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# Health Communication Research Performance in 2013-2022: A Bibliometric Analysis

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**Abstract**

Health communication is one of the crucial fields of contemporary research, especially in the post-Covid-19 epidemic era. In the last decade (2013-2022), however, no bibliometric performance analysis of the health communication (HC) overall has been conducted.To investigate research performance in HC, including performance of different countries/regions, institutions/groups, authors, journals, research areas, as well as status of collaboration and funding support. On January 25, 2023, a search for topic terms and article sources was carried out using Web of Science Core Collection. Then, duplicate data were removed, and a manual screening process was implemented. Bibliometric indicators were selected. Finally, data collection, analysis, and graph were performed using Excel 2019 and Origin 8.5.The quantity of publications in HC has steadily risen from 2013, and experienced rapid growth after 2019, whereas these publications' overall impact has been on a decline. The articles are predominantly situated within the fields of social sciences, medicine, environmental science, and science and technology, for these areas benefit from the highest level of financial support. USA continues to hold an absolute leadership position in research productivity, reflected in the preponderance of prolific institutions and authors affiliated with USA. Additionally, among the top productive18 journals, half are OA, and importantly, their *h*-indices tend to be on par with non-OA journals. At last, collaboration between authors and institutions is widespread, however, the degree of international collaboration is relatively low. For HC research, diverse nations should strive to overcome cultural and political barriers, fostering stronger research collaborations. The diminishing influence of HC articles over the years may not be a reflection of a decline in scholarly quality; instead, it might be the integration of knowledge with substantial heterogeneity.

**Keywords:** Bibliometric Review, Health Communication, Research Performance, Impact

## Introduction

Health communication (HC) is one of the most active, intricate, and important fields of study and practice in modern society (Ferreira et al., 2017; Kreps, 2012; Ngenye & Kreps, 2020). Especially due to the outbreak of the COVID-19 pandemic, there has been a swift increase in global research and collaboration within this field, for health challenges recognize no borders, and the relevance of HC research, which plays a crucial role in effectively addressing significant health risks, promoting wellness, alleviating pain and distress, and prolonging life, is global (Kreps, 2012). In the era after the pandemic, given the importance of HC, there is a requirement to access the performance of scientific output in HC, offering an overview and research reference for academia.

Bibliometrics is a tool that utilizes mathematical and statistical methods for the quantitative assessment of publishing information. It operates on two algorithms: one tallies the various constituents of publications independently, aiding in performance analysis; while the other, through co-occurrence counting, explores the relationships among these components in publications, facilitating science mapping and network analysis. Due to provision of an objective standard, bibliometric tools are increasingly garnering attention in the assessment of academic quality and productivity (Cobo et al., 2015; Özköse, 2023).

Performance analysis can be used to detect the contributions of research constituents to a given field (Donthu et al., 2021). It contains a number of metric indicators, among them, metrics such as publication count, citations, impact factor, and *h*-index, are often used as key performance indicators for different purposes in academia (Cucari et al., 2023; Yan et al., 2016). However, no bibliometric study has been performed to the best of our ability to evaluate global academic performance on the whole HC.

The concept of HC was formally introduced by Jackson in 1992, but it gained the broadest acceptance with the definition proposed by Rogers in 1996 (Dang et al., 2021), he defined HC in a board sense as “any type of human communication whose content is concerned with health” (Rogers, 1996)(p. 15)， to promote patient-doctor communication, set media agendas, and strategize preventive health campaigns, and more. Then, Harrington (2015) emphasize HC is that we use health messages to generate meaning. Moreover, Ferreira et al. (2017) noted that HC study is a strategy to promote health of human. Thus, HC research is guided by applied research for its ultimately purpose is to improve health. Based on application orientation, HC research can be categorized by application scenarios as follows: delivery of care, health promotion, risk communication, E-health, and management of health care systems (Kreps, 2020).

Evidently, HC spans a diverse range of disciplines, constituting a pivotal domain for transdisciplinary research that bridges the natural sciences and engineering with the social and human sciences. When assessing the scholarly performance across these sciences, simply putting them together and employing a uniform standard for simultaneous quantitative assessment may give rise to inaccuracies in the results, since different scientific fields exist diverse research strategies, objectives, and forms of output (Eto, 2012; Huang & Chang, 2008; Jaffe, 2014; Mohan, 2019). Additionally, as HC research is primarily situated within the social sciences, our investigation solely encompasses social science literature.

Up to this point, the complete performance landscape of scientific output in HC remains undisclosed. Only within the fields of risk/crisis communication (Goerlandt et al., 2020; Upadhyay & Upadhyay, 2023) and E-health communication (Aagja et al., 2023) have we found performance analysis of global research output. In the other three application contexts,

bibliometric analyses are dispersed into more granular fields. For instance, in the delivery of care field, research investigates areas like physician-patient communication (Konda et al., 2023) and the application of social media (Shrestha et al., 2019). Within the field of health promotion, health literacy and health education was analyzed (Selva-Pareja et al., 2022). In the domain of managing health care systems, scholars have conducted research on electronic health records (Jabali et al., 2022).

Therefore, this study fulfills the gap by providing a holistic view of research performance in the HC field over the last decade using bibliometric analysis. To meet this objective, a large set of references related to HC were obtained from Web of Science (WoS) and performance analysis were used to elaborate the data. The study aims to answer the following questions:

*Q1*. What is the global trend of performance on HC research?

*Q2*. Which specific areas exhibit remarkable performance within the field？

*Q3*. What disparities exist in the productivity and impact of various countries, institutions, authors, and journals in HC?

*Q4*. What characterizes the collaborative dynamics among nations, institutions, and authors?

*Q5*. How do scientific output and impact manifest in fields with financial backing, and in which specific fields does funding exhibit a bias?

## Methodology

*Database*

This study chooses the Core Collection in Web of Science, because it contains world-class scholarly journals, books, and conference proceedings in the natural sciences, social sciences, arts, and humanities from 1985 to the present. Put simply, this database constitutes a collection of the most influential documents, representing trusted and reliable scientific research (Apriliyanti & Alon, 2017; Chu et al., 2022). Then, the editions of “Social Sciences Citation Index(SSCI)--2005-present” was selected, for it has the world’s most influential social sciences journals (Clarivate). Moreover, the selected database contains the representative journals in HC, such as *Health Communication, Journal of Health Communication, American Journal of Public Health*, *Journal of Medical Internet Research, BMC Public Health, Patient Education and Counseling, Social Science & Medicine, Journal of Health Psychology,* etc.

*Search Strategy*

For the literature collection, the sampling frame consists of two parts. One part of the data came from two important journals in the field of HC—*Health Communication* and *Journal of Health Communication,* for in existing academic journals, these are the two earliest established professional journals in the field of HC (Gary L et al., 1998), exerting substantial influence that persists to this day. A further part of the data is drawn from topic search by using term “health communication”, since“health communication” are common search terms (Hannawa et al., 2015; Lwin & Salmon, 2015; Mheidly & Fares, 2020a, 2020b).

A search of the WoS database was conducted on January 25, 2023, and the search results are limited to publication years 2013-2022. Exported documents are restricted to the ones published in English, 48523 documents were retrieved, then 5990 non-articles were removed. After deduplicating the remaining 42533 entries, a manual selection process ensued to delete articles that did not identify health communication as the main focus. Ultimately, data filtering was implemented based on Rogers’ definition of HC, 41062 articles were left.

*Bibliometric Indicators*

Data in the retrieved literature was exported to Microsoft Excel. The exported data included year of publication, affiliations, authors, areas of research, journals, number of citations, and funding names. The metrics of performance analysis relate to publication (e.g. total publications, number of authors, institutions and countries, sole- and co-authored publications, number of publications per year), citation (e.g. total citations, average citations), and citation-and-publication (e.g. *h*-index) (Donthu et al., 2021).

For *h*-index, it concurrently considers both the quantity of publications and the frequency of citations (Donthu et al., 2021), representing at least *h* publications that have been cited *h* times (Ciriminna & Pagliaro, 2013). Despite certain limitations inherent in this evaluation metric, it remains a robust and reliable indicator for assessing academic achievements; Its applicability extends to individual researchers, research groups, institutions, universities, countries, and journals (Shah & Jawaid, 2023). Data collection, analysis, and graphical representation were performed using Excel 2019 and Origin 8.5.

**Results**

In this section, we provide the analysis findings to address research questions *Q*1 to *Q*5, and give the various scientific results some appropriate explanations.

*3.1 Articles Outputs and Their Impacts*

1) Number of published articles

Over the past decade, there has been a continuous rise in the quantity of HC literature. Polynomial fitting of the data indicates an increasing growth rate, averaging at 10.99% annually. The growth of the literature can be divided into two phases. The first phase, spanning from 2013 to 2019, witnessed a steady increase in the number of publications. The second phase occurred after the outbreak of the COVID-19 pandemic in 2019, where HC experienced a rapid surge in publications (see Fig. 1).

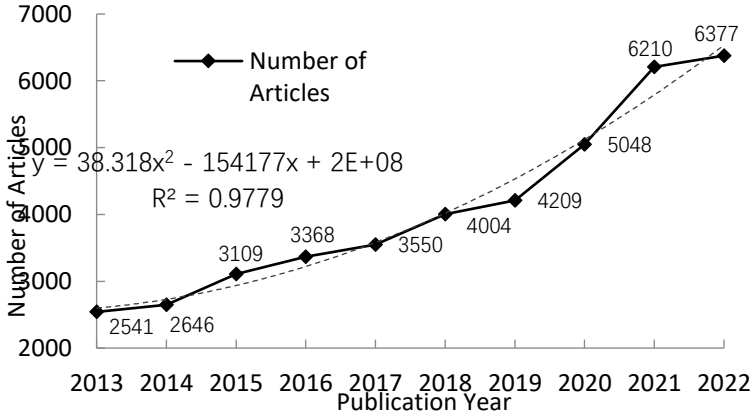
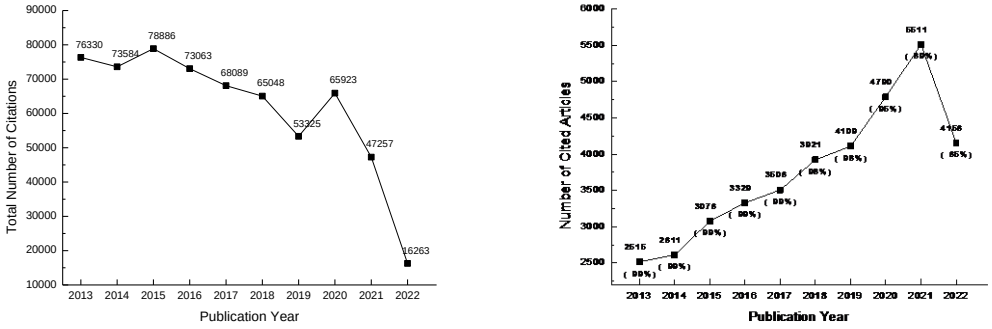



Fig. 1 Annual number of articles in health communication

2) The impact of HC research

Fig. 2 presents the trend of annual total citations (a) and annual cited articles (b), with over half of the articles cited every year. More than 95% of articles published prior to 2020 have been referenced, though there is a downturn during 2021 and 2022, likely attributed to the short period since their publication and inadequate information utilization. Despite the high utilization of HC literature, denoting active information exchange, its impact is progressively diminishing for the average citation frequency per article drop from 30 times in 2013 to 3 times in 2022.




a b

Fig. 2 Annual total citations (a) and annual cited articles (b) in health communication

3) Research areas covered in HC

According to the classification that WoS conducted, overall, from 2013 to 2022, the articles covers a total of 120 research areas. And there has been a slow increase in the number of research areas covered in HC annually, which is 77, 82, 83, 85, 87, 89, 95, 100, 90. While, the decline observed in 2022 may be attributed to a time lag of articles indexed in the WoS database.

The top 10 research areas in terms of number of publications include: public, environmental & occupational health(PEOH), health care sciences & services (HCSS), communication (Com), psychology (Psy), nursing (Nur), environmental sciences & ecology (ESE), education & educational research (EER), general & internal medicine (GIM), oncology (Onc), science & technology - other topics (STOT) (see Fig. 3). These fields collectively contribute to 29576 articles, comprising 72.03% of all publications in the domains of HC. It is evident that the primary focus of HC research is distributed across the domains of social sciences, medicine, environmental studies, and science and technology.

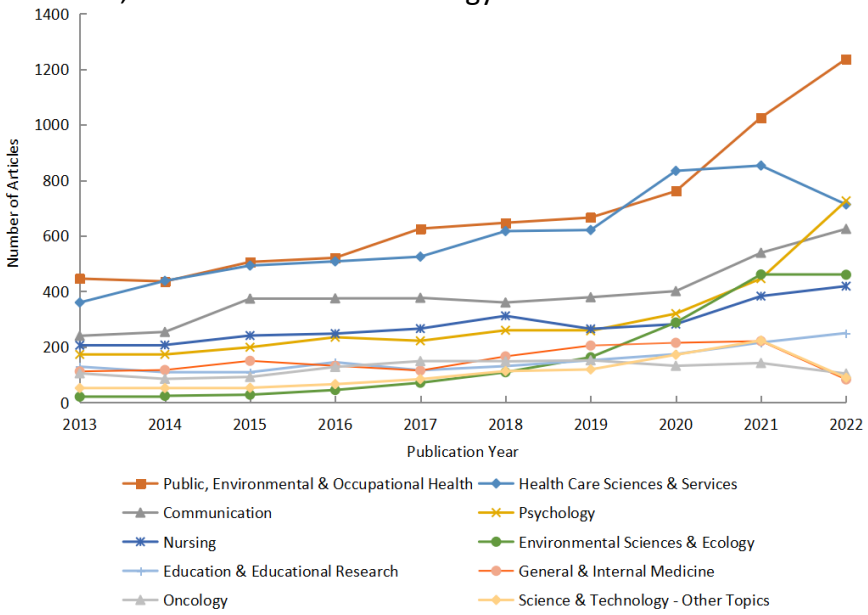



Fig. 3 Annual number of articles in main research areas

According to Fig. 4, there are notable variations in the average annual publication number across different research areas ($F$=23.215，$p$=0.0001). Specifically, PEOH and HCSS exhibit the highest average annual publication number, totaling 687.2 and 596.2, respectively.

Following are Com and Psy, with average annual publication number of 392.4 and 301.2, respectively. EER, GIM, Onc, and STOT display the lowest average annual publication number (153.1, 151.6, 123.7, and 102.3, respectively), with no significant differences among these 4 areas. Therefore, PEOH and HCSS made greater contribution than other research areas. After 2020， Psy articles soared, increasing from 320 in 2020 to 726 in 2022.

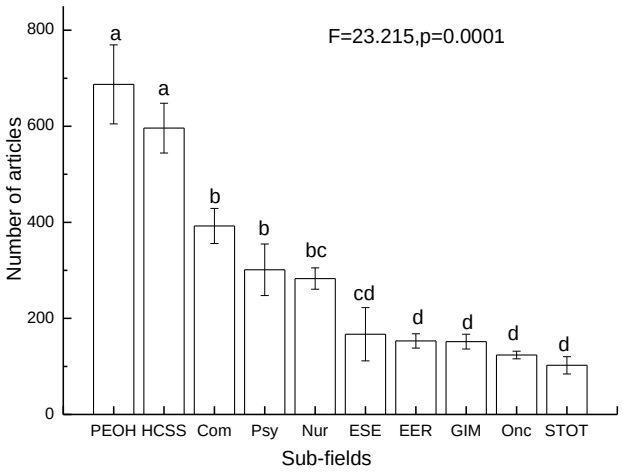



Fig. 4 The comparisons of average number of publications in the top 10 research areas

The average citation of top 10 prolific areas is arranged in descending order as follows: Psy (20), GIM (19), Onc (19), STOT (19), HCSS (16), Com (15), PEOH (13), EER (12), Nur (10), ESE (10). Evidently, the academic influence of Psy, GIM, Onc, and STOT fields surpasses that of other areas.

*3.2 Performance of Different Countries*

1) Geographic distribution

Statistical analysis was conducted based on the country/region of the first author for each paper， the 41,062 HC articles were geographically distributed very unevenly but concentrated in several leading countries. Concretely, 156 countries/regions contributed to HC research, however merely 6 countries/regions produced over 1000 articles (69.04% of the total). The USA was the most productive country, accounting for 43% of total publications, followed by Australia, England, and Canada. Similarly, USA maintains its leading position with the highest *h*-index (see Fig. 5).

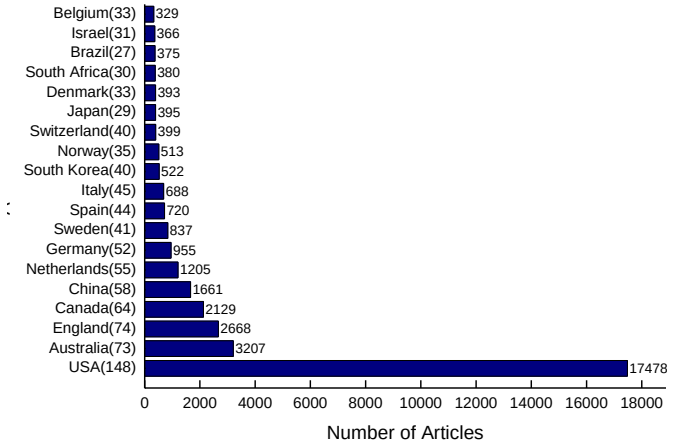



Fig. 5 The top 19 prolific countries (*h*-index)

2) International collaboration

With regards to international openness, generally, collaboration among various countries/regions in HC research has shown an increasing trend over the years. Despite this trend, the main area for HC research remains within solo countries/regions, accounting for 76.75% of the total articles. The variance in the slopes of their linear fits (Solo country/region: slop=307.55, r=0.917; International collaboration: slop=129.67, r=0.926) suggests that the growth rate of research output in solo country/region surpasses that of collaborative country/region (see Fig. 6).

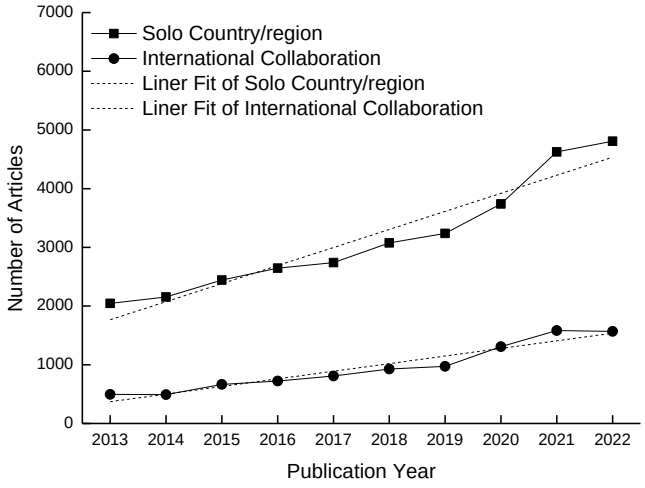



Fig. 6 Solo country/region and international collaboration articles by year

*3.3 Performance of Different Institutions*

1) Number and impact of publications by institutions

In the statistical examination of the primary affiliations of first authors, from 2013 to 2022, a total of 4078 institutions/groups contributed to HC research. Notably, among the top 25 productive institutions, 19 are from the USA, while Australia and the United Kingdom each contribute two, and Canada and the Netherlands each contribute one (see Fig. 7).

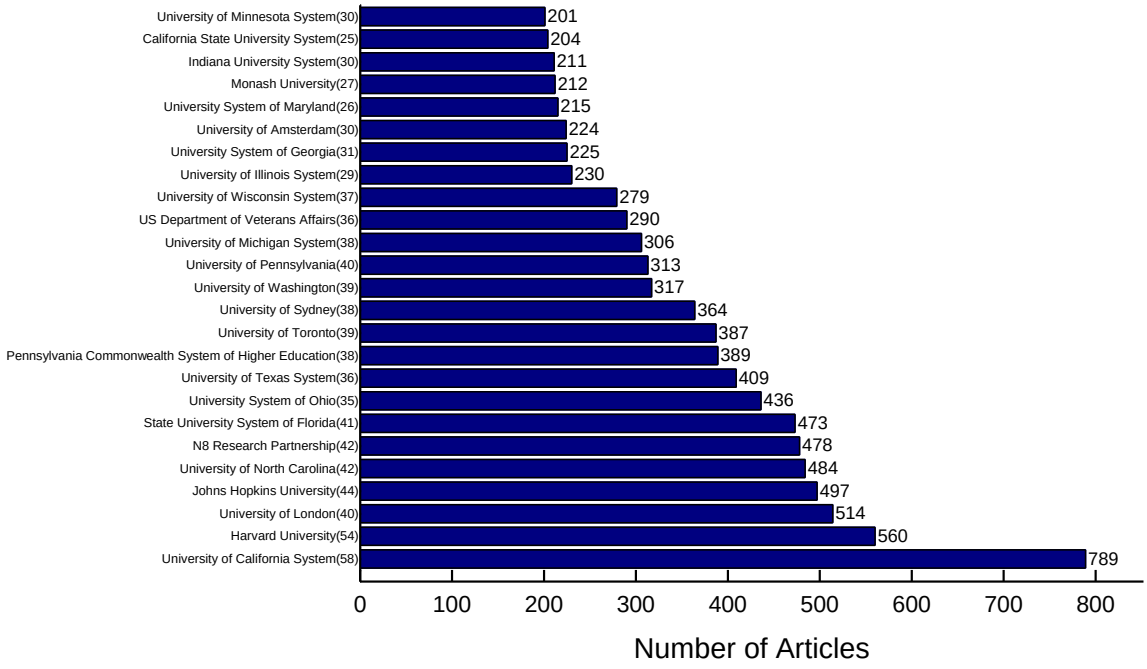



Fig. 7 The top 25 productive institutions/groups (*h*-index)

2)Institutional collaboration

The quantity of collaborative research in HC across different institutions/groups (constituting 73.19% of the total) far exceeds the number of studies conducted by individual institutions (representing 26.81% of the total). The discernible difference in the slopes of their respective linear fits (Solo institution/group: slop=125.39, *r*=0.851; Institutional collaboration: slop=311.84, *r*=0.945） suggests that the growth rate of research output in institutional collaboration exceeds that of solo institution/group (see Fig. 8).

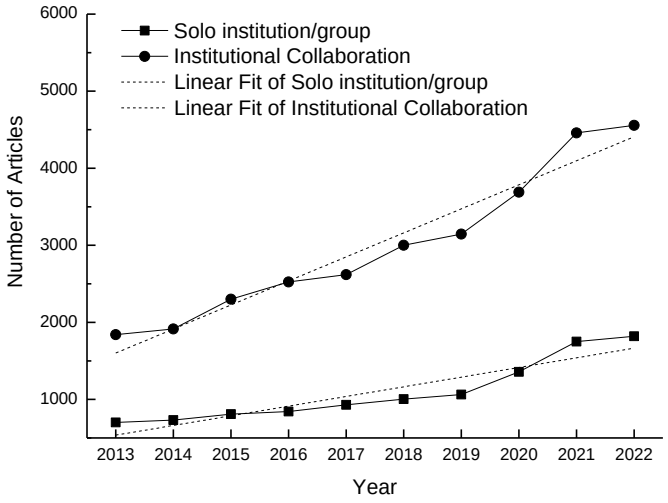



Fig. 8 Solo institution/group and institutional collaboration articles by year

*3.4 Performance of Authors*

1) Number of authors and their impact

Only considering the first author, the total count amounts to 33225. The analysis of productivity unveiled that a limited set of highly productive writers generated a considerable proportion of top-notch articles on HC. To be specific, a total of 28617 scholars authored just a solitary article, constituting 86% of the entire first authorship, whereas a mere 384 scholars authored no fewer than 5 articles. Tab. 1 enumerates the 23 authors who demonstrated exceptional productivity. Among these authors, the majority are Americans. At the forefront of productivity stands Jiang Shaohai, affiliated with the Department of Communication & New Media at the National University of Singapore.

Tab. 1
*The top 23 prolific authors and their h-index*

| Author | Affiliation | Country | Number of Articles | *h*-index |
|---|---|---|---|---|
| Jiang, Shaohai | National University of Singapore | Singapore | 28 | 11 |
| Gesser-Edelsburg, Anat | University of Haifa | Israel | 22 | 10 |
| Nan, Xiaoli | University System of Maryland | USA | 19 | 12 |
| Myrick, Jessica Gall | Pennsylvania Commonwealth System of Higher Education | USA | 16 | 10 |
| Asan, Onur | Stevens Institute of Technology | USA | 15 | 9 |
| Niederdeppe, Jeff | Cornell University | USA | 15 | 8 |
| Smith, Rachel A. | Pennsylvania Commonwealth System of Higher Education | USA | 15 | 8 |
| Grossman, Jennifer M. | Wellesley College | USA | 14 | 7 |
| Perrault, Evan K. | Purdue University System | USA | 14 | 4 |
| Rains, Stephen A. | University of Arizona | USA | 14 | 9 |
| Kam, Jennifer A. | University of California System | USA | 13 | 7 |
| Ledford, Christy J. W. | University System of Georgia | USA | 13 | 7 |
| Kim, Hye Kyung | Nanyang Technological University & National Institute of Education (NIE) Singapore | Singapore | 12 | 8 |
| Kim, Jarim | Yonsei University | South Korea | 12 | 5 |
| Tang, Lu | Texas A&M University System | USA | 12 | 8 |
| Wittenberg, Elaine | California State University System | USA | 12 | 8 |
| Wright, Paul J. | Indiana University System | USA | 12 | 8 |
| Yang, Qinghua | Texas Christian University | USA | 12 | 8 |
| Alpert, Jordan M. | State University System of Florida | USA | 11 | 8 |
| Gollust, Sarah E. | University of Minnesota System | USA | 11 | 7 |
| Hovick, Shelly R. | University System of Ohio | USA | 11 | 7 |
| Langford, Aisha T. | New York University | USA | 11 | 5 |
| Strekalova, Yulia A. | State University System of Florida | USA | 11 | 7 |

2) Authors Cooperation

Fig. 9 reveals the quantity of articles attributed to sole authors and collaborative endeavors. In fact, the percentage of collaboration articles consistently surpasses the 90% annually. This

emphasizes the prevalent trend of scientific collaboration in the field of HC, characterized by a notably high percentage of collaboration articles and a continuous upward trajectory. Hence, within the domain of HC, scientists can effectively harness collaborative intelligence, resulting in an increased quantity of research outcomes and an improved efficiency in scientific labor.

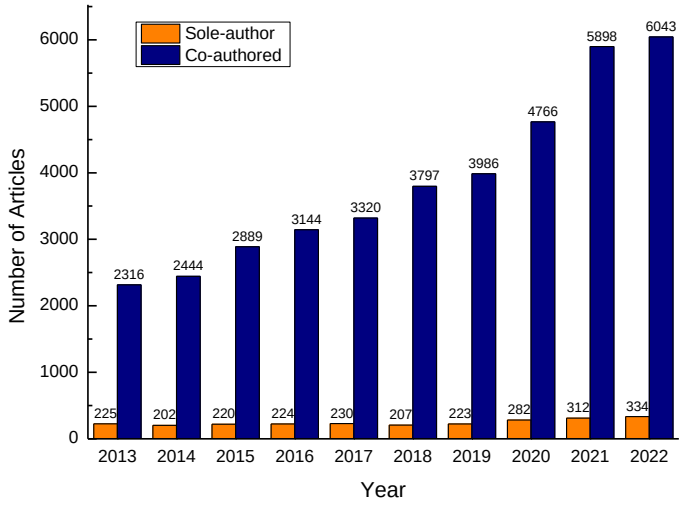



Fig 9. Sole-author and co-authored articles by year

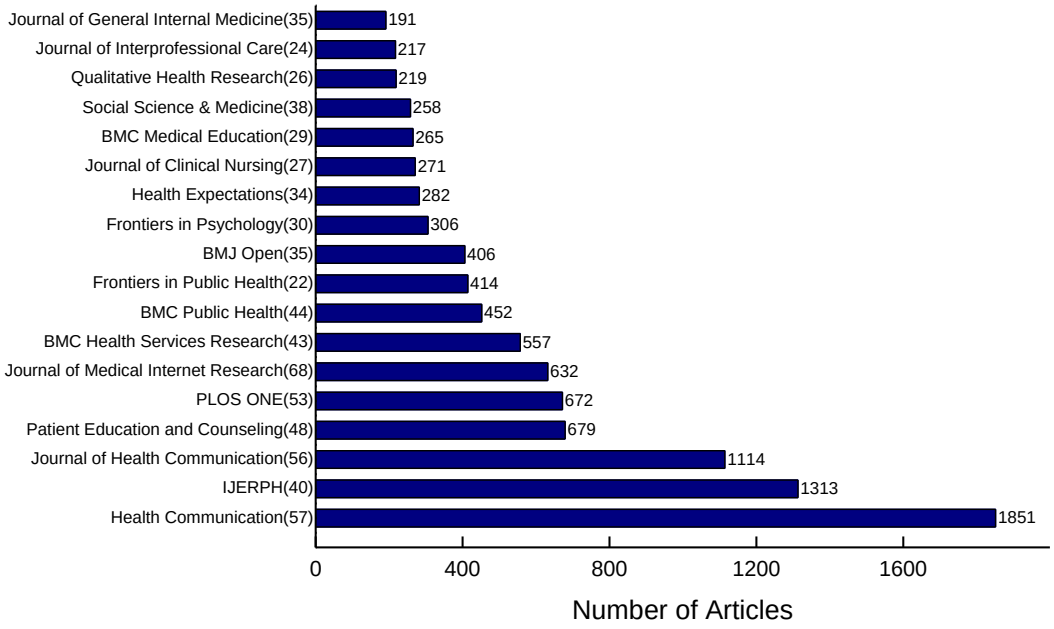
*3.5 Performance of Journals*

1) Number of journals

A total of 41062 articles are dispersed across a diverse range of 3189 journals. There was a steady annual increase in the number of journals associated with HC research, which is 863, 896, 1000, 1044, 1099, 1189, 1206, 1318, 1431, 1311 from 2013 to 2022. The number of journals in 2022 is lower than that in 2021, potentially because, during the data collection period, some articles published in 2022 were not yet incorporated and visible in the WoS database.

2) The most prolific and influential journals

HC articles were published relatively decentralized, only 46 journals have published more than 100 articles, while the vast majority of journals (3143) have published fewer than 100 articles. Fig. 10 lists the top 18 productive SSCI journals in HC. Among these journals, half are open access (OA), and importantly, their *h*-indices tend to be on par with non-OA journals. *Health Communication* takes the lead in publication count, followed by *International Journal of Environmental Research and Public Health, Journal of Health Communication*. Nevertheless, the *Journal of Medical Internet Research* has published a mere 632 articles, yet it attains the highest *h*-index.

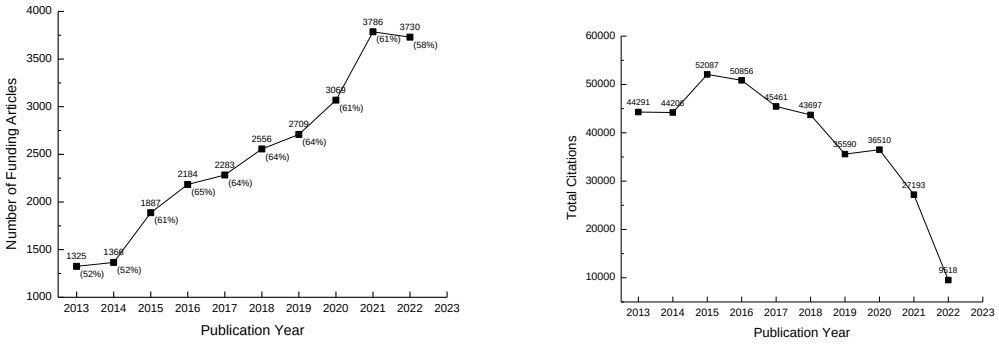



IJERPH is an abbreviation for *International Journal of Environmental Research and Public Health.*

Fig. 10 The top 18 productive scholarly journals (*h*-index)

### *3.6 Performance of Funding Articles*

From 2013 to 2022, each year, more than half of the papers received project supports, and the counts of funded paper continue to rise (see Fig. 11(a)). While, the number of citations of grant-related articles exhibits a decreasing trend (see Fig. 11 (b)). There are a total of 112 areas receiving funding, with the top 12 funded areas outlined in Fig. 12.




a b

Fig. 11 Annual number of funding articles (a) and their citations (b)

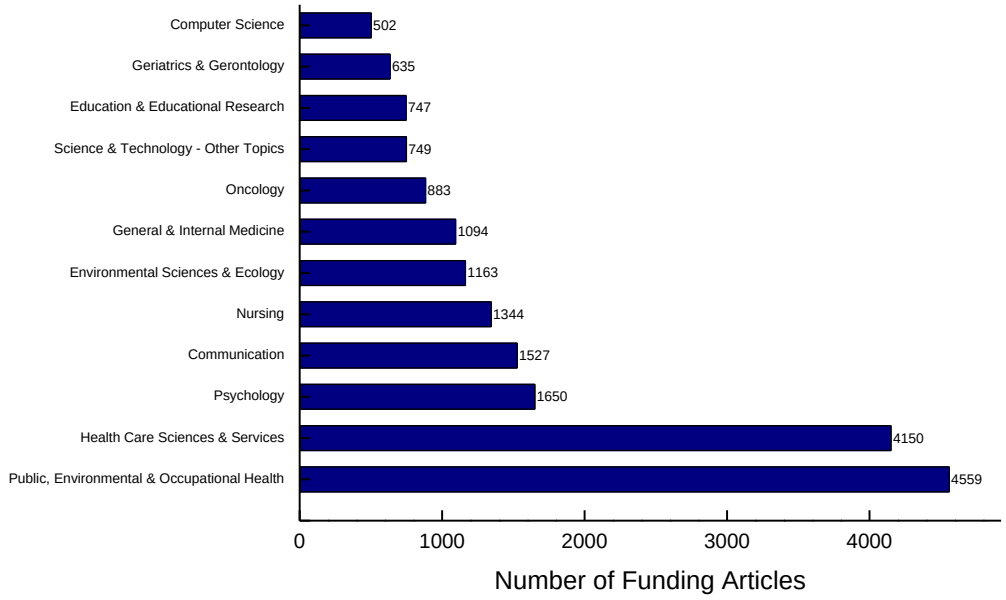



Fig. 12 The top 12 funded areas and number of funding articles

**Discussion**

When considering the absolute number of publications, developed nations occupy a predominant position, especially the United States. Naturally, this is reflected in the authors and institutions as well, most of whom are from the United States. It is understandable that academic research in the United States takes a leading role, as one reason lies in the profound scientific foundations in USA, where HC is born and flourished. Another, arguably more crucial factor, is the substantial financial support from the large budget of the American scientific community. Moreover, the high *h*-index of the United States is closely tied to its gross domestic product (GDP), as the citations tend to positively correlate with a country's GDP (Tian et al., 2017). While, for developing countries, China is the most significant contributor, leading both in terms of research quantity and quality. The findings of this study exhibit uniformity across global subfields, spanning e-health Aagja et al (2023), health literacy & education Selva-Pareja et al (2022), risk communication Goerlandt et al (2020), and even more specialized areas such as technology and occupational health in the healthcare sector Vaquero-Alvarez et al (2020), electronic health records (Jabali et al., 2022). Although China commence HC research very late in 1980s Dang et al (2021), the HC field has witnessed robust growth in recent years, propelled by the continual growth of China's GDP and substantial investment in scientific research from the government (China, 2022).

Pre-2014, Li & Li (2014) delved into HC articles within the Medline database of WoS spanning the years 2003 to 2013, the findings revealed that among the top 10 productive journals, only 3 were OA journals. Interestingly, after nearly a decade, there has been a complete reversal of the situation. Seven out of the top prolific10 journals are now open-access, and their *h*-index is, on the whole, competitive with non-OA journals. A case in point is the OA journal—*Journal of Medical Internet Research*, which claims the top spot in *h*-index rankings; concurrently, the highest in scientific output among OA journals, *International Journal of Environmental Research and Public Health* (IJERPH), achieves a commendable *h*-index of 40. In the period of 2020-2021, IJERP has also performed very well during the COVID-19 pandemic

(de Las Heras-Pedrosa et al., 2022).
Additionally, many OA journals incorporate the words “frontiers” “medical” “public health” “environment” “psychology” in their names. This signifies, on one hand, these OA journals have the ability to respond promptly to contemporary events and convey cutting-edge knowledge in a timely manner. On the other hand, it indicates that, in the past ten years, scholars in HC have directed more attention towards medicine, public health, climate and environmental change, and mental health.
Collaboration among scholars and institutions is common in the academic field of HC, but cooperation between countries is relatively limited. Presently, threats to human health arise from global factors such as climate change, food security, environmental pollution, and ecological degradation. Simultaneously, the deepening integration of the global economy has led to more frequent interactions between nations and increased population mobility, which will raise the risk of widespread global virus transmission and disease outbreaks, thereby jeopardizing human life. Communication is deemed essential in all efforts to improve human health (Lwin & Salmon, 2015), so, the field of HC research should undergo a process of growing internationalization, wherein scholars from various nations should intensify dialogue and collaboration.
In this study, the overall increase in the number of journals and sub-fields, coupled with the elevation in the absolute quantity of funded papers and the reduction in their relative proportion, implies an undergoing diversification and growing transdisciplinarity in the HC research field, Makkizadeh & Ebrahimi (2022) recently performed cluster analysis of keywords on HC literature in PubMed and observed a similar phenomenon. Academics may publish funded papers on a more extensive range of topics, rather than exclusively centering on a few dominant research directions. Researchers from diverse fields, including but not limited to communication science, social science, physical science, and medicine (Kreps, 2020), are actively participating in the study of HC theory and practice. Different disciplines contribute not only varied theoretical knowledge for understanding and interpreting phenomena and issues within HC but also offer various methodological tools to guide specific action plans. Given that HC is one of the most active, complex, and important fields of research and practice in modern society Harrington (2015), it is advisable to actively promote collaboration across disciplines.
Our research findings indicate that in the field of HC, greater financial support in some specific sub-fields is correlated with higher research productivity, thereby indirectly promoting the prosperity of journals in the relevant domain. However, both overall articles in this study and those specifically funded exhibit a declining trend in their annual average citations. The reasons for this decline, in our view, are not attributed to a prevalent belief about the academic quality of the articles decreasing. In reality, the factors influencing the citation of literature are intricate. Besides the factors such as time windows, and data sources, we assert that a significant influence derives from the complex diversity of interdisciplinary within the field. We opted to assess disciplinary diversity along three dimensions: variety (the number of disciplines), balance (the evenness of the distribution of disciplines) and disparity (the extent to which these disciplines are different) (Chen et al., 2022). Most research indicate that variety has a positive impact on citation influence Chen et al (2021); Wang et al (2022); Yet other studies have shown that balance and disparity have negative influences on citation impact (Chen et al., 2021; Chen et al., 2022; Wang et al., 2015; Yegros-Yegros et al., 2015). To elucidate, scientific audiences tend to cite literature from a relatively proximal range of fields but is hesitant to reference papers that integrate highly disparate knowledge systems,

particularly those that are groundbreaking or challenging (Yegros-Yegros et al., 2015). Of course, an additional and comprehensive research in HC is warranted to substantiate the aforementioned assumptions.

**Conclusion**

Researchers have employed bibliometric techniques to assess worldwide scholarly output across various academic disciplines (Cucari et al., 2023). Yet, a comprehensive evaluation of global research contributions in HC remains absent from the literature. This study seeks to address that gap by examining the international research performance in this particular domain. Our approach involves applying a range of metrics to analyze scholarly performance within the field of HC. Table 2 summarizes the key findings in HC research performance (2013-2022), providing a comprehensive overview for a high-quality academic journal publication.

Tab. 2
*Key findings in HC research performance (2013-2022)*

| Aspect | Key findings |
|---|---|
| Publication trends | Total of 41,062 articles; 10.99% average annual growth rate |
| Research impact | Over 95% of pre-2020 articles are cited, but the annual total number of citations exhibits a declining trend |
| Research areas | 120 research areas covered; Top 4 areas include public, environmental & occupational health, health care sciences & services, communication, psychology |
| Geographic distribution | 156 countries/regions contributed; Top 6 countries by publication count and *h*-index: USA, Australia, England, Canada, China, Netherlands; USA ranks highest in productivity (17,478) and *h*-index (148) |
| International collaboration | Increasing trend, but solo country research still dominant (76.75% of articles) |
| Institutional performance | 4,078 institutions contributed; 19 of top 25 institutions in productivity and *h*-index are from USA; Institutional collaboration (73.19%) exceeds solo institution research (26.81%) |
| Author productivity | 33,225 first authors; 19 of top 23 authors in productivity and *h*-index are from USA; Most productive author is Jiang Shaohai (National University of Singapore); High collaboration rate (>90% annually) |
| Journal performance | 3,189 journals with increasing trend published HC articles; Half of top 18 productive journals are open access; Most prolific (1,851) and highest *h*-index (57) journal is *Health Communication* |
| Funding | Over half of papers are funded annually; Number of funded papers is increasing yearly; however, their total citations are decreasing annually; 112 areas received funding; Top 4 prolific areas of funding are public, environmental & occupational health, health care sciences & services, psychology, communication |

This comprehensive bibliometric analysis of HC research not only illuminates the field's developmental trends but also provides valuable insights into its dynamic evolution. From a theoretical perspective, our study quantitatively demonstrates the cross-disciplinary nature

of HC research Kreps (, 2020), spanning a wide range of sub-fields. This cross-disciplinary integration underscores the importance of HC as a holistic research domain, laying the groundwork for future theoretical framework development and integration. Our findings emphasize the necessity of adopting multidimensional approaches in understanding and addressing complex health issues, pointing towards new directions for advancing HC theory.
Furthermore, the methodological approach of this study has important implications for future bibliometric analyses. Our comprehensive method, combining analyses of publication trends, research impact, geographical distribution, and funding support, provides a holistic framework for assessing academic field development. This approach is not only applicable to the HC domain but can also be extended to evaluating other transdisciplinary research fields.
From a practical standpoint, this study's contributions are threefold. Firstly, our analysis reveals shifts in research focus, particularly the increased attention to environmental, psychiatric, oncological, care-related HC. This insight provides valuable information for health policymakers and practitioners, aiding in the adjustment of strategies to address emerging health challenges. Secondly, the observed trend towards increased international collaboration highlights the importance of global cooperation in addressing transnational health issues, providing empirical support for enhancing global health partnerships. Lastly, our research underscores the growing role of open-access journals in disseminating HC research, which has significant implications for improving the accessibility and impact of research findings.
All in all, this study not only fills a gap in the bibliometric performance analysis of the HC field but also provides crucial guidance for its future development. By revealing research trends, collaboration patterns, and resource allocation, our research offers valuable references for scholars, policymakers, and health practitioners, contributing to the advancement of HC research and practice towards a more comprehensive and collaborative direction. Future research can build upon this foundation to explore more diverse and effective methods for assessing the quality of HC research.

**Limitations**

1) The chosen research literature sample is restricted. This study solely relies on journal articles acknowledged by social science citation index (SSCI) of WoS, implying that materials absent from SSCI of WoS, along with other types of literature are excluded. Additionally, using a topic search based on specific terms may result in exclusion of certain scholarly works.
2) The comparison of papers across different disciplines relies on standardized metrics. It is imperative to approach the results with caution since these metrics have their inherent limitations.
3) The research conclusion provides a statistical description of the "historical realities" in the domain of HC. Prudent consideration is advised when applying these conclusions to predict the discipline's future or for extrapolative applications.

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