Trends in Information Seeking Behaviour Research: a bibliometric study using Scopus database

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Abstract

This paper analyses publications on information seeking behaviour using Scopus data. For this study the Scopus abstracting and indexing e-database were searched using the keywords "Information seeking," "Information seeking behaviour," and "Information seeking behavior." A total of 74,101 publications were found as the outcome of the search. The data set of 74,0101 bibliographic records was obtained, containing information such as the distribution of articles by year, authors of the publications, source titles, distribution of publications by nation, and impact of the publications. It is revealed that there is a consistent upward trend in research production over successive decades. This paper highlights the growing importance of understanding and exploring information seeking behaviour, reflecting the increasing significance of information retrieval in our information-driven society. The longitudinal perspective on research productivity provides context for researchers and policymakers to appreciate the evolution and direction of this field of study. These findings have practical implications, as they offer scholars and practitioners a valuable resource to identify primary journals and research publications related to information seeking behaviour. This research empowers researchers to stay informed about the latest developments and insights in this domain, facilitating the dissemination of knowledge to a broader audience. This paper equips individuals and institutions with a valuable tool to navigate the dynamic landscape of information-seeking behaviour in a world that is increasingly reliant on information access and utilisation.

Keywords: Bibliometric Analysis, Information Seeking Behaviour, Publications, Research Output, Scholarly Literature, Scopus

1. Introduction

Information seeking behaviour refers to acquiring desired information and using it to fulfill needs or specific purposes (Shah, 2014). It enfolds people's actions and strategies to find and utilise relevant information. Information seeking behaviour can vary depending on the context and objectives. Each person is constantly looking for information to fulfill some goal in this era of information so that they can survive and perform several tasks or specialised tasks with perfection (Biswas, Chakrabarti, & Das Biswas, 2013). Information seeking behaviour studies and research are happening across all disciplines (Akhter, 2018). This study will provide valuable insights for understanding the current status of information-seeking behaviour research. It will delve deeper into historical

trends and comprehensive details to the research community by providing quantitative analysis of information-seeking behaviour scholarly output. These insights are immensely helpful for scholars, corporates, and library professionals to plan future research agendas. Further, this research can be a reference to the researchers working on information seeking behaviour. This paper aims to provide comprehensive scholarly historical data on information seeking behaviour.

2.   Review of related literature

Akhter's (2018) study on information seeking behaviour found a steady increase in productivity over decades, with a whopping 861 papers found in library and information science journals. Akakandelwa's (2016) book chapter revealed the expansion of publications, author collaboration patterns, prominent contributors, publication preferences, preferred journals, and the influence of literature. Patel's (2021) article found fluctuating trends in research activity, with Nicholas D. being the most prolific author and Mckenzie PJ receiving the highest citation count. Shah (2010) and Shah (2014) highlighted the importance of collaboration in information-seeking processes and advocated for the development of systems for collaborative information seeking (CIS) tasks. Kim (2017) explored recent trends in information behaviour research, focusing on content words, highly cited articles, disciplinary categories, and author keywords. Greifeneder (2014) analysed 155 recent publications on information behaviour, revealing persistent trends from 2008 and 2011, including qualitative methods, information seeking, and user needs. Tella (2016) provided international perspectives on digital library issues, focusing on information retrieval, usability, copyright, and legal issues, addressing challenges in countries with limited infrastructure and socio-economic barriers.

3.   Significance of the study

Researchers often examine papers from different study fields using tools and databases like Scopus or Web of Science. Nevertheless, their assessments frequently focus on particular periods, topic areas, and selected academic publications. Hence, it is necessary to thoroughly analyse and integrate all the literature on Information Seeking Behaviour in the Scopus database to have a full picture of the current status of the subject. Hence, the main objective of this article is to do a bibliometric analysis and examine the data on publications about information seeking behaviour.

4.   Objectives

  i. To discover the latest information-seeking behaviour trends

  ii. To drive into the world of information seeking behaviour with insights from top authors in the field

  iii. To reveal the groundbreaking research conducted by the top universities in the study of information seeking behaviour

  iv. To gain valuable insights into information seeking behaviour from experts in the best universities around the world.

5.   Methodology

To fulfil the above research objectives, the Scopus database has been identified to analyse the data comprehensively. In this study, Boolean search strategies have been used for collecting extensive data, by using the search terms like, "Information seeking" OR "Information seeking behavior" OR "Information seeking behaviour" to analyse the publications in the information seeking behaviour area. A total of 74,107 publications on information seeking behaviour topics were
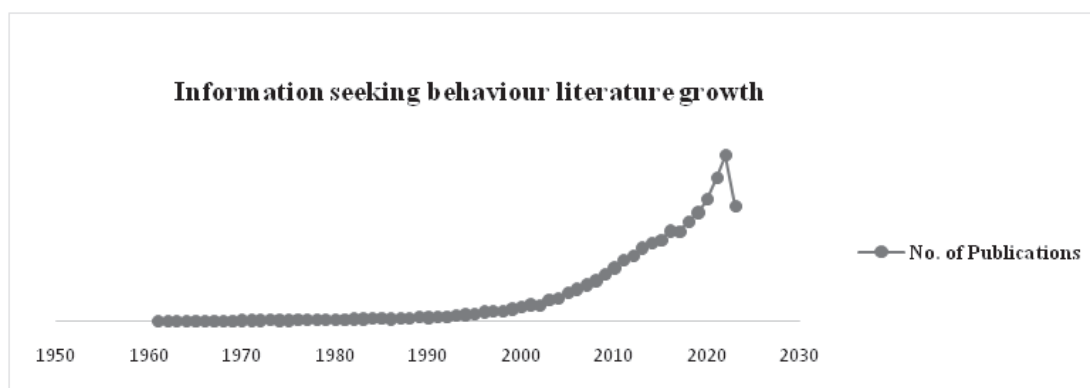
found from 1961 to 2023. These publications included major fields like social sciences, medicine, computer science, psychology, business management, and other subjects. Further, we have analysed the following aspects from the data retrieved: growth of literature, author pattern, subject areas, document types, source of the publication, keywords, affiliation, funding agencies, country, and access type.

6. Data analysis

6.1 *Growth of the literature*

The proliferation of scholarly works about the topic of information seeking behaviour has seen significant growth over the years, with a total of 34,450 publications being produced between the years 2010 and 2019 which is almost half of the overall literature. Out of which 27,590 publications have been produced last five years. It is evident that research on information seeking behaviour has grown exponentially over the previous 10 years and will continue to do so in tandem with the explosion of information. Another interesting insight here is that during 2020-21, the publications reached about 7000, the highest peak in a single year.

Figure 1: Information seeking behaviour literature growth

6.2 *Sources of the publications*

Lecture Notes in Computer Science (LNCS) including its subseries Lecture Notes in Artificial Intelligence (LNAI) and Lecture Notes in Bioinformatics (LNBI) have published the highest number of publications (1230) on information seeking behaviour topics followed by The Journal of Medical Internet Research (853), Library Philosophy and Practice (647), Journal of Documentation (643), International Journal of Environmental Research and Public Health (614), Health Communication (569), Journal of the American Society for Information Science and Technology (529), PLOS ONE (521), Conference on Human Factors in Computing Systems Proceedings (486), Information Processing and Management (483) are listed in top source of publications.

Among the total of 74,107 papers, it was observed that 24,754 papers were published in 159 sources, each of which had published more than fifty documents. Out of these sources, 8,450 papers were published by core library science journals, medicinal journals published 7,295 papers, 5,621 papers were published by computer science journals, and 3,388 papers were published by social science journals. The

remaining documents are published in journals covering various subject categories.
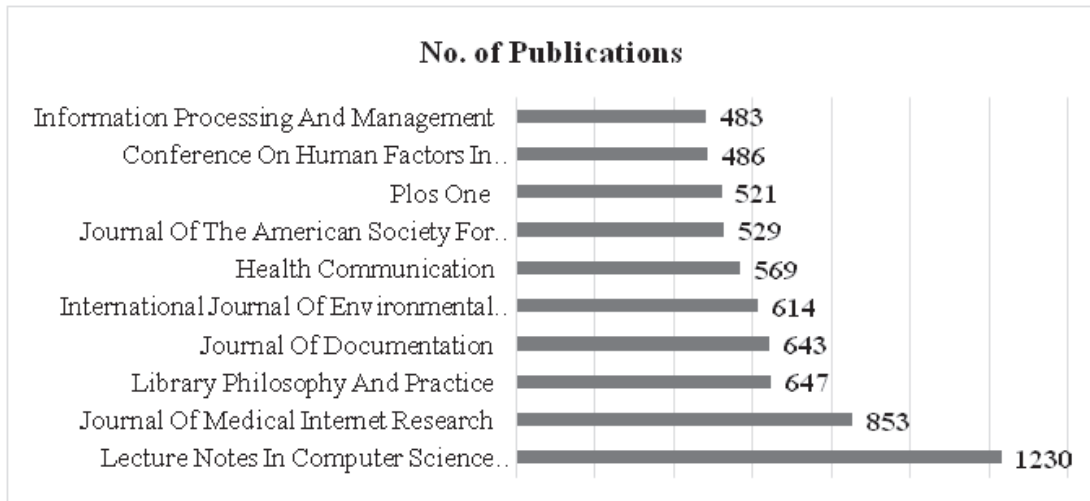
No. of Publications

Information Processing And Management	483
Conference On Human Factors In..	486
Plos One	521
Journal Of The American Society For..	529
Health Communication	569
International Journal Of Environmental..	614
Journal Of Documentation	643
Library Philosophy And Practice	647
Journal Of Medical Internet Research	853
Lecture Notes In Computer Science..	1230

Figure 2: Number of publications

6.3 *Document types*

Out of the total retrieved documents, 59,524 articles were published in peer-reviewed journals, while 7,808 papers were published in Conference Proceedings. Additionally, 4,056 papers were published as books, and 2,637 papers were published as part of book series. A smaller number of sixty-eight papers were published in trade journals, while a mere 14 papers were published in sources that could not be categorised.
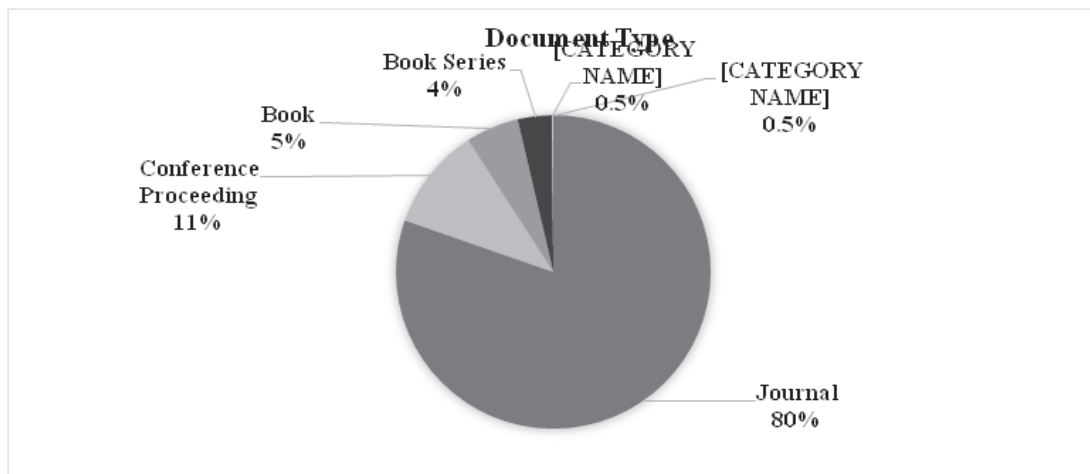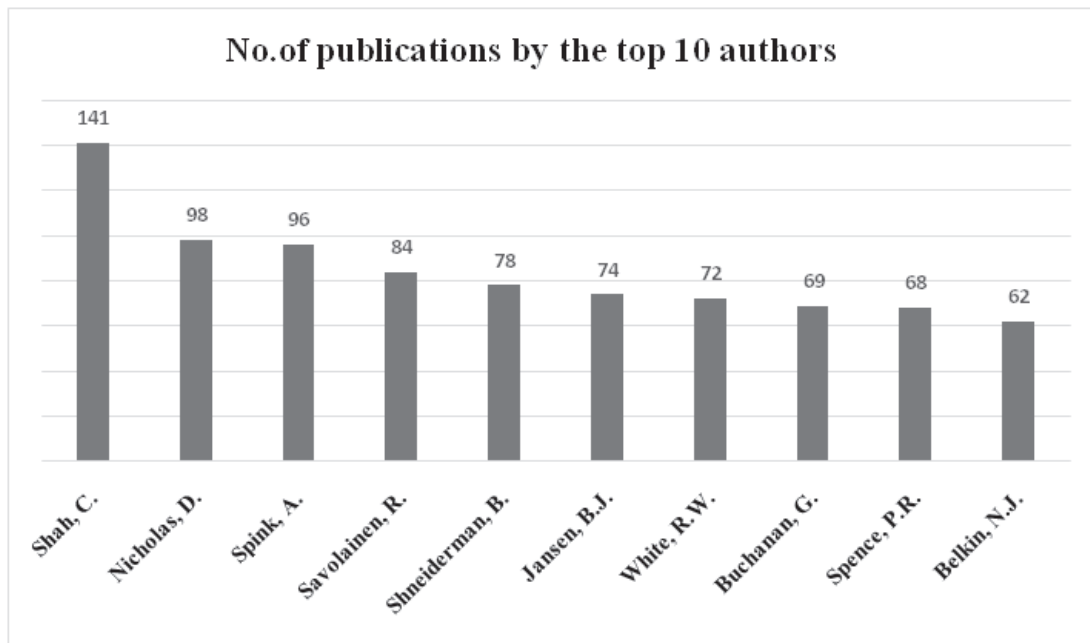
Document Type

- Book Series 4%
- Book 5%
- Conference Proceeding 11%
- [CATEGORY NAME] 0.5%
- [CATEGORY NAME] 0.5%
- Journal 80%

Figure 3: Document type

6.4 *Most contributed authors*

Many authors have made significant contributions to the body of research in understanding information seeking and utilisation. The most prominent authors in the field of information-seeking behaviour are Shah, C, Nicholas, Spink, A., Savolainen, R., Shneiderman, B., Jansen, B.J., White, R.W., Buchanan, G., Dr. Spence., and Belkin. These authors have made significant contributions to the body of knowledge of information seeking behaviour in various contexts, and their work touches on a wide range of themes within the field. Shah's research focuses on information behaviour, digital libraries, and technology's influence on information-seeking activities. Spink's work focuses on web search and user interfaces. Savolainen's work covers topics like information literacy and cultural dimensions. Shneiderman's research focuses on human-computer interaction and information visualisation. Jansen's work focuses on web search behaviour, online information retrieval, and user interactions with search engines. White's work is recognised for web search engines, information retrieval, and user-centric search interfaces. Buchanan's work explores information-seeking behaviour in digital libraries and user interfaces. Dr. Spence's research focuses on social media's influence on information-seeking behaviour and online communication. Belkin's work on information seeking and relevance is notable.
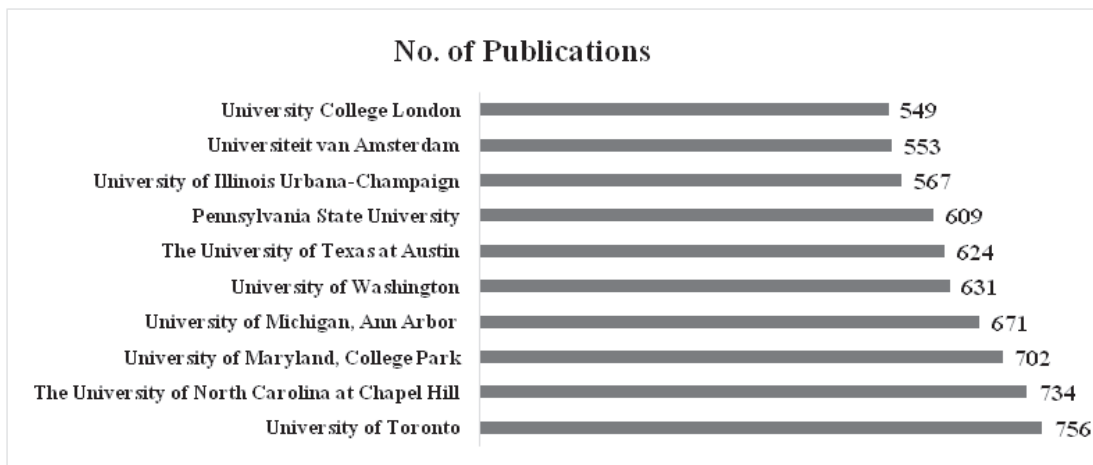

Figure 4: Number of publications by the top 10 authors

6.5 *Top Universities in information seeking behaviour research*

In the dynamic and ever-evolving field of information seeking behaviour research, leading global universities have distinguished themselves as leaders in generating knowledge and advancing the understanding of how individuals seek and utilise information. The table below presents the top universities globally based on the number of publications they have contributed to this crucial study area.

These universities serve as beacons of excellence in information seeking behaviour research. Their contributions to this field have expanded our understanding of how individuals' access and use information and have also informed policy and practice, shaping how we interact with information in the digital age. As the academic landscape continues to evolve, these institutions remain at the forefront of innovative research in this critical domain. University of Toronto tops the list with the most publications, while University College London has with least publications.

No. of Publications

University	No. of Publications
University College London	549
Universiteit van Amsterdam	553
University of Illinois Urbana-Champaign	567
Pennsylvania State University	609
The University of Texas at Austin	624
University of Washington	631
University of Michigan, Ann Arbor	671
University of Maryland, College Park	702
The University of North Carolina at Chapel Hill	734
University of Toronto	756

Figure 5: Number of publications

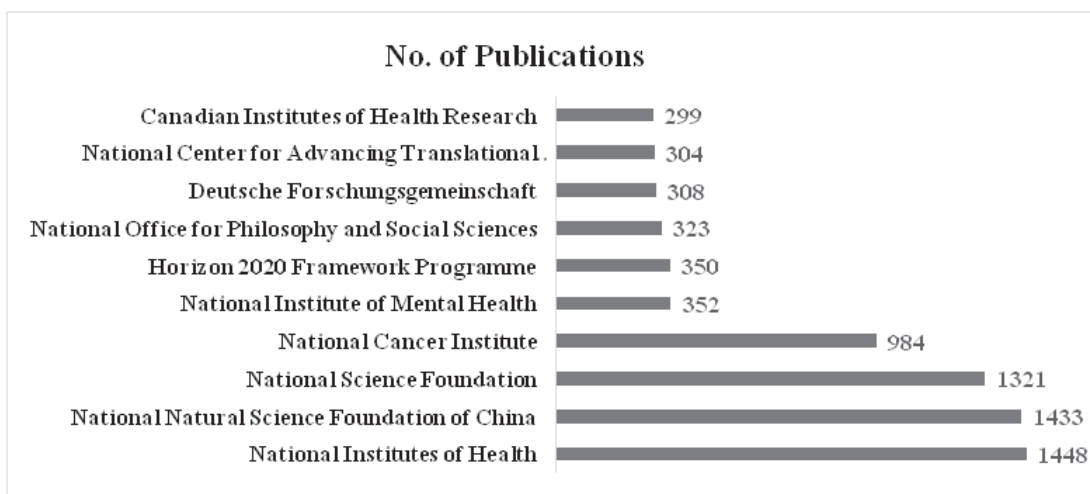## 6.6 *Top funding sponsor agencies in information seeking behaviour research*

This bibliometric study analyses and identifies and ranks the top funding sponsor agencies significantly contributing to information-seeking behaviour (ISB) research. By examining the number of publications associated with each agency and their respective countries, we shed light on the key players in advancing our understanding of ISB.

This bibliometric analysis provides valuable insights into the prominent funding sponsor agencies that have driven information seeking behaviour (ISB) research. Their financial support has been instrumental in advancing our understanding of how individuals seek, access, and utilise information in various contexts. These agencies have contributed significantly to the academic discourse and influenced policy and practice in fields where ISB research plays a crucial role. Future research should continue

to explore the evolving landscape of ISB and the role of funding agencies in shaping this dynamic field. It is pertinent to mention here that National Institutes of Health have funded most research projects, while Canadian Institutes of Health Research have funded the least number of publications. It can also be observed that most funding agencies are from the Healthcare, Sciences, and allied sectors.

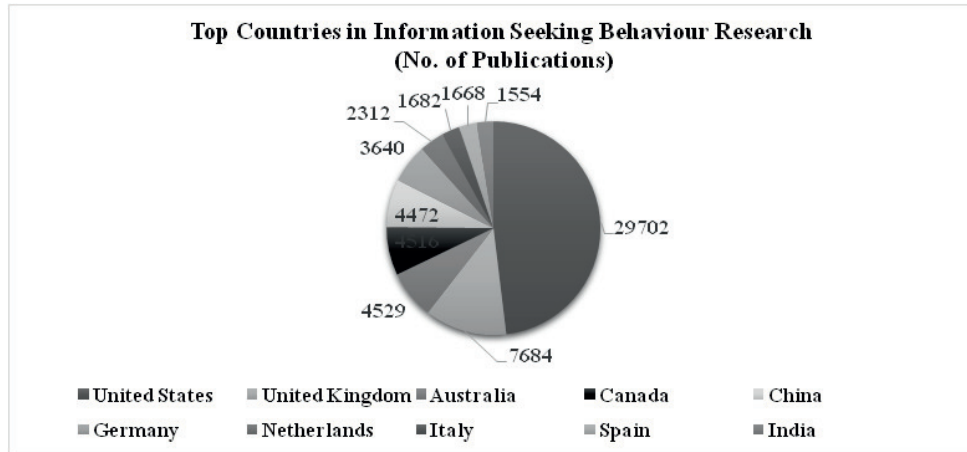**Figure 6: Number of publications**

6.7 *Top countries in information seeking behaviour research*

In the realm of information seeking behaviour (ISB) research, a global landscape unfolds, as indicated by the statistics. The United States emerges as a formidable leader with a commanding 29,702 publications, reflecting its prominent role in shaping the discourse around how individuals seek and utilise information.

The United Kingdom, Australia, and Canada follow with 7,684, 4,529, and 4,516 publications, respectively. These countries contribute significantly to the ever-evolving ISB research field, highlighting the topic's importance in diverse cultural and educational contexts. With 4,472 publications, China demonstrates its growing influence in ISB research, reflecting its commitment to understanding information behaviours both within its borders and on a global scale. Germany, the Netherlands, Italy, Spain, and India add to the international chorus of ISB exploration. Their combined 11,898 publications underscore the collaborative and multidisciplinary nature of ISB research.

In these numbers, a global community of researchers and scholars has been witnessed who are dedicated to unraveling information seeking behaviour's intricacies. This international effort enriches our understanding and has practical implications for fields as varied as healthcare, education, technology, and beyond. The statistics bear witness to the shared pursuit of knowledge and the global significance of information seeking behaviour research.

Figure 7: Top countries in information seeking behaviour research
(Source: Scopus Database)

6.8   *Main research areas*

Main subject areas emerging in information seeking behaviour research include IT ability, reading/writing capacity, and resilience, alongside information seeking itself. These areas significantly affect students' academic performance and are considered essential indicators of scholarly accomplishments. Five main research areas in information-seeking behaviour research are diverse, each addressing how individuals and society seek and process information differently.

i.   Public Information Coordination Research: Investigating how public information is managed and disseminated.

ii. Public Information Behaviour and Perception Research: Studying how the public seeks, perceives, and uses information.

iii. Health Information Communication Research: Focusing on how health-related information is communicated and how it influences health behaviour.

iv. Risk Communication and Social Media Research: Exploring how risks are communicated on social media platforms and their impact on public perception and behaviour.

v.   Information Technology in Emergency Management: Examining the role of IT in managing information during emergencies.

Each area contributes to the broader understanding of information seeking behaviour, highlighting how information is sought, processed, and acted upon in different contexts and through various media and technologies.

7.   Conclusion

This analysis explores the expansion, origins, types of documents, authors, institutions, funding agencies, nations, and primary research fields in the domain of information-seeking behaviour. From 2010 to 2019, there was a substantial increase in academic publications, totalling 34,450 articles, with a particularly prominent peak in 2020-21. Lecture Notes in Computer Science (LNCS) including its subseries placed in top

and prominent library science journals, has had a substantial impact. The predominant portion of the papers consisted of publications published in peer-reviewed journals. Some of the major contributors are Shah, Nicholas, Spink, Savolainen, Shneiderman, Jansen, White, Buchanan, Dr Spence, and Belkin. The University of Toronto achieved the top ranking in terms of publications among universities worldwide. The National Institutes of Health emerged as the primary funding agency, with the United States taking the lead in information seeking behaviour research worldwide, followed by the United Kingdom, Australia, Canada, and China. The primary topics of research are the coordination of public information, the behaviour of public information, the transmission of health information, the communication of risks through social media, and the use of information technology in disaster management. Moreover, the field of bibliometric studies and research on information seeking behaviour is constantly evolving, with a continuous increase in publications. It is crucial for researchers to regularly analyse information seeking behaviour research to gain deeper insights into emerging technologies, diverse cultural perspectives, ethical considerations, and a comprehensive understanding of information seeking behaviours in different domains and contexts. Our study provides information on various parameters influencing the ISB studies, and sets agenda for more empirical studies in this field.

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