

## Tracking global health communication publication trends

Fitri Hardianti<sup>1\*)</sup>, Benni Handayani<sup>2</sup>, Arif Ardy Wibowo<sup>3</sup>

<sup>1</sup>Faculty of Communication Science, Universitas Islam Riau

184 Karya I Rd, Simpang Tiga, Bukit Raya, Pekanbaru, Riau, Indonesia

<sup>2</sup>Department of Communication, Universiti Kebangsaan Malaysia

43600 Bangi, Selangor, Malaysia

<sup>3</sup>Department of Communication Science, Universitas Ahmad Dahlan

Ringroad Selatan, Kragilan, Bantul, Yogyakarta Special Region, Indonesia

Email: fitrihardianti@comm.uir.ac.id and Phone Number: +6282384524109

**How to Cite This Article:** Hardianti, F., et al. (2024). Tracking global health communication publication trends. *Jurnal Studi Komunikasi*, 8(1). doi: 10.25139/jsk.v8i2.7772

Received: 30-01-2024, Revision: 29-05-2024, Acceptance: 21-06-2024, Published online: 24-07-2024

**Abstract** The field of communication has evolved and become more diverse, leading to the emergence of health communication as a multidisciplinary field of study. This study aims to identify several studies that examine the patterns and distinctiveness of health communication research globally and present them visually. The method used is a quantitative paradigm with a bibliometric approach. A total of 1,639 documents will be analysed from the search through Scopus obtained from several specific criteria. The results showed that over the past five years (2019-2023), the increase in the growth of the number of publications related to health communication amounted to 14.07%. The results of the analysis also show Health communication as the source with the most relevant and highest publications totalling 256 articles. The authors who produce the most publications related to this topic include Kim S and Noar SM with 13 articles each. Meanwhile, the country that produces the most correspondence authors and the highest citations is the USA with a total of 787 articles. The most popular keyword is health communication with a frequency of 650 mentions. This analysis also provides a roadmap for future research in health communication, highlighting untapped areas and encouraging global collaboration in this field.

**Keywords:** analysis; bibliometrics; health communication; scopus publication trends

### INTRODUCTION

Communication has developed into an intellectually rich field, characterised by a variety of traditions and research interests as well as extraordinary ontological diversity. Communication studies was born at the intersection of various disciplines and fields. The field's multidisciplinary pedigree has been a major contributing element. Communication studies on the other hand is often considered a 'disciplinary muddle', which is also a hallmark of contemporary academic knowledge. Communication studies typically exhibit an omnivorous approach in combining research fields. One of the results that exemplifies this form of integration can be seen from a variety of research in the field of communication, one of which is health communication.

<sup>\*)</sup> Corresponding Author

Research on health communication itself, as traced in Scopus has started since 1953, with a study that discusses communication carried out by ministers of public health in Europe (Ribeyre, 1953). Health communication does not only involve communication that is being carried out by practitioners or experts in the health sector, but health communication has a broader range of meaning and contexts. Referring to previous studies, including research that discusses one of the health issues particularly mental health, it is explained in the study that mental health problems affect a variety of groups, including young people, adults, black people, white people, those who are employed, and those who are not. However, in this case, the research was conducted on unpaid caregivers who willingly took care of people despite of the high risks of COVID-19. The study recommended considering caregiver workload in future mental health assessments (Czeisler et al., 2021).

Furthermore, research conducted by Chou & Budenz (2020) addressed emotional considerations related to COVID-19 vaccine communication. This research that was conducted in America was motivated by the fact that most of the American population refused to be vaccinated because they were worried about the safety and efficacy of the vaccine as Covid-19 continued to undergo mutations or novel variants that required the population to be vaccinated as a form of long-term control and prevention to the continued development of the disease. In conjunction, this research was developed and aims to form a communication strategy by considering the role of emotions as an effort to overcome doubts and foster trust revolving the vaccines.

From the two studies above, we can broadly conclude that health communication is an important part of human communication that delves into how individuals deal and manage health related issues and maintain their mental well-being. Health communication utilises communication services to positively influence the health behaviour of individuals, families, and communities. In addition, health communication also covers information on disease prevention, health promotion, health maintenance policies and raises individual awareness about health issues, health problems, health risks and health solutions (Rahmadiana, 2012).

In addition, another definition of health communication, as explained by Notoatmodjo involves a systematic effort to positively influence public health behaviour, using various communication principles and methods using both interpersonal communication and mass communication (Harahap & Putra, 2020).

Historically, research on health communication developed rapidly in the 1980s along with many studies and publications on health communication to answer challenges and promote health to the public (Haro et al., 2020). Even now, research on health communication continues to grow. Based on the results of an analysis from Bibliometrics of the annual growth rate of research publications on the topic of health communication, a percentage of 14.07% was obtained. This indicates that there is an increasing interest among other researchers to study this topic. From this background, it then makes the author's curiosity to find out the development of health communication research and find out in the future what trends or research topics can be done. So that later, it can provide novelty, especially in health communication research.

This study aims to determine publication trends related to health communication globally. This study would be valuable as it outlines the directions of future research, including finding the most prolific authors and their contributions to the field that can help future researchers find important literature and collaborators, identifying the most relevant affiliates that can also aid future researchers in considering to establish research collaborations with these institutions or affiliates. This research also identifies countries with the most active and passive in terms of producing publications regarding topics that are related to this. Further, the analysis of keywords discussed in this study is also expected to help future researchers in identifying unexplored topics in health communication research.

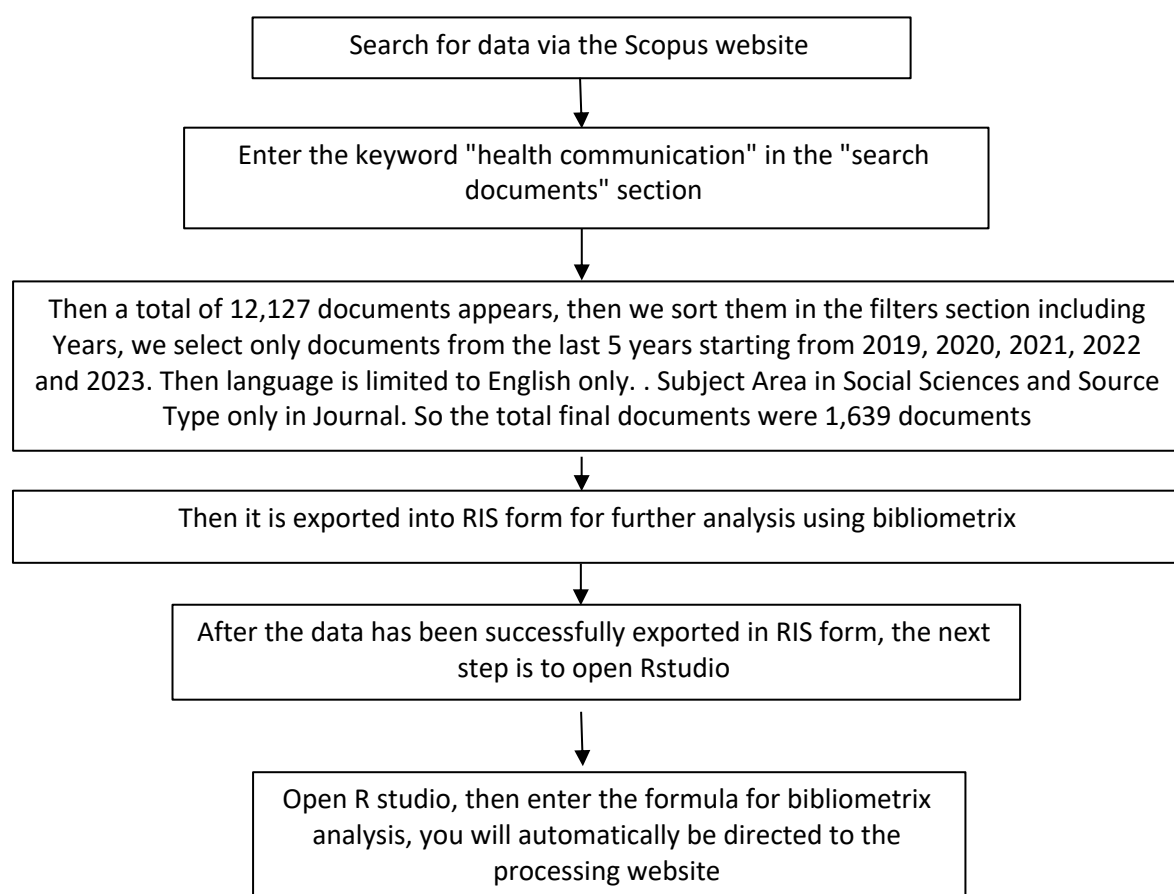
## **METHODOLOGY**

This research employs a bibliometric analysis to study and track publication trends related to health communication globally. Bibliometrics is an open-source tool for conducting comprehensive scientific literature analysis, as it is considered as a mapping analysis of science. It is programmed within the R software to facilitate statistical and graphical packages as an integrated part (Aria & Cuccurullo, 2017). Bibliometric reviews are commonly used in scientific

disciplines and focus on the quantitative study of journal papers, books or other types of written communication (Setyaningsih et al., 2018).

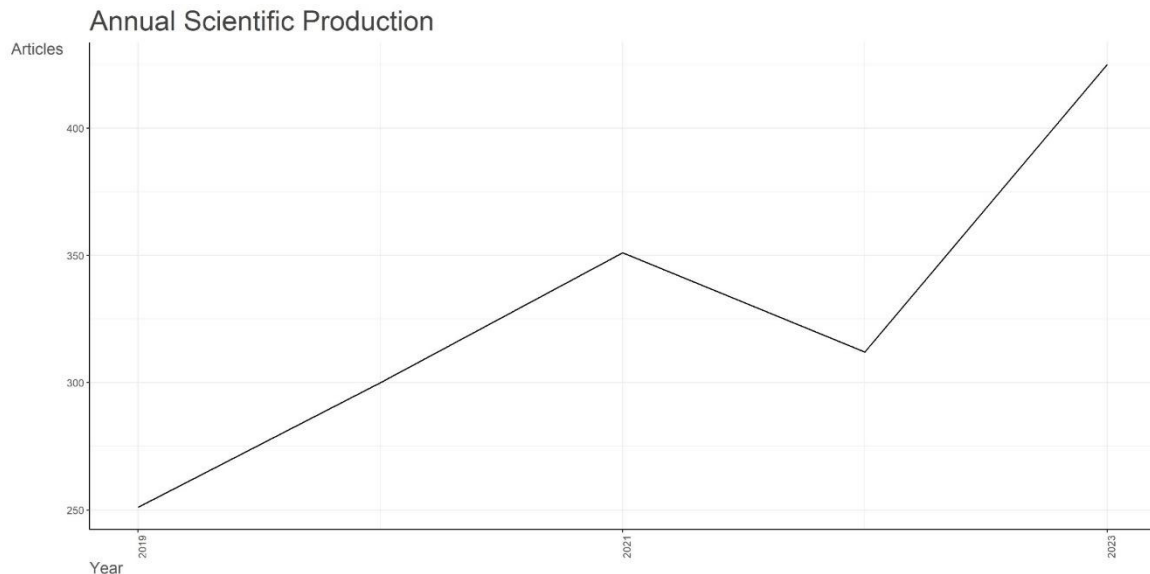
The concept of bibliometrics utilises statistical and mathematical methods to analyse data extracted from books, journals and other communication media. Experts refer to it as literature reviews that employ quantitative studies. In other words, bibliometric analysis assist in understanding which authors are interested in the topic, which journals extensively publish regarding the topic, the institutions and countries that dominate discussions on the topic, the frequently used keywords related to the topic, and the relationship seen between these elements (Borregan-Alvarado et al., 2020).

Data related to publications regarding health communication were obtained from the database (<https://www.scopus.com>). Scopus was selected as the database source for the data due to its established reputation of having an extensive collection of highly reputable scientific journals. This warrants the quality of articles undergoing a rigorous peer review assessment process. Therefore, the data used is reliable. Scopus, launched by Elsevier in 2024, is a comprehensive academic database accepted globally and used as a reference for publications in various countries. (Nuryana et al., 2023). This research only takes journals that are indexed or listed in Scopus. The data was taken on December 17, 2023. The filter applied includes a certain time period (year), namely only data for the last 5 years that the author uses, that spans from 2019-2023, then the data source (source type) focused exclusively on journal articles, and specific languages (language) particularly only those in English and the scope (subject area) in social sciences. The results of this research are based on a total of 12,127 documents which were filtered according to the criteria mentioned previously, and that the documents obtained are 1,639 documents which were later analysed. Then the data was analysed using the R-based bibliometrix application (Aria & Cuccurullo, 2017) which can be downloaded for free from: <https://www.bibliometrix.org/>.



**Figure 1.** Research Method Analysis Chart  
Source: Data from Author (2024)

As stated in the Figure 1, the total number of documents analysed was 1,639 documents, with details of 251 articles published in 2019, 300 articles published in 2020, 351 articles published in 2021, 312 articles published in 2022 and 425 articles published in 2023. The following figure 2 is depicted in the form of a line graph for the development of publications each year:



**Figure 2.** Annual Scientific Production  
Source: Data From Bibliometrics' Analysis (2024)

## RESULTS AND DISCUSSION

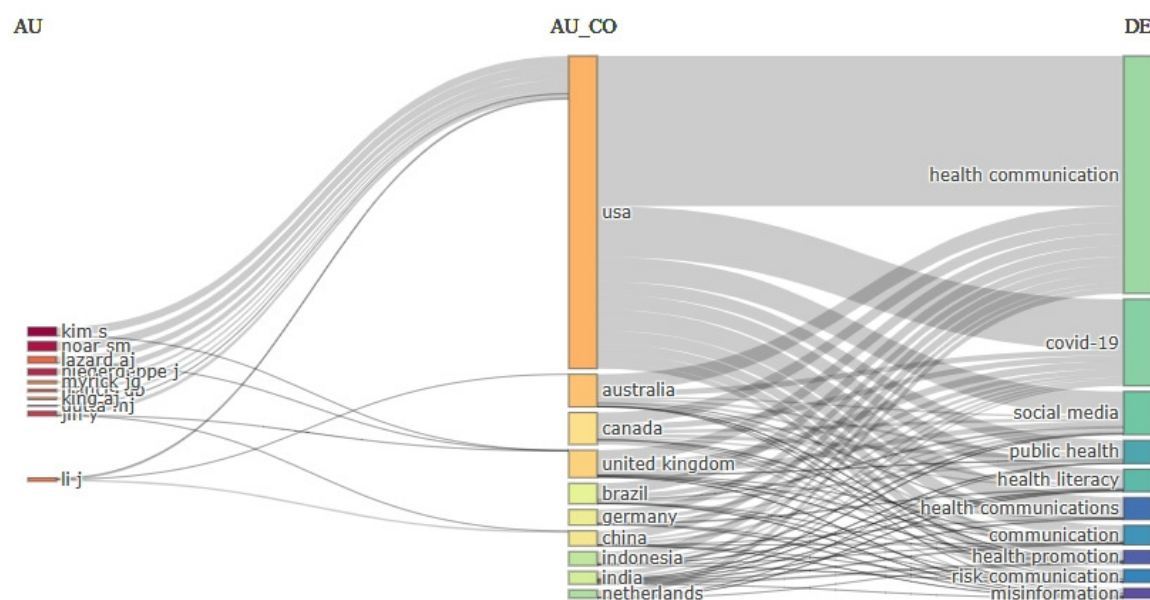
After the author carried out data analysis, the data will then be interpreted in visual form (images) which can also be in the form of tables. Suppose you look at the analysis results of this research in general. In , this research focuses on publications published in the last 5 years- particularly from 2019-2023 with the assumption of the novelty of these publications. The total number of documents analysed was 1639 documents, with various document types including 1504 articles, 1 conference paper, 16 editorials, 29 errata, 10 letters, 17 notes, 61 reviews and 1 short survey. Apart from that, these 1639 documents are distributed across 436 sources. The growth rate of publications on this topic per year from 2019-2023 as a percentage is around 14.07%. The total number of authors or authors is 4900 authors, 265 of whom are document authors as sole authors. Around 15% of them collaborate with writers from various countries (internationally), even in 1 article written by 3-4 people. The keywords utilised are 3263 keywords across 71223 references (Figure 3).



**Figure 3.** Main Information  
Source: Data From Bibliometric's Analysis (2024)

The next image is a three-field plot analysis. Figure 4 shows the correlation between three units determined under certain conditions, including author, country of origin of the author, and keywords. This three-field plot analysis is limited by only showing the top 10 data, be it the author, country of origin and keywords which are an accumulation from 2019 to 2023. On the left is the name of the author of the article, the longer it is to the bottom and the thicker the colour of the line, it is certain that the author will have more publications, in this theme that is occupying the top position is Noar SM with a total of 13 articles and Kim S with the same total publications as Noar SM totalling 13 articles. Next, in the middle is the author's country of origin and on the right are the keywords that appear most often. The size of each rectangle shows these three categories connected by grey lines. The red rectangle is a symbol of the author of the article, the orange rectangle represents the author's country of origin, where the longer it goes down, it indicates that there are more authors from that country who have published the results of their research related to health communication. The country with the most publications related to this theme is the United States (USA) with 787 articles published from 2019-2023, of which 715 articles are Single Country Publications (SCP) and the other 72 are Multiple Country Publications (MCP).

Meanwhile, the green rectangle is a symbol of keywords that are often mentioned in these articles, as well as the author and the author's country of origin. The longer it is, the longer it is, indicating that there are more authors who use these keywords in their articles. Among the keywords that were most frequently mentioned, particularly health communication was mentioned 335 times. Meanwhile, if additional keywords (keyword plus) are included, the most mentioned thing in these articles is human with 698 mentions. The following is an image of a three-field plot analysis:

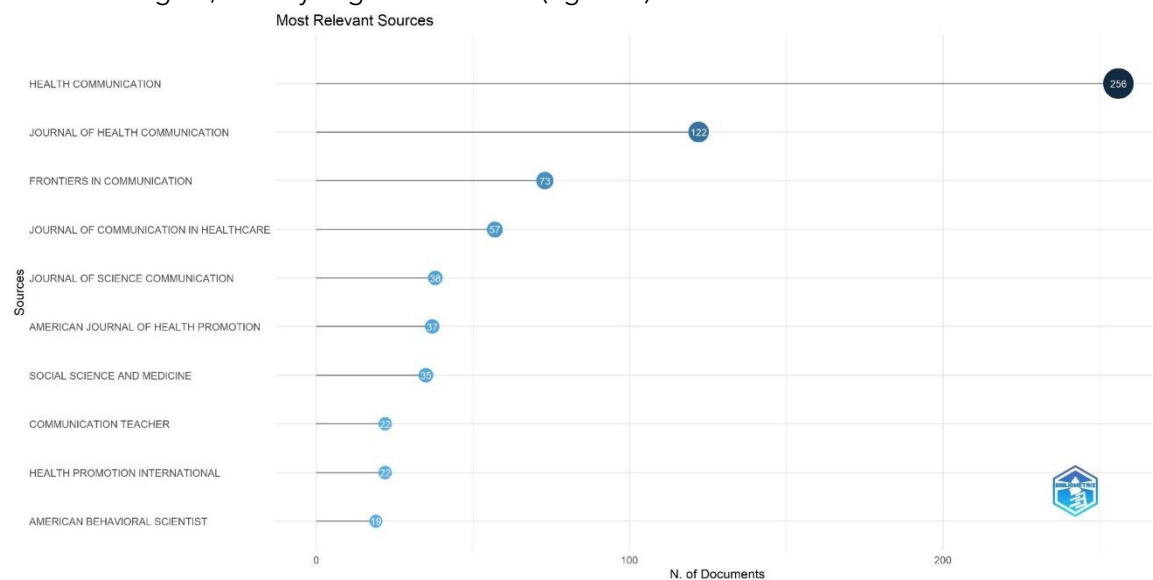


**Figure 4.** Correlation Plot for 3 Fields related to health communication topics  
Source: Data From Bibliometric's Analysis (2024)

### Contribution of Sources with the Most Relevant and Highest Publications

The publication of 1639 articles are distributed across various journals indexed in Scopus. If we refer to the sources that are most relevant and distribute the most written works on the topic of Health Communication, we can rank the top 10, including: Health Communication with a total of 256 articles; Journal of Health Communication with a total of 122 articles; Frontiers in Communication with a total of 73 articles; Journal of Communication in Healthcare totalling 57 articles; Journal of Science Communication totalling 38 articles; American Journal of Health Promotion totalling 37 articles; Social science and Medicine totalling 35 articles; Communication Teacher totalling 22 articles; Health Promotion International totalling 22 articles, and American Behavioural Scientist totalling 19 articles.

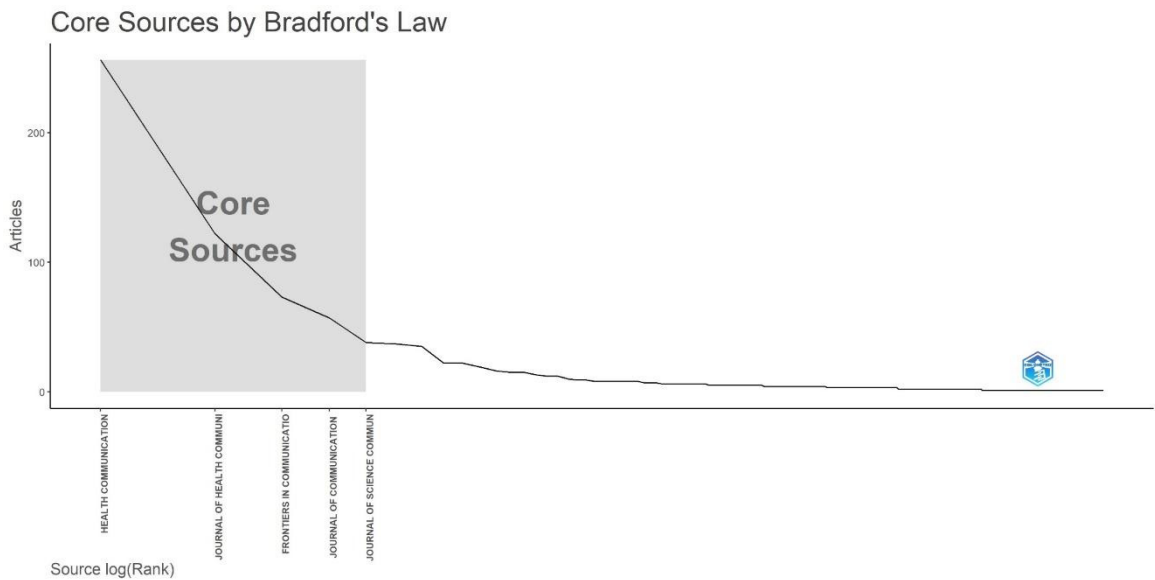
These publication sources are derived from the Scopus international journal category with quartiles 1 and 2, where Q1 and Q2 are the Scopus international journal levels with the most significant impact compared to other classifications. These include Health Communication, Journal of Health Communication, Frontiers in Communication, American Journal of Health Promotion, Social Science and Medicine, Health Promotion International and American behavioural Scientists which are in the Q1 category, the rest are in the Q2 category. And 8 of the 10 journals come from publishers in the European region including Routledge, Taylor and Francis Ltd, Frontiers Media SA, Maney Publishing, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Elsevier, and Oxford University Press, 2 of which come from publishers in the American region, namely Sage Publications (figure 5).



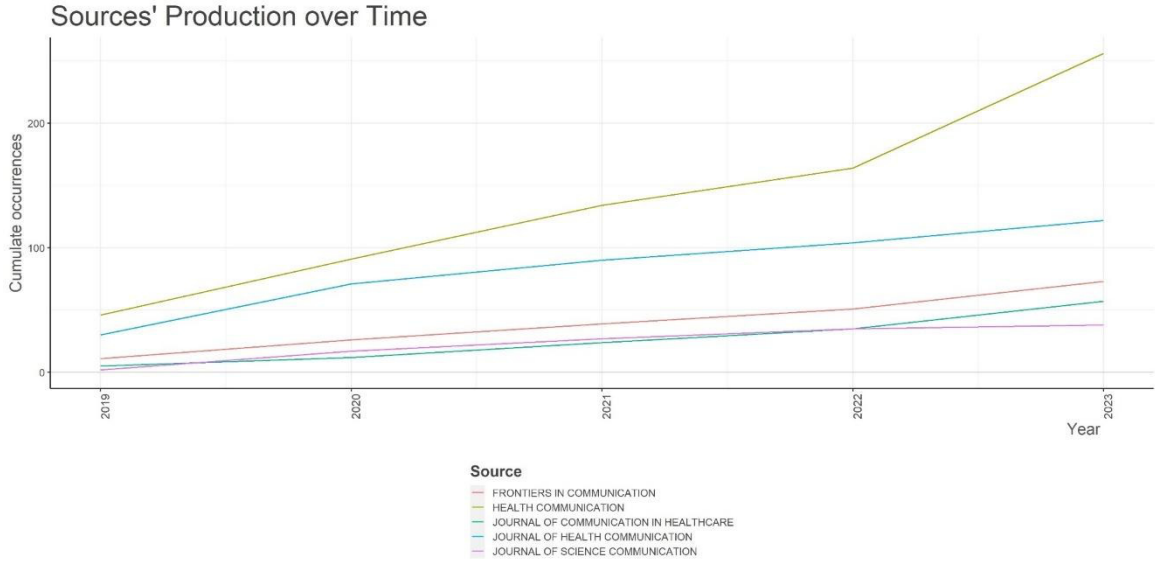
**Figure 5.** Sources Most Relevant to Health Communication Topics  
Source: Data From Bibliometric's Analysis (2024)

In this bibliometric analysis, one of the major studies discussed regarding publications is distribution, according to Bradford's law which describes documents in certain scientific disciplines, it describes the topic of Health Communication, dividing the sources most relevant to this topic into in several zones- Zone 1 is referred to as the zone with the highest or most publications, among the sources included in Zone 1 are: Health Communication in first position, Journal of Health Communication in second position, Frontiers in Communication third position, Journal of Communication in Healthcare in fourth position and Journal of Science Communication in fifth position. These positions are taken from the top five sources with the highest frequency of publications on health communication topics. Sequences 6 to 10 enter the second zone, and so on. This can be seen from the Figure 6.

The five sources of publication above, if we look at the publication footprint spanning from 2019-2023, it can be explained first, health communication in 2019 with 46 articles, 2020 with 91 articles, 2021 with 134 articles, 2022 with 164 articles and 2023 with 256 articles. Second, if the journal of health communication is described sequentially, the publication production from 2019 amounted to 30 articles; In 2020 there were 71 articles; in 2021 there were 90 articles; in 2022 there were 104 articles, and in 2023 there were 122 articles. Meanwhile, in 2019, Frontiers in Communication published 11 articles; in 2020 it published 26 articles; in 2021 it published 39 articles; in 2022 it published 51 articles and in 2023 it published 73 articles. Next in fourth place is the Journal of Communication in Healthcare, in 2019 it disseminated 5 articles; in 2020 there were 12 articles; in 2021 there were 24 articles; in 2022 there were 35 articles, and in 2023 there were 57 articles. Fifth, the Journal of Science Communication with a published work over the last five years- in 2019 with 2 articles; in 2020 with 17 articles; in 2021 with 27 articles; 2022 with 35 articles, and 2023 with 38 articles. It is evident that these five sources experience an increase in publications related to this topic every year (Figure 7).



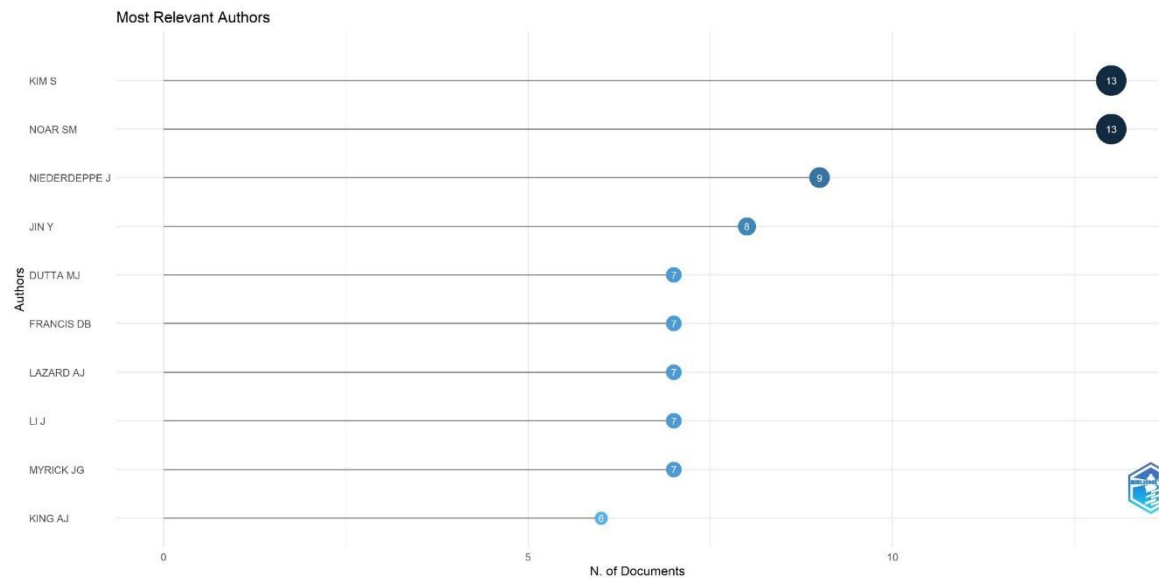
**Figure 6.** Core source based on Bradford's Law  
Source: Data From Bibliometric's Analysis (2024)



**Figure 7.** Production of Resources Relevant to Health Communication Topics over Time  
Source: Data From Bibliometric's Analysis (2024)

**Author Contributions with the Most Publications on Health Communication Topics**

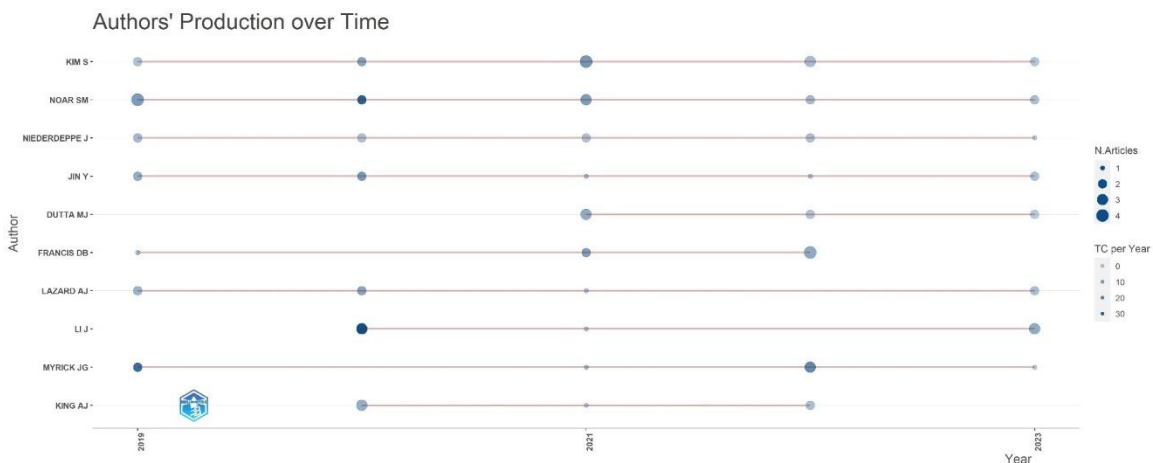
When discussing about publications, it is essential to acknowledge that they were produced by the researchers who conducted studies and documented their studies in scientific or academic articles. The authors who have made a major contribution to the development of this health communication topic include KIM S and NOAR SM who have the same number of publications, particularly with 13 articles. In third place is NIEDERDEPPE J with 9 articles. Fourth place is JIN Y with eight articles. Meanwhile, fifth to ninth place have the same number of articles, those who have 7 articles are the following with fifth place being DUTTA MJ, sixth place being FRANCIS DB, seventh place being LAZARD AJ, the eighth place being LI J, ninth place being MYRICK JG, and last place being tenth is KING AJ with a total of 6 publications. The Figure 8 is depicted in a graph.



**Figure 8.** Top 10 Authors Most Relevant to Health Communication Topics  
Source: Data From Bibliometric's Analysis (2024)

The total number of publications that have been written by the top 10 authors above has a different history each year, considering that over the five years these authors produced different numbers of articles, in the graph below it is depicted with a blue circle symbol if the publications produced were many in that year. The blue circle is larger, but on the other hand, if there are few publications, the blue circle is small. If we explain in detail the number of publications produced by these authors, starting from KIM S with a total of 13 publications over the past 5 years, in 2019 he published 2 publications related to the topic of Health Communication including Cultural Factors Influencing Teenage Pregnancy in Jamaica (McFarlane et al., 2019) and Opening the Minds' Eye: The Pvtal Role of Sympathy in Depression Coverage Effectiveness (Lee et al., 2019), continuing in 2020 he released two more articles containing Telling the Tale : the Role of Narratives in Helping People Respond to Crises (Liu et al., 2020) and A Comparison of Metaphor Modality and Appeals in the Context of Skin Cancer Prevention (Occa et al., 2020), in 2021 there was an evident increase, he published 4 articles involving the substituting relationship between presumed media influence and interpersonal health communication for health prevention (Hong et al., 2021), the interplay between message framing and message recipients' regulatory focus in promoting HPV prevention strategies (Mao et al., 2021), Polarization Over Vaccination: Ideological Differences in Twitter Expression About COVID-19 Vaccine Favorability and specific hesitancy concerns (Jiang et al., 2021), improving VTE prophylaxis adherence among hospitalised adolescents using human-centred design (Kim et al., 2021), in 2022 he published 3 articles including To Tailor or Not to Tailor : An Investigation of Narrative Tailoring for Health Communication (Christy et al., 2022), Effects of Individuals' Cultural Orientations and Trust in Government Health Communication sources on Behavioural Intentions During a Pandemic: A Cross-country Study (Choi et al., 2024), Immunise the HPV Vaccine Rumours: Effects of Inoculation Messages and Tone of Voice on Parental Intention to Vaccinate Their Children (Park et al., 2022) and this year 2023 he wrote 2 more articles involving how motivation reduce uncertainty and predicts Covid-19 Behavioural Responses: Strategic Health Communication insights for managing an ongoing pandemic (Kim et al., 2023) and Are They Still Determining?: Analysis of Associations among Ethnicity, Gender, Socioeconomic Status, Neighbourhood Factors, and Covid-19 Vaccination(Kim et al., 2023). Meanwhile, Noar SM has the same total publications as KIM S, namely 13 articles, starting with 4 articles in 2019, 2 articles in 2020, 3 articles in 2021, 2 articles in 2022 and 2 articles in 2023. Next, NIEDERDEPPE J started with 2 articles in 2019, 2 articles in 2020, 2 articles in 2021, 2 articles in 2022 and 1 article in 2023. Next JIN Y, he started by writing 2 articles in 2019, continued 2 more articles in 2020, 1 article in 2021, 1 article in 2022 and 2 articles in 2023. Meanwhile, DUTTA MJ, just started publication in 2021 with 3 articles, 2 articles in 2022 and 2 articles in 2023 FRANCIS DB, wrote 1 article in 2019, then wrote again in 2021 with the results of his written work totalling 2 articles and increasing again in 2022 by publishing 4 articles. LAZARD AJ started writing on the topic of

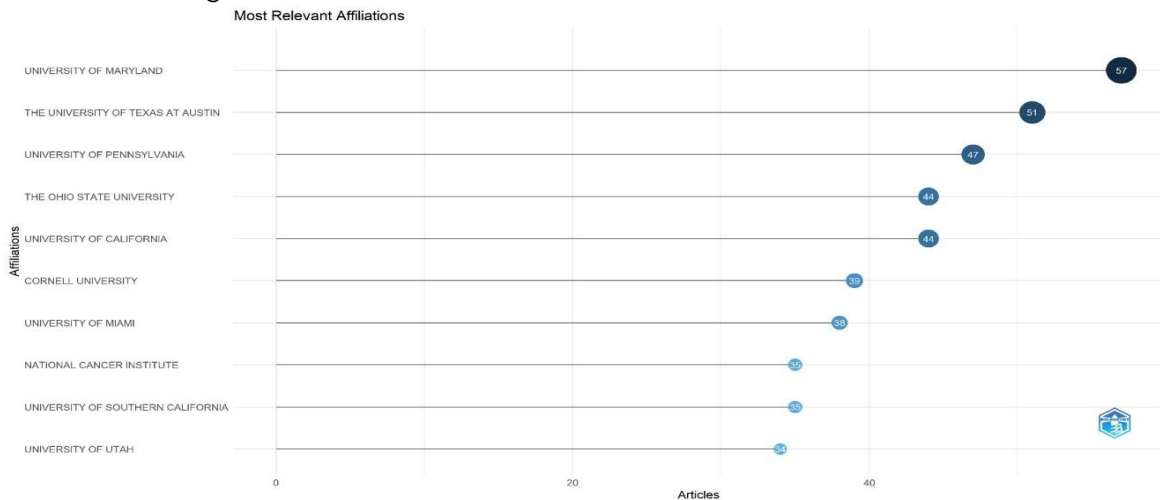
health communication in 2019 with 2 articles, in 2020 he wrote 2 articles again, in 2021 with 1 article and in 2023 with 2 articles. LI J produced 3 articles in 2020, 1 article in 2021 and 3 articles in 2023. MYRICK JG wrote 2 articles in 2019, 1 article in 2021, 3 articles in 2022, and 1 article in 2023. Lastly, KING AJ wrote 3 articles in 2020, 1 article in 2021, and 2 articles in 2022 (Figure 9).



**Figure 9.** Production of Scientific Work by the Top 10 Writers Most Relevant to Health Communication Topics from 2019-2023  
Source: Data From Bibliometric's Analysis (2024)

**Affiliate Contributions Most Relevant to Health Communication Topics**

After the discussion of the names of authors who are deemed most relevant to this topic, next we will discuss affiliations in publications related to the topic of Health communication, including the top 10 affiliates which fall into the category that produced the most number of publications related to the topic of Health communication. The first place is the University of Maryland with 57 articles. Second, The University of Texas at Austin with 51 articles. Third, the University of Pennsylvania with 47 articles. Fourth, The Ohio State University with 44 articles. Fifth, University of California with 44 articles. Sixth, Cornell University with 39 articles. Seventh, University of Miami with 38 articles. Eighth, National Cancer Institute with 35 articles. Ninth, University of Southern California with 35 articles. And finally, the University of Utah with 34 articles. The graph can be seen at Figure 10.

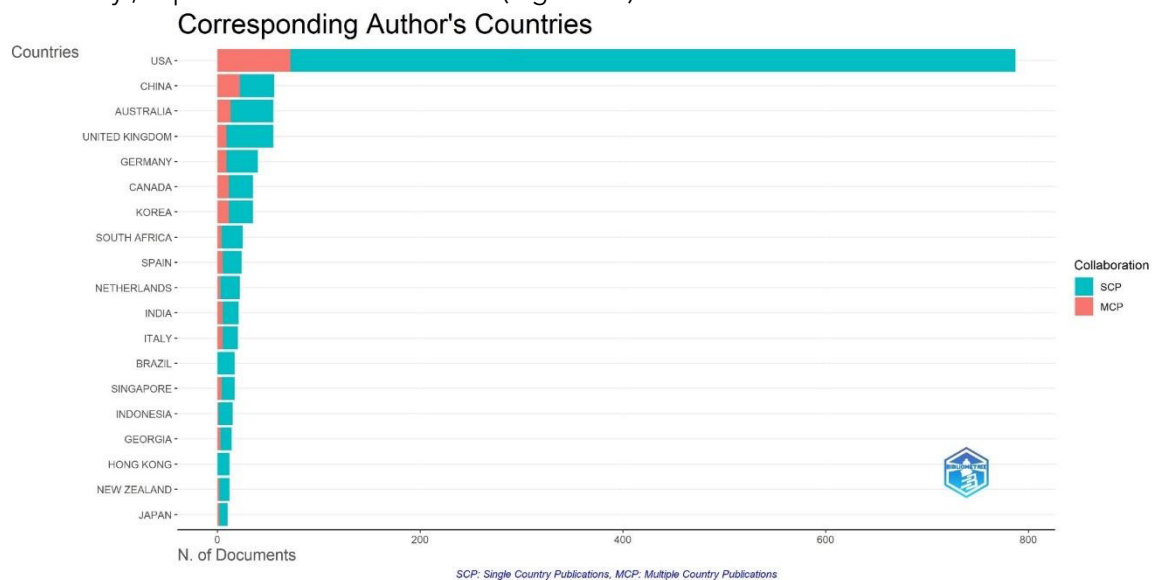


**Figure 10.** Names of Affiliates Most Relevant to Health Communication Topics  
Source: Data From Bibliometric's Analysis (2024)

**Corresponding Author's Country Contribution and Most Highly Cited**

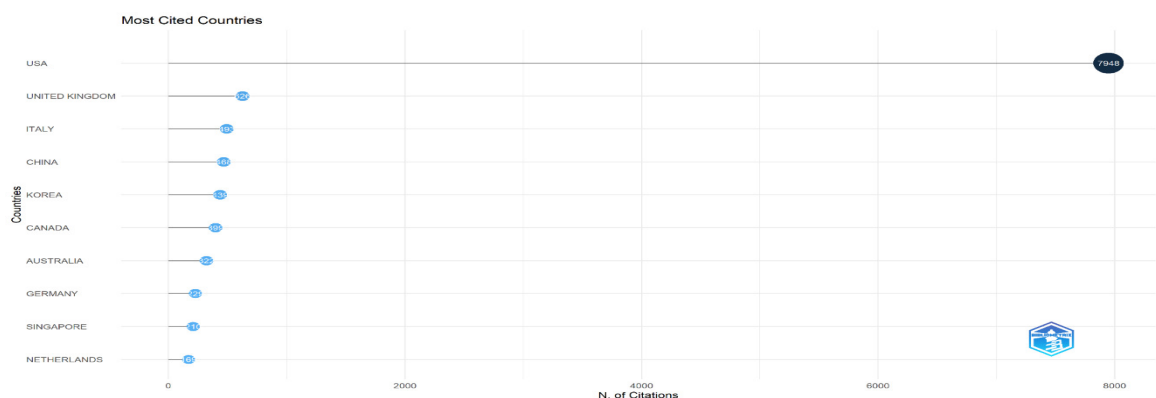
In scientific publications, one of the factors that influences the smoothness of the publication process of a scientific work is correspondence. Correspondence is defined as the connection between the paper author and the journal publisher. The author who is the corresponding author is responsible for all correspondence and article corrections. As well as being responsible for the content and legality of article submission (Darmalaksana & Suryana, 2018). The countries

of origin of the corresponding authors are sorted from first to twentieth, including: USA with a total of 787 articles, of which 715 articles are Single Country Publications (SCP), namely publications written by authors from other countries. Similarly, the remaining 72 articles are Multiple Country Publications (MCP) that indicate publications written by authors who are interested in collaborating with research groups or academics who have different country backgrounds. Next, China with 34 SCP articles, 22 MCP. Followed by Australia with 42 SCP articles, 13 MCP articles. In fourth position, United Kingdom, 46 SCP and 9 MCP. Fifth, Germany with 31 SCP and 9 MCP. Sixth, Canada with 24 SCP and 11 MCP. Seventh, Korea with 24 SCP and 11 MCP. Eighth, South Africa with 21 SCP and 4 MCP. Ninth, Spain with 19 SCP and 5 MCP. Tenth, Netherlands with 19 SCP and 3 MCP. Eleventh, India with 16 SCP and 5 MCP. Twelfth, Italy with 15 SCP and 5 MCP. Thirteenth, Brazil with 17 SCP and 0 MCP. Next, Singapore with 13 SCP and 4 MCP. Next, Indonesia with 14 SCP and 1 MCP. Followed by Georgia with 11 SCPs and 3 MCPs. Next, Hong Kong with 12 SCP and 0 MCP. Next, New Zealand with 10 SCP and 2 MCP, and Lastly , Japan with 8 SCP and 2 MCP (Figure 11).



**Figure 11.** Country Contributions from Contributing Authors  
Source: Data From Bibliometric's Analysis (2024)

While talking about citations, the countries whose writings are most cited, especially on the topic of Health Communication, include the USA with the number of citations over the last 5 years with 7948 citations. Followed by the United Kingdom with a number of 626 citations. Next is Italy with a number of 493 citations. Next is China with 468 citations. Followed by Korea with 439 citations. Next is Canada with 399 citations, Australia with 322 citations, Germany with 229 citations, Singapore with 210 citations and finally the Netherlands with 169 citations. For more details, see Figure 12.

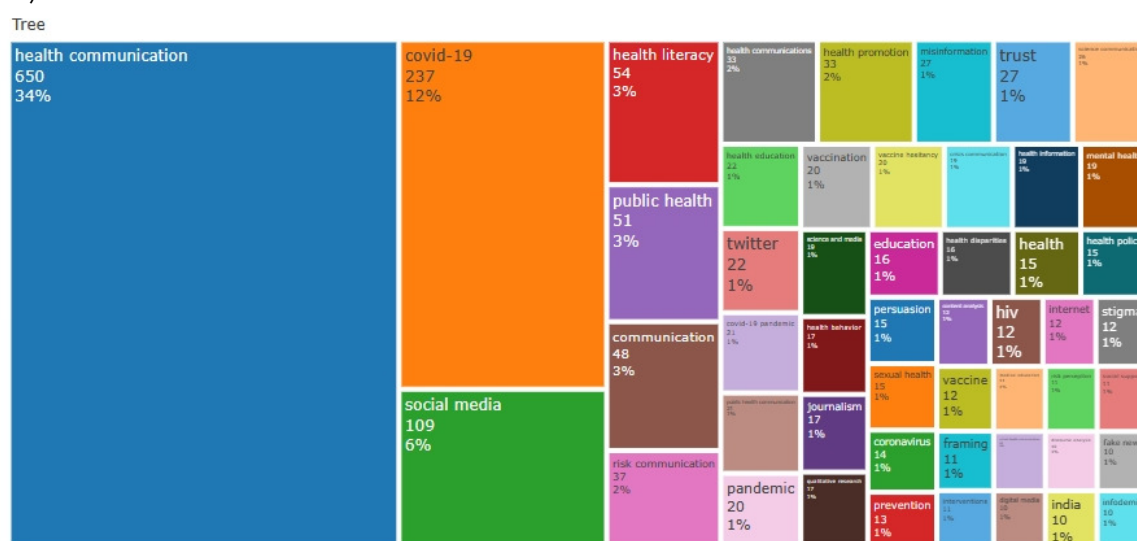


**Figure 12.** Contribution of Author Countries with the Highest Citations  
Source: Data From Bibliometric's Analysis (2024)

### Most Frequently Mentioned Keywords

Keywords are one of the most crucial elements that must be present in a scientific article. In general, authors write several keywords after writing the abstract. The keywords chosen by the authors are considered to be significant conveyors of scientific concepts, ideas and knowledge. The selection of keywords must be familiar, it requires the role of semantics and the relationship between the keywords and the descriptor attributes of the keywords (Lu et al., 2019).

As for this research, popular keywords in the topic of health communication include 'health communication' with a frequency of 650 times mentioned by the author in his article. Next is 'Covid-19' with a frequency of 237 mentions; 'Social media' with a frequency of 109 times; 'health literacy' with a frequency of 54 times; 'public health' was mentioned 51 times; 'communication' was mentioned 48 times; 'risk communication' with a frequency of 37 times; 'health communications' 33 times; 'health promotion' 33 times, and 'misinformation' 27 times (Figure 13).



**Figure 13.** Most Popular Keywords in Health Communication Topics  
Source: Data From Bibliometric's Analysis (2024)

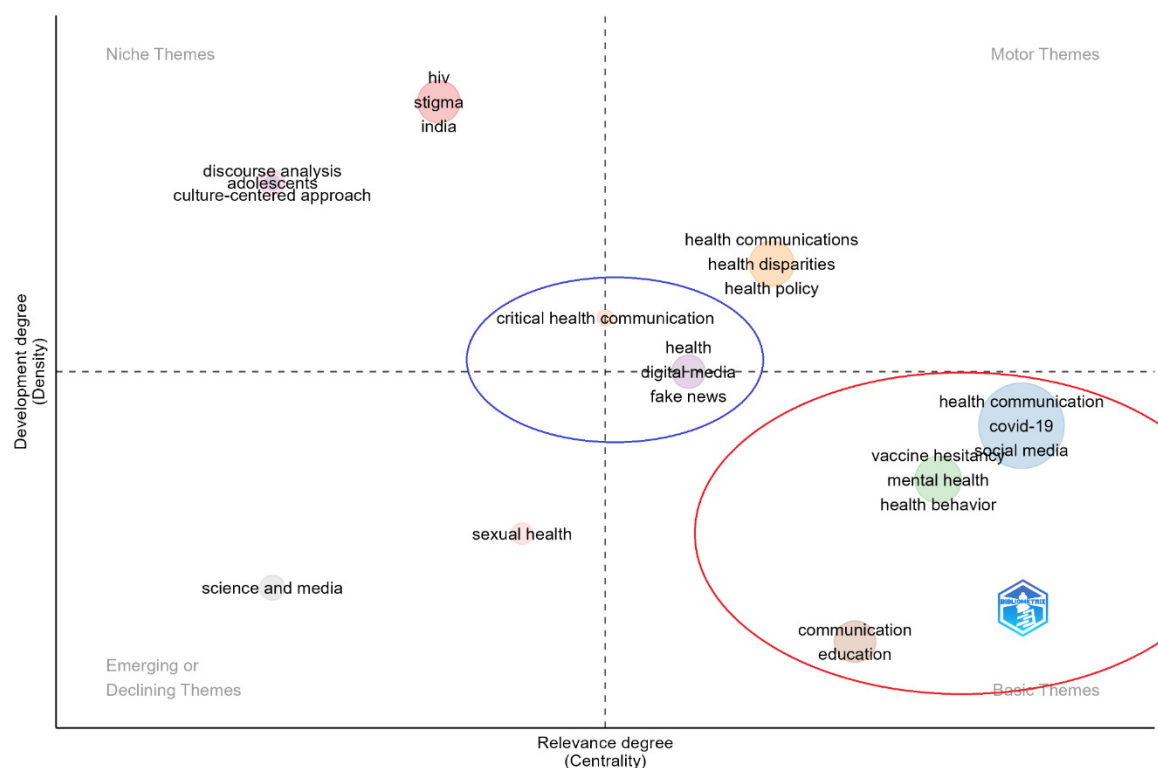
### Key Themes and Proposed Future Themes

Talking about research themes, in the Figure 14 the themes that often appear in health communication topics are divided into four rooms which are then classified based on the author's keywords. In the picture below, in room 1 they are called basic themes. Basic themes are defined as themes which are fundamental or basic in research related to the topic of health communication. The author's keywords that are included in space category or theme 1 as circled in red include: health communication, Covid-19, social media, vaccine hesitancy, mental health, health behaviour, communication, and education. Among the research titles categorised into health communication, for example research conducted by Caserotti et al in 2021 regarding Associations of COVID-19 Risk Perception with Vaccine Hesitancy Over Time for Italian residents (Caserotti et al., 2021), other research comes from Katherine J. Head et al in 2020 with the title: A National Survey Assessing SARS-CoV-2 Vaccination Intentions: Implications for Future Public Health Communication Efforts (Head et al., 2020), then research conducted by Peipei Song and Takashi Karako which discussed the importance of rapid dissemination of scientific information to the public during the Covid-19 period to reduce public panic was carried out in 2020 (Song & Karako, 2020), and there are many other studies that fall into the 'health communication' category. There are also other researches which would also fall into category 1, such as research with the keyword 'vaccine hesitancy', also, including a research conducted by Ariana Y. Lahijani et al with the title HPV Vaccine Promotion: The Church as an Agent of Change in 2021 which discussed public perceptions about HPV and HPV vaccination through FGDs with a number of leaders and members of the African Methodist Episcopal (AME) church in metro-Atlanta, Georgia (Lahijani et al., 2021). Then there was also research conducted by Brian A. Palmer et al in 2018, with the title Effect of In-Class vs. Online Education on Sexual Health Communication

Skills in First-Year Medical Students: A Pilot Study (Palmer et al., 2019), and naturally, there are many other studies that would fit into this category.

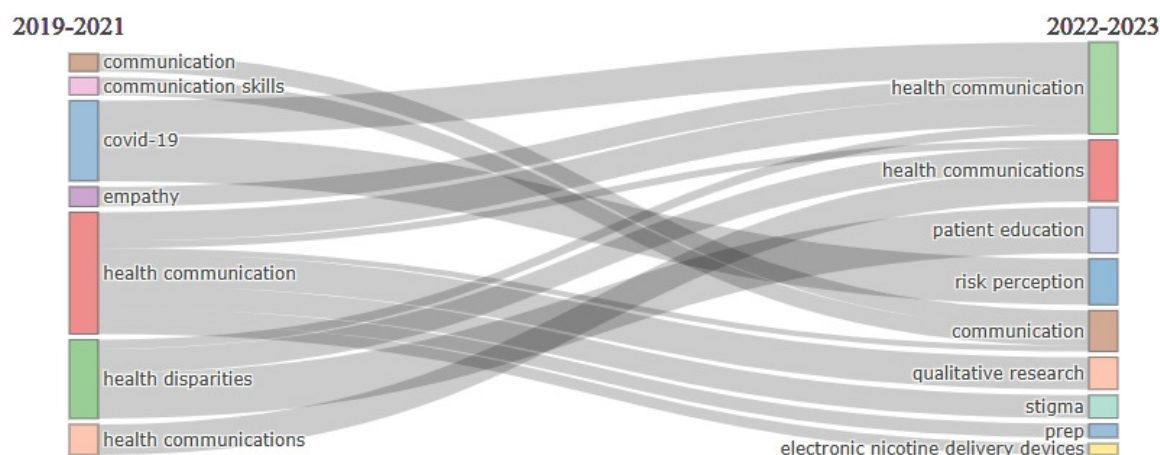
In the second room it is referred to as 'motor themes', in this room the driving themes in question are themes that encourage transformation to expand or develop this topic in the future, specifically, those that are included in the driving themes such as health communications, health disparities and health policy. Furthermore, in the third space, referred to as niche themes (special themes), special themes here refer to certain topics or subjects that are the focus of a journal. The themes that fall into the niche themes category include HIV, stigma, India, discourse analysis, adolescents and culture-centered approach. Some examples of research that fall into this category include research conducted by Tracy M. Scull et al in 2022 which discusses a program, such as media aware, a type of comprehensive web-based sexual health program for high school students with a media literacy education approach (Scull et al., 2022). There is also research discussing mother-daughter communication (around 13-16 years old) about dating and romantic relationships conducted by Laura F. Romo and Aida Hurtado in 2021 (Romo & Hurtado, 2022). Lastly, emerging or declining themes, these themes are linguistically defined as themes that sometimes appear or decline, or in other terms, it is defined as a declining theme in the study. Themes that fall into this category include science and media and sexual health.

If you refer to the four themes above, the themes that can be proposed as possible themes in the future that can be noticed through the blue circles. The themes included in the blue circle include critical health communication, health, digital media, and fake news.



**Figure 14.** Thematic Map Analysis  
Source: Data From Bibliometric's Analysis (2024)

Over the last five years, the research themes related to this topic have experienced evolution or changes during that time. For more details, the evolution of the theme from 2019-2021 to 2022-2023 can be seen in the Figure 15.



**Figure 15.** Evolution of Themes from 2019-2021 to 2022-2023  
Source: Data From Bibliometric's Analysis (2024)

## CONCLUSION

The results of scientific publications based on the theme 'health communication' on the Scopus database found 12,127 documents. These were filtered by a number of criteria and a time range spanning from 2019-2023 which obtained a total of 1,639 documents which were then analysed. From the results of the analysis using bibliometrics, a variety of data were obtained including, the most relevant sources, authors, affiliations, countries of correspondence authors, keywords, as well as key themes and proposed themes in the future which became the main part of this analysis.

Future researchers can use the most relevant sources on this topic to consider submitting articles for publication in the journal. Also, the information on relevant sources makes it easier for future researchers to find previous research. The most prolific authors were identified and their contribution to the research. Top authors, top countries and frequently occurring keywords were linked through a three-field plot.

The results also identified the most relevant affiliates, so that future researchers can decide to establish research collaborations with these institutions or affiliates. The research also identified countries that are active and passive in producing publications on this topic. Further, this research also identified a set of the most used keywords that are also interrelated with each other visualised in the form of a word cloud. The word cloud image shows that the word 'health communication' is the most used keyword, indicating that most of the research conducted in this area revolves around this key theme and focuses on various aspects around 'health communication'. A number of other important themes that emerged when talking about 'health communication' were divided into four spaces. The themes that can be proposed as future theme opportunities include critical health communication, health, digital media and fake news.

Although this analysis provides a broad overview of health communication research topics, it is not without limitations. The research is limited to English-language articles only, it only looks at the last 5 years, the subject area is in the social sciences, the source type is from journals and indexed in the Scopus database which may not include relevant studies that have been published in other languages or databases. In addition, this study did not consider the quality or impact of the research. Instead, it concentrates on the quantity of publications and citations published.

## REFERENCES

- Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959-975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Borregan-Alvarado, J., Alvarez-Meaza, I., Cilleruelo-Carrasco, E., & Garechana-Anacabe, G. (2020). A bibliometric analysis in industry 4.0 and advanced manufacturing: What about the sustainable supply chain? *Sustainability (Switzerland)*, 12(19). <https://doi.org/10.3390/SU12197840>
- Caserotti, M., Girardi, P., Rubaltelli, E., Tasso, A., Lotto, L., & Gavaruzzi, T. (2021). Associations of COVID-19 risk perception with vaccine hesitancy over time for Italian residents. *Social Science and Medicine*, 272. <https://doi.org/10.1016/j.socscimed.2021.113688>

- Choi, S. I., Kim, S., Jin, Y., Valentini, C., Badham, M., Colleoni, E., & Romenti, S. (2024). Effects of Individuals' Cultural Orientations and Trust in Government Health Communication Sources on Behavioral Intentions During a Pandemic: A Cross-Country Study. *Health Communication*, 39(1), 107-121. <https://doi.org/10.1080/10410236.2022.2159975>
- Chou, W. Y. S., & Budenz, A. (2020). Considering Emotion in COVID-19 Vaccine Communication: Addressing Vaccine Hesitancy and Fostering Vaccine Confidence. *Health Communication*, 35(14), 1718-1722. <https://doi.org/10.1080/10410236.2020.1838096>
- Christy, K. R., Minich, M., Tao, R., Riddle, K., & Kim, S. (2022). To Tailor or Not to Tailor: An Investigation of Narrative Tailoring for Health Communication. *Journal of Health Communication*, 27(3), 152-163. <https://doi.org/10.1080/10810730.2022.2068702>
- Czeisler, M., Wiley, J. F., Facer-Childs, E. R., Robbins, R., Weaver, M. D., Barger, L. K., Czeisler, C. A., Howard, M. E., & Rajaratnam, S. M. W. (2021). Mental health, substance use, and suicidal ideation during a prolonged COVID-19-related lockdown in a region with low SARS-CoV-2 prevalence. *Journal of Psychiatric Research*, 140, 533-544. <https://doi.org/10.1016/j.jpsychires.2021.05.080>
- Darmalaksana, W., & Suryana, Y. (2018). Korespondensi dalam publikasi ilmiah. *Jurnal Prespektif*, 02(01), 01-08. [www.perspektif.uinsgd.ac.id](http://www.perspektif.uinsgd.ac.id)
- Harahap, R. A., & Putra, F. E. (2020). *buku ajar komunikasi kesehatan*. Prenamedia Group.
- Haro, M., Fahmi, A., Reffita, L. I., Ningsih, N. S., Sholihat, N., Alwi, N. P., Wahyuningsih, Rosdiana, Iskandar, A. M., Permatasari, R. F., & Romainur. (2020). *Komunikasi Kesehatan*. Media Sains Indonesia.
- Head, K. J., Kasting, M. L., Sturm, L. A., Hartsock, J. A., & Zimet, G. D. (2020). A National Survey Assessing SARS-CoV-2 Vaccination Intentions: Implications for Future Public Health Communication Efforts. *Science Communication*, 42(5), 698-723. <https://doi.org/10.1177/1075547020960463>
- Hong, Y., Myung, E., & Kim, S. (2021). The substituting relationship between presumed media influence and interpersonal health communication for health prevention. *Journal of Communication in Healthcare*, 14(3), 259-268. <https://doi.org/10.1080/17538068.2021.1954411>
- Jiang, X., Su, M. H., Hwang, J., Lian, R., Brauer, M., Kim, S., & Shah, D. (2021). Polarization Over Vaccination: Ideological Differences in Twitter Expression About COVID-19 Vaccine Favorability and Specific Hesitancy Concerns. *Social Media and Society*, 7(3). <https://doi.org/10.1177/20563051211048413>
- Kim, B., Hong, S., & Kim, S. (2023). Are they still determining? Analysis of associations among ethnicity, gender, socioeconomic status, neighborhood factors, and COVID-19 vaccination. *Frontiers in Communication*, 01-09. <https://doi.org/https://doi.org/10.3389/fcomm.2023.1040797>
- Kim, S., Choi, S. I., Valentini, C., Badham, M., & Jin, Y. (2023). How Motivation to Reduce Uncertainty Predicts COVID-19 Behavioral Responses: Strategic Health Communication Insights for Managing an Ongoing Pandemic. *American Behavioral Scientist* <https://doi.org/10.1177/00027642231164051>
- Kim, S., Klugman, J., Norell, S., Kenefake, A., Komos, L., Jain, D., Corcoran, M., Montero, C., Kreppel, A., Sales, J., Porto, I., Wang, J., Hsu, L. L., & Erwin, K. (2021). Improving VTE prophylaxis adherence among hospitalized adolescents using Human-Centered Design. *Journal of Patient Safety and Risk Management*, 26(4), 172-178. <https://doi.org/10.1177/25160435211036784>
- Lahijani, A. Y., King, A. R., Gullatte, M. M., Hennink, M., & Bednarczyk, R. A. (2021). HPV Vaccine Promotion: The church as an agent of change. *Social Science and Medicine*, 268. <https://doi.org/10.1016/j.socscimed.2020.113375>
- Lee, Y. I., Zhang, Y., Jin, Y., Kim, S., Martin, E. F., & Smith, J. J. (2019). Opening the Minds' Eye: The Pivotal Role of Sympathy in Depression Coverage Effectiveness. *Communication Studies*, 70(5), 633-653. <https://doi.org/10.1080/10510974.2019.1650086>
- Liu, B. F., Austin, L., Lee, Y. I., Jin, Y., & Kim, S. (2020). Telling the tale: the role of narratives in helping people respond to crises. *Journal of Applied Communication Research*, 48(3), 328-349. <https://doi.org/10.1080/00909882.2020.1756377>
- Lu, W., Li, X., Liu, Z., & Cheng, Q. (2019). How do Author-Selected Keywords Function Semantically in Scientific Manuscripts? *Knowledge Organization*, 46(6), 403-418. <https://doi.org/10.5771/0943-7444-2019>
- Mao, B., Kim, S., & Peng, W. (2021). The Interplay between Message Framing and Message Recipients' Regulatory Focus in Promoting HPV Prevention Strategies. *Journal of Health Communication*, 26(2), 92-103. <https://doi.org/10.1080/10810730.2021.1895918>
- McFarlane, S. J., Kim, S., Kirch Schneider, K., & Dubey, S. (2019). Cultural factors influencing teenage pregnancy in Jamaica. *Culture, Health and Sexuality*, 21(8), 929-945. <https://doi.org/10.1080/13691058.2018.1529333>
- Nuryana, Z., Xu, W., & Lu, S. (2023). Developing self-esteem-based curriculum as a foundation for sustainable education: A systematic literature review and bibliometric analysis. In *Frontiers in Education*, 8, 01-15. <https://doi.org/10.3389/feduc.2023.957801>
- Occa, A., Kim, S., Carcioppolo, N., Morgan, S. E., & Anderson, D. (2020). A Comparison of Metaphor Modality and Appeals in the Context of Skin Cancer Prevention. *Journal of Health Communication*, 25(1), 12-22. <https://doi.org/10.1080/10810730.2019.1694607>
- Palmer, B. A., Lee, J. H., Somers, K. J., Swintak, C. C., Rullo, J., Bright, R. P., Michael Bostwick, J., Frye, M. A., & Sperry, J. A. (2019). Effect of In-Class vs Online Education on Sexual Health Communication Skills in First-Year Medical Students: a Pilot Study. *Academic Psychiatry*, 43(2), 175-179. <https://doi.org/10.1007/s40596-018-0949-8>
- Park, E. H., Kim, S., & Cameron, G. T. (2022). Immunize the HPV Vaccine Rumors: Effects of Inoculation Messages and Tone of Voice on Parental Intention to Vaccinate Their Children. *Journal of Community Health*, 47(5), 790-799. <https://doi.org/10.1007/s10900-022-01100-9>
- Rahmadiana, M. (2012). Komunikasi kesehatan : sebuah tinjauan\*. In *Jurnal Psikogenesis*, 1(1), 88-94.
- Ribeyre. (1953). European Community of Health; Communication from the Minister of Public Health. *Prophyl Sanit Morale* 25(1), 5-12.
- Romo, L. F., & Hurtado, A. (2022). "Know your worth and play it safe:" messages to daughters from Mexican-origin mothers in conversations about dating and romantic relationships. *Culture, Health and Sexuality*, 24(6), 812-826. <https://doi.org/10.1080/13691058.2021.1887523>

- Scull, T. M., Dodson, C. V., Geller, J. G., Reeder, L. C., & Stump, K. N. (2022). A Media Literacy Education Approach to High School Sexual Health Education: Immediate Effects of Media Aware on Adolescents' Media, Sexual Health, and Communication Outcomes. *Journal of Youth and Adolescence*, 51(4), 708-723. <https://doi.org/10.1007/s10964-021-01567-0>
- Setyaningsih, I., Indarti, N., & Jie, F. (2018). Bibliometric analysis of the term 'green manufacturing. *Int. J. Management Concepts and Philosophy*, 11(3), 315-339.
- Song, P., & Karako, T. (2020). COVID-19: Real-time dissemination of scientific information to fight a public health emergency of international concern. *BioScience Trends*, 14(1). <https://doi.org/10.5582/BST.2020.01056>