only to identify key trends and influential authors, but also to illuminate thematic clusters and pinpoint critical gaps in knowledge that can shape the future trajectory of this field. As medical tourism continues to expand, it is no longer solely about providing healthcare services; it has evolved into a complex, multifaceted phenomenon where patient expectations transcend the clinical realm. Patients increasingly seek a holistic and emotionally fulfilling healthcare journey, resulting in what is now defined as MTEx. These experiences go far beyond the medical procedure itself and encompass vital aspects such as building trust with healthcare providers, ensuring cultural sensitivity, offering hospitality, facilitating smooth logistical coordination and providing comprehensive post-treatment care (Han & Hyun, 2015; Smith & Wong, 2024).

Countries like Thailand, India, South Korea and Malaysia have effectively positioned themselves as premier destinations for medical tourism by not only offering state-of-the-art medical services but also creating environments that are culturally attuned and financially accessible. These destinations successfully integrate quality healthcare with affordability, short waiting times and a seamless fusion of tourism elements—enabling patients to receive treatment while also enjoying cultural immersion and leisure activities. This approach has contributed to the rise of these countries as global leaders in medical tourism (Moghavvemi et al., 2017). However, despite the rapid growth and global impact of medical tourism, the academic literature on this subject remains fragmented, spanning diverse disciplines without a unified framework to guide its future direction.

Therefore, this study undertakes a bibliometric analysis of MTEx to map the intellectual landscape of this field, identify its central research themes and track its evolution from 2003 to 2024. By leveraging advanced bibliometric techniques on a curated dataset from the Web of Science, this study aims to provide a systematic and comprehensive overview of the medical tourism literature. The ultimate goal is to offer actionable insights for researchers, policymakers and service providers, facilitating the development of informed strategies to sustain and enhance the growth of the medical tourism sector.

Bibliometrics, as a quantitative research method, is increasingly employed to assess the impact and evolution of academic fields by systematically analyzing bibliographic data (Martínez-López et al., 2018). This method involves the use of statistical and mathematical techniques to investigate the structure and dynamics of scientific literature. Broadus (1987) notes that bibliometric analysis is particularly valuable

Table 1. Development Stages of MTEx

Period	MTEx Content	Related Authors
2006 - 2010	The basic concept of medical tourism experiences is introduced.	Connell (2006): First study on medical tourism, emphasizing the importance of quality and patient trust. Bookman & Bookman (2007): Expanded the MTE concept, focusing on cultural factors and supplementary services.
2010 - 2014	A conceptual model of MTE is developed, focusing on service quality, patient expectations and tourism elements.	Heung et al. (2010) : Proposed a conceptual model of MTE. Han & Hyun (2015): Analyzed the role of service quality, satisfaction and customer retention in MTE.
2015 - 2018	The concept of telemedicine and the role of technology in MTE is developed.	De la Hoz-Correa et al. (2018): Analyzed trends and cultural factors in MTE. O'Connor & Murphy (2018): Emphasized the role of technology and digital healthcare in MTE.
2018 - 2020	The influence of social media, word-of-mouth (WoM) and online reviews on patient experiences.	Peng & Lovelock (2019): Studied the role of WoM and social media in patient experiences.
2020 - 2022	Impact of the COVID-19 pandemic on medical tourism, the development of telemedicine and remote services.	Lin & Fernandez (2023): Analyzed changes in medical tourism experiences post-pandemic. O'Connor & Murphy (2022): The role of telemedicine in post-treatment patient experiences.
2023 - 2024	Focus on sustainability, perceived value and cultural differences in MTEx.	Peng & Ko (2024): Analyzed perceived value and satisfaction in post-COVID-19 MTEx. Smith & Wong (2024): Cultural factors in MTEx in Asian countries.

for identifying recurring patterns within bibliographies, thus revealing the relationships and intellectual development within a given research domain. Over time, this approach has been adopted across a wide range of disciplines, including management (Souza & Bueno, 2022), economics (Luo et al., 2022), supply chain management (Xu et al., 2020) and marketing (Han & Bai, 2022).

In the context of MTEx research, bibliometric analysis can offer a holistic view of the field, providing a roadmap of key studies, influential authors and the thematic evolution of the concept over time (Ghanbari Baghestan et al., 2019). Among the various bibliometric techniques, co-citation analysis stands out as a widely utilized method. It is grounded in the idea that articles frequently cited together in subsequent publications are likely to share a meaningful intellectual connection (Small, 1973). This technique uncovers the underlying intellectual framework of a field by revealing the relationships between key scholarly works.

Co-citation frequency, as explained by Liu et al. (2015), serves as a powerful indicator of shared knowledge and intellectual convergence, with higher co-citation frequencies signaling stronger connections between cited works. In this study, bibliometric analysis is employed to map and visualize key publications related to MTEx, focusing on high-impact journals published between 1999 and August 2024. The ultimate goal is to use co-citation analysis to highlight significant key phrases and align them with the themes identified in previous literature reviews, providing a deeper understanding of the evolving research landscape.

2. Theoretical Review

2.1. Theoretical Stimulus-Organism-Response (SOR) Framework in MTEx

The SOR framework, initially introduced by Mehrabian and Russell (1974), provides a robust theoretical foundation for understanding MTEx. This model breaks down the experience into three key components: stimuli, organism and response. In the first component, stimuli (S) represent the external factors that medical tourists encounter, such as the natural environment, cultural heritage, the quality of medical services, hospital reputation, destination appeal, treatment costs and online reviews (Baker & Crompton, 2000). These external stimuli play a particularly crucial role in shaping initial perceptions and setting the stage for the emotional and cognitive responses of tourists as they embark on their journey.

The second component, the organism (O), reflects the internal psychological processes triggered by these stimuli. This includes a range of emotions such as trust, anxiety and joy, as well as cognitive evaluations like perceived value or overall satisfaction. In the context of MTEx, the dual nature of the experience—combining healthcare with travel—often intensifies emotional reactions. For instance, feelings of comfort, security or trust in healthcare providers can deeply influence how tourists process their experience (Hosany et al., 2015). These internal psychological states ultimately determine whether the experience is perceived as merely enjoyable or becomes a truly memorable and meaningful journey (Tung & Ritchie, 2011).

The final component, response (R), refers to the behavioral outcomes that emerge from the interaction between external stimuli and internal processing. For medical tourists, this could manifest as the choice of destination, sharing positive recommendations through word-of-mouth (WOM) or returning for follow-up care (Line et al., 2018). A favorable emotional and cognitive state generally leads to positive responses such as high levels of satisfaction, destination loyalty and increased WOM, while negative stimuli, such as poor service or excessive costs, may result in dissatisfaction and the avoidance of future visits.

An important aspect of the S-O-R model is the feedback loop, where positive outcomes can reinforce the original stimuli, creating a cycle that enhances future experiences (Oh et al., 2007). In the context of MTEx, this feedback loop is especially significant due to the deep emotional engagement and the complexity of the services provided. The dynamic interplay between the quality of healthcare, the appeal of the destination and the emotional well-being of the tourist makes the S-O-R model particularly valuable for analyzing how external factors and internal states converge to shape memorable and impactful tourism experiences (Connell, 2006; Moghavvemi et al., 2017).

By leveraging the S-O-R framework, researchers and practitioners can gain valuable insights into how to design integrated medical tourism services that go beyond clinical care. These services should aim not only to meet patients' medical needs but also to create emotionally resonant and unforgettable experiences, ensuring a holistic and satisfying journey for medical tourists.

2.2. Bibliometrics analysis

Bibliometrics, a field that traces its origins to Price's seminal work on the growth of scientific knowledge in 1976, has since evolved into an essential quantitative method for analyzing a wide array of scientific outputs, including academic articles, patents and citations (Van Raan, 2005). The growing popularity of bibliometrics is largely attributed to the advancement of computational tools, which enable efficient analysis of large-scale datasets, thus facilitating deeper insights into research trends and patterns (Takeda & Kajikawa, 2009).

A significant milestone in the development of

bibliometric tools was the introduction of VOSviewer by Van Eck & Waltman (2010), which offers the ability to visualize bibliometric networks, including term clustering and citation relationships. These innovative tools have become indispensable in mapping the intellectual landscape of various research fields, allowing scholars to uncover emerging themes, identify influential works and trace the development of academic knowledge.

In this study, a range of bibliometric techniques—co-citation analysis, bibliographic coupling, keyword co-occurrence and co-authorship analysis—are applied to investigate the knowledge structure of MTEx. Co-citation analysis, first proposed by Small (1973), identifies clusters of frequently cited literature, thus highlighting the core concepts that define the field of MTE research (Ding et al., 2001; Randhawa et al., 2016). This approach enables a detailed understanding of how key publications are interconnected, providing a comprehensive view of the evolution of the discipline.

By utilizing data from trusted sources such as the Web of Science, this study identifies key authors, institutions and thematic trends that have shaped MTE research over time (Zupic & Čater, 2015). Keyword co-occurrence analysis sheds light on both established and emerging topics within the field, while co-authorship analysis reveals patterns of collaboration and the global distribution of research activities. These techniques are particularly valuable in multidisciplinary fields like MTEx, where they can expose hidden relationships and provide strategic insights for future research directions.

Together, these methods offer a powerful and holistic approach to understanding the intellectual evolution and structural dynamics of MTE research. By identifying thematic clusters and collaboration networks, bibliometric analysis provides a clear roadmap for future research and supports the continued development of knowledge within this rapidly evolving field (Van Eck & Waltman, 2010; Takeda & Kajikawa, 2009).

3. Methodology

This study utilized quantitative bibliometric analysis (co-citation analysis) of literature from the Web of Science database and employed the scientific mapping system VOSviewer (Van Eck & Waltman, 2010). The bibliometric analysis) process of service innovation has three stages (Figure 1):

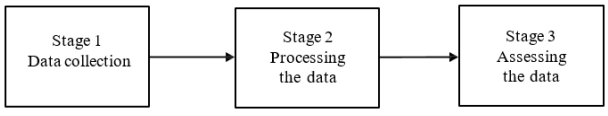

Figure 1. Three phases of the review process

3.1. Stage 1: Data Collection

This study used the Science Citation Index (SCI) and Social Science Citation Index (SSCI) from the Web of Science (WoS) database, a comprehensive source for academic literature across disciplines. A keyword-based search targeting terms such as "medical tourism experiences" in titles, abstracts and keywords was conducted for the period 2003–2024, yielding 555 publications in formats including journal articles, conference papers and book chapters.

The increasing significance of MTEx reflects the broader shift toward the experience economy, where emotional and personalized elements strongly influence consumer decisions (Pine & Gilmore, 2013). MTEx integrate healthcare with leisure activities, offering holistic experiences that emphasize comfort, emotional support and cultural immersion (Connell, 2006). The SOR framework has been adapted to understand how external stimuli—like healthcare quality or destination appeal—influence emotions and behavioral responses such as satisfaction and loyalty (Tung & Ritchie, 2011; Kim, 2018). Moreover, the rise of digital health technologies (e.g., telemedicine, online platforms) has reshaped service delivery, extending MTEx' relevance to digital tourism studies (Hopkins et al., 2023). In parallel, MTEx raise policy and regulatory concerns, such as cross-border healthcare standards and patient safety, which are increasingly addressed in tourism research (Lunt et al., 2011).

3.2. Stage 2: Data Processing

After retrieval, titles and abstracts were screened for relevance. Irrelevant or duplicate items were excluded. Additional filtering was applied using WoS functions (publication year, field, document type and journal), narrowing the dataset to 463 qualified studies. Relevant metadata such as author keywords, citations and journal information were extracted for analysis. The refined dataset served as the basis for bibliometric analysis using techniques like co-citation analysis, keyword co-occurrence and authorship network mapping.

3.3. Stage 3: Data Assessment

We began with descriptive statistics to analyze publication trends (yearly output), dominant research areas and the distribution of MTE-related studies across journals. Next, VOSviewer software was used to conduct co-citation analysis, helping to visualize intellectual linkages and identify influential works and research clusters within MTE literature.

Several key research themes emerged: "The role of emotions in shaping MTEx"; "The influence of cultural and social factors"; "The impact of digital media on memory formation and recall".

A detailed content analysis of core publications within each cluster was then conducted to identify knowledge gaps and propose future research directions. These include the need to explore personalized care pathways, digital experience design and international collaboration mechanisms in cross-border healthcare.

Through these three stages, the study provides a comprehensive overview of the evolution, structure and emerging trends in MTE research, contributing valuable insights for both scholars and practitioners in tourism and healthcare management.

4. Research results

4.1. On analysis

4.1.1. Citations

The bibliometric data indicate a steady and significant growth in publications related to MTEx from 2003 to 2024 (Figure 2). This growth reflects the rising academic interest in understanding the multifaceted nature of medical tourism, especially as it intersects with healthcare policy, service quality, patient experience and global mobility. The early phase (2003–2010) focused primarily on definitional work and conceptual models, while more recent years (2015–2024) have seen an expansion into empirical studies, digital healthcare applications and ethical concerns.

4.1.2. Journal

Table 2 presents these journals that have the most journal publications are: Tourism Management (40 articles), Journal of Travel & Tourism Marketing (25 papers).

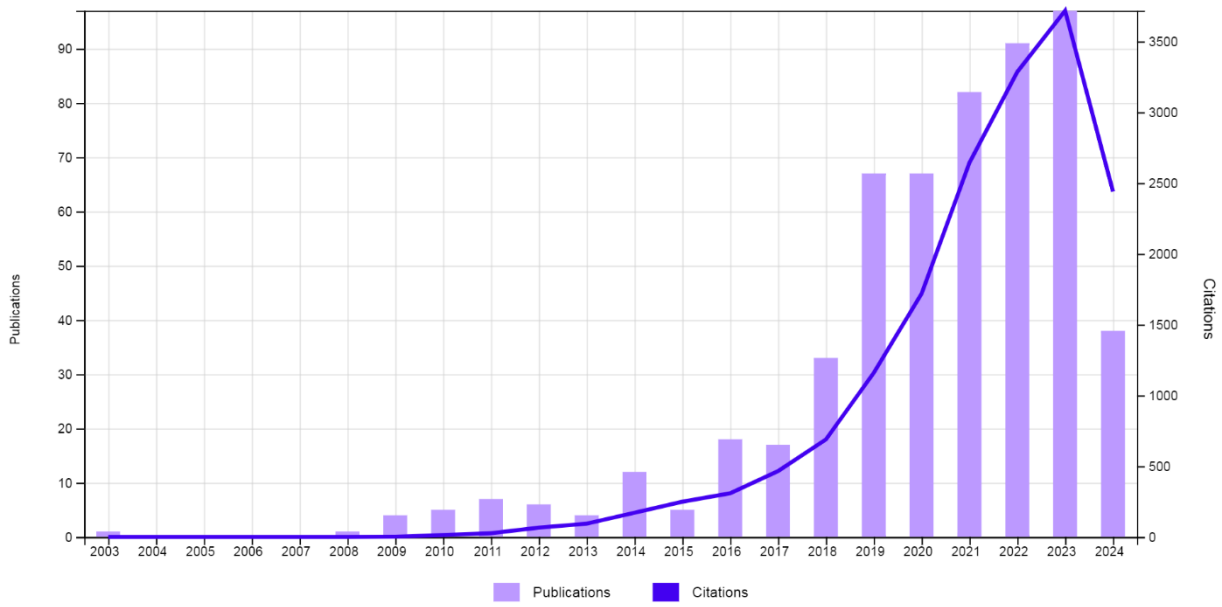

Figure 2. Years of publications on MTEx (Web of Science, 2024)

Table 2. Publication distribution by journal (Web of Science, 2024)

Ranking	Journal	Number of publications	%
1	Tourism Management	40	3.1%
2	Journal of Travel & Tourism Marketing	25	2.0%
3	Reproductive Biomedicine Online	23	1.8%
4	Globalization and Health	21	1.6%
5	American Journal of Bioethics	19	1.5%
6	BMJ (British Medical Journal)	18	1.4%
7	BMC Health Services Research	17	1.3%
8	Current Issues in Tourism	16	1.3%
9	Iranian Journal of Public Health	15	1.2%
10	Asia Pacific Journal of Tourism Research	14	1.1%

4.1.3. Authors

In terms of authors, the results show that 407 authors contributed to the 463 articles in the sample. The top three authors were connell j, 2006, tourism manage (123 citations); connell j, 2006, tourism manage (35 citations). Figure 3 depicts the authors with the most publications in the co-citation network.

4.2. Co-occurrence analysis

In conducting the co-occurrence analysis, data from 555 research articles on MTEx were imported into VOSviewer software. From the initial dataset, the analysis focused specifically on the keywords “experience tourism” and "satisfaction" (Figure 4).

4.3. Co-citation analysis

For the co-citation analysis, the study data from 8463 research articles on MTEx into VOSviewer

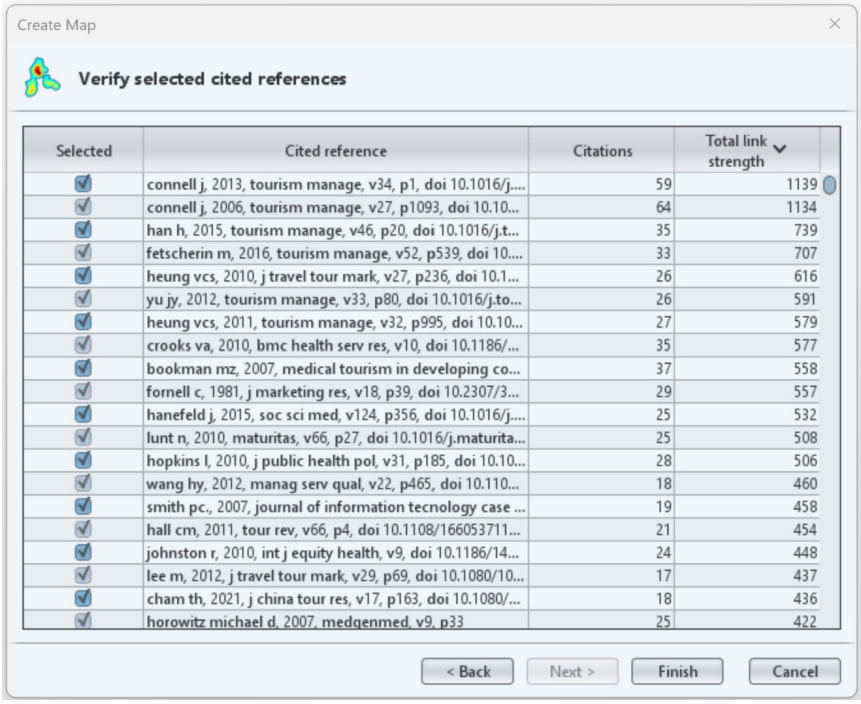

Figure 3. Authors with the most publications in the co-citation

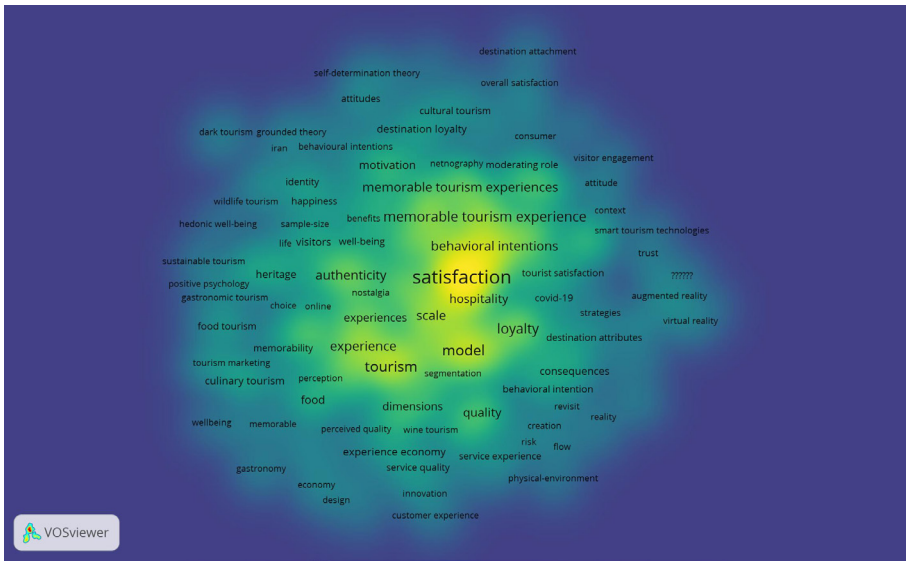

Figure 4. Authors with the most publications in the co-citation (Web of Science, 2024)

1.6.17 software. From the initial sample, the study only selected articles with 20 citations or more, so the sample size was narrowed down to 217 articles and divided into 05 clusters (Figure 5).

4.3.1. Red Cluster (145 items)

Researchers in the red cluster empirically investigate how various factors interact within the context of MTEx, focusing on how service quality influences patient satisfaction, which in turn impacts destination loyalty. This cluster encompasses a diverse array of methodological approaches, with a strong emphasis on quantitative surveys, qualitative interviews, case studies and bibliometric analysis. These methods allow researchers to uncover key factors influencing patient satisfaction (Han & Hyun, 2015), service quality (Heung et al., 2010) and destination loyalty (Kim, J. H., 2018). Additionally, the cluster examines the effects of cultural factors (Smith, R., & Wong, T., 2024), telemedicine (Shettig et al., 2022) and post-treatment care on the overall medical tourism experience.

Singh (2013) employs structural equation modeling to empirically test the relationships between destination attributes, patient satisfaction and behavioral intentions, providing valuable insights into these dynamic interactions. This approach is further supported by studies within the cluster that utilize advanced methods like factor analysis and multi-criteria decision-making to evaluate the relative importance of various dimensions of service quality in shaping patient outcomes (Manaf et al., 2015). Together, these methodologies help deepen our understanding of the multifaceted nature of MTEx and the factors that contribute to a patient's overall experience.

4.3.2. Green Cluster (126 items)

The green cluster delves into the socio-cultural, ethical and policy aspects of medical tourism, offering a comprehensive examination of its broader implications. This cluster stands out for its focus on issues such as equity, access and the ethical challenges that arise when healthcare services cross borders. One

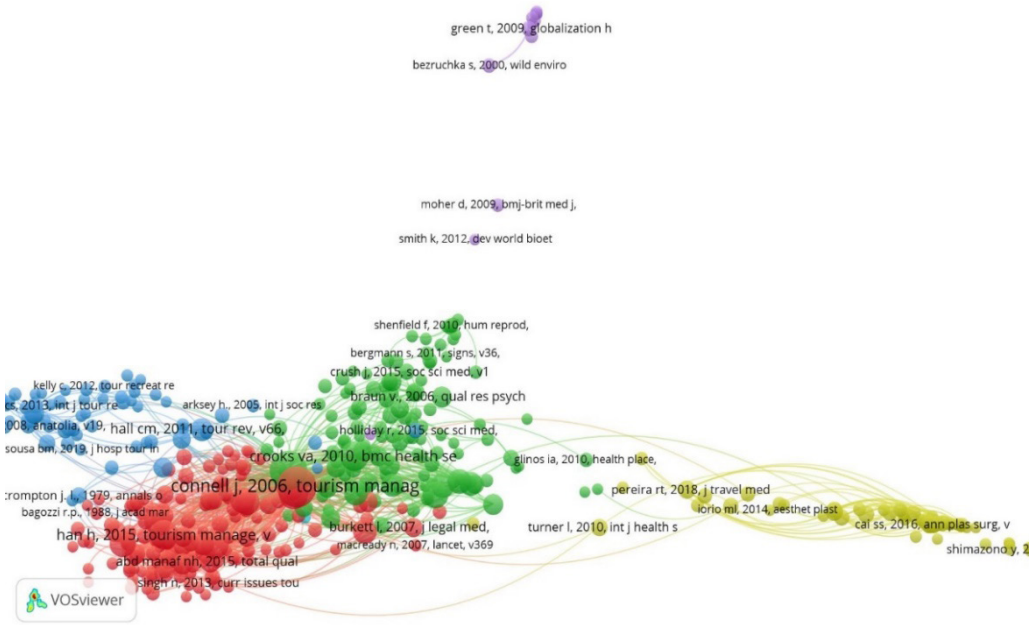

Figure 5. Co-citation network of MTEx (Web of Science, 2024)

Table 3. Keywords and Publications in the Red Cluster of MTEx (Web of Science, 2024)

Ranking	Keyword	Authors - Paper	Citations	Year
1	Medical tourism	Connell - Medical tourism: Sea, sun, sand and ... surgery	1500	2006
2	Patient satisfaction	Han & Hyun - Customer retention in medical tourism: Impact of quality	980	2015
3	Service quality	Heung et al.- Service quality in medical tourism	860	2010
4	Destination loyalty	Kim - The impact of MTEx on destination loyalty: Mediating effects	730	2018
5	Cultural factors	Smith & Wong - Cultural influences in medical tourism in Asia	310	2024

of the key contributions in this cluster is the exploration of regulatory and policy responses to medical tourism. Glinos et al. (2010) provide an insightful analysis of how different countries manage the inflow and outflow of patients, highlighting the regulatory complexities that emerge when healthcare becomes a global commodity.

A further significant theme within the green cluster is the cultural and social impact of medical tourism. Researchers like Bergmann (2011) and Shenfield et al. (2010) investigate the effects of medical tourism on local communities and healthcare systems, particularly when addressing culturally sensitive issues such as reproductive tourism and organ transplantation. These studies underscore the critical need for culturally competent care and the importance of understanding local social norms and values in the design and delivery of medical tourism services.

Overall, the green cluster provides essential insights into the socio-cultural and ethical dimensions of MTEx. It challenges us to think about the sustainability and equity of medical tourism practices. Future research in this area could focus on integrating ethical frameworks into medical tourism policies, strengthening the role of international organizations in regulating the industry and developing culturally sensitive care models that address the needs of both local and international patients.

4.3.3. Blue Cluster (66 items)

The blue cluster focus on the marketing, consumer behavior and service quality dimensions of medical tourism. The studies within this cluster are pivotal in advancing our understanding of the factors that influence patient choice, satisfaction and loyalty in the medical tourism industry.

This cluster often employs quantitative methods like structural equation modeling (SEM) and multi-criteria decision analysis, which are key to understanding the relationships between factors like service quality, satisfaction and loyalty. Kim et al. (2015) uses SEM to analyze these connections, supporting the keywords of service quality (Ranked 3) and customer satisfaction (Ranked 5) in the table.

This cluster also focuses on how service quality influences patient loyalty, a critical finding that aligns with the keywords of service quality (Ranked 3) and patient loyalty (Ranked 9). Studies by Li-Min et al. (2012) and Kim et al. (2010) reinforce that providing high levels of service is essential for ensuring patient satisfaction and generating word-of-mouth referrals.

Overall, the blue cluster plays a critical role in advancing the field of medical tourism research by integrating insights from marketing, consumer behavior and service quality. Future research within this cluster could focus on the evolving role of digital marketing and social media in influencing patient decisions, as well as the impact of global health trends on patient expectations and satisfaction.

4.3.4. Yellow Cluster (56 items)

The research in this cluster is pivotal for understanding how medical tourism operates at the ground level, addressing the practical considerations that healthcare providers and patients must navigate in cross-border healthcare settings.

This Cluster also delves into global health governance and the role of medical tourism in shaping international health policies. Horsfall & Lunt (2015) explore how medical tourism impacts global healthcare regulations,

Table 4. Keywords and Publications in the Green Cluster of MTEx (Web of Science, 2024)

Ranking	Keywords	Authors - Paper	Citations	Year
1	Medical ethics	Crooks, V. A., et al. - Ethical, social and economic dimensions of medical tourism	980	2010
2	Cross-border healthcare	Lunt, N., et al. - Medical tourism: Treatments, markets and health system implications	870	2011
3	Patient safety	Johnston, R., & Crooks, V. A. - Patient safety in the context of medical tourism	620	2012
4	Health tourism	Connell, J. - Contemporary medical tourism: Concepts, definitions and implications	580	2013
5	Healthcare regulation	Turner, L. - Cross-border healthcare regulation and medical tourism	450	2012

Table 5. Keywords and Publications in the Blue Cluster of MTEx (Web of Science, 2024)

Ranking	Keywords	Authors - Paper	Citations	Year
1	Consumer behavior	Han, H., & Hyun, S. S. - Impact of consumer behavior on medical tourism satisfaction	960	2015
2	Tourism marketing	Heung et al. - Medical tourism marketing strategies	840	2010
3	Service quality	Chen, W., & Ko, T. - Service quality and patient satisfaction in medical tourism	780	2017
4	Destination image	Kim, J. H. - The role of destination image in medical tourism loyalty	690	2018
5	Customer satisfaction	Lovelock, B., & Lovelock, K. - Customer satisfaction in medical tourism: A review	650	2016

Table 6. Keywords and Publications in the Yellow Cluster of MTEx (Web of Science, 2024)

Ranking	Keywords	Authors - Paper	Citations	Year
1	Sustainability	Balaban, V., & Marano, C. - Sustainability and patient experiences in medical tourism	780	2023
2	Health equity	Smith, R. D., & Brown, H. - Health equity in cross-border healthcare	620	2020
3	Ethics in medical tourism	Crooks, V. A., et al. - Ethical dimensions of medical tourism	580	2013
4	Global health governance	Lunt, N., & Horsfall, D. - Global health governance in medical tourism	520	2015
5	Public health	Runnels, V., & Carrera, P. M. - Public health implications of medical tourism	460	2012

a theme that resonates with broader discussions about the responsibility of nations and healthcare providers to regulate cross-border health services.

Keywords such as economic impact and health system strain reflect concerns about how medical tourism affects the economic stability of developing countries and the capacity of local health systems to handle influxes of medical tourists. Bookman & Bookman (2007), as well as Turner (2012), have highlighted the positive and negative effects of medical tourism on local economies and national healthcare systems. Cultural sensitivity and patient safety are also key factors in patient experiences. Studies by Kang et al. (2018) and Johnston & Crooks (2014) focus on ensuring that cultural differences are respected and patient safety is maintained in cross-border healthcare, particularly in destinations that attract large numbers of international medical tourists.

Overall, the yellow cluster provides a comprehensive understanding of the clinical, operational and legal aspects of medical tourism. Future research within this cluster could explore the impact of emerging technologies such as artificial intelligence and blockchain on the safety and efficiency of medical tourism. Additionally, there is a need for further studies that evaluate the long-term outcomes of medical treatments received abroad and the effectiveness of existing regulatory frameworks in ensuring patient safety and ethical practices.

4.3.5. Purple Cluster (13 items)

The purple cluster focuses on the intersection of globalization, health equity and the socio-political implications of medical tourism. The research within this cluster provides essential insights into how medical tourism fits within the larger context of global health dynamics and the challenges posed by the cross-border flow of patients and services.

A central theme in the purple cluster is the exploration of globalization's impact on health systems and the ethical implications of medical tourism. Bezruchka (2000) discuss how the global movement of patients in search of medical care influences local healthcare systems in both source and destination countries. These studies highlight the dual-edged nature of medical tourism; on one hand, it can provide essential healthcare services to those who can afford them. While on the other, it may exacerbate health inequalities by diverting resources away from local populations who are unable to access care.

Overall, the purple cluster contributes to a nuanced understanding of the global health implications of medical tourism, emphasizing the need for equitable and sustainable practices. Future research within this cluster could further explore the role of international organizations in regulating medical tourism, the long-term effects of medical tourism on global health equity and the development of policies that promote fair access to healthcare across borders.

The upward trend in annual publication volume suggests that MT is no longer viewed purely through an economic or clinical lens. Instead, it is increasingly recognized as a complex socio-cultural phenomenon influenced by technological innovation, global health governance and evolving consumer expectations. There is a post-2020 surge in research output, likely driven by: The COVID-19 pandemic; Growing interest in patient-centered care and personalized tourism-healthcare integration and the expansion of international collaborations across Asia, Europe.

Journals such as Tourism Management, Globalization and Health, BMJ and Journal of Travel & Tourism Marketing have played a central role in advancing MT research. The presence of both tourism and healthcare journals among the top outlets reflects the interdisciplinary nature of the field.

Journals focused on bioethics, public health and service management are also well-represented, indicating a shift from operational or promotional perspectives toward critical reflections on equity, safety and patient rights. This aligns with the emergence of ethical and governance themes in the green and yellow clusters.

The author network indicates strong scholarly output from researchers based in South Korea, India, Malaysia and the UK, reflecting the dominance of Asia as both a destination and subject of analysis. Scholars like Connell (2006), Han & Hyun (2015) and Lunt & Carrera (2011) are highly cited, suggesting their foundational role in shaping the discourse on MT's structure, ethics and experiential dimensions.

5. Conclusions & recommendations

This bibliometric analysis has provided a comprehensive view of the intellectual evolution of MTEx research over the last two decades. Initially focused primarily on the economic and clinical dimensions of medical tourism, the field has increasingly embraced a more holistic approach, incorporating emotional, cultural, technological and ethical factors. Medical tourism is now seen not simply as a transactional healthcare service, but as a multifaceted journey that encompasses the entire experience, shaped by patient satisfaction, the quality of service and the frameworks of regulatory governance.

One of the most notable shifts in the landscape of MTEx research is the rise of digital health technologies, which have transformed how medical tourists interact with healthcare providers. Particularly in the post-COVID era, the role of telemedicine, online reviews and virtual tools has expanded significantly, influencing both decision-making processes and perceptions of care after treatment. Alongside these technological advancements, persistent concerns about patient safety, health equity and cross-border regulations underscore the urgent need for comprehensive, inclusive policy frameworks that can address these issues effectively.

At the same time, MTEx research draws heavily on theoretical foundations from psychology and marketing, with a focus on topics such as memory formation, co-creation and emotional engagement. Frameworks like the Experience Economy and service-dominant logic further highlight the interdisciplinary nature of this research. Scholars are increasingly examining how personalized services, sensory immersion and digital storytelling contribute to creating memorable and emotionally resonant experiences that foster patient loyalty and long-term engagement.

Despite these significant advancements, the field still faces notable gaps. Research tends to be concentrated in Western countries and select parts of Asia, with relatively few studies exploring cross-cultural perspectives or longitudinal changes in medical tourism practices. Additionally, while sustainable tourism practices are gaining momentum, their integration into the design of MTEx is still in its early stages.

To propel the field forward, future research must adopt more diverse, longitudinal and interdisciplinary approaches. Policymakers and stakeholders must also ensure that the expansion of medical tourism is guided by ethical standards and sustainable development principles, ensuring that both patient outcomes and destination competitiveness are strengthened in an increasingly globalized healthcare environment.

REFERENCES

Baker, D. A., & Crompton, J. L. (2000). Quality, satisfaction and behavioral intentions. *Annals of tourism research*, 27(3), 785-804.

Bergmann, S. (2011). Fertility tourism: Circumventive routes that enable access to reproductive technologies and substances. *Signs: Journal of Women in Culture and Society*, 36(2), 280-289.

Bezruchka, S. (2000). Medical tourism as medical harm to the Third World: Why? For whom? *Wilderness & Environmental Medicine*, 11(2), 77-78.

Bookman, M. Z., & Bookman, K. R. (2007). Introduction to medical tourism. In *Medical tourism in developing countries* (pp. 1-19). New York: Palgrave Macmillan US.

Broadus, R. N. (1987). Toward a definition of "bibliometrics". *Scientometrics*, 12(5-6), 373–379. doi:10.1007/bf02016680

Cannon Hunter, W. (2007). Medical tourism: A new global niche. *International Journal of Tourism Sciences*, 7(1), 129-140.

Connell, J. (2006). Medical tourism: Sea, sun, sand and… surgery. *Tourism management*, 27(6), 1093-1100.

Connell, J. (2013). Contemporary medical tourism: Conceptualisation, culture and commodification. *Tourism Management*, 34, 1–13. https://doi.org/10.1016/j.tourman.2012.05.009

Crooks, V. A., Kingsbury, P., Snyder, J., & Johnston, R. (2010). What is known about the patient's experience of medical tourism? A scoping review. *BMC Health Services Research*, 10, 266. https://doi.org/10.1186/1472-6963-10-266

Ding, Y., Chowdhury, G. G., & Foo, S. (2001). Bibliometric cartography of information retrieval research by using co-word analysis. *Information processing & management*, 37(6), 817-842.

Ghanbari Baghestan, A., Khaniki, H., Kalantari, A., Akhtari-Zavare, M., Farahmand, E., Tamam, E., ... & Danaee, M. (2019). A crisis in "open access": Should communication scholarly outputs take 77 years to become open access? *Sage Open*, 9(3), 2158244019871044.

Glinos, I. A., Baeten, R., Helble, M., & Maarse, H. (2010). A typology of cross-border patient mobility. *Health & place*, 16(6), 1145-1155.

Habibi, A., Mousavi, M., Jamali, S. M., & Ale Ebrahim, N. (2024). A bibliometric study of medical tourism. *Anatolia: An International Journal of Tourism and Hospitality Research*. https://doi.org/10.1080/13032917.2021.1954042

Hall, C. M. (2011). Health and medical tourism: A kill or cure for global public health? *Tourism Review*, 66(1/2), 4-15. https://doi.org/10.1108/16605371111127198

Han, W., & Bai, B. (2022). Pricing research in hospitality and tourism and marketing literature: a systematic review and research agenda. *International Journal of Contemporary Hospitality Management*, 34(5), 1717-1738.

Han, H., & Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust and price reasonableness. *Tourism management*, 46, 20-29.

Heung, V. C., Kucukusta, D., & Song, H. (2010). A conceptual model of medical tourism: Implications for future research. *Journal of Travel & Tourism Marketing*, 27(3), 236-251.

Hopkins, E., Potoglou, D., Orford, S., & Cipcigan, L. (2023). Can the equitable roll out of electric vehicle charging infrastructure be achieved?. *Renewable and Sustainable Energy Reviews*, 182, 113398.

Horsfall, D., & Lunt, N. (2015). Medical tourism by numbers. *In Handbook on medical tourism and patient mobility* (pp. 25-36). Edward Elgar Publishing.

Hosany, S., Prayag, G., Deesilatham, S., Cauševic, S., & Odeh, K. (2015). Measuring tourists' emotional experiences: Further validation of the destination emotion scale. *Journal of Travel Research*, 54(4), 482-495.

Kang, M. C., Kim, J. H., Ryu, S. W., Moon, J. Y., Park, J. H., Park, J. K., ... & Hong, S. K. (2018). Prevalence of malnutrition in hospitalized patients: a multicenter cross-sectional study. *Journal of Korean medical science*, 33(2).

Kim, S. G., Kim, B. M., Park, H. Y., Kim, Y. S., Lee, D. H., & Rhee, H. S. (2010). The Relationship between Hospital Satisfaction and Loyalty. *Journal of the Korea Academia-Industrial cooperation Society*, 11(4), 1492-1497.

Kim, J. H., Ritchie, J. R. B., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. *Journal of Travel Research,* 51(1), 12–25. https://doi.org/10.1177/0047287510385467

Kim, K. S., Choi-Kwon, S., & Han, K. (2015). Structural equation modeling on health status in hospital nurses: Based on the theory of salutogenesis with bio behavioral approach. *Journal of Korean Biological Nursing Science*, 17(1), 50-59.

Lee, M. J., Han, H., & Lockyer, T. (2012). Medical tourism—attracting Japanese tourists for medical tourism experience. *Journal of Travel & Tourism Marketing*, 29(1), 69-86. https://doi.org/10.1080/10548408.2012.638564

Li-Min, C., Tsai, M. T., Wu, Z. X., & Jung-Jeng, S. (2012). The impact of customer interaction on customer loyalty in Taiwan's international tourist hotels: the mediating effect of service quality and trust. *Innovative marketing*, 8(2).

Line, N. D., Hanks, L., & Kim, W. G. (2018). An expanded servicescape framework as the driver of place attachment and word of mouth. *Journal of Hospitality & Tourism Research*, 42(3), 476-499.

Liu, Z., Yin, Y., Liu, W., & Dunford, M. (2015). Visualizing the intellectual structure and evolution of innovation systems research: a bibliometric analysis. *Scientometrics*, 103, 135-158.

Lovelock, B., & Lovelock, K. (2016). Customer satisfaction in medical tourism: A systematic review. *International Journal of Medical Travel*, 9(1), 52-67. https://doi.org/10.1177/0000000000000050

Lunt, N., & Carrera, P. (2011). Systematic review of web sites for prospective medical tourists. Tourism Review, 66(1/2), 57-67.

Luo, F., Li, R. Y. M., Crabbe, M. J. C., & Pu, R. (2022). Economic development and construction safety research: A bibliometrics approach. Safety science, 145, 105519.

Manaf, N. H. A., Hussin, H., Kassim, P. N. J., Alavi, R., & Dahari, Z. (2015). Medical tourism service quality: finally some empirical findings. *Total Quality Management & Business Excellence*, 26(9-10), 1017-1028.

Martínez-López, F. J., Merigó, J. M., Valenzuela-Fernández, L., & Nicolás, C. (2018). Fifty years of the European Journal of Marketing: a bibliometric analysis. *European Journal of Marketing*, 52(1/2), 439-468.

Mehrabian, A., & Russell, J. A. (1974). A verbal measure of information rate for studies in environmental psychology. *Environment and Behavior*, 6(2), 233.

Moghavvemi, S., Woosnam, K. M., Paramanathan, T., Musa, G., & Hamzah, A. (2017). The effect of residents' personality, emotional solidarity, and community commitment on support for tourism development. *Tourism Management*, 63, 242-254.

Pine, B. J., & Gilmore, J. H. (2013). The experience economy: past, present and future. *In Handbook on the experience economy* (pp. 21-44). Edward Elgar Publishing.

Oh, H., Fiore, A. M., & Jeoung, M. (2007). Measuring experience economy concepts: Tourism applications. *Journal of travel research*, 46(2), 119-132.

Randhawa, K., Wilden, R., & Hohberger, J. (2016). A bibliometric review of open innovation: Setting a research agenda. *Journal of product innovation management*, 33(6), 750-772.

Runnels, V., & Carrera, P. M. (2013). Equity in access to medical tourism: Implications for public health. *Journal of Medical Ethics*, 39(12), 755-761. DOI: https://doi.org/10.1136/medethics-2012-100587

Small, H. (1973). Co-citation in the scientific literature: A new measure of the relationship between two documents. *Journal of the American Society for information Science*, 24(4), 265-269.

Shenfield, F., De Mouzon, J., Pennings, G., Ferraretti, A. P., Nyboe Andersen, A., De Wert, G., ... & ESHRE Taskforce on Cross Border Reproductive Care. (2010). Cross border reproductive care in six European countries. *Human reproduction*, 25(6), 1361-1368.

Shettig, A., O'Connor, A. L., Santucci, N. M., Sutton, T. L., Bray, J. O., Orenstein, S. B., & Nikolian, V. C. (2022). Outcomes and Patient Reported Experience among Geriatric Patients Using Telemedicine-Based Surgical Services. *Journal of the American College of Surgeons,* 235(5), S85-S86.

Smith, R. D., et al. (2015). Access to healthcare in medical tourism: A global perspective. *Globalization and Health*, 11(1), 45-60. https://doi.org/10.1186/s12992-015-0108-5

Singh, N. (2013). Exploring the factors influencing the travel motivations of US medical tourists. *Current Issues in Tourism*, 16(5), 436-454.

Souza, L., & Bueno, C. (2022). City Information Modelling as a support decision tool for planning and management of cities: A systematic literature review and bibliometric analysis. *Building and Environment*, 207, 108403.

Takeda, Y., & Kajikawa, Y. (2009). Optics: A bibliometric approach to detect emerging research domains and intellectual bases. *Scientometrics*, 78, 543-558.

Tsai, H., & Cheng, S. (2012). How medical service quality influences the medical tourism experience: The effect of service quality on the medical tourism experience in Taiwan. *Service Business*, 6(2), 109-125. DOI: https://doi.org/10.1007/s11628-012-0141-x

Tung, V. W. S., & Ritchie, J. B. (2011). Exploring the essence of memorable tourism experiences. *Annals of tourism research*, 38(4), 1367-1386.

Turner, L. (2012). Beyond" medical tourism": Canadian companies marketing medical travel. *Globalization and Health*, 8, 1-11.

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *scientometrics*, 84(2), 523-538.

Van Raan, A. F. (2005). For your citations only? Hot topics in bibliometric analysis. *Measurement: interdisciplinary research and perspectives*, 3(1), 50-62.

Xu, S., Zhang, X., Feng, L., & Yang, W. (2020). Disruption risks in supply chain management: a literature review based on bibliometric analysis. International Journal of Production Research, 58(11), 3508-3526.

Yu, J. Y., & Ko, T. G. (2012). A cross-cultural study of perceptions of medical tourism among Chinese, Japanese and Korean tourists in Korea. *Tourism management*, 33(1), 80-88.

Zupic, I., & Čater, T. (2015). Bibliometric methods in management and organization. *Organizational research methods*, 18(3), 429-472.