

Investigating Past, Present, and Emerging Research Trends on Public Spaces for Cultural Heritage, Social Cohesion, and Safety

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Abstract

Public spaces play a crucial role in fostering cultural heritage, promoting social cohesion, and ensuring safety in urban environments. This study employs a bibliometric analysis to map the evolution of research on public spaces as key sites for cultural heritage preservation, social cohesion, and safety. The research systematically searched Scopus using specific keywords to find 3218 relevant articles. By analysing this comprehensive dataset of scholarly publications, the research identifies dominant trends, influential authors, prominent journals, and core research clusters within this multidisciplinary field. The analysis highlights how scholarly interest has shifted over time, from foundational studies in urban sociology and architecture to recent, technology-driven approaches focused on digital heritage, participatory design, and data-informed safety planning. Emerging themes include the role of public spaces in community resilience, the integration of cultural narratives into urban landscapes, and the use of public spaces for promoting inclusivity and social interaction. This bibliometric approach provides a nuanced understanding of how academic discourse on public spaces has adapted to contemporary challenges, offering critical insights for researchers, urban planners, and policymakers invested in designing public spaces that foster cultural vitality, social cohesion, and urban safety. The findings underscore the importance of interdisciplinary collaboration and the potential for new research frameworks that address evolving societal needs.

Keywords

Public spaces, cultural heritage, social cohesion, urban safety, bibliometric analysis, Scopus

1. Introduction and background

In this increasingly urbanized world, public spaces are critical platforms for the promotion of cultural heritage, social cohesion, and community safety. These public spaces, ranging from parks and plazas to cultural institutions and community centers, are central to maintaining the rich tapestry of cultural identities and histories that constitute our societies. They are social hubs, centres of cultural exchange, and civic participation that can contribute to the general welfare and quality of life of citizens (Lopes et al., 2020; Gürer et al., 2017). Furthermore, available and well-managed public spaces can encourage a sense of community, facilitate social interaction, and enhance interpersonal relationships (Hutomo & Fuad, 2020 ; Amirjani & Zarghami, 2014). Researchers have been studying different facets of public spaces, design, use, and effect on the immediate community. Amidst growing research on public spaces and their importance, design, use, and effect on cities and immediate communities, there is a knowledge gap regarding the intricate dynamics and new trends in research in this area.

This discovery is significant in formulating pragmatic policy and design solutions that are realistic and responsive to real situations. As matters of public space, the research objective was to conduct a bibliometric literature review that will provide an overall overview on the past, current and future trends and issues that are emerging and developing between public space and three main fields: cultural heritage, social cohesion, and safety. Through a study of the intersections of these three axes based on a bibliometric analysis, the study will present insights needed into the general publication trends so that researchers, policymakers, and urban planners interested in planning public space are aware of the dominant research topics in studying such spaces (Smith et al., 2021). Public space in the context of this paper is defined as urban environments that are accessible to the general public and serve as shared spaces for social interaction, cultural activities, and community engagement (Carvalho and Carvalho, 2021). There are various typologies of public spaces which are all considered in this study parks, plazas, streets, squares, and other open areas. Public spaces have also been considered as contributing to social cohesion which is understood as being The degree to which individuals in a community feel connected, supported, and integrated. It involves a sense of belonging, trust, and shared values among community members (Putnam,2000). Accessible, inclusive, and properly maintained public spaces not only provide a sense of security for residents but also play a role in preventing crime and reducing social tensions (Nguyen & Roberts, 2019). Therefore, indicating their role in improving safety which is the perception and reality of freedom from harm or danger. It includes physical safety, such as protection from crime and violence, as well as psychological safety, such as feeling secure and comfortable in public spaces (Nguyen, and Roberts, 2019). Urban public spaces are not merely physical entities, but rather multifunctional domains that hold profound social, political, and cultural significance (Silva & Costa, 2016). As cities continue to grow and evolve, the preservation of cultural heritage within public spaces has become increasingly vital. These spaces serve as tangible reminders of a community's past, fostering a sense of identity and belonging. Moreover, the preservation of cultural heritage in public spaces can contribute to the sustainability of urban development, enriching human life with meaning and emotion, and raising the quality of life as a key component of sustainability.

3. Methodology

A bibliometric analysis was applied in the study in order to explore the research landscape of public spaces with a focus on the role they play in cultural heritage, social cohesion and safety. This type of analysis was best suited for the study because it provides a thorough and quantitative approach to map the intellectual structure of the research field, identify key trends, and uncover emerging patterns (Merigó and Yang, 2017). The main aim of this technique is to grasp the interconnections that occur among citations from journals in order to identify key research topics and emerging trends (Jia & Mustafa, 2022). By analysing a large dataset of scholarly publications, this method allows researchers to gain valuable insights into the evolution of research topics, the contributions of leading scholars, and the impact of specific studies (Khan et al., 2020). The Scopus database was chosen as the main source for this research due to its wide coverage of peer-reviewed literature on subjects such as urban planning, architecture, sociology, and cultural studies (Bass et al., 2020). Subsequently, the powerful indexing and citation analysis offered by Scopus makes it an established basis for bibliometric research. In addition, since the focus of the database is on quality and relevance, this complements the specific aims of the current study ensuring the analysis contained within is grounded on high-quality. ChatGPT was also employed to guide the researchers in their analyses of the network maps, providing insights into patterns, relationships, and key themes emerging from the data.

3.1. Selection criteria

On August 31, 2024, a Scopus database search was conducted to access and evaluate the body of research on public spaces, cultural heritage, social cohesion, and safety. To ensure a comprehensive review, no specific time frame was imposed. The search terms included "public space AND cultural heritage," "public space AND social cohesion," and "public space AND safety." The inclusion criteria focused on English-language publications from any country and any year up to 2024, encompassing articles on social cohesion, cultural heritage, and safety in public spaces. Exclusion criteria eliminated editorials, errata, letters, notes, short surveys, publications with unidentified authors and books, book chapters, reviews, and conference papers not published in English. To ensure rigorous selection, titles and abstracts were screened to confirm eligibility, guided by the PRISMA protocols. PRISMA is a well-established method for systematically reviewing literature, reducing bias, enhancing the validity of findings, and presenting results in a clear and coherent manner (Selcuk, 2019; Page et al., 2021).

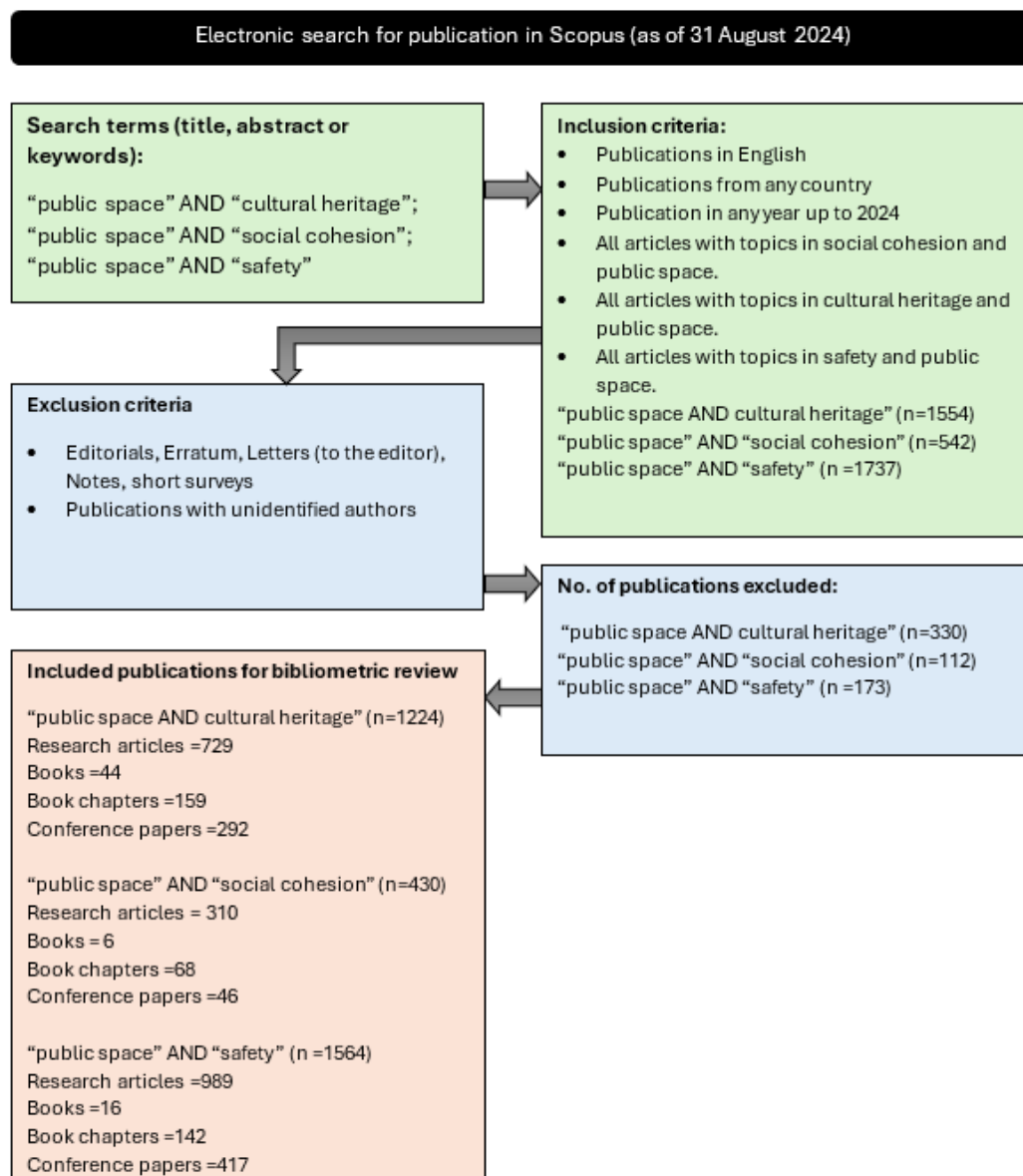


Figure 1: PRISMA flow diagram (Adapted from Moher et al. ,2016)

The initial search yielded 1554 publications on public space and cultural heritage, 542 on public space and social cohesion, and 1737 on public space and safety. After applying the inclusion and exclusion criteria, 1224, 430, and 1564 publications were respectively excluded, leaving a total of 3218 eligible documents. VOSviewer was utilized to conduct the bibliometric analysis, as outlined in the figure below (Van Eck & Waltman, 2014). VOSviewer is a software tool that visually analyzes literature reviews, identifying trends, research foci, and key areas (Zhang et al., 2021; Soegoto et al., 2022). While other analysis tools like Citespace have been used in other studies, VOSviewer remains the preferred choice due to its ability to handle large datasets and produce reliable results (Kalaoane et al., 2024).

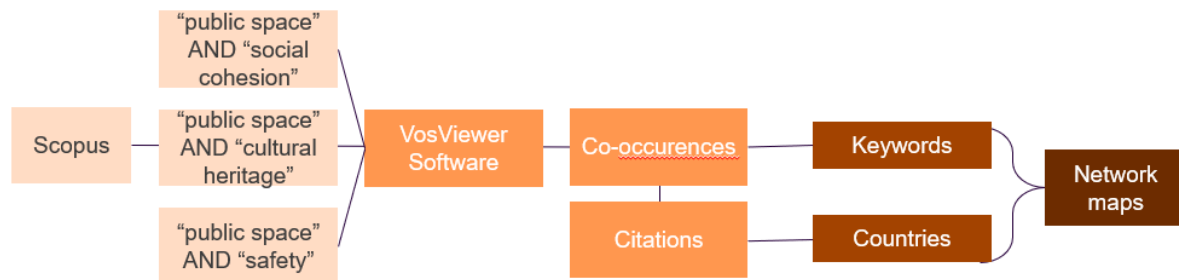
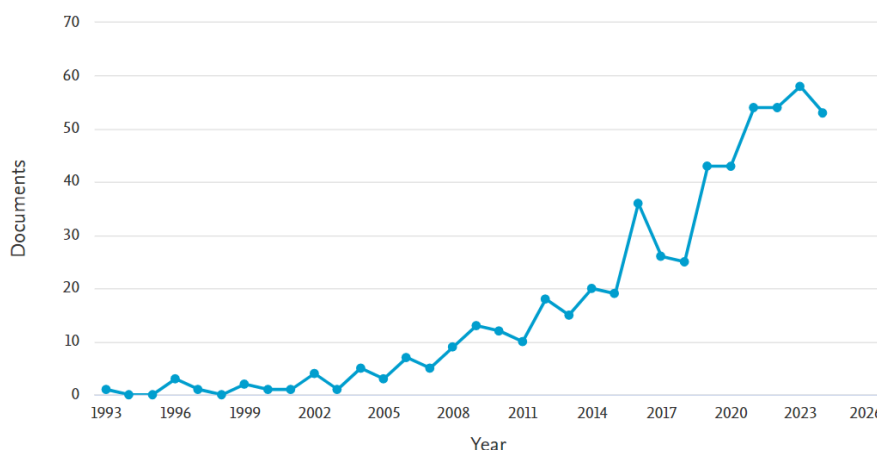


Figure 2: Bibliometric analysis process (Adapted from Kalaoane, 2024)

4. Results and discussions of the bibliometric analysis

4.1 Publication trends

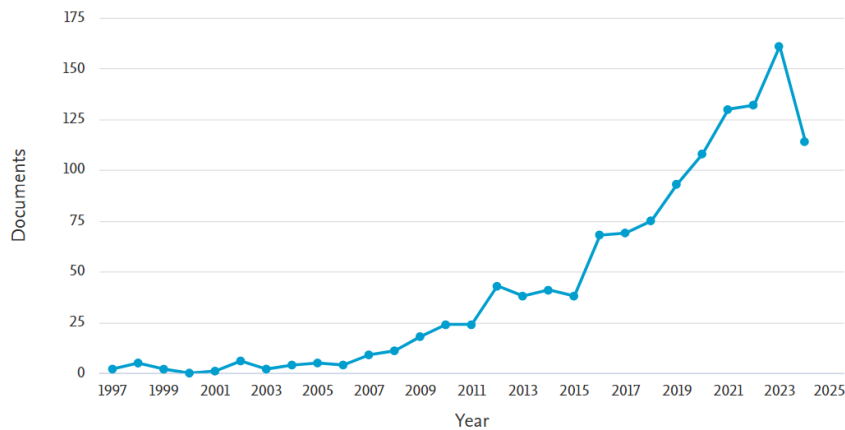
Between 1993 and 2024, there has been a noticeable rise in the number of publications on public space and social cohesion. As can be seen in the figure below, initially, research activity in this area was scarce since there were few and fluctuating publications in the beginning years. But from 2005, a slow increase in publications can be seen, which reflects growing interest in the topic. This trend rises rapidly after 2014. There is a significant rise in research activity, which may be due to several factors, including urbanization trends, increasing social inequality, and growing recognition of the importance of public spaces in enhancing community well-being. In general, the graph reveals the rising significance of public spaces for social cohesion and points to the growing number of studies focusing on this area.



Graph 1: Publication trends for research on public space and social cohesion

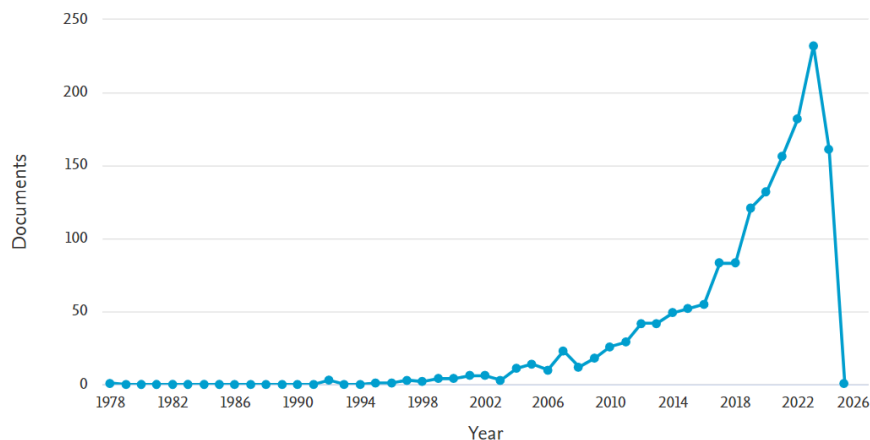
Research into the issues of public space and cultural assets has received great impetus in recent years, as depicted by Graph 2 on the trends in publication between 1997 and 2025: In the initial period, the number of documents published was rather modest to demonstrate sufficient academic attention to the problem.

However, from the year 2005 onwards, a sudden increase in publications reflected an increase in awareness of the value of public places for maintenance of cultural assets. This upward slope became more pronounced after 2014, reflecting a big increase in research activities. This could have been attributed to many factors that include increased urbanization, the influence of globalization, and an improved understanding of the ways in which public space engenders cultural identity and civic well-being.



Graph 2: Publication trends for research on public space and cultural heritage

The graph 3 on publication on public space and safety depicts a clear upward trend in the number of documents published on public space and safety over the period from 1978 to 2026. This indicates a growing interest and research focus on this topic within the academic community.



Graph 3: Publication trends for research on public space and safety

The graph reveals a modest number of publications in the early years, suggesting limited research activity in this area. However, from the mid-2000s onwards, a gradual increase in publications is observed, indicating a growing recognition of the importance of public spaces in promoting safety. This trend accelerates significantly after 2014, suggesting a substantial rise in research activity. The surge in publications may be attributed to various factors, including increased urbanization, terrorism threats, and a heightened awareness of the role of public spaces in fostering community security. Interestingly, the graph shows a sharp decline in publications in 2026. This could be due to various factors, such as a shift in research priorities, changes in funding, or methodological limitations. Further analysis would be needed to determine the specific reasons for this decline. Overall, the graph demonstrates a clear and sustained increase in research on public space and safety, albeit with a recent downturn. This trend suggests that

4.2 Keyword Analysis

The red cluster focuses on urban planning and public space, with terms like "accessibility," "urban policy," and "sustainable development," indicating a strong emphasis on spatial design and governance for inclusivity and environmental goals. The green cluster centers on health and demographic characteristics, including terms like "public health," "social environment," and specific age and gender groups. This suggests that many studies examine how public spaces impact physical and mental health across different demographics, with keywords like "depression" and "physical activity" highlighting connections to well-being. The blue cluster emphasizes the link between public spaces and physical health, as seen in terms like "physical activity," "exercise," and "quality of life," focusing on the role of green spaces in promoting active lifestyles. Meanwhile, the purple cluster addresses environmental and economic aspects with terms like "greenspace," "ecosystem services," and "economic effects," indicating research interest in the environmental benefits and economic impacts of public spaces. From this analysis, one is able to deduce that key themes in public space and social cohesion research include the role of public spaces in fostering social interaction and engagement, as well as promoting physical and mental health. Inclusivity is a priority, with studies examining demographic-specific experiences to create cohesive environments. Emerging areas explore cultural and religious inclusivity, supporting diverse practices for social integration. Governance and policy are also significant, with interest in innovative, inclusive models. Geographic mentions indicate that national contexts impact approaches, showing cross-country differences. Overall,

this interdisciplinary research highlights public spaces' vital role in enhancing community bonds and quality of life.

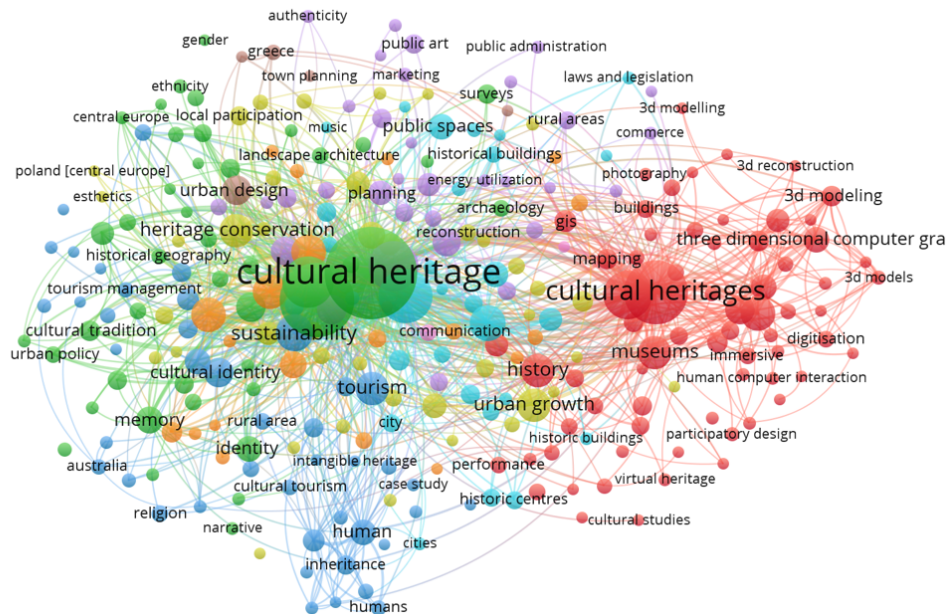


Figure 4: A co-occurrence network analysis of keywords on public space and cultural heritage research.

The analysis of research on cultural heritage and public space research shows a broad and interconnected research field around cultural heritage and public space, where traditional themes like urban planning, conservation, and identity intersect with modern concerns about technology, sustainability, and digitalization. The green cluster focuses on "cultural heritage," "sustainability," and "heritage conservation," highlighting research efforts to preserve cultural heritage within sustainable urban planning frameworks. Terms like "urban design," "cultural identity," and "memory" suggest a commitment to maintaining heritage sites in ways that respect both ecological and cultural values, emphasizing the role of heritage in shaping social identity within communities. The red cluster highlights technological integration in heritage preservation, with terms like "3D modeling," "digitisation," and "immersive media" suggesting a shift toward using digital tools like GIS and immersive media for public engagement and documentation of heritage sites. This reflects a growing trend towards digital and participatory approaches in heritage studies. The blue cluster focuses on tourism and urban growth, with keywords like "tourism," "urban growth," and "cultural tourism" indicating the economic impact of heritage sites on urban expansion and identity formation. This cluster underscores the importance of tourism-driven heritage sites in city planning, balancing preservation with economic benefits. Meanwhile, the purple cluster addresses public spaces and policy, with terms like "public administration" and "town planning" underscoring the regulatory role in managing heritage sites within urban spaces.

Key themes across these clusters include cultural identity and community engagement, as seen in terms like "cultural identity," "local participation," and "authenticity," emphasizing the importance of community involvement in heritage preservation. Technology and heritage visualization are also prominent, with "3D modeling" and "digitisation" highlighting digital tools' role in both preserving and making heritage sites more accessible. Sustainability and conservation remain central, reflecting a need to balance heritage protection with urban development needs. The economic impact of tourism is another important focus, showing that heritage sites serve as both cultural symbols and economic assets. Geographic mentions like "Greece," "Australia," and "Central Europe" indicate that cultural heritage research often considers local

and regional contexts, showcasing diverse approaches to heritage preservation. Overall, this analysis demonstrates the interdisciplinary nature of cultural heritage research, incorporating urban planning, technology, sustainability, and tourism to enrich the role of heritage in modern urban spaces.

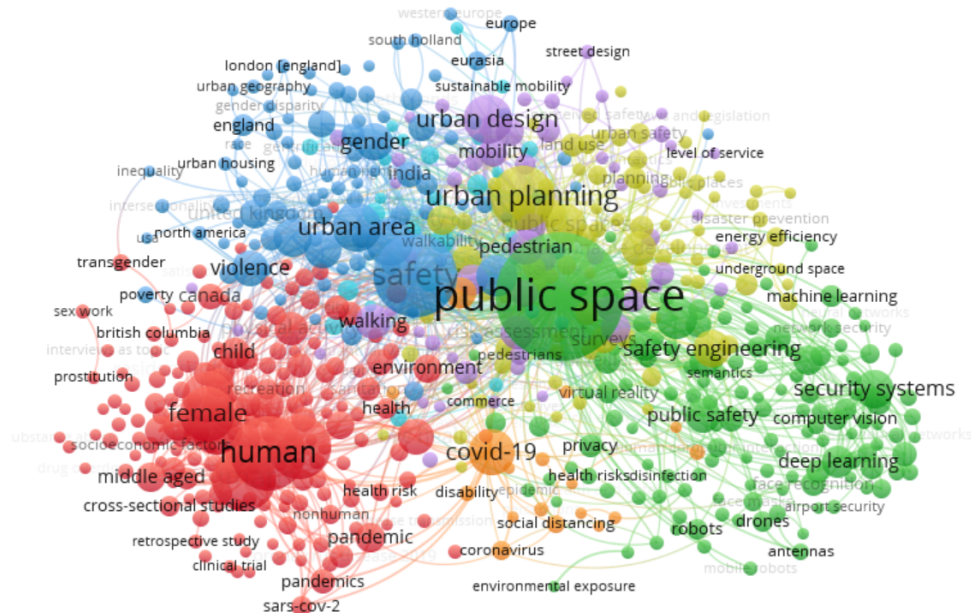


Figure 5: A co-occurrence network analysis of keywords on public space and safety research.

This keyword co-occurrence network on research on public space and safety shows a comprehensive analysis of themes in research on public space and safety, revealing several interconnected clusters around topics such as urban planning, health, security, and social dynamics. The green cluster focuses on safety technology, featuring terms like "safety engineering," "security systems," "deep learning," and "machine learning," reflecting an increasing interest in using advanced technologies such as AI, drones, and computer vision to enhance public safety. Meanwhile, the yellow cluster emphasizes environmental health and safety, with keywords like "environmental exposure," "air pollution," and "energy efficiency," showing a focus on the role of urban planning in mitigating environmental risks to promote public well-being. The blue cluster highlights urban planning and mobility, centered around terms like "urban design," "mobility," "walking," and "sustainable mobility." This indicates an emphasis on designing walkable, pedestrian-oriented spaces that prioritize safety and accessibility. The red cluster addresses social issues impacting public space safety, including terms such as "violence," "gender," "poverty," and "health risk." The prominence of COVID-19 and pandemic-related terms in this cluster underscores how health crises have influenced public space safety discussions, reshaping perceptions and priorities around accessibility and safety.

Finally, the purple cluster focuses on governance and policy, with terms like "urban policy," "laws and legislation," and "public administration" pointing to the role of policy in shaping safe and accessible public spaces. This highlights the importance of government intervention and regulatory frameworks in ensuring urban safety. Overall, this analysis shows that research on public space and safety is highly interdisciplinary, integrating urban design, technology, health, social issues, and policy. Key themes include the use of advanced technologies for public safety, the impact of environmental and health risks, especially in light of COVID-19, and the importance of urban design in creating pedestrian-friendly spaces. Social factors such as gender, poverty, and violence also play a significant role, emphasizing the need for inclusive safety measures that address diverse experiences. Governance and policy appear crucial for maintaining safe

public spaces, revealing a complex interplay of design, technology, health, and social equity in urban safety research.

4.1 Top countries publishing in public space research on cultural heritage, social cohesion and safety

The analysis of the top ten countries contributing to public space research reveals a complex interplay of historical, cultural, and socio-economic factors. Anglophone countries, particularly the United States, the United Kingdom, Canada, Australia, and South Korea, dominate the rankings, reflecting a strong emphasis on urban planning, architectural design, and social sciences within these nations. These countries have a long history of urban development and a deep-rooted understanding of the role of public spaces in shaping urban life. However, the emergence of China, Indonesia, and Mexico as significant contributors to public space research is noteworthy. These countries are experiencing rapid urbanization and social change, leading to increased attention on the role of public spaces in addressing challenges such as congestion, pollution, and social inequality. The focus on public space and social cohesion in these countries reflects a growing awareness of the importance of public spaces in fostering community resilience and promoting social justice. The diverse geographic distribution of research underscores the global significance of public spaces. By sharing knowledge and experiences, researchers from different countries can identify best practices and innovative solutions to common challenges. Furthermore, the findings can inform policymakers and urban planners in developing evidence-based strategies for creating and managing public spaces that are inclusive, safe, and culturally relevant.

Rank	Country	Public Space & Cultural Heritage	Public Space & Safety	Public Space & Social Cohesion
1	United Kingdom	128	165	165
2	United States	128	265	265
3	Canada	40	126	126
4	Australia	41	68	68
5	Sweden	18	81	81
6	Hong Kong	11	54	54
7	Russia	33	72	72
8	South Korea	19	22	22
9	Indonesia	22	16	16
10	Mexico	16	79	79

Table 1: Top Countries in research on the interconnections between public space, cultural heritage, safety, and social cohesion

While the analysis reveals a global interest in public space research, it is notable that African countries are underrepresented in the top 10 list. This lack of representation may be attributed to various factors, including limited research funding, inadequate infrastructure, and a scarcity of skilled researchers. Additionally, historical and colonial legacies may have shaped research priorities and institutional capacities in many African countries (Lawson, 2019). The underrepresentation of African perspectives in public space research has significant implications. Firstly, it limits our understanding of the diverse ways in which public spaces are used and experienced in different cultural and socio-economic contexts. Secondly, it hinders the development of context-specific design guidelines and policy interventions that address the unique challenges and opportunities faced by African cities. Thirdly, it may perpetuate a global discourse

on public space that is dominated by Western perspectives, potentially overlooking the valuable insights and innovative practices that may exist in African contexts (Moyo, 2021). To address this issue, it is crucial to invest in research capacity building in African institutions, encourage international collaborations, and promote the dissemination of knowledge on African public spaces. By fostering a more inclusive and equitable research landscape, we can better understand the role of public spaces in shaping the future of African cities.

Conclusion and recommendations

In conclusion, the bibliometric analysis has provided a comprehensive overview of the academic discourse on public spaces as crucial sites for cultural heritage, social cohesion, and safety. Over the past few decades, research has increasingly recognized public spaces as vital components of urban life, with trends showing a shift from traditional urban planning and architecture toward technology-driven approaches that integrate digital heritage, participatory design, and data-informed safety measures (Qi et al.,2024). Through the lens of cultural heritage, social cohesion, and safety, the analysis emphasizes the role of public spaces in fostering inclusivity, resilience, and social interaction, underscoring the importance of public spaces in the well-being of communities. The findings reveal key themes and emerging areas, such as the role of public spaces in promoting community resilience, the integration of cultural narratives into urban landscapes, and the use of public spaces for fostering inclusivity and social interaction. These insights offer a valuable reference for urban planners, policymakers, and researchers working to create public spaces that respond to societal needs and challenges. Furthermore, the underrepresentation of African countries in the research on public spaces calls attention to a global knowledge gap that limits diverse perspectives on public space utilization and design. Addressing this imbalance is crucial for developing a comprehensive understanding of public spaces' roles across varied socio-cultural contexts.

Key recommendations could be considered for policy, practice and research. These are outlined below:

- Encourage multidisciplinary and collaborative research: Given that the study of public space encompasses several subjects, including urban planning, technology, health, and social dynamics, future research must be truly inter-disciplinary. Collaboration in research between architecture, urban sociology, public health, and digital technology will thus be critical to gaining a comprehensive knowledge of the role of public space in urban living (Lee et al., 2024).
- Inclusion of Underrepresented Regions: Expanding research in currently underrepresented regions, particularly African countries, which face unique challenges in public space management and its intersections with cultural heritage, safety, and social cohesion (Landman and Makakavhule, 2021). This will be done to bring varied viewpoints and context-specific insights into public. This would be done to incorporate varied viewpoints and context-specific insights into public space design and use. International collaborations, capacity-building efforts, and knowledge-sharing platforms can help to close this gap.
- Integrate advanced technology with public space management: With a growing scholarly interest in digital tools for public space research, cities should implement technologies such as GIS, 3D modeling, and AI-powered safety systems to construct accessible, resilient, and secure public places. Such technologies allow for more informed planning and better meet the dynamic demands of urban populations (Sepe, 2024).
- Emphasize Policy and Governance for Inclusive Public Spaces: Policymakers should consider regulatory frameworks that prioritize inclusivity, safety, and cultural preservation in public spaces.

Policies should address social issues such as gender safety, environmental health, and inclusivity to ensure public spaces serve the needs of all community members equitably.

- **Prioritize Community Engagement in Public Space Planning:** Local communities should be involved in public space planning, design, and management, aligning with participatory design approaches described in this study. Community engagement encourages a sense of ownership, promotes social cohesiveness, and guarantees that public places represent inhabitants' cultural values and requirements (Gearin and Hurt, 2024).

By implementing these recommendations, cities can foster public spaces that enhance quality of life, preserve cultural heritage, and promote social cohesion, ultimately contributing to sustainable and resilient urban futures.

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