Bibliometric analysis of articles on tourism, animation and recreation published in the Web of Science database

Lukman Önen*[1], Sude KILINÇ[1], Nahide Betül ÖZKAN[2], Mehmet DEMİREL[1]

[1] Department of Recreation Management, Faculty of Tourism, Necmettin Erbakan University, Türkiye

[2] Department of Recreation Management, Faculty of Tourism, Hacı Bayram University, Türkiye

Abstract

This study presents a detailed bibliometric analysis of 330 academic publications on tourism, hotel animation, and recreation indexed in the Web of Science database between 2005 and 2025. Recognizing that modern tourism relies heavily on diverse experiences to ensure customer satisfaction and competitive advantage, the research utilizes VOSviewer software to evaluate citation networks, institutional contributions, and keyword relations. The findings identify Josip Mikulic and Darko Prebezac as the most cited researchers, with Croatia, China, and Germany standing out as leading contributors. Notably, the University of Zagreb and Hong Kong Baptist University are key institutions in this domain. Data indicates a significant surge in publications from 2020 to 2025, primarily within the "Hospitality Leisure Sport Tourism" and "Management" categories. Ultimately, the analysis underscores the growing academic recognition of animation in the tourism experience and provides a valuable framework for understanding current trends and future research opportunities. Furthermore, the study emphasizes that integrating robust animation programs addresses the psychological and social needs of guests, thereby transforming simple accommodation into memorable, high-quality vacation experiences.

1. Introduction

Today, the tourism sector is undergoing constant transformation due to global competition and increasing guest expectations. As one of the factors influencing guests' destination choices and accommodation satisfaction, recreational activities and hotel animation have gained increasing attention in recent years due to their ability to enhance competitiveness in the tourism sector. Recreation and animation services, which have become one of the important elements of the tourism sector, play a significant role in improving guests' holiday experiences by meeting their spiritual, physical, and social needs. Recreation and animation services improve overall guest satisfaction and provide a competitive advantage for destinations by allowing guests to spend their leisure time more actively and satisfyingly (Albayrak et al., 2017).

Recreation is defined as the whole range of activities in which individuals voluntarily participate in their leisure time, find enjoyment, refresh themselves, and achieve personal development (Cevik & Simskek, 2017). The word "recreation" is derived from the Latin word "recreate," which means renewal, recreation, or restructuring. It is widely used as the Turkish equivalent of "leisure time

activities." This concept refers to relaxing and entertaining activities that individuals or social groups voluntarily engage in during their leisure time (Suiçmez, 2000). In a different study, recreation was defined as the entirety of activities undertaken with the aim of refreshing the individual's body and soul and utilizing leisure time (Orel & Yavuz, 2003). Recreational activities that individuals participate in during their leisure time make positive contributions to their lives. Participating in leisure activities is a factor that contributes to individuals' social and cognitive development. At the same time, these activities also make positive contributions to individuals' physical and mental development (Dinç et al., 2018). Animation, on the other hand, is a set of entertainment and activities that encourage active participation and enable guests at accommodation facilities to spend their leisure time in a fun and meaningful way (Ivkov & Stamenkovic, 2007). Animation and recreation services enrich tourists' holiday experiences and enhance the competitiveness of accommodation facilities. Especially the animation and recreation services offered in hotels are among the important factors that shape tourists' holiday preferences (Türkay et al., 2018).

The role of animation and recreation in tourism not only meets the physical and psychological needs of guests but also helps to strengthen the visibility of hotel brands (Qi et al., 2024). The diversity, quality, and effectiveness of recreational programs and animation activities offered in hotels can directly impact customer satisfaction and revisit intentions (Mikulić & Prebežac, 2011). Especially in today's world, where experience-based tourism is gaining increasing importance, animation and recreation services are not only considered a means of entertainment but also a strategic element that enhances customer loyalty. Studies show that these services positively contribute to guests' overall holiday experience and play a decisive role in destination preferences (Alegre & Garau, 2010). Additionally, the integrated presentation of animation and recreation with service quality directly impacts customer perception and satisfaction levels, thereby increasing the brand value of hotels (Chen & Chen, 2010). Therefore, systematically presenting how these types of services are addressed in tourism literature and how they have evolved over time has become an important requirement for both academic circles and industry stakeholders. At this point, bibliometric methods based on the numerical and content analysis of scientific publications offer an effective tool for understanding the overall structure and evolution of the relevant literature.

Bibliometrics is a method that examines the structure, development, and trends of scientific communication thru the numerical analysis of scientific publications. This analysis method makes it possible to systematically evaluate the flow of information in the literature and reveals the direction, intensity, and impact level of studies conducted in a specific field (Pritchard A, 1969). Bibliometric studies offer the possibility of visualizing and understanding the structure and evolution of research areas thru various criteria such as authors, institutions, countries, journals, keywords, and citations (Donthu et al., 2021). Bibliometrics not only analyzes the number of publications in the literature but also makes the knowledge structure and development trends in a research area visible by analyzing author collaborations, keyword clusters, and citation relationships (Zupic & Čater, 2015). Additionally, identifying fundamental studies and leading academics in the research field is of great importance for monitoring emerging topics and providing guiding information for future research (Aria & Cuccurullo, 2017). Bibliometric analysis methods offer a powerful tool for examining the quantitative characteristics of scientific production in a specific research area, revealing the intellectual structure and knowledge networks of the subject. Bibliometric analyzes are particularly useful in disciplines such as social sciences and tourism, serving as a guide for identifying research gaps, determining key study areas, and directing future studies (Merigó & Yang, 2017). In this context, a bibliometric analysis of publications on animation and recreation offers an opportunity to comprehensively evaluate the current body of knowledge in the field of tourism.

In this context, the main objective of the study is to examine academic publications indexed in the Web of Science database between 2015 and 2025 using the bibliometric analysis method, with the keywords "recreation," "tourism animation OR guest animation OR hotel animation," and "tourism," in order to reveal scientific trends in these fields, institutional and individual collaboration structures, influential authors and publications, keyword clusters, and thematic development areas. In this context, the study will identify prominent scientific contributions in the literature thru citation analysis of the authors, and will reveal the geographical and institutional distribution of research

outputs thru citation analysis of countries and institutions. While conceptual trends and areas of intensity will be examined thru keyword analysis, content similarities will be evaluated thru bibliographic matching analysis of the texts. Additionally, intellectual collaborations and academic interaction networks of the authors will be analyzed using bibliographic coupling and co-citation analysis; temporal and thematic changes in the literature will also be visualized thru distribution analysis of publications by year and research area. Thus, both the current trends in the field will be mapped numerically and the position of animation and recreation services in the tourism sector will be analyzed in a multi-dimensional manner.

2. Method

In this study, the bibliometric analysis method was used to reveal the current state of academic literature in the fields of recreation, hotel animation, and tourism. The study's dataset consists of 330 scientific articles published in peer-reviewed journals, obtained from a search conducted in the Web of Science (WoS) database between 2005 and 2025 using the keywords "recreation," "tourism animation OR guest animation OR hotel animation," and "tourism." These publications were examined using the VOSviewer software, a bibliometric analysis tool. During the analysis process, citation analyzes of authors, countries, and institutions were conducted to identify the most influential academic actors; thematic intensities and conceptual structures were revealed thru keyword analysis. Additionally, inter-publication content similarities and inter-author research orientations were assessed thru bibliographic matching analysis of texts and authors, and intellectual connections within the literature were analyzed using co-citation analysis. Finally, the distribution of articles by year and research area was analyzed to visualize the temporal and thematic evolution of the literature. The data obtained was supported by visual maps and the findings were systematically interpreted.

2.1. Sample and population

The research population consists of scientific publications indexed in the Web of Science (WoS) database. The research sample consists of 330 academic studies published in peer-reviewed journals between 2005 and 2025, indexed with the keywords "recreation," "tourism animation OR guest animation OR hotel animation," and "tourism," and with full-text access available.

2.2. Data collection tools

The data used in this study were obtained from the Web of Science (WoS) Core Collection database. In line with the purpose of the research, five key words related to the topic were identified and combined using Boolean operators to create the search query: TS = ("recreation" AND ("tourism animation" OR "guest animation" OR "hotel animation") AND "tourism"). This query covered publications where the relevant concepts appeared in the title, abstract, and keyword fields, and care was taken to ensure topic integrity. The obtained records were limited according to specific filtering criteria; only academic studies published in English and of the types "Article", "Proceeding Paper", "Meeting Abstract", "Retracted Publication", and "Early Access" were included in the analysis. Publications in other languages or different types of publications have been excluded. Based on these criteria, a total of 330 publications were selected and exported in "JSON" format, which is suitable for bibliometric analysis.

2.3. Data Analysis

The data obtained in this study were evaluated using the bibliometric analysis method. Bibliometric analysis is a widely used scientific method for systematically examining academic output in a specific research area, revealing its developmental dynamics, and mapping scientific communication networks (Zupic & Čater, 2015; Donthu et al., 2021). The method allows for the identification of structural patterns and trends in the literature thru metrics such as publication counts, keyword frequencies, citation counts, and collaboration relationships. In this context, the VOSviewer 1.6.20

software, specifically developed for processing and visualizing bibliometric data, was used in the study. VOSviewer is an open-source analysis tool with multi-dimensional visualization capabilities that can work with data obtained from large-scale databases such as Web of Science, Scopus, and Dimensions (van Eck & Waltman, 2010).

Three fundamental analysis techniques can be applied thru software: network visualization, density visualization, and overlay visualization (Perianes-Rodriguez et al., 2016). Within the scope of this study, the network visualization method was specifically chosen, and author-author collaborations, country-based citation relationships, inter-institutional connections, keyword clusters, and bibliographic couplings were visualized based on the publications included in the dataset. Thus, the conceptual structure and interaction networks of scientific production focusing on recreation, animation, and tourism in the literature have been analyzed in detail. Additionally, using bibliographic coupling and co-citation analysis techniques, thematic proximities between authors and studies, as well as intellectual clusters within the literature, were identified. Keyword analysis, on the other hand, identified prominent themes in the literature; current research trends were mapped based on frequently used terms. Thus, it has been made possible to perform a structural analysis not only at a quantitative but also at a conceptual level (Aria & Cuccurullo, 2017).

2.4. Research Ethics

We declare that the study titled "Bibliometric analysis of articles on tourism, animation, and recreation published in the Web of Science database" is among those that do not require ethical committee approval.

3. Results

Within the scope of the research findings, the distributions of articles published on the Web of Science platform are primarily addressed. To examine the interactions of recreation, hotel animation, guest animation, tourism, and tourism animation, the studies were analyzed based on their distribution over 5-year periods. However, the final period covers a duration of 10 years and 5 months, including May 2025. When evaluating the findings of the study, the duration of the final period is a factor that should be considered.

3.1. Citation analysis of authors

A network map of author citation analysis was generated using at least one publication and at least one citation criterion to identify citation networks. The results of the citation analysis show that the most frequently cited authors are Josip Mikulic (78 citations), Darko Prebezac (78 citations), Benjamin Ka Lun Cheng (72 citations), and Wai Han Lo (72 citations). Also, in terms of total connection power, Josip Mikulic, Darko Prebezac, and Tahir Albayrak and their friends are in the top 3.

Figure 1. Authors' Citation Links
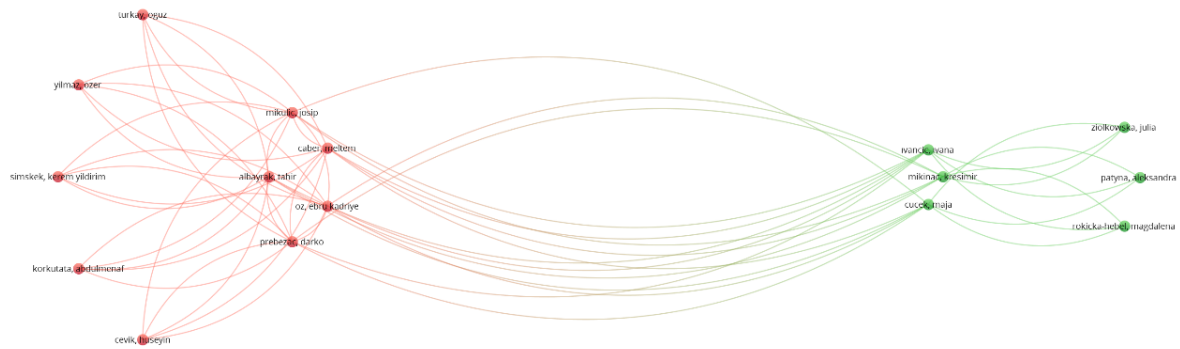
3.2. Countries of Citation Links

A network map of country citation analysis was generated using at least one publication and at least one citation criterion to identify citation networks. Based on the country-level analysis, it is evident that countries like Croatia (80 citations), China (78 citations), Germany (54 citations), and Turkey (41) stand out in academic studies on animation and recreation. It is observed that Croatia and China, in particular, receive more citations compared to other countries. Additionally, when looking at total connection power, Croatia, Turkey, and Poland are seen to be in the top 3.
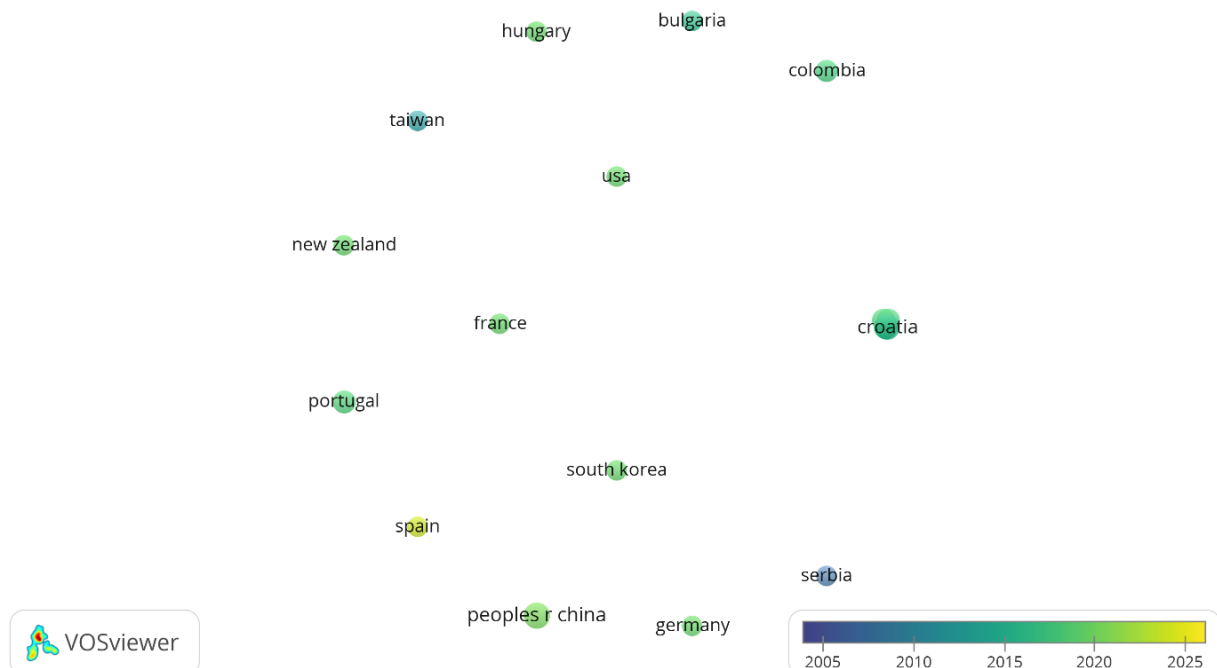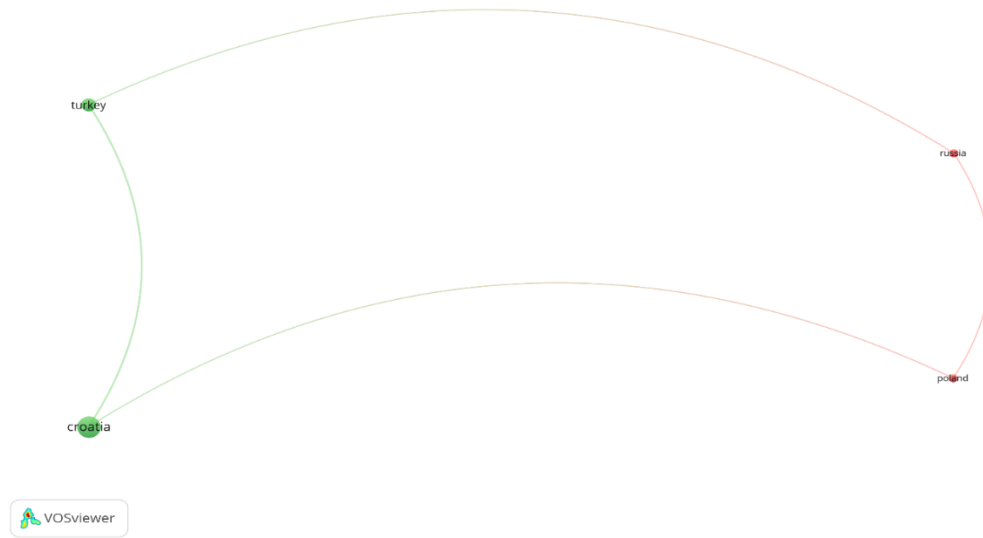
Figure 2. Countries of Citation Links

Figure 2.1. Total Link Strength of Countries

3.3. Citation of Organizations

In the analysis conducted for institutions, institutions such as the University of Zagreb (Croatia - 78 citations), Hong Kong Baptist University (Hong Kong - 72 citations), and the University of Freiburg (Germany - 54) stand out in the fields of animation and recreation. The institutions with the highest total connection strength were Akdeniz University (Turkey) with a total connection strength of 9 and the University of Zagreb (Croatia-78 citations) with a total connection strength of 8.

Figure 3. Institutional Citation Links
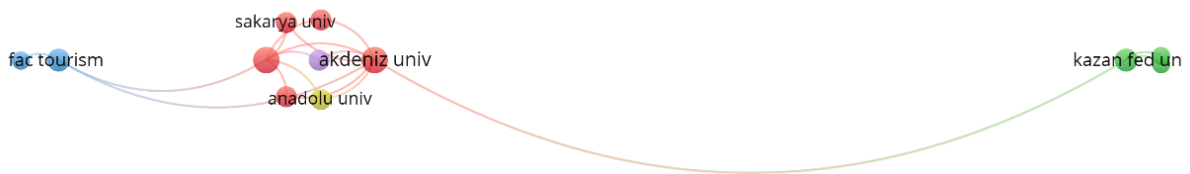
3.4. Co-occurence of all keywords

Looking at the most frequently used keywords in studies on animation, recreation, and tourism, the terms "animation" (11 repetitions), "tourism" (8 repetitions), "tourist animation" and "recreation" (4 repetitions), and "hotels" (3 repetitions) are at the forefront. The strongest expressions in terms of total connection strength were determined to be animation (16), tourism (13), and recreation (11), respectively.

Figure 4. Keyword Links
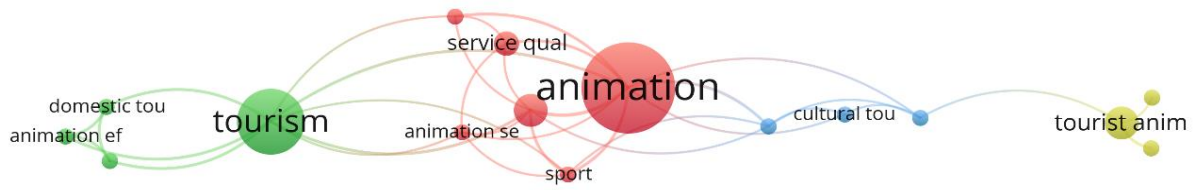
3.5. Bibliographic coupling of documents

Bibliographic coupling refers to the situation where a common work is cited by two independent sources (van Eck & Waltman, 2010). In this study, publications with at least 1 citation published on animation, recreation, and tourism and that are bibliographically matched were analyzed. As a result of the analysis, a total of 4 different clusters, 21 connections, and 50 total connection strength were obtained. Within the scope of the analysis, the publications with the highest number of bibliographic matches were, respectively, Mikulic and Prebezac (2011) with 78 citations, Lo (2020) with 72 citations, Israel (2019) with 54 citations, and Albayrak et al. (2017) with 16 citations. The works with the highest total connection strength were studies published by Türkay (2018) with a total connection strength of 26, Albayrak et al. (2017) and Çevik (2017) with a total connection strength of 18.

Figure 5. Bibliographic Match Links of Texts
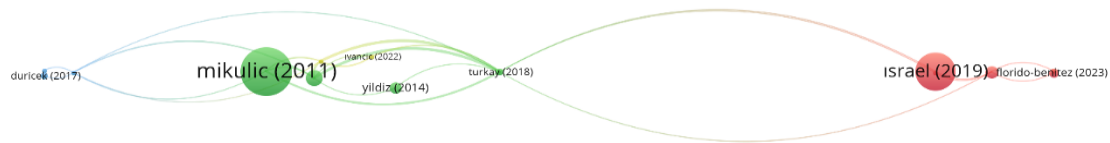
3.6. Bibliographic coupling of authors

In the bibliometric coupling analysis of publications in the fields of recreation, animation, and tourism, authors with at least 1 citation and connections between them were examined. When the authors with the most bibliographic matches were examined in order as part of the analysis, Mikulic, Josip, and Prebezac, Darko, with 78 citations each, and Cheng, Ka lun Benjamin, with 72 citations, were the authors with the most bibliographic matches. When examining the prominent names in terms of total connection strength among the authors, Türkay, Oğuz, Yılmaz, Özer, and Korkutata, along with the Abdulmenaf trio, were the researchers with the highest value of 152 connection strength.

Figure 6. Authors' Bibliographic Matching Links

3.7. Co-citation of authors

Different sources cited simultaneously in a publication are called co-citations (van Eck & Waltman, 2010). In this analysis, 29 author units with a minimum citation count of 3 were evaluated. As a result, a total of 5 clusters, 68 links, and 510 total link strength were identified. When the authors with the most bibliographic matches were examined in order within the scope of the analysis, Bruza, D. (11 citations, 17 link strength), Flotynski, J. (9 citations, 63 link strength), and Parasuraman, A. (6 citations, 33 link strength) were the authors with the most bibliographic matches. When examining the prominent names in terms of authors' total connection strength, it is observed that Flotynski, J. (9 citations, 63 connection strength), Walczak, K. (4 citations, 48 connection strength), and Attene, M. (3 citations, 39 connection strength) are the researchers with the highest connection strength.

**Figure 7.** Links Between Authors with Common Citations
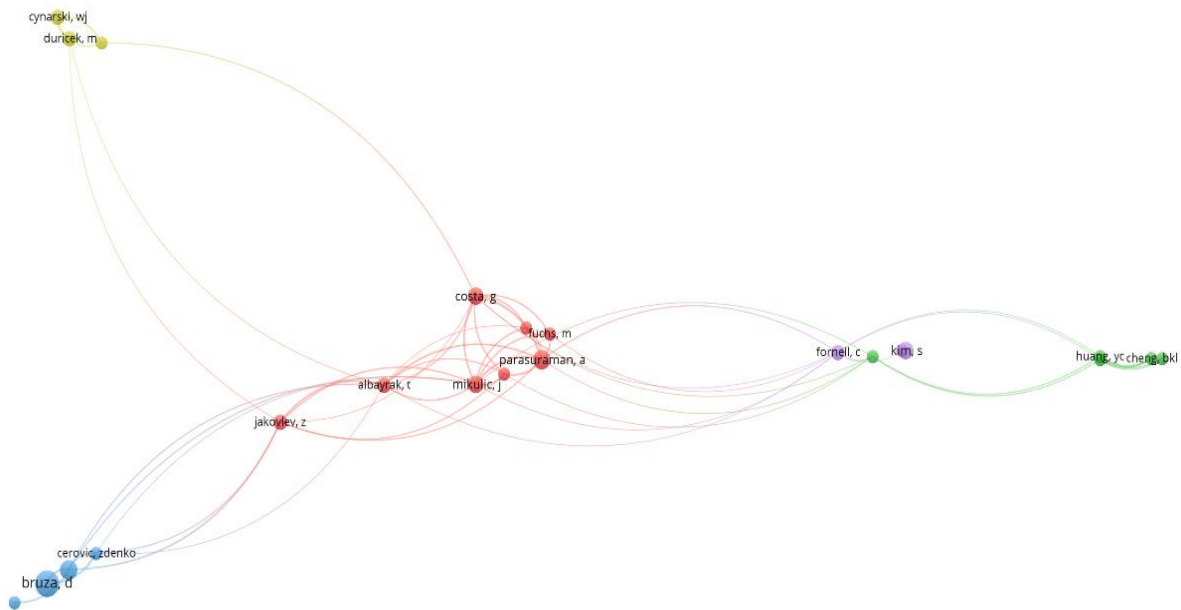
3.8. Distribution analysis of articles by year and research field

The pie chart below (Figure 8) shows the distribution of academic studies published between 2005 and 2025, categorized by 5-year periods. According to the review:

- A relatively low number of publications were made during the 2005-2009 period.
- An increase in the number of publications was observed between 2010 and 2014.
- The period from 2015 to 2019 shows a noticeable increase in intensity.
- It is understood that the period from 2020 to 2025 was the time frame with the highest concentration of publications.

Figure 8. Article Distribution by Year
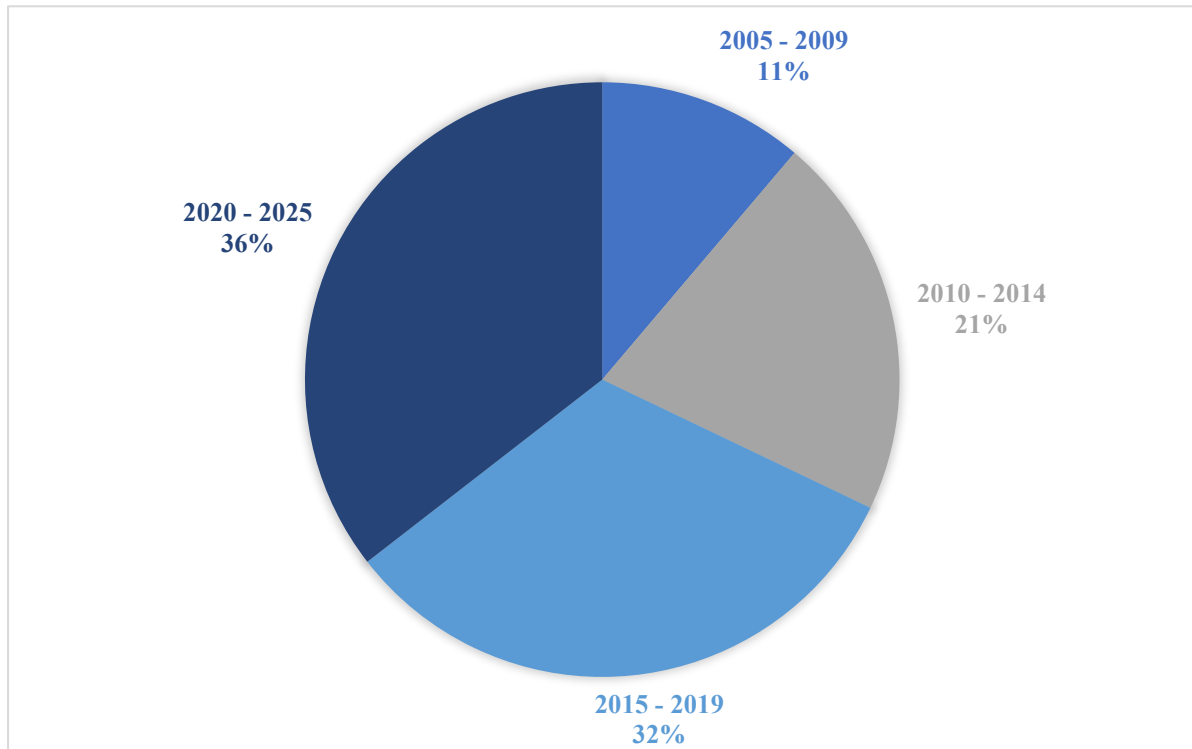
When examined in terms of research areas (Figure 9), the most articles were published in the field of "Hospitality Leisure Sport Tourism" (51 publications). This is followed by "Management" (13 publications), "Education & Educational Research" (12 publications), "Environmental Studies" (10 publications), and "Social Sciences Interdisciplinary" (9 publications), respectively.

Figure 9. Distribution by Research Areas
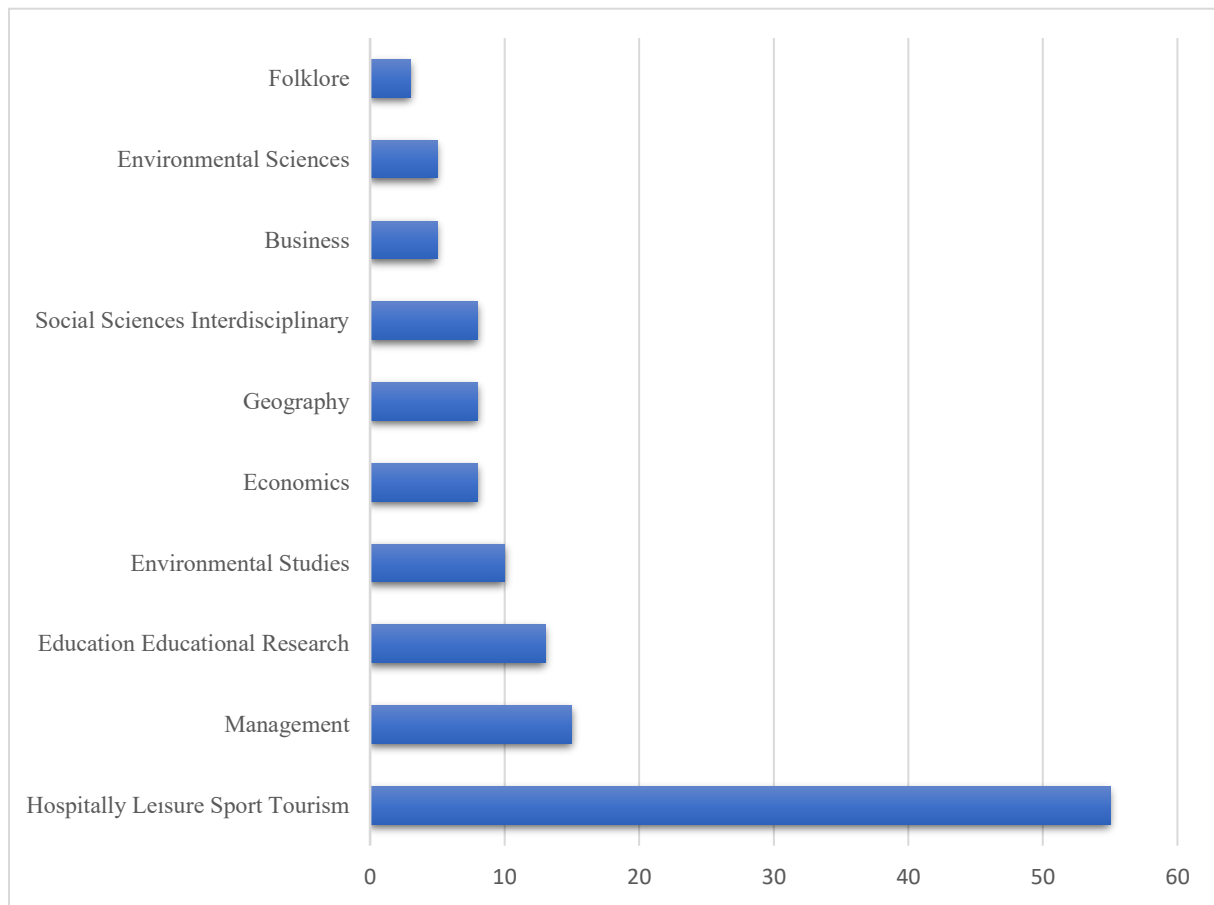
5. Discussion and Conclusion, Recommendations

This study aimed to evaluate the general trends of scientific production on tourism, recreation, and animation using bibliometric methods by analyzing 330 academic articles published between 2005 and 2025, based on the Web of Science database, using the keywords "recreation," "tourism animation," "guest animation," or "hotel animation," and "tourism." Based on the analyzes conducted, it has been shown that these three areas have become increasingly researched over time and have gained an interdisciplinary nature. The noticeable increase in publication numbers, especially after 2020, indicates that both digitalization and a customer experience-focused understanding of tourism have found resonance in the academic literature.

Josip Mikulic, Darko Prebezac, Benjamin Ka Lun Cheng, and Wai Han Lo, prominent figures in citation analysis, are among the authors whose fundamental works in this field are widely cited in the literature. Additionally, the academic contributions of countries like Croatia, China, Germany, and Turkey in this regard are measurable not only by the number of citations but also by their total connectivity strength. This also shows that tourism, animation, and recreation are among the interesting topics at the international level, both theoretically and practically.

In terms of institutional contributions, the fact that institutions such as the University of Zagreb, Hong Kong Baptist University, the University of Freiburg, and Akdeniz University have highly cited publications in this field strengthens the academic inclusivity of the study. According to the results of the keyword analysis, the most frequently used terms were "animation," "tourism," "recreation," and "tourist animation," and these words also had the highest total link strength. This also proves that

these concepts have become the fundamental building blocks of the discipline. Additionally, it is believed that animation and recreational activities are attracting increasing academic interest in enhancing the tourism experience and are gaining importance in the tourism literature.

In co-citation analysis, it was found that authors such as Flotynski, Walczak, and Attene hold a central position in the literature; they are frequently co-cited by other studies, thereby establishing strong epistemological connections within the literature. In bibliographic coupling analysis, studies such as Mikulic & Prebezac (2011), Lo (2020), and Albayrak et al. (2017) are seen to be central reference points in the literature.

Looking at the thematic distribution of research areas, it is evident that the "Hospitality Leisure Sport Tourism" category stands out significantly, followed by fields such as Management, Environmental Studies, Educational Research, and Sociology. This distribution shows that the topics of recreation and animation are not limited to tourism literature, but also have an impact in fields such as education, management, and social sciences.

In conclusion, this study meticulously reveals the scientific evolution, knowledge networks, and trends of research on animation and recreation in tourism, highlighting the importance of animation and recreation services in the tourism sector and their increasing attention in the academic field. In this context, the research provides both a systematic map of the current state of the literature and a guiding foundation for future studies.

5.1. Recommendations for Future Research

Increasing data diversity by including different databases (Scopus, Dimensions, Google Scholar) and strengthening literature representation by covering studies published in other languages beside English. Performing field segmentation based on tourism types within the context of the relationship between recreation, hotel animation, and tourism. Interpreting bibliometric findings in more depth and enriching conceptual structures using methods such as content analysis and thematic analysis. In conclusion, this study, by examining the interaction of recreation, animation, and tourism within a multi-layered structure, has analyzed current research trends in the literature, scientific production networks, and thematic concentrations from an interdisciplinary perspective; in this respect, it provides an important foundation for future academic orientations in the field.

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