

# Community Advisory Boards: A Bibliometrics Analysis and Future Research Directions

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## Abstract

Community Advisory Boards (CABs) play a vital role in ensuring community representation and engagement in research, particularly in the context of health and social sciences. This bibliometrics analysis delves into the existing literature on CABs to assess the current state of research, identify authors and institutions, and uncover potential research avenues. A search for articles on the topic was performed in the Web of Science (WoS) database, which is a global, publisher-independent citation database. The search identified a total of 240 relevant documents and the collected data was analyzed using a bibliometric tool called Bibliometrix. The main results are presented and discussed, followed by some potential avenues for research.

## Keywords

Community Engagement, Community Representatives, Community-Based Participatory Research, Collaborations, Community Advisory Board

## 1. Introduction

CABs are increasingly promoted in international research guidelines to protect communities from exploitation and harm (Nyirenda et al., 2018). Initially, CABs were introduced in HIV/AIDS research to strengthen the representation of people affected by or living with HIV/AIDS in research planning and implementation (Lawrence & Stewart, 2016). The roles of CABs in health research include reviewing study protocols and informed consent forms, representing community concerns, advocating for the rights of research participants to provide advice, identi-

fyng research priorities, assisting in the development of study materials, study design, and implementation (Cramer et al., 2018; Newman et al., 2011; Maung Lwin et al., 2014; Mlambo et al., 2019; Nyirenda et al., 2018; Ortega et al., 2018; Pratt et al., 2015; Yuan et al., 2020; Zhao et al., 2019). CABs provide an infrastructure for community members to voice concerns and priorities that otherwise might not enter into the research agenda and advise about the suitable research process that is respectful of and acceptable to the community (Newman et al., 2011).

Numerous studies have highlighted the multifaceted roles played by CABs in fostering project success. One significant role is their function as a link between the research team and the community, enabling the exchange of knowledge and information (Minkler et al., 2008). Through this linkage, CABs bridge the gap between researchers and community members, facilitating mutual understanding and collaboration. They play a crucial role in ensuring that the community's health issues and concerns are effectively conveyed to the research team (Israel et al., 2010). Furthermore, CABs serve as the collective voice of the people, advocating for community interests and ensuring that projects are aligned with community needs and aspirations (Minkler et al., 2008). Their active involvement in project design and implementation allows them to express community perspectives, which significantly contribute to tailoring projects to local contexts and enhancing their relevance and impact (Israel et al., 2010). CAB also provides invaluable feedback on various aspects of public projects, drawing on their unique community perspectives and experiences (Minkler et al., 2008). Their input helps to refine project ideas and design, improving the overall effectiveness and appropriateness of interventions. By actively participating in decision-making processes, CABs contribute to the continuous improvement and adaptation of projects over time (Israel et al., 2010).

Moreover, the support offered by CABs throughout the project lifecycle is critical to its success (Minkler et al., 2008). Their dedication and commitment ensure the continuity and sustainability of projects, leading to long-term positive outcomes. Community members' active involvement in project support activities fosters a sense of ownership and empowerment, strengthening project implementation and impact (Israel et al., 2010).

Additionally, CABs play a pivotal role in mobilizing and involving community members in the project and future CAB activities (Minkler et al., 2008). Through their efforts, CABs help to expand the participant pool, ensuring diverse representation and perspectives. This community involvement fosters a sense of collective responsibility and shared ownership, which is instrumental in ensuring project success and sustainability (Israel et al., 2010).

This study aims to conduct a bibliometric analysis and identify research directions regarding Community Advisory Boards (CABs). Understanding the significance and impact of CABs is crucial for various stakeholders, including researchers, policymakers, and community organizations. By analyzing the existing literature on CABs, we can gain insights into the current state of research,

identify knowledge gaps, and highlight areas for further exploration. The current study will contribute to the debate on CAB. More specifically, our study builds on both prior literature review and bibliometric papers on the CAB to answer the following research questions:

- What is the current level of research in the CAB?
- Who are the most productive authors in the CAB?
- Who are the most-cited authors in the CAB?
- Which are the most productive institutions, countries, and journals outlets in the CAB?
- What are the potential research avenues on the CAB?

By identifying future research directions, this study can guide scholars in focusing their efforts on areas that have received less attention or require further investigations, ultimately advancing our understanding of CABs and their potential contributions to community engagement decision-making processes. In order to address these research questions, the paper draws on a bibliometric analysis of data on CAB extracted from the Web of Science (WoS) database. The rest of this paper is organized as follows.

## 2. Methodology

Our study aims to assess the current state of knowledge creation on Community Advisory Boards (CABs) and for this purpose, we have adopted a bibliometric approach. Bibliometrics involves measuring various elements associated with the publication and readership of books and papers (Trinidad et al., 2021). This research methodology is well-suited for evaluating the status of a specific discipline by utilizing indicators such as the most influential journals, publications, authors, institutions, and countries. Additionally, it allows for the assessment of collaborative networks among authors, institutions, and countries. By employing this approach, we can analyze a substantial volume of published data at both macroscopic and microscopic levels. Previous studies have successfully applied this research method to examine various fields and domains, including entrepreneurship and ethics (Vallaster et al., 2019), operations research and management science (Merigó & Yang, 2017), diffusion of innovation (van Oorschot et al., 2018). Building upon these prior studies, our research aims to investigate the current level of knowledge development on CABs.

### Database Selection

To conduct our bibliometric study, we retrieved data from the Web of Science (WoS) database, which is a renowned publisher-independent global citation database. With its robust research engine, WoS can track content across various disciplines and time, encompassing over 1.7 billion cited references from more than 159 million records (Singh et al., 2021). On May 25<sup>th</sup>, 2023, we performed a search within the WoS database using a combination of specific keywords: “Community advisory boards\*”, “community engagement boards\*”, “public ad-

visory boards\*”, “community advisory committees\*”, and “public participation committees\*”. This search yielded 240 relevant documents, which were selected for further analysis using a bibliometric tool called Bibliometrix (Aria & Cuccurullo, 2017). In particular, we utilized the biblioshiny interface of Bibliometrix, an R-tool that enables comprehensive science mapping analysis (Aria & Cuccurullo, 2017).

### 3. Results

In the sections below, we will present and discuss the key findings from our bibliometric analysis.

#### 3.1. Main Information

**Table 1** shows the primary information about the dataset extracted from WoS containing papers dealing with CAB. The table provides a range of interesting information. For example, we can see that most documents are articles (240, in which 208 are articles, 6 early access articles, 7 editorial material, 5 letter, 5 meeting abstract, 12 reviews and 1 review: early access). The table provides valuable insights into the characteristics and content of the dataset under consideration.

Regarding the main information about the data, **Table 1** covers a substantial timespan from 1993 to 2023. This long duration allows for an analysis of trends and developments over time. The data is derived from 144 different sources, indicating a diverse range of publications, including journals and books. The dataset comprises a total of 240 documents, showing a positive annual growth rate of 7.6%, indicating an increasing body of research in the field. The average age of the documents is 6.53 years, suggesting that the dataset includes both recent and older publications. Additionally, the average citations per document are relatively high at 24.95, indicating the potential impact and relevance of the research included in the dataset.

The document contents reveal the presence of a substantial number of keywords. The dataset contains 650 Keywords Plus (ID) and 624 Author’s Keywords (DE), reflecting the breadth and depth of topics covered in the research.

The author-related information highlights the involvement of numerous researchers in the field. The dataset includes 1679 unique authors, indicating a wide range of contributors. Interestingly, 14 documents are single-authored, implying the presence of individual research efforts. However, the majority of documents have multiple authors, with an average of 8.32 co-authors per document. This suggests a strong emphasis on collaboration and interdisciplinary approaches in the field. Furthermore, approximately 31.67% of the co-authorships involve international collaborations, indicating a global perspective in the research endeavors. The dataset encompasses various types of documents, including articles, editorial material, letters, meeting abstracts, and reviews. This diverse range of document types suggests a comprehensive examination of the research area, encompassing original studies, discussions, and critical evaluations.

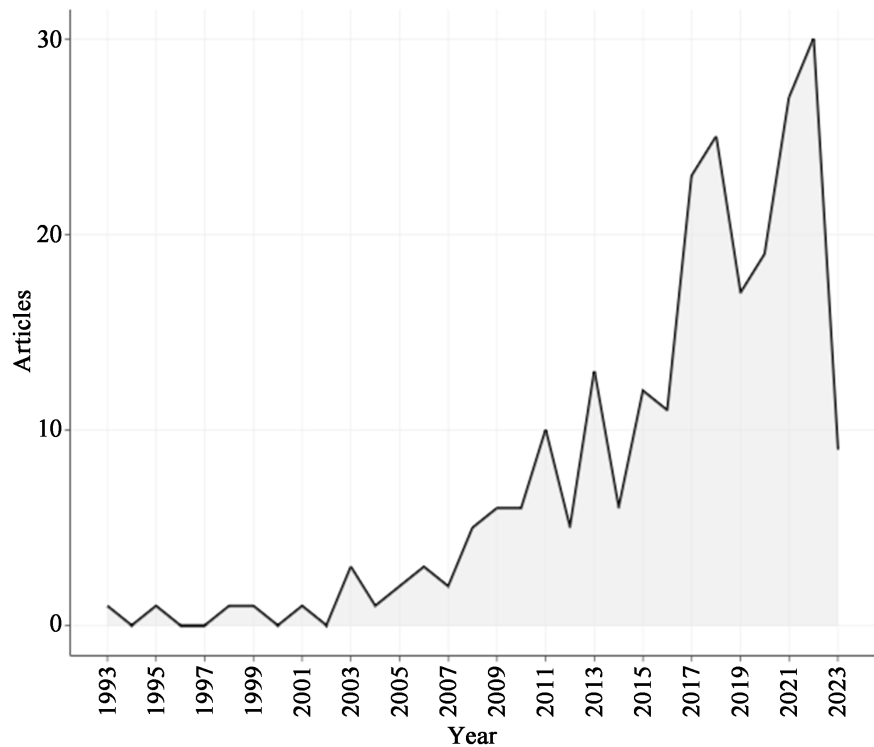
**Table 1.** Main information about the data.

Description	Results
Timespan	1993:2023
Sources (Journals, Books, etc.)	144
Documents	240
Annual Growth Rate %	7.6
Document Average Age	6.53
Average citations per doc	24.95
References	1
DOCUMENT CONTENTS	
Keywords Plus (ID)	650
Author's Keywords (DE)	624
AUTHORS	
Authors	1679
Authors of single-authored docs	14
AUTHORS COLLABORATION	
Single-authored docs	15
Co-Authors per Doc	8.32
International co-authorships %	31.67
DOCUMENT TYPES	
article	204
article; early access	6
editorial material	7
letter	5
meeting abstract	5
review	12
review; early access	1

Overall, the information provided in the table highlights the breadth, depth, and collaborative nature of the research covered in the dataset. The extensive timespan, diverse sources, and substantial number of authors contribute to the richness of the dataset. These findings indicate that the dataset is a valuable resource for understanding the trends, developments, and interdisciplinary nature of the research area under investigation.

### 3.2. Annual Scientific Production

**Figure 1** represents the yearly scientific production of articles on CAB from



**Figure 1.** Yearly scientific production.

1993 to 2023. We can see the number of articles published per year varies throughout the year including fluctuations in research activity and publication output in the field. It shows that, in the earlier years (1993-2002), the number of articles published per year is generally low, with several years having no publications at all. Starting from 2003, there is an upward trend in the number of articles published per year, indicating a growing interest and activity in research. The number of articles steadily increases until reaching its peak in 2022 with 30 articles. The years with the highest number of articles published are 2017 (23 articles), 2018 (25 articles), 2020 (19 articles), and 2021 (27 articles). These years likely represent periods of increased research productivity or significant developments in the field. It is noteworthy that there are fluctuations in the number of articles published from year to year, with some years showing higher variations compared to others. This could be influenced by factors such as funding availability, emerging research trends, or specific events or breakthroughs in the field. The number of articles published in 2023 is 9, which indicates that the data collection or observation period may not have covered the entire year. Therefore, it is important to consider this incomplete data when analyzing the overall publication trends.

### 3.3. Most Relevant Sources

Regarding the top 10 most relevant sources **Table 2** shows that, PROGRES IN COMMUNITY HEALTH PARTNERSHIPS-RESEARCH EDUCATION AND ACTION stands out as the top contributor with 13 articles listed. It indicates a

strong presence in the field and a commitment to promoting community health partnerships through research and education. BMC MEDICAL ETHICS With 12 articles listed, this source ranks second in terms of the number of articles. It focuses on medical ethics, suggesting a significant interest in exploring ethical issues and considerations within the medical field. Other sources have less than 10 articles.

### 3.4. Source Local Impact

Regarding the source local impact, **Table 3** shows that BMC Medical Ethics has

**Table 2.** Top 10 most relevant source.

Sources	Articles
PROGRESS IN COMMUNITY HEALTH PARTNERSHIPS-RESEARCH EDUCATION AND ACTION	13
BMC MEDICAL ETHICS	12
AIDS AND BEHAVIOR	6
LANCET	6
JOURNAL OF CLINICAL AND TRANSLATIONAL SCIENCE	5
JOURNAL OF EMPIRICAL RESEARCH ON HUMAN RESEARCH ETHICS	5
JOURNAL OF THE INTERNATIONAL AIDS SOCIETY	5
PLOS ONE	5
AIDS PATIENT CARE AND STDS	4
AMERICAN JOURNAL OF PUBLIC HEALTH	4

**Table 3.** Top 10 source local impact.

Element	h_index	g_index	m_index	TC	NP	PY_start
BMC MEDICAL ETHICS	8	11	0.727	198	11	2013
PROGRESS IN COMMUNITY HEALTH PARTNERSHIPS-RESEARCH EDUCATION AND ACTION	7	11	0.538	129	13	2011
AIDS AND BEHAVIOR	5	6	0.556	107	6	2015
AIDS PATIENT CARE AND STDS	4	4	0.333	86	4	2012
AMERICAN JOURNAL OF PUBLIC HEALTH	4	4	0.174	379	4	2001
JAIDS-JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES	4	4	0.19	98	4	2003
LANCET HIV	4	4	0.8	115	4	2019
PLOS ONE	4	5	0.571	101	5	2017
BMC MEDICAL RESEARCH METHODOLOGY	3	3	0.231	39	3	2011
JOURNAL OF EMPIRICAL RESEARCH ON HUMAN RESEARCH ETHICS	3	4	0.2	52	4	2009

a moderate h-index of 8, indicating that it has published at least 8 papers that have received 8 or more citations each. The g-index of 11 suggests a relatively high impact, considering both the number of articles and their citations. The m-index of 0.727 indicates that, on average, each paper published by the journal has received approximately 0.727 citations. With a total of 198 citations and 11 papers published since its start in 2013, this journal seems to have gained recognition in the field of medical ethics within a relatively short period. Progress in Community Health Partnership—Research Education and Action has an h-index of 7, indicating a good impact with several highly cited papers. The g-index of 11 suggests that the journal has published a considerable number of articles with notable citations. The m-index of 0.538 represents a moderate average citation rate per paper. With 129 total citations and 13 papers published since its start in 2011, this journal has made a significant contribution to community health partnerships research and education. AIDS and BEHAVIOR has an h-index of 5, suggesting a moderate impact in the field of AIDS-related behavioral research. The g-index of 6 indicates that the journal has published a relatively smaller number of articles compared to others on the list but with notable citations. The m-index of 0.556 represents a relatively high average citation rate per paper. Since its start in 2015, the journal has received a total of 107 citations for its 6 published papers. AIDS PATIENT CARE AND STDS has an h-index of 4, indicating a moderate impact with a smaller number of highly cited papers. The g-index of 4 suggests a relatively lower number of articles compared to other journals, but with citations to support their impact. The m-index of 0.333 indicates a moderate average citation rate per paper. Since its start in 2012, the journal has accumulated 86 citations for its 4 published papers. AMERICAN JOURNAL OF PUBLIC HEALTH has an h-index of 4, suggesting a moderate impact with a few highly cited paper.

### 3.5. Source Dynamics

**Figure 2** shows the source growth dynamics on CAB published in the WoS database. The Figure represents the number of publications (articles) in various journals for each year from 1993 to 2023. In the earlier years (1993-1999), there were no publications in any of the journals listed. From 2009 onwards, there is an increasing number of publications in most of the journals. Progress in Community Health Partnerships-Research Education and Action” and “LANCET” have consistently shown a gradual increase in publications over the years. BMC Medical Ethics” and “Aids and Behavior” have seen a steady increase in publications, but the numbers are relatively lower compared to other journals. Journal of Clinical and Translational Science”, “Journal of Empirical Research on Human Research Ethics”, “Journal of the International Aids Society”, and “PLOS ONE” have varied publication counts but generally show an upward trend. PLOS ONE has the highest number of publications among the listed journals. The number of publications across all journals seems to stabilize from 2022



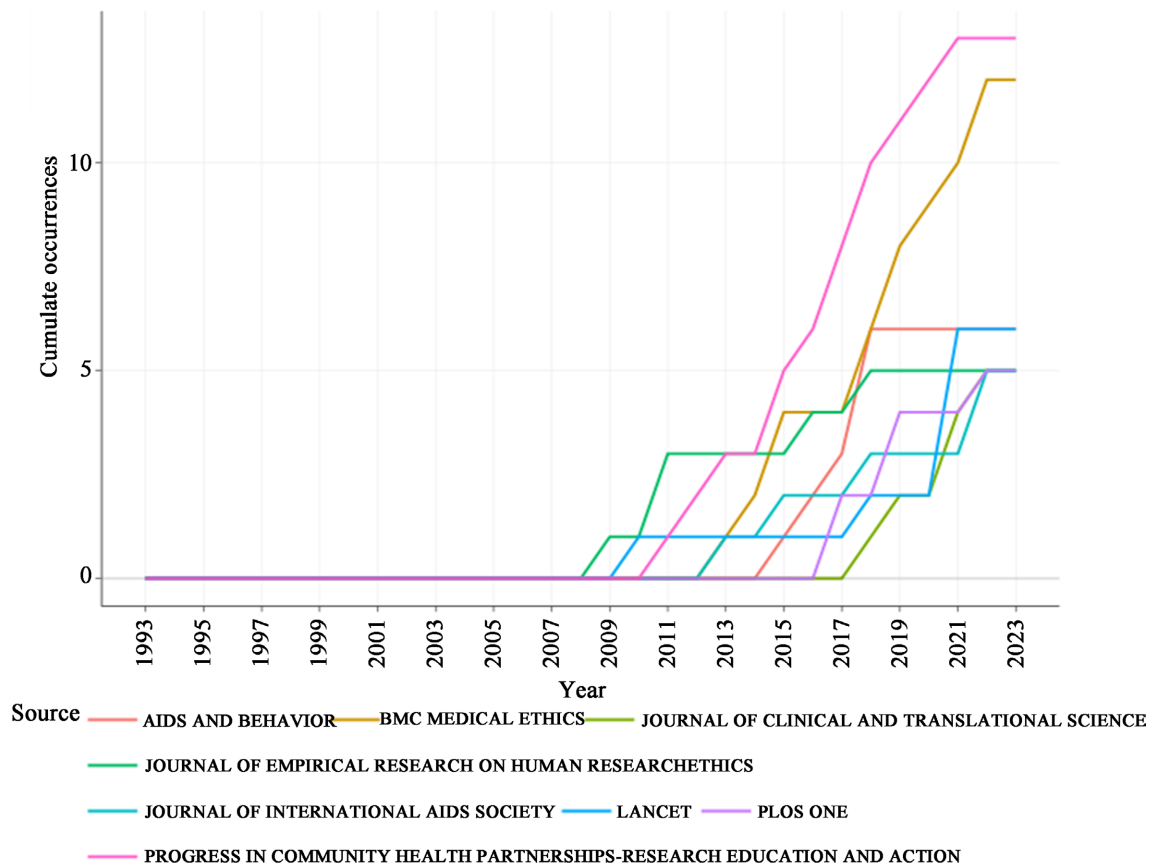


Figure 2. Source dynamics.

onwards, with no further increase in the number of publications.

### 3.6. Bradford Law

Bradford's law is a bibliometric principle that suggests a pattern in the distribution of scientific literature across different journals or information sources. According to Bradford's law, the cumulative frequency of articles in a given field can be divided into three zones; Zone 1, 2 and 3. The number of journals in each zone follows a logarithmic distribution. Table 4 shows that, the top ranked journal in the entire list is "Progress in Community Health Partnerships-Research Education and Action", with a frequency of 13 articles. The top two journals in Zone 1 are "Progress in Community Health Partnerships-Research Education and Action" and "BMC Medical Ethics" with frequencies of 13 and 12 articles, respectively. The cumulative frequency column shows the total number of articles up to that particular journal. For example, in Zone 1, the cumulative frequency increases from 13 (for the top-ranked journal) to 37 (for the fourth-ranked journal). The rankings and frequencies continue to decrease as you move from Zone 1 to Zone 3, indicating a wider scattering of articles across a larger number of journals.

### 3.7. Most Relevant Authors

Regarding the most relevant authors, Table 5 shows that, De Pokomandy A.,

**Table 4.** Distribution of scientific literature.

SOURCES	Rank	Freq	cumFreq	Zone
PROGRESS IN COMMUNITY HEALTH PARTNERSHIPS-RESEARCH EDUCATION AND ACTION	1	13	13	Zone 1
BMC MEDICAL ETHICS	2	12	25	Zone 1
AIDS AND BEHAVIOR	3	6	31	Zone 1
LANCET	4	6	37	Zone 1
JOURNAL OF CLINICAL AND TRANSLATIONAL SCIENCE	5	5	42	Zone 1
JOURNAL OF EMPIRICAL RESEARCH ON HUMAN RESEARCH ETHICS	6	5	47	Zone 1
JOURNAL OF THE INTERNATIONAL AIDS SOCIETY	7	5	52	Zone 1
PLOS ONE	8	5	57	Zone 1
AIDS PATIENT CARE AND STDS	9	4	61	Zone 1
AMERICAN JOURNAL OF PUBLIC HEALTH	10	4	65	Zone 1

**Table 5.** Top 10 most relevant authors.

Authors	Articles	Articles Fractionalized
DE POKOMANDY A	13	0.97
KAIDA A	13	0.97
LOUTFY M	12	0.89
O'BRIEN N	7	0.35
WEBSTER K	7	0.44
CARTER A	6	0.37
CONWAY T	6	0.42
NICHOLSON V	6	0.25
SEREDA P	6	0.43
TUCKER JD	6	0.76

and Kaida A., are ranked number one with 13 articles and fractionalized value of 0.97 which means that approximated 97% of their articles have been fractionalized or distributed. Loutfy M., is ranked number 3 with 12 articles and fractionalized values of 0.97. Other authors have less than 10 articles.

### 3.8. Author Production over Time

**Table 6** shows varying levels of author productivity over the years. In 2017, Carter A published the highest number of articles (3), contributing significantly to their total count (TC) of 93 articles. This indicates a productive year for Carter A. In contrast, 2019 saw a decrease in productivity with only 1 article published. The TC per year (TCpY) metric helps assess the average annual productivity of the author. Carter A's TCpY ranges from 1.6 to 13.286, indicating fluctuating productivity levels. De Pokomandy A demonstrates a different pattern compared to Cart-

er A and Conway T. The author had a productive year in 2013 with 1 article contributing to a high TC of 60. In 2015, another article was published, adding to a TC of 18. The TCpY for De Pokomandy A is 5.455 in 2013 and 2 in 2015, indicating a consistent level of productivity across the years considered.

### 3.9. Author Impact

Regarding the author impact, **Table 7** shows that De Pokomandy A., and Kaida A, have an h-index of 8, which means they have published at least 8 papers that have received 8 or more citations. De Pokomandy A., and Kaida A have an m-index of 0.727, suggesting a relatively balanced ratio between their publication count and citation received. De Pokomandy A., and Kaida A have TC of 259, indicating that they have each authored 259 papers. They both started publishing in 2013.

**Table 6.** Author production over time.

Author	year	freq	TC	TCpY
CARTER A	2015	1	18	2
CARTER A	2017	3	93	13.286
CARTER A	2018	1	32	5.333
CARTER A	2019	1	8	1.6
CONWAY T	2015	1	18	2
CONWAY T	2017	2	36	5.143
CONWAY T	2018	1	2	0.333
CONWAY T	2019	2	15	3
DE POKOMANDY A	2013	1	60	5.455
DE POKOMANDY A	2015	1	18	2

**Table 7.** Author impact.

Element	h_index	g_index	m_index	TC	NP	PY_start
DE POKOMANDY A	8	13	0.727	259	13	2013
KAIDA A	8	13	0.727	259	13	2013
LOUTFY M	7	12	0.778	199	12	2015
O'BRIEN N	7	7	0.636	209	7	2013
CARTER A	6	6	0.667	151	6	2015
WEBSTER K	6	7	0.857	119	7	2017
CONWAY T	5	6	0.556	71	6	2015
DING E	5	5	0.714	110	5	2017
NICHOLSON V	5	6	0.556	122	6	2015
PICK N	5	5	0.714	62	5	2017

### 3.10. Affiliations

Regarding the top most affiliations, **Table 8** shows that Univ Toronto emerges as the top affiliation with 43 articles listed. This indicates a strong research presence and productivity from researchers affiliated with this institution. The University of North Carolina (UNC) ranks second with 34 articles listed. UNC's significant contribution to research is evident from the number of articles published, highlighting its research output and impact in various fields. With 30 articles listed, the University of Washington is another notable contributor. It showcases the institution's active involvement in research and its commitment to generating knowledge across diverse disciplines. McGill University, with 26 articles listed, demonstrates its research excellence and productivity. As one of Canada's leading universities, McGill contributes significantly to the scientific literature through its research output.

### 3.11. Corresponding Author's Country

Regarding the top most authors corresponding countries, **Table 9** and **Figure 3** shows that the USA has the highest number of articles with 151 publications, indicating a strong research output from American institutions and researchers. Followed by Canada with 23 articles listed, indicating a relatively smaller research output compared to the USA and South Africa has 11 articles listed, indicating a smaller research output compared to the USA and Canada. Other countries have less than 10 articles.

### 3.12. Most Global Cited Documents

Regarding the most global cited global cited documents **Table 10** shows that Karim QA, 2010 has received the high citation with 1521 count suggests that it is a seminal work with substantial influence in its respective field. VANGAY P, 2018, CELL has garnered 346 citations, indicating its significant impact within the

**Table 8.** Top 10 Most relevant affiliation.

Affiliation	Articles
UNIV TORONTO	43
UNIV N CAROLINA	34
UNIV WASHINGTON	30
MCGILL UNIV	26
LONDON SCH HYG AND TROP MED	17
SIMON FRASER UNIV	17
UNIV PITTSBURGH	16
UNIV MINNESOTA	14
MAYO CLIN	13
UNIV WITWATERSRAND	13

**Table 9.** Top most authors corresponding countries.

Country	Articles	SCP	MCP	Freq	MCP_Ratio
USA	151	115	36	0.629	0.238
CANADA	23	20	3	0.096	0.13
SOUTH AFRICA	11	4	7	0.046	0.636
AUSTRALIA	7	5	2	0.029	0.286
UNITED KINGDOM	7	0	7	0.029	1
	6	4	2	0.025	0.333
UGANDA	4	2	2	0.017	0.5
BURKINA FASO	3	1	2	0.013	0.667
GERMANY	3	2	1	0.013	0.333
KENYA	3	2	1	0.013	0.333
NIGERIA	3	1	2	0.013	0.667
TANZANIA	3	2	1	0.013	0.333
ZAMBIA	3	0	3	0.013	1
CHINA	2	0	2	0.008	1
GHANA	2	0	2	0.008	1
NETHERLANDS	2	1	1	0.008	0.5
BRAZIL	1	0	1	0.004	1
INDIA	1	1	0	0.004	0
IRELAND	1	1	0	0.004	0
MALAWI	1	1	0	0.004	0
NEW ZEALAND	1	1	0	0.004	0
PORTUGAL	1	1	0	0.004	0
SWAZILAND	1	0	1	0.004	1

scientific community. CHES C, 1999, ENVIRON SCI TECHNOL is in third position with a total citation count of 300, this document published in Environmental Science & Technology has also received substantial recognition.

### 3.13. Most Local Cited Documents

**Table 11** shows the list of most local cited documents ranging from 1993 to 2005. Of the Most documents have not received any local citations, as indicated by the “Local Citations” column. The “Global citations” column shows that some documents have received a notable number of citations from global sources, ranging from 2 to 300 citations. The LC/GC ration is 0% for all documents, suggesting that the local citations are minimal or non-existent compared to the global citations. The normalized local citations and normalized global citations are provided for comparison within the context of this table.

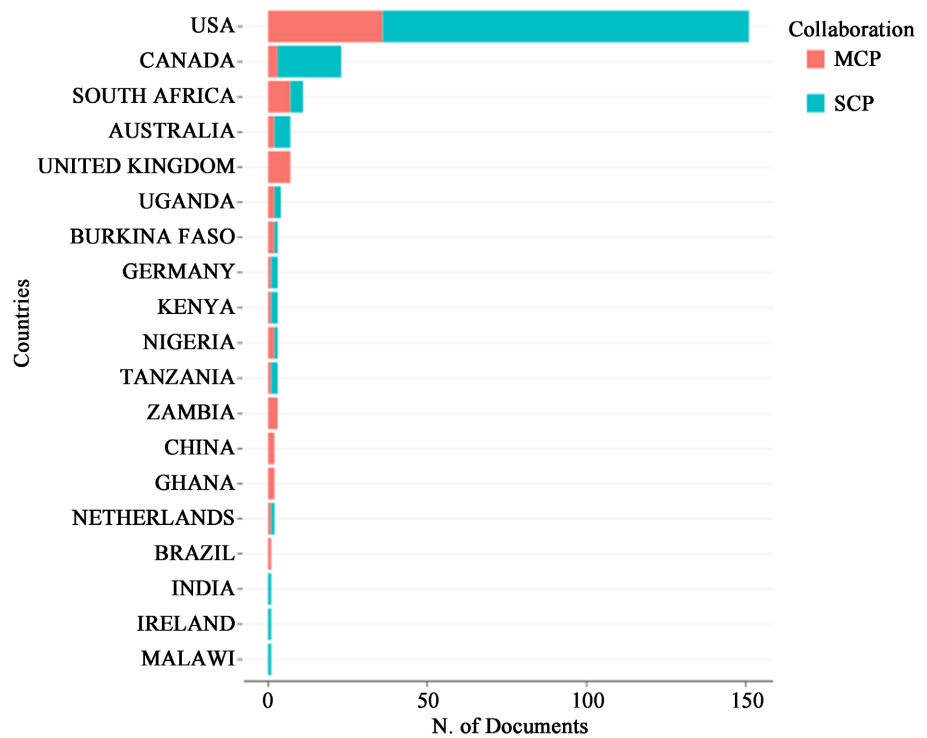


Figure 3. Top most authors corresponding countries.

Table 10. Most global cited documents.

Paper	DOI	Total Citations	TC per Year	Normalized TC
KARIM QA, 2010, SCIENCE	10.1126/science.1193748	1521	108.64	5.42
VANGAY P, 2018, CELL	10.1016/j.cell.2018.10.029	346	57.67	13.49
CHESS C, 1999, ENVIRON SCI TECHNOL	10.1021/es980500g	300	12.00	1.00
STRAUSS RP, 2001, AM J PUBLIC HEALTH	10.2105/AJPH.91.12.1938	154	6.70	1.00
AMPLEMAN MD, 2015, ENVIRON SCI TECHNOL	10.1021/es5048039	124	13.78	4.28
LINGAPPA JR, 2010, LANCET	10.1016/S0140-6736(09)62038-9	113	8.07	0.40
QUINN SC, 2004, AM J PUBLIC HEALTH	10.2105/AJPH.94.6.918	95	4.75	1.00
WOODSONG C, 2005, AM J PUBLIC HEALTH	10.2105/AJPH.2004.041624	83	4.37	1.80
MORIN SF, 2003, JAIDS-J ACQ IMM DEF	10.1097/00126334-200308010-00013	75	3.57	1.79

Table 11. Most local cited documents.

Document	DOI	Year	Local Citations	Global Citations	LC/GC Ratio (%)	Normalized Local Citations	Normalized Global Citations
LAVIOLETTE N, 1993, J GREAT LAKES RES	10.1016/S0380-1330(93)71227-7	1993	0	2	0.00		1.00
DELGADO JL, 1995, AM J HEALTH PROMOT	10.4278/0890-1171-9.4.300	1995	0	45	0.00		1.00

**Continued**

COX LE, 1998, HEALTH SOC WORK	10.1093/hsw/23.4.290	1998	0	56	0.00	1.00
CHESS C, 1999, ENVIRON SCI TECHNOL	10.1021/es980500g	1999	0	300	0.00	1.00
STRAUSS RP, 2001, AM J PUBLIC HEALTH	10.2105/AJPH.91.12.1938	2001	0	154	0.00	1.00
MORIN SF, 2003, JAIDS-J ACQ IMM DEF	10.1097/00126334-200308010-00013	2003	0	75	0.00	1.79
JACKSON SE, 2003, HEALTH PROMOT INT	10.1093/heapro/dag415	2003	0	43	0.00	1.02
KREMER H, 2003, EUR J MED RES		2003	0	8	0.00	0.19
QUINN SC, 2004, AM J PUBLIC HEALTH	10.2105/AJPH.94.6.918	2004	0	95	0.00	1.00
LAURIAN L, 2005, ENVIRON PLANN B	10.1068/b31046	2005	0	9	0.00	0.20

**Table 12.** Most frequent words.

Words	Occurrences
health	30
community advisory boards	21
engagement	21
participatory research	20
care	19
prevention	15
aids	13
clinical-trials	13
informed-consent	13
risk	12

**3.14. Most Frequent Words**

**Table 12** and **Figure 4** provides a snapshot of the frequency of specific words within the context or dataset being analyzed. The word “health” appears 30 times, suggesting its frequent occurrence or relevance within the analyzed context. “Community advisory boards” and “engagement” both occur 21 times, indicating their significance or prevalence in the analyzed data. “Participatory research” appears 20 times, highlighting its frequency and potential importance within the context. Other terms such as “care”, “prevention”, “aids”, “clinical-trials”, “informed-consent”, and “risk” have their respective occurrences,

suggesting their presence and relevance in the analyzed dataset.

3.15. Word Dynamics

Figure 5 below present the keywords/topics listed on the table include “Health”, “Community Advisory Boards”, “Engagement”, “Participatory research”, “Care”,



Figure 4. Word cloud.

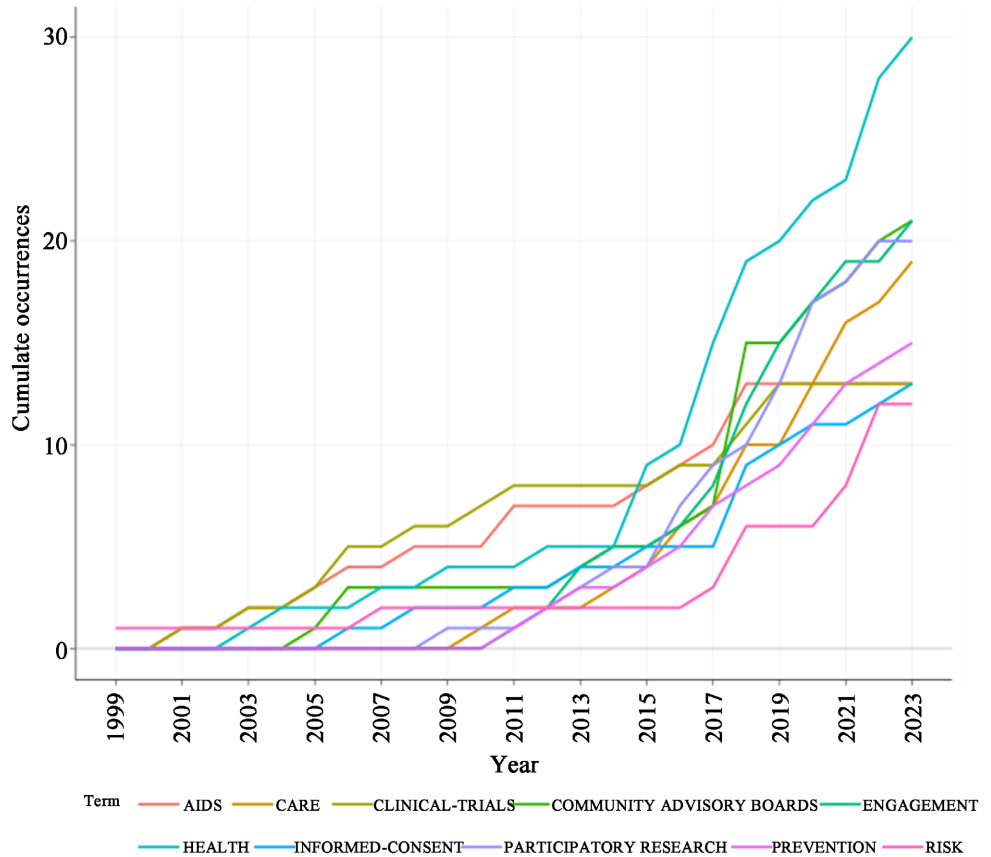


Figure 5. Word dynamics.



“Prevention”, “AIDS”, “Clinical-trials”, “Informed-consent”, and “Risk”. in the earlier years (1999-2003). There are few or no occurrences/mentions of most keywords/topics. From 2003 onwards, there is a gradual increase in the occurrences/mentions of various keywords/topics. “Health and “AIDS” have consistently higher numbers of occurrences/mentions across most years. Community advisory boards”, “engagement”, “participatory research”, and “Care” show a gradual increase in occurrences/mentions over the years, with higher numbers in recent years “Clinical trials”, “Informed-consent”, and “Risk” have relatively lower numbers of occurrences/mentions compared to other keywords/topics, but they still show a gradual increase over time. “Prevention” has a steady increase in occurrences/mentions from 2005 to 2016, after which it remains relatively stable. The number of occurrences/mentions for most keywords/topics tends to stabilize or show a slight increase from 2022 onwards.

### 3.16. Trend Topics

The items listed in **Table 13** include “clinical-trials”, “aids”, “clinical-research”, “consultation”, “hiv”, “empowerment”, “advisory boards”, “transmission”, “ethics”, and “HIV/AIDS”. The “freq” column shows the frequency or the number of times each item appears. For example, “clinical-trials” and “aids” both appear 13 times, while “clinical-research” appears 6 times. The “year\_q1”, “year\_med”, and “year\_q3” columns provide quartiles of the publication years for each item. These quartiles help understand the distribution and range of publication years for each item. For example, “clinical-trials” has a first quartile (year\_q1) of 2006, a median (year\_med) of 2010, and a third quartile (year\_q3) of 2018. This suggests that the publications related to clinical trials are spread across a range of years, starting from 2006 and extending until 2018. Similarly, the other items have their respective quartiles, indicating the distribution of their publication years.

**Table 13.** The trend topics.

item	freq	year_q1	year_med	year_q3
clinical-trials	13	2006	2010	2018
aids	13	2006	2011	2017
clinical-research	6	2010	2011	2017
consultation	7	2012	2013	2016
hiv	7	2010	2013	2022
empowerment	5	2011	2013	2019
advisory boards	6	2012	2014	2016
transmission	7	2011	2015	2016
ethics	5	2008	2015	2016
hiv/aids	6	2014	2016	2019

#### **4. Contribution**

Our work provides essential insights for managers, practitioners, scholars, decision-makers, and policymakers involved in CABs issues. By investigating the literature carefully, we identified the dynamics of the CABs over the years. Regarding the contributions for practice, our analysis showed that of the ten most relevant affiliations on the Community Advisory Boards, only one is from the most disaster-prone regions and less developed countries. It means that substantial challenges (e.g., poor community participation in public projects design, and implementation). Thus, emphasizing the needs of strong projects and public policies around the world, to enhance the community engagement in public projects. From the academic contributions, our results showed that the CAB keeps as a hot topic, and the needs of more works from emerging economies like Africa countries is fundamental to an in-depth understanding of the particularities of each country.

#### **5. Limitations**

As the main limitations of this study, since we used keywords for the search, we cannot ensure that we covered all published papers. In the same thought, the choice for a database, in this case, WoS, could limit the search. Also, we used a traditional bibliometric approach as the main method to analyze the literature, and future studies can combine different types of literature review with bibliometrics.

#### **6. Conclusion and Future Research Avenues**

The main objective of this paper was to provide a holistic view of the development of the CABs field. To achieve our aim, we conducted a bibliometric analysis of CAB-related data extracted from the Web of Science (WoS) database. The key insights presented included the following: 1) the most productive authors, institutions, and countries in Community Advisory Boards; and 2) the most cited authors, countries, and journals outlets in Community Advisory Boards. For example, the study found that most CAB-related documents extracted from WoS were articles (240, in which 208 are articles, 6 early access articles, 7 editorial material, 5 letters, 5 meeting abstracts, 12 reviews and 1 review: early access). The table provides valuable insights into the characteristics and content of the dataset under consideration. Therefore, future research may consider diversifying the nature and portfolio of documents dealing with CABs, by including case studies and teaching cases, for example.

Compared to other fields, and based on the data collected from WoS, CAB is relatively new field, as the first paper published on the topic only dates to 1993, as shown by the WoS database. Starting from 2003, there was a rise in trend in the number of articles published per year, indicating a growing interest and activity in research. The number of articles steadily increased until reaching its peak in 2022 with 30 articles. The years with the highest number of articles pub-

lished are 2017 (23 articles), 2018 (25 articles), 2020 (19 articles), and 2021 (27 articles). These years likely represent periods of increased research productivity or significant developments in the field. The number of articles published in 2023 is 9, which indicates that the data collection or observation period may not have covered the entire year.

The study also shows that the ten most relevant affiliations on CABs published in the WoS database were mainly from developed nations (except the University of Witwatersrand of South Africa. More institutions from the most disaster-prone regions and from less developed countries should appear on this list soon. Future studies should expand the scope of this study and improve on its findings by collecting more data from other sources, including other renowned databases such as Science Direct, Scopus and Social Science Citation Index.

## Declarations

As a bibliometric study, no human participants were involved in this type of analysis. Therefore, there was no need for Institutional Review Boards approval, and it was exempted based upon the design of this study.

## Availability of Data and Materials

Data can be retrieved from Web of Science using search query presented in methodology

## Authors' Contribution

FM conducted analysis and wrote the main manuscript; MD, SAHQ, SSS, KA, CA, ES, and OAJ reviewed the manuscript for substantial intellectual content and review. All authors reviewed the manuscript and approved it for submission.

## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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### **Abbreviations**

CAB	Community Advisory Boards
WoS	Web of Science
USA	United States of America
UNC	University of North Carolina
HIV	Human Immune Virus
AIDS	Acquired Immune Deficiency Syndrome