

A Bibliometric Analysis of Studies on Sustainability and Quality in Healthcare Services

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Introduction: In addition to being a sector that consumes significant resources and generates harmful and toxic waste, the healthcare industry is characterized by technology-intensive and costly service delivery, resulting in serious concerns about its carbon footprint. In recent years, these concerns have brought attention to the social, economic, and environmental sustainability of healthcare services. In the context of sustainability in healthcare, quality can be defined as the ability to provide services while maintaining current standards in the future. Given the sensitivity of this definition, both practical and academic activities and works on this subject have increased. Therefore, this study aims to conduct a bibliographic analysis of academic studies conducted globally on the sustainability and quality focus of healthcare services.

Timespan	Sources	Documents	Annual Growth Rate
1992:2024	1496	3746	9.9 %
Authors	Authors of single-authored docs	International Co-Authorship	Co-Authors per Doc
18182	223	28.11 %	5.53
Author's Keywords (DE)	References	Document Average Age	Average citations per doc
8862	153057	5.9	19.54

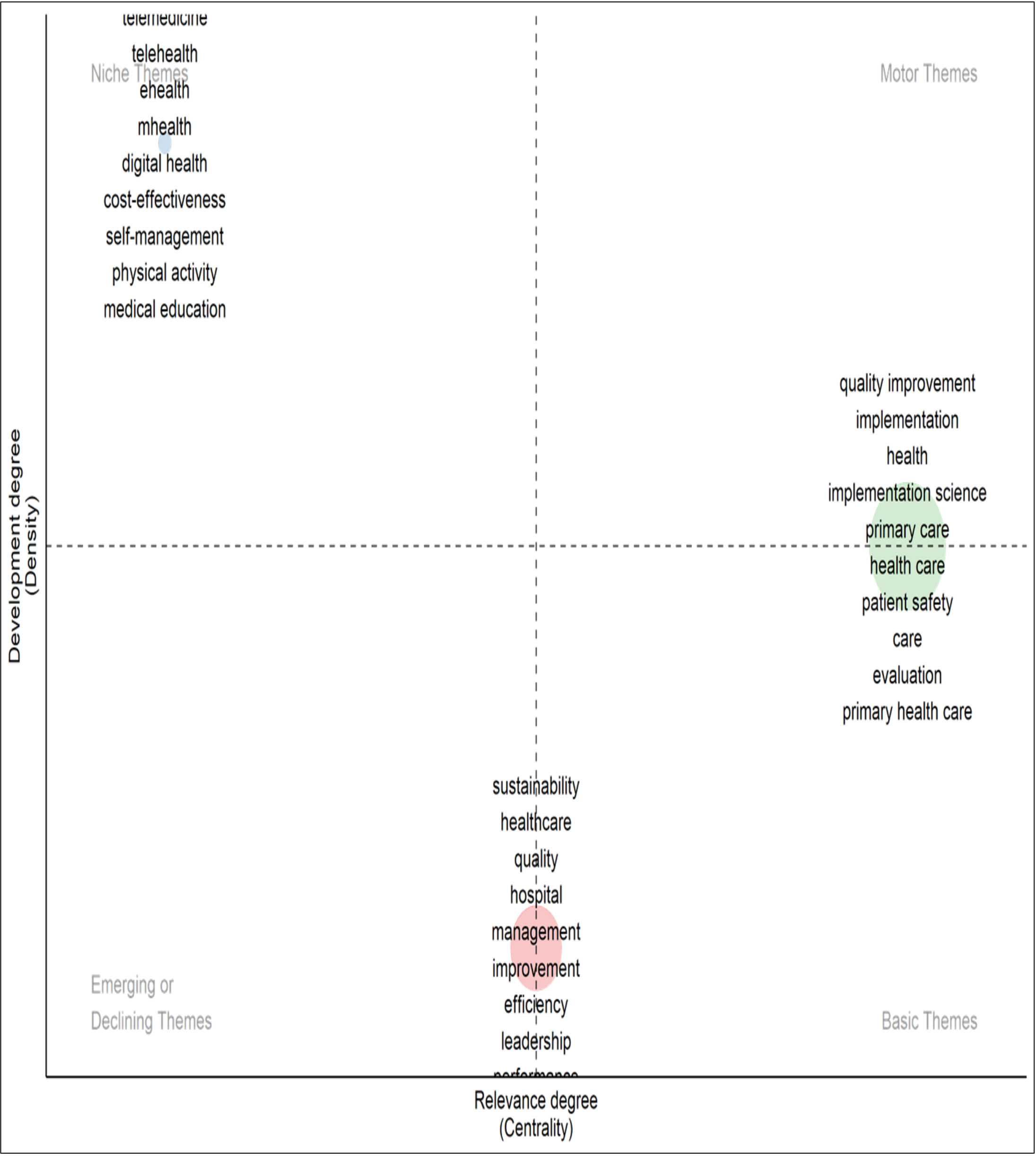
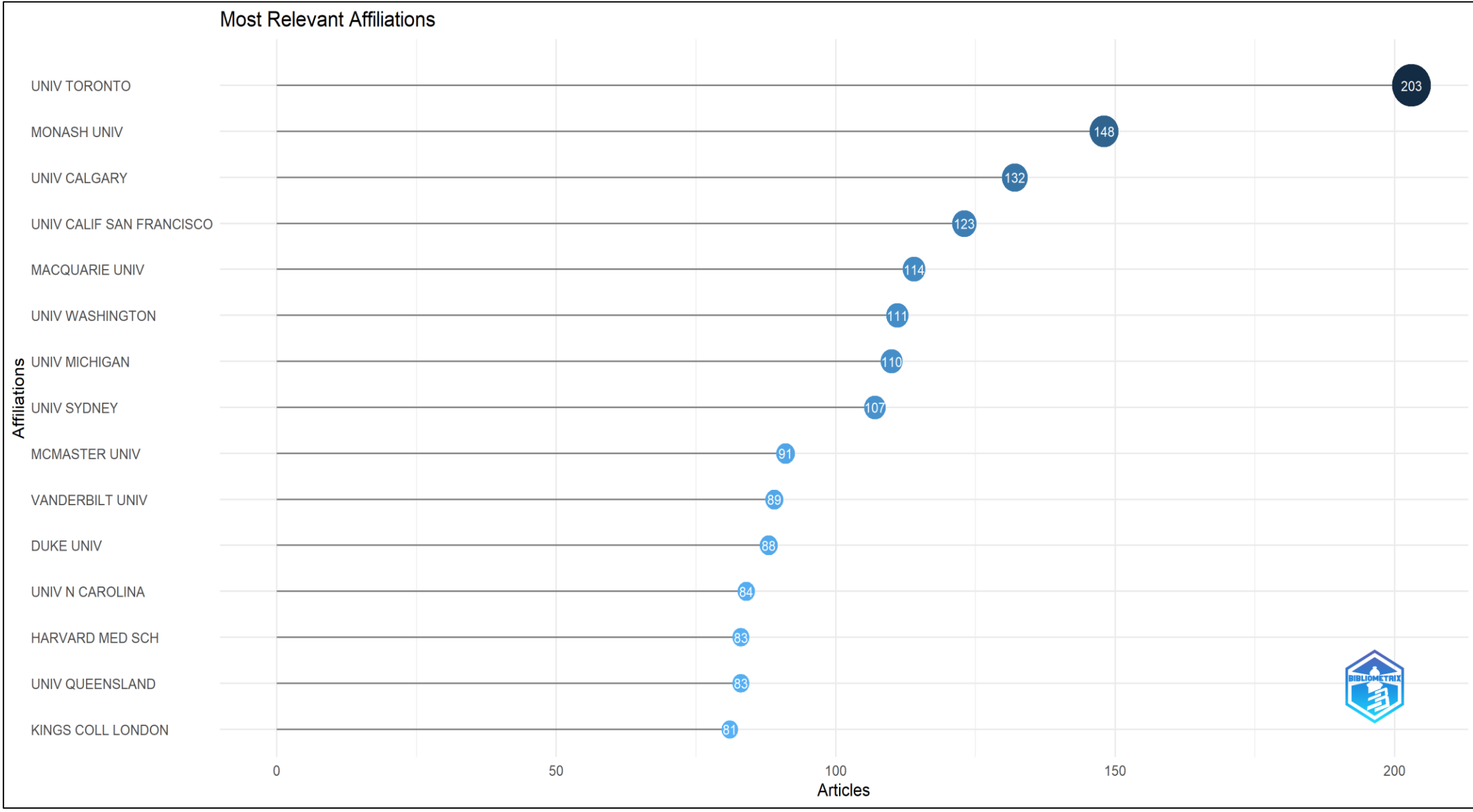
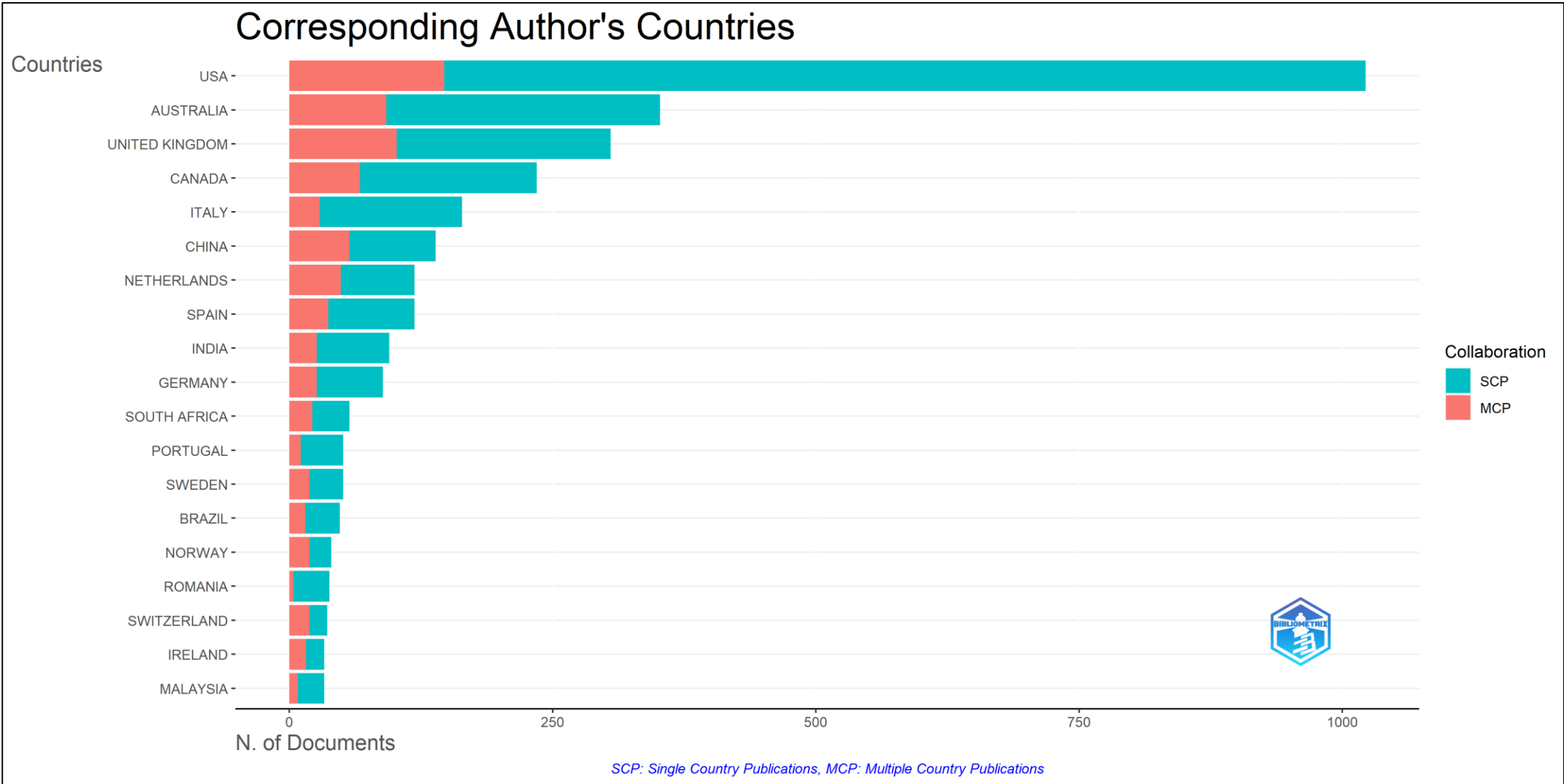
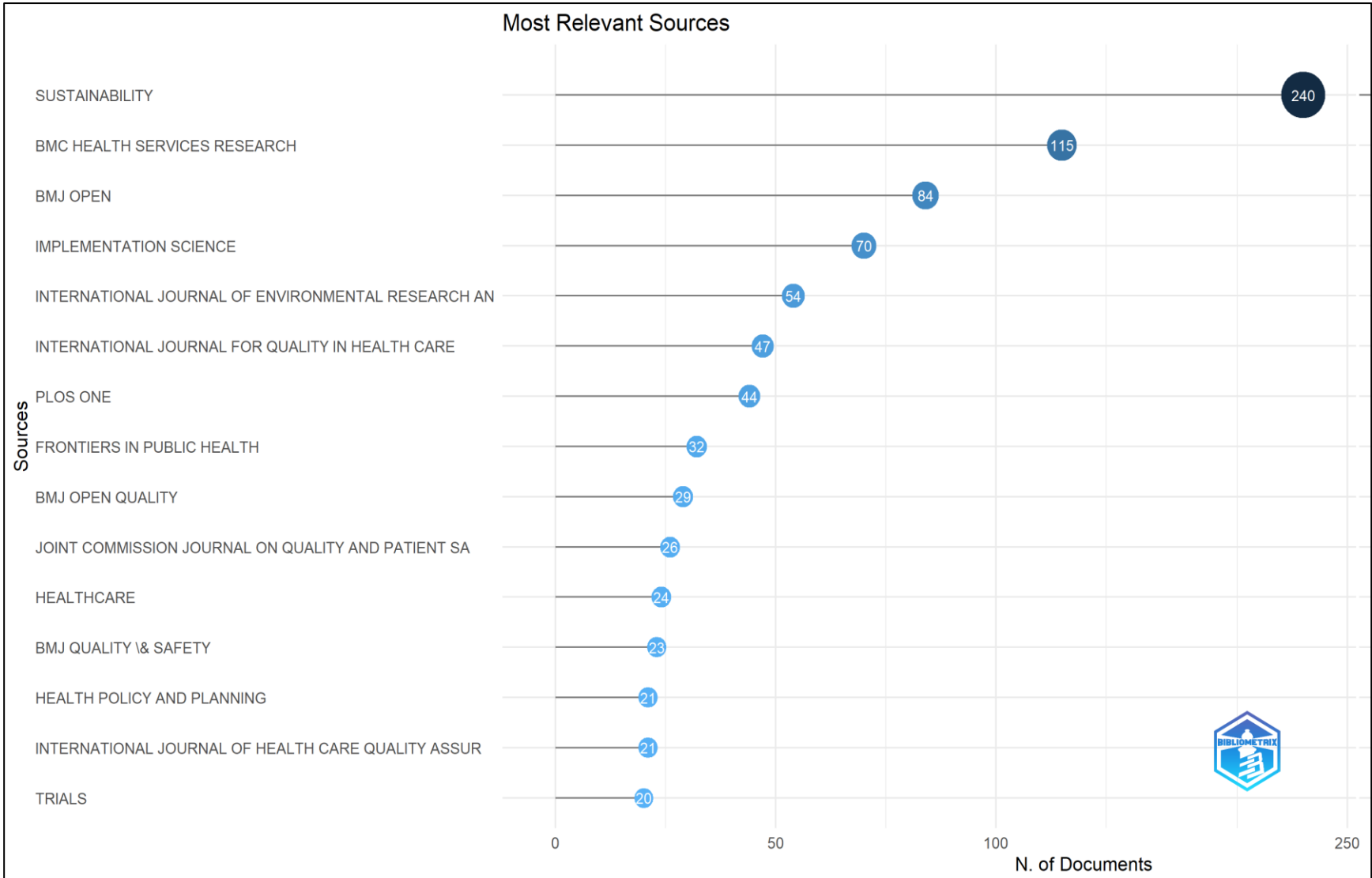


Method: In this bibliographic analysis research, publications indexed in the Web of Science (WOS) database were searched using the keywords "health care" or "healthcare" and "sustainability" and "quality." As of February 6, 2024, a total of 3746 publications were identified. All bibliographic information related to these publications was downloaded from the database and transferred to the Bibliometrix software running on R Studio. Using the program, publications on the examined topic were analyzed in terms of annual publication count, researcher profiles, journal names, countries, institutions, citations, keywords, trending topics, authors, and international collaboration in publications.

Results: When examining the included studies by publication year, a continuous increase in publications from 1992 to 2024 was observed (9.9%), with the highest number of publications in 2023 (n=548). The included studies involved 18,182 authors, with the most prolific authors being Braithwaite J, Churruca K, De, and Ellis LA. The citation order of authors in the subject group was Alexander JA, Damschroder LJ, and Aron DC. The top journals with the most publications were Sustainability, BMC Health Services Research, BMC Open, and Implementation Sciences. The three countries with the highest number of publications were the United States, Australia, and the United Kingdom. The top institutions with the most publications were the University of Toronto, Monash University, and the University of Calgary. The most cited studies were Damschroder LJ et al., 2009 Implement SCI, Stirman SW et al., 2012 Implement SCI, and Chambers DA et al., 2013 Implement SCI. In addition to these findings, collaboration clusters of universities, authors, and countries were schematized. Examining the external keywords in the studies revealed concepts such as quality improvement, covid-19, primary care, telemedicine, hospital, patient safety, evaluation, education, nursing, management, telehealth, mental health, mhealth, ehealth. Furthermore, sustainable development goals, climate change, carbon footprint, transformation, and telemedicine were identified as trending concepts. Additionally, areas for future research were determined, including the integration of sustainability and quality studies in topics such as telemedicine, digital health, cost-effectiveness, self-management, physical activity, and medical education.



Conclusion: The analysis findings serve as a valuable resource for academics and practitioners interested in understanding current trends and priorities in the field. The identified authors, topics, journals, and countries in the forefront of sustainability and quality in the context of discussing the environmental impact of healthcare services have been highlighted. In this context, the integration of digital technologies in sustainability and quality is seen to have significant implications.



Trend Topics: Teamwork–Sustainable Development Goals–Carbon Footprint–Covid 19–Digital Health–Primary Care–Education–Screening–Long Term Care–Chronic Disease–Developing Countries–Reproductive Health–Organizational Inovation