

# Bibliometric Analysis on Policy Strategies Regarding HIV/AIDS

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## Abstract

The Covid-19 pandemic that has hit the world of health in the last 2-3 years has been given more significant impact on people living with HIV/AIDS globally. Because for those who live side by side with HIV, the Covid-19 pandemic became a significant threat. Because of the hurry transmission of the coronavirus between humans. In this thing, many researchers have conducted research related to HIV/AIDS both in terms of the world of health, social, or laboratory test results. The goals of this study are to perform an analysis of the publication database scientifically with the keywords HIV, Policy, and Strategy by applying the keywords One press on the column search and search simultaneously on the Scopus Site as follows: (TITLE -ABS-KEY (HIV)) AND (policy) AND (strategy) AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (SUBJAREA, "SOC")) with the area of Social Science. In it, researchers find publication scientific as many as 6,417 documents, with the research sample used, is as many as 2,000 publication documents scientific, the latest retrieved through the Scopus database. The analysis results show that the keyword Female, Male, Adult, AIDS, and Human Immunodeficiency Virus Infection are the 5 most popular keywords among researchers. Based on p that, the researcher furthermore identifies policy strategies based on the results of previous studies relevant to the keywords as has been determined to produce based strategy recommendations situation latest.

**Keywords:** Bibliometric, VOSviewer, Health, Policy Strategy.

## A. Introduction

The variants of the virus and Covid-19 and the continued problem of handling Acquired Immunodeficiency Syndrome (AIDS) into two things, serious mutual collision with crisis health, which also affects life, economy, and humanity in various countries. This thing, share HIV condition crisis in the last two years is the crisis that occurred in a manner successive and is felt by most HIV sufferers. With his living condition side by side with HIV, they also need to be vigilant will potency the spread of the Corona Virus in him and other impacts that affect both aspects of health, economy, education, and other impacts caused by this pandemic. Impact another bad for people living with HIV is that this pandemic hinders global response to the AIDS pandemic. No can be denied that governments from various layers are busy with the Covid-19 pandemic, which is spreading rapidly in various places corners of the world, even from the public small until characters important in every country (Benzaken et al., 2019; Fauci & Lane, 2020; Govender et al., 2021; Iqbal et al., 2019b; Khairunisa & Sihaloho, 2019)

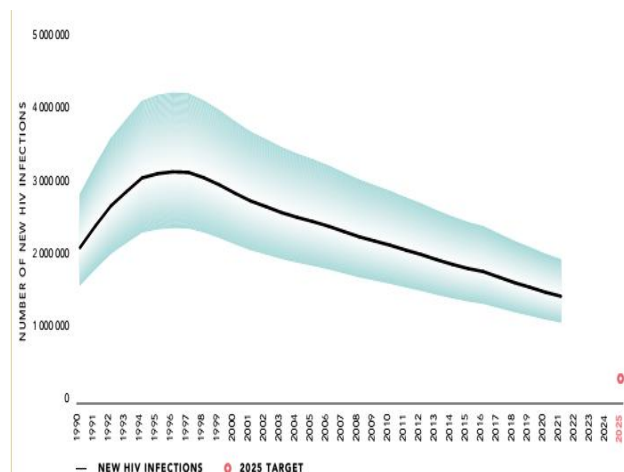
it even also expressed UNAIDS (*Joint United Nations Program on HIV and AIDS*) in the report entitled "UNAIDS Global AIDS Update 2022" that progress has faltered, source Power has shrunk, and inequality has widened. Investments and actions that are not

adequate have put the man in danger. This is due to the middle world being faced with its potency, millions of death related to AIDS, and millions of new HIV infections if this inequality remains continues. The progress that has faltered is characterized by data showing that as many as 1.5 million people will have new HIV infections globally by 2021. The figures show that the number of people infected with HIV in 2021 will be 1 million more compared to those estimated previously (Cao et al., 2020; Duko et al., 2019; Remien et al., 2019; UNAIDS, 2022; Uwishema et al., 2022)

Furthermore, the glaring inequalities, both within a country or between countries, have hindered the speed response or response against HIV and caused the increasing spread of HIV extends. UNAIDS said that every 2 minutes in 2021, a child girl or teenage daughter had been infected with HIV. However, The Covid-19 pandemic has caused interruptions to service, mainly in treatment or activity HIV prevention. This also causes millions child broken girls school consequence infected with HIV, a spike in teenage pregnancy, as well as violence gender (Cao et al., 2020; Fauci & Lane, 2020; Govender et al., 2021; Iqbal et al., 2019a; UNAIDS, 2022)based.

The data shows that every day, as many as 4,000 people are in it, including 1,100 youth aged 15-24 years infected with HIV. UNAIDS estimated. If this condition continues, in 2025, about 1.2 million

people will be infected with HIV, and triple exceed predictions in 2025, i.e., with as many as 370,000 new infections. Another effect of exists lateness handling or even discontinued treatment for people living with HIV there is data to show that in 2021, as many as 650,000 people will die because of AIDS. That means by year, one person every minute stated dies due to AIDS. The following is a graph showing the number of new HIV infections globally from 1990 – 2021:



**Figure 1. Development of the Amount of Deployment New HIV Infection**

Source: UNAIDS Report, 2022

The data show that as of December 2021, people living with HIV have exceeded the target predicted in the effort of HIV prevention to the year 2025. It can be seen in the presence of 1.5 million global public infected with HIV in 2021. In this case, there are about 4,000 people newly infected with HIV every week there are as many as 7,800 youths aged 15-24 years infected with HIV. Charts show that happen decline to the annual amount new HIV infections are declining globally by 32% since 2010. However, decline the Still a long way to reach the target by 2025, which requires a decline of 83%. In addition, the decline that occurred in 2021 declined the least since 2017. So based on trends this is about 1.2 million people predicted can new HIV infections by 2025, even can reach increase up to 3 times by 2025 (UNAIDS, 2022)

Based on the description of the course, it is necessary to follow carry-on from various *stakeholders* to implement return action prevention and control will exist HIV/AIDS potential that occurs in society starting from maturity until one of them teenager is through a policy strategy tackling HIV/AIDS. This policy strategy is expected can give a clear and systematic picture related to the action that should be done to end eye the AIDS chain and to better prepare and protect the world self from existing warning possible pandemics happening in the future come. In this case, sector academics or researchers as well own role is essential in giving education and development in a manner sound scientific through laboratory tests that produce work scientific science or through research to condition

the social public in response to HIV /AIDS globally, incl making research a reference in formulating a policy strategy based on past HIV/AIDS cases scattered in various countries globally. In this case, research also serves to find out various possible development made reference to action or actions furthermore in overcome HIV/AIDS (Fauci & Lane, 2020; Remien et al., 2019; Yang et al., 2020)

Policy strategy in matter tackling HIV/AIDS is crucial in order to achieve the stated targets globally that by 2030 society must be liberated from this HIV/AIDS (UNAIDS, 2022)pandemic. Moreover, the transmission of HIV and AIDS needs immediate handling to remember the danger and the implications. Even No only dangerous to the health of humans, but transmission is also possible to endanger various aspects of life in social, economic, and political involvement the effect obstructing the development of a country (Purnomo et al., 2021). To produce a policy strategy related explicitly to tackling HIV/AIDS, review policy strategies must be carried out in a comprehensive manner equipped with appropriate and appropriate models to know and provide a solution to the problem you want to overcome. In the matter, the trend publication scientific that has been published globally and accessible to the public in a manner wide is one possible method used to strategize. The research results on the condition objective of spreading HIV/AIDS in various countries are expected to be described factually and be a recommendation or basis for developing this policy strategy.

Further, the case transmission of HIV/AIDS in various countries today has become a global issue, thus giving rise to the publication of scientific knowledge related to HIV/AIDS in these few decades. On the basis here, it is, then researcher interested in doing research on fundamental publication scientific research with the theme of HIV/AIDS research and its policy strategy. Of the many publications collected science then the researcher analyzes relevant research topics through analysis using the Biblioshiny and VOSviewer analysis methods. The results of the analysis of both methods. Then do it withdrawal conclusions to formulate a policy strategy that can be implemented based on the results of research studies earlier. Using Biblioshiny and VOSviewer to generate policy strategies specifically in tackling HIV/AIDS is classified research as rare or not. Many researchers conducted research using Biblioshiny and VOSviewer in the discussion of HIV/AIDS, so it make this research an update from previous studies (Fuadi, 2022; Hamidah et al., 2020; Jia & Mustafa, 2023; Pradana et al., 2022a; Saadah & Maika, 2022; Tupan, 2022).

Hardianto (2021) in (Tupan, 2022) said that Bibliometric analysis method that measures progress A knowledge through the number of publications made by a researcher related themes specific. Bibliometrics was introduced in 1969 by Nalimov, Pritchard, and Mulchencko. They introduce bibliometrics as one of the methods utilized in math

or statistics of communication media with the help of the internet. The goals of this bibliometric analysis are to understand development studies philosophy in the academic world, so the results of this bibliometric analysis can become the basis for conducting similar research and finding renewal in the research (Tupan, 2022).

While Human Immunodeficiency Virus, known as HIV, is one of the viruses that become the reason happening AIDS and is in the retrovirus group. Most people with HIV/AIDS (ODHA) will still be asymptomatic or symptomatic. No looked in an extended period. However, someone infected with HIV / AIDS can infect others without consciousness. While AIDS or *Acquired Immune Deficiency Syndrome* is followed, carry on from HIV infection in the body, someone who is gathering causing symptoms decline system immunity body. Furthermore, HIV infection can develop very progressively so that it can damage the system immunity of the human body, which in the end, sufferer No can withhold attack infection fungi, bacteria, and viruses present in themselves. The vast majority of people infected with HIV will die within a number of the year after existence the first sign of AIDS that appears, if No There is follow carry on treatment or therapy (Fauci & Lane, 2020; Govender et al., 2021; Kartono et al., 2019)

One of the studies that became lighter from the researcher, i.e., research conducted by Henshaw et al. entitled "*Thirty -Five Years (1986–2021) of HIV/AIDS in Nigeria: Bibliometric and Scoping Analysis*," is to be conducted in 2022. This research was conducted with the aim namely to perform an analysis of Trends in research related to HIV/AIDS in Nigeria. The researcher used the PUBMED database to perform the Bibliometric analysis related to research on HIV/AIDS in Nigeria since years 1986 to 2021, with keywords used, namely the keywords HIV, AIDS, Immunodeficiency Syndrome, and Nigeria. The analysis results show that the number of scientific articles related to keywords as the set is as many as 2,796 articles. Most of the articles dominate written by 4 authors. While the University of Ibadan is most affiliates it publishes articles related to keywords. PLoS ONE is the most journals used for reference, while Illiyasu Z is the writer most productive. Keyword analysis uses overlay visualization to show a shift gradually from characteristics of disease become diagnosis, treatment, and prevention (Okoroiwu et al., 2022).

Another research was conducted by Miguel Cabanillas-Lazo et al. entitled "*Bibliometric Analyzes of Applications of Artificial Intelligence on Tuberculosis*" in 2022. This research aims to analyze bibliometric characteristics in the Application of Artificial Intelligence (AI) on tuberculosis in Scopus. This research A Studies Bibliometrics, while the Scopus database was used using a search strategy consisting of controlled terms and terms accessible on TB and AI. Field searches "TITLE", "ABSTRACT", and "AUTHKEY" are used to find the term the. Data

that has been collected and then analyzed using rank soft Scival. Bibliometric data is then described through pictures and tables, which are summarized with absolute values and percentages. The research results show that 1,041 documents were collected and analyzed. Yudong Zhang is a writer with the production of scientific highest, but KC Santosh is a writer with considerable influence. Anna University (India) is the most issuing affiliate publication, while the United States leads scientific production. The research results also show that most articles on tuberculosis and AI published in the first quartile, p, reflect needs and interests worldwide (Lazo et al., 2022).

Further researchers also use research conducted by Linh Phuong Doan et al. entitled "*Social Network and HIV/AIDS: A Bibliometric Analysis of Global Literature*" in 2022 as previous research. This research was conducted to measure research, patterns, and trends in the user network in the field of HIV /AIDS, as well as the use of publication scientific globally extracted through the database obtained from the Web of Science Core Collection. The research method used is the Latent Dirichlet Allocation Method for modeling customized topics. The WOS database shows that during the period 1991 to 2019, there are as many as 5,698 publications on the topic highest, i.e., Mental disorders (16.1), the prevalence of HIV/ infection infectious sexual orientation (9.9%), and HIV-related stigma (9.3%). The research results show a need for intervention using network society and its improvement with research capacity through regional cooperation to reduce the burden of HIV across a wide range of income countries low to medium (Doan et al., 2022).

Sufficient other research In touch with AIV /AIDS management strategies is research conducted by Gregorio A. Millett, Jeffrey S. Crowley, et al. entitled "*A Way Forward: The National HIV/AIDS Strategy and Reducing HIV Incidence in the United States*." the research the aim to focus return attention national (United States of America) in respond the HIV epidemic domestic. Whereas the objective of this strategy is to reduce the number of HIV transmissions, increase access to care, optimize health outcomes for people living with HIV, and reduce gaps that occur. This article also aims to outline the main program and research issues that must be addressed to achieve objective prevention from strategy national HIV/AIDS in the United States. The research method used is a qualitative research method, with research results showing that there are several strategies, recommendations, and targets for handling HIV/AIDS in the United States. There are some of these strategies among them like reduce HIV transmission through increasing effort prevention for the most vulnerable exposed to HIV, increasing access service maintenance and optimization care in people living with HIV, as well as reducing disparities that exist among people living with HIV (Millett et al., 2010).

Further based on research data in Scopus, from research using bibliometrics analysis of 26,649 bibliometrics analysis and 669 research related to disease and treatment disease, none of which has been studied about HIV/AIDs, especially about Policy strategy treatment of HIV AIDs—doing this research be necessary for researchers and stakeholder's policy in the field of AIDS, Health, and those related to both, aware the importance of strategic policy treatment of HIV/AIDs in the world.

## B. Method

This research uses bibliometric analysis techniques followed by a description of the results of the analysis that has been done before. This method is used with the purpose that is to serve a general description of a field of research through the identification of various journals that have been published. This research is done by doing a review of various literature and done in a manner systematically using the bibliometric method. As for inside obtaining such databases, researchers do limit to some keywords namely the keywords HIV, Policy, and Strategy, by applying keywords One press on the column search and search simultaneously on the Scopus Site as follows : (( TITLE -ABS-KEY (HIV) ) AND ( ( policy ) ) AND ( strategy ) AND ( LIMIT-TO ( OA, "all" ) ) AND ( LIMIT-TO ( SUBJAREA , " SOCI" ) )) with the area of Social Science. In it, researchers find publication scientific as many as 6,417 documents, with the research sample used, is as many as 2,000 publication documents scientific, the latest retrieved through the Scopus database.

The results of this analysis were later described in the form of a sentence, as well an analysis of possible HIV/AIDS coping strategies was carried out through the discoveries contained in various publication scientific. Scopus database was used because this database is the most extensive database with better coverage of articles and journals and is recognized as a source trusted for a variety of studies academic and bibliometric. In the process, documents have been collected. The analysis was carried out with the help of VOSviewer and R-Packages software to produce graphs, tables, or pictures for later description (Caputo et al., 2022; Dincer & Dincer, 2023; Liu et al., 2023; Pradana et al., 2022b; Saadah & Maika, 2022).

## C. Result and discussion

### 1. Biblioshiny Analysis Result

#### a. Main Information

At this stage, the researcher obtains information from leading related publications and scientific studies on HIV /AID in various countries, presented in the form table for convenience researchers and readers to understand the analysis results. Loaded data in table the inside it there are several information-sharing publications primarily about data, document content, authors, collaboration author, and DocumentDocument type. The author analyzed 2,000 scientific articles on HIV /AIDS in various countries. The results of the analysis of information this main as can be shown in the following table:

Table 1. Main Information	
Information	Results
<b>KEY INFORMATION ABOUT THE DATA</b>	
Time Range	2013:2023
Sources (Journals, Books, Etc.)	595
Document	2000
Annual Growth Rate %	-6
Document Average Age	4.74
Average Citations Per Document	12,9
Reference	97631
<b>DOCUMENT CONTENTS</b>	
Keywords Plus (ID)	9656
Author's Keywords (DE)	3896
<b>WRITER</b>	
Writer	17076
Single Author	47
<b>WRITER COLLABORATION</b>	
Single Written DocumentDocument	51
Documents By Multiple Authors	12,4
Documents By Multiple Authors International % %	56.95
<b>DOCUMENT TYPE</b>	
Articles	2000

Source: Biblioshiny, 2023

#### b. Number of Publication Every Year

Based on the Scopus database, based on some criteria that have determined so has is known that complete publication of scientific study with the theme of HIV/AIDS globally, namely as many as 2,000 documents. The analysis results show that the

number of scientific publications is the most happening in 2021 by the number of publications, i.e., 218 publications scientific. At the same time, the increase in the number of publications is the most happening in 2020, i.e., with the increase of 62 articles from the issue before, and the decline most happening in 2022, which is where the number of



publications decreased by a total of 237 publications from the year before. Based on these numbers, the following are chart growth in the number of publications scientific research related to HIV/AIDS per year counted since 2013-2023 as follows:

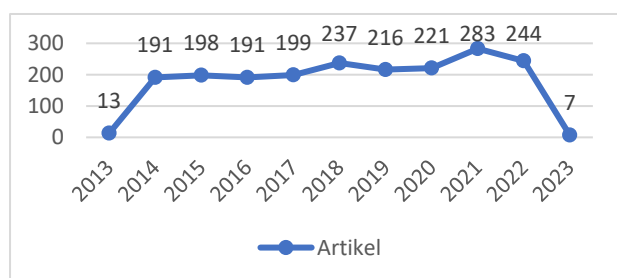


Figure 2. Number of Publications Scientific per year  
Source: Biblioshiny, 2023

### c. Most Relevant Affiliates

In it, the author analyzes the data indicating affiliates most do publication research results related to HIV/AIDS globally. The results of the analysis show that the most relevant source that published publication a scientific study on the theme of HIV/AIDS is the University of Washington by the number of publications, i.e., as many as 231 articles, then followed by the University of California by the number of publications 132 articles. The University of Cape Town has 100 articles published. As for detailed source or affiliation data most relevant to the publication scientific with the theme of HIV/AIDS, seen in the following table:

Affiliate	Article
UNIVERSITY OF WASHINGTON	231
UNIVERSITY OF CALIFORNIA	132
UNIVERSITY OF CAPETOWN	100
LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE	96
UNIVERSITY OF THE WITWATERSRAND	95
CHIANG MAI UNIVERSITY	88
JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH	82
UNIVERSITY OF KWAZULU-NATAL	76
HARVARD MEDICAL SCHOOL	70
MAKERERE UNIVERSITY	63
UNIVERSITY COLLEGE LONDON	62
UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL	62
MAHIDOL UNIVERSITY	55
EMORY UNIVERSITY	54
MINISTRY OF HEALTH	54
JOHNS HOPKINS UNIVERSITY	50
UNIVERSITY OF OXFORD	50
STELLENBOSCH UNIVERSITY	47
WALTER REED ARMY INSTITUTE OF RESEARCH	44
HARVARD TH CHAN SCHOOL OF PUBLIC HEALTH	43
CHULALONGKORN UNIVERSITY	41
COLUMBIA UNIVERSITY	41
HENRY M. JACKSON FOUNDATION FOR THE ADVANCEMENT OF MILITARY MEDICINE	41
UNIVERSITY OF AMSTERDAM	38
WORLD HEALTH ORGANIZATION	38

Source: Biblioshiny, 2023

### d. Most Relevant Author

Based on the results of the bibliometric analysis of the category, the most relevant authors served in the form of pictures and tables. The analysis results show that author by level relevance the most is Joudain G by the number of publications, i.e., as many as 33 articles with 2.20 articles fractionated. Likewise, Ngo-Giang -Huang had published 33 articles with 2.48 fractionated articles. Furthermore followed by Kumarasamy N with the number of publications of 26 articles with 1.43 fractionated articles and Crowell TA with 25 articles that have been published and 1.50 fractionated articles. The pictures and tables present the results of the analysis by category most relevant authors are as follows:

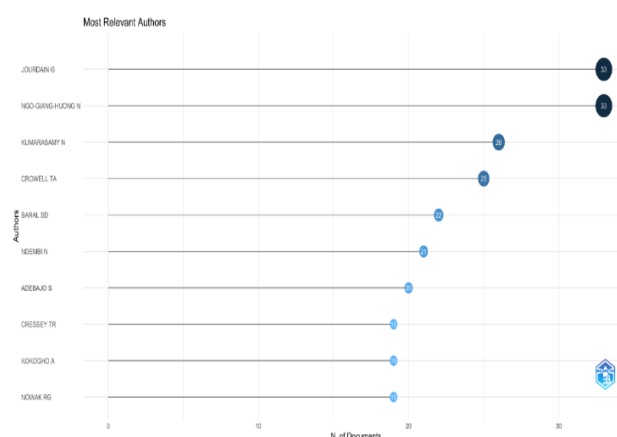


Figure 3. Most Relevant Authors  
Source: Biblioshiny, (2023)

Table 3. Most Relevant Authors

Writer	Article	Fractionalized articles
JOURDAIN G	33	2,20
NGO-GIANG-HUONG N	33	2.48
KUMRASAMY N	26	1.43
CROWELL TA	25	1.50
BARAL SD	22	1.32
NDEMBI N	21	1,12
ADEBAJO S	20	1,12
CRESSEY TR	19	1.41
KOKOGHO A	19	0.91
NOWAK RG	19	1.15
CHARURAT ME	18	1.10
FRENKEL LM	18	1.63
ROBB ML	18	0.86
ANWORANICH J	17	1.05
DO CD	17	0.89
JIAMSAKUL A	17	0.58
LALLEMANT M	17	1.21
LATKIN CA	17	2,13
AKE JA	15	0.75
HOSSEINIPOUR MC	15	1.39
KALEEBU P	15	1.03
NGUYEN LT	15	1.01
SOHN AH	15	0.37
FOKAM J	14	1.05
KANJANAVANIT S	14	0.67

Source: Biblioshiny, 2023

#### e. Trend Topic per Year

Trending topics per year is an analysis of themes or frequent keywords used by researchers in global HIV/AIDS research. The results of the analysis show that the most trending topics or keywords used in research the keyword "female" with as many as

2,230 keywords, "male" with 2,145 keywords, 1,877 keywords for "adult," 1,869 keywords for "human," and 1,727 keywords for "Human Immunodeficiency Virus infection." As for the exact amount of related trend, most topics or keywords in publication scientific HIV/AIDS is as follows shown in the tables and graphs following:

Table 4. Trend Topics per Year

Topics/keywords	Amount
female	2230
male	2145
adult	1877
human	1869
human immunodeficiency virus infection	1727
HIV infections	1579
humans	1551
article	1483
middle-aged	933
adolescent	812
young adults	798
major clinical studies	785
controlled studies	757
human immunodeficiency virus 1	621
child	556
priority journals	527
antiretroviral therapy	519
cd4 lymphocyte count	519
load virus	468
prevalence	460
human immunodeficiency virus	444
anti-human immunodeficiency virus agent	416
infant	414
nonhuman	409
HIV-1	393

Source: Biblioshiny, 2023

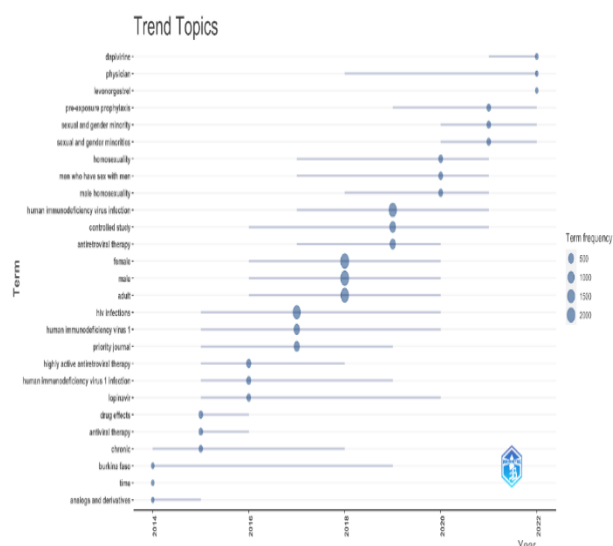


Figure 4. Trend Topics per Year

Source: Biblioshiny, 2023

Furthermore, the results of the analysis using the R -Biblioshiny for frequent keywords appear in published scientific studies on the theme of HIV/AIDS also produced a shaped data visualization map keyword tree and consists of 50 keywords. As for the based map keyword tree it is known that frequent keyword appear, namely keywords "female" 2,230 (7%), "male" 2,145 (7%), "adult" 1,877 (6%), "human" 1,869 (6%), and "human immunodeficiency virus infection" 1,727 (6%). The following is a map keyword tree which is the result of R -Biblioshiny analysis:

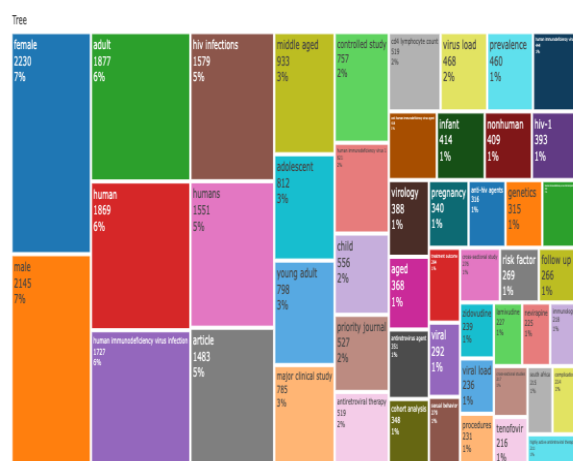


Figure 5. Keywords Tree Map Image

Source: Biblioshiny, 2023

#### f. Linkages between Journal, Author, and Keywords

Based on the results of the bibliophily analysis show that there are three linkage plots between journal, author, and keywords. Linkages between these plots are shown to exist in shape graph rectangle length, where if the more significant, the larger the rectangle is shown on the drawing or graph, the bigger the number of publications, authors, and keywords. Based on the analysis, results showing big small rectangles long show that the keywords HIV and HIV/AIDS are the most researched topics. Braun V represents the source of the most publications used to publish research results related to HIV/AIDS, and Wirawan is the most researchers researching HIV/AIDS. The results of the analysis can be shown in the following picture:

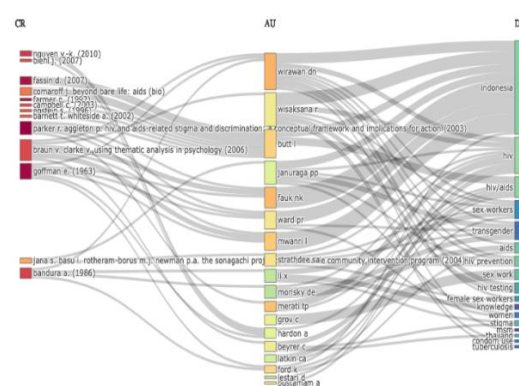


Figure 6. Linkage between Journals, Authors, and Keywords

Source: Biblioshiny, 2023

#### g. Production Scientific Collaboration Between Countries

Based on the analysis results, 18 participating countries contributed to scientific publications related to HIV/AIDS globally. The results of the analysis show that the USA occupies first order by frequency as many as 138 articles that have been published. In this regard, the USA is collaborating with South Africa to do its research. Furthermore, the second position is also occupied by the USA in collaboration with the United Kingdom, with total publications, i.e., as many as 137 articles. Kindly detail the following tables and graphs showing collaboration scientific between countries:

Table 5. Collaboration between Countries

From	To	Amount
USA	SOUTH AFRICA	138
USA	UNITED KINGDOM	137
USA	THAILAND	82
SOUTH AFRICA	UNITED KINGDOM	81
USA	UGANDA	79
USA	KENYA	76
USA	FRANCE	69
USA	SWITZERLAND	55
USA	CANADA	54

Table 5. Collaboration between Countries

UNITED KINGDOM	FRANCE	48
USA	MALAWI	46
USA	AUSTRALIA	43
USA	NIGERIA	42
UNITED KINGDOM	SWITZERLAND	41
USA	NETHERLANDS	41
FRANCE	THAILAND	37
UNITED KINGDOM	NETHERLANDS	35
USA	CHINA	35
USA	ZIMBABWE	35
UNITED KINGDOM	UGANDA	34
USA	GERMANY	34
UNITED KINGDOM	KENYA	33
FRANCE	CAMEROON	31
THAILAND	AUSTRALIA	30
UNITED KINGDOM	THAILAND	30

Source: Biblioshiny, 2023

Country Collaboration Map

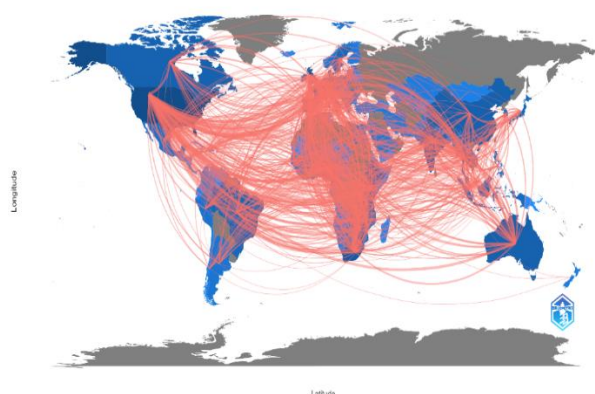


Figure 7. Collaboration Scientific between Countries

Source: Biblioshiny, 2023

Based on the results of the R -Biblioshiny analysis through an analysis of the number of article publications with keywords in the form of HIV, Policy, Strategy, and area limitation in the form of Social Science then, the number of publications the most, i.e., happen in 2021, i.e., 283 publications scientific. Whereas the affiliate that published the most documents by keyword the conducted by the University of Washington several publications and 231 articles. Of the 5 keywords, the most were *Female* with 2,230 keywords, *Male* with 2,145 keywords, *Adult* with 1,877 keywords, *human* with 1,869 keywords, and *Human Immunodeficiency Virus Infection* with 1,727 keywords.

Based on the keyword trends most used, the researcher concludes that policy strategy needs to do with the point focus to effort countermeasures based on gender, equality, and age, indeed prone to caught global transmission of the HIV/AIDS virus. This follows what was conveyed by UNAIDS in the report about the *Global AIDS Update* in 2022, which states that women are especially vulnerable to caught transmission of the HIV/AIDS virus—evidenced by the existence of data that shows that in 2021 there are as many as 250,000 youth women affected by the HIV/AIDS virus globally. This figure is

also 5 times more than the target that has been determined. It also shows that there are about 4,900 new HIV cases that occur in women, mature or youth, every week. So important is a focused policy strategy to particularly in the fight against HIV/AIDS among women (UNAIDS, 2022)

As for inside it exists several similar studies regarding policy strategy focus on HIV /AIDS prevention on gender or age. In a study by Elizabeth Fearon et al. entitled "*How Can Programs Better Support Female Sex Workers to Avoid HIV Infection in Zimbabwe? A Prevention Cascade Analysis*" in 2019. The results of the study stated that there is a need for a policy strategy for treatment and services for health reproduction, as well as intervention to minimize alcohol consumption and approach Friend the same applied (Fearon et al., 2019). Another research is entitled "*HIV Prevention Programme Casdcacades: Insights from HIV Monitoring Program for Female Sex Workers in Kenya*," conducted by Parinita Bhattacharjee et al. in 2019. The results showed that the policy strategy carried out, namely the prevention strategy with attention point area to be developed as well as existing zoning and restrictions access for worker sex (Bhattacharjee et al., 2019).

## 2. VOSviewer Result

Vosviewer is software used to perform analysis and mapping in the bibliometric. The results of this mapping can later be used to see various studies carried out on the same research theme so that researchers can do other research that has yet to be done to produce a renewal of research in the field of similar knowledge. The analysis results produced by Vosviewer consist of data maps in network visualization, overlay visualization, and density visualization. The following is the result of an analysis using Vosviewer software on research with the theme of HIV/AIDS globally.

### a. Mapping Based on Network Connection

Based on the analysis results using the Vosviewer software, this results from keyword mapping based



on a shared network connection into 4 clusters of 885 items, 173,672 links, and 686,720 strengths. As for the distribution of each class, it consists of the following:

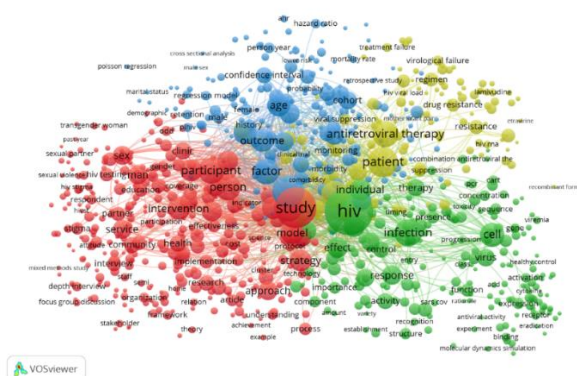
Cluster 1 (red) (338 items) : Study, Analysis, Model, Strategy

Cluster 2 (green) (211 items) : HIV, Infection, Effect, Cell

Cluster 3 (blue) (197 items) : Data, Factor, Risk, Age

Cluster 4 (yellow) (139 items): Treatment, Patient, Antiretroviral Therapy, Mutation

Furthermore, the results of the analysis using This Vosviewer also earn mapping, as can be shown in the picture mapping following:

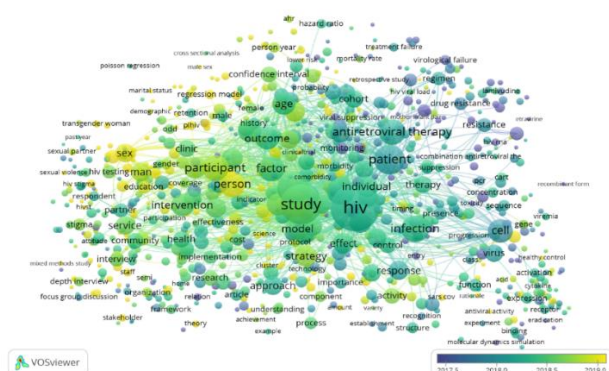


**Figure 8. Mapping based on Frequent Network Connection Appear**

Source: VOSviewer, 2023

#### b. Mapping Based on Overlay Visualization

Vosviewer analysis results next is a visualized analysis based on visualization overlay mapping. Analysis of this visualization overlay is used author to see the trend or shift to focus topic done by researcher from year to year. The analysis results show that the publication of scientific knowledge related to HIV/AIDS has been done since 2016 to 2023. Research regarding HIV/AIDS carried out in 2017 consisted of several topics with the keywords Subject, Mutation, Variant, and Monitoring. In 2018 consists of the keywords HIV, Patient, Infection, Cell, Treatment, Study, Data, Factor, and Risk. 2019 until now currently consists of Education, Person, Sex, and Depression. The results of the analysis can be shown in the following picture:

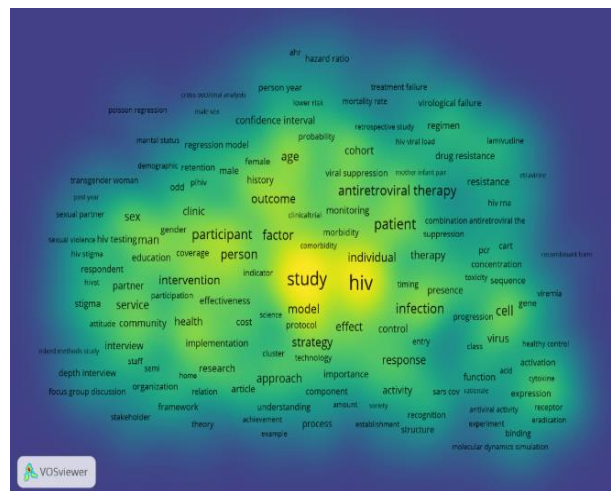


**Figure 9. Mapping Based on Overlay Visualization**

Source: VOSviewerBased on the picture above, can is known that the dot with the color purple is a research topic discussed before in 2017. Meanwhile, colored dots blue are the topics discussed between 2017 until 2018. Period colored green young, and yellow is the topic most discussed between 2018 until now.

#### c. Mapping Based on Density Visualization

Furthermore, mapping analysis is based on density visualization, which is weighting in a manner principal and composed from green to yellow. As for the results of the Vosviewer analysis against Density Visualization, this shows that Study topics, HIV, Participant, Factor, Person, Infection, Antiretroviral Therapy, Strategy, Age, Outcome, Intervention, Model, and Effect are the most topics researched. The density map also allows researchers to conduct research with rare research topics carried out through research topics marked with the color blue. The following is the result of the mapping analysis based on Density Visualization:



**Figure 10. Mapping based on Density Visualization**

Source: Vosviewer Analysis ResultsBased on the results of the analysis of mapping based on Network Connection, Overlay Visualization, and Density Visualization obtained through this VOSviewer software shows that publication scientific trend publication most scientific done by groups of the researcher is related to the efforts made in handling transmission of HIV/AIDS through study cases, analysis, models, and strategies against the handling of HIV/AIDS in various countries or carried out globally. In this thing, trend publication scientifically done is the related transmission of HIV/AIDS and impact to life society and country. They were followed by the trend publication on data related to HIV/AIDS, factors causes, problems, and vulnerable ages to the transmission of HIV/AIDS. Continue with its publication scientifically discussed related treatment, patients, and available therapy by HIV/AIDS patients.

So based on VOSviewer results, the researcher can conclude that important the existence of a policy strategy to tackle HIV/AIDS that focuses on these

factors, the critical cause or problem in the case of global transmission of HIV/AIDS. In this thing, the study case to factors main reason hurry transmission of HIV/AIDS needs to be studied in more detail, and make it the focus of central policy so it can disconnect eye chain transmission of HIV/AIDS in the community globally. In addition, the appropriate handling model or strategy must also be discussed or regulated in policy regarding efforts to tackle HIV/AIDS (Auliani, 2017; Lestari, 2013; Pamela & Nurmala, 2021; Purbani et al., 2019).

This is Malebogo Tihajoanem et al. in research entitled “A Longitudinal Review of National HIV Policy and Progress Made in Health Facility Implementation in Eastern Zimbabwe” in 2018, showing that policy strategy that can namely through decentralization service maintenance from hospital to clinic closest, as well do diversion task maintenance from doctor to nurse. Researchers also found it exists the changes shown increase in the proportion of facility health offers free HIV testing and counseling, PMTCT, and services for other HIV treatments are increasing in a manner significantly (Tihajoane et al., 2018). Another research was conducted by Sima Barmania and Syed Mohamed Aljunid, entitled “Navigating HIV Prevention Policy and Islam in Malaysia: Concentration, Compatibility or Reconciliation? Findings from in-depth Interview among Key Stakeholders” in 2016. Researchers state that in facing HIV problems that occur in the country, the policy strategies that are carried out are to play a significant Islam in establishing a strategy for tackling HIV in Malaysia. Health promotion is done based on perspectives and principles of the Islamic religion as one approach to the public (Barmania & Aljunid, 2016).

## D. Conclusion

Based on the analysis results using Boblioshiny to the global strategy for tackling HIV/ AIDS can conclude that research trends by several scientific publications, the most happening in 2021, by the number of publications, a total of 283 publications. Whereas affiliation with the publication is the most conducted by the University of Washington by the number of publications, a total of 231. As for frequent keyword trends used by researchers, the keyword *female, Male, Adult, human, and Human Immunodeficiency Virus Infection*. At the same time, the results of the VOSviewer analysis show that based on Network Connection. There are 4 clusters of 885 items, 173,672 links, and 686,720 total strength. Cluster 1, marked with red, is the cluster with the highest number of items, i.e., as many as 338 items consisting of the keywords Study, Analysis, Model, and Strategy.

Further, researchers conclude that policy strategy is fundamental to cope with case transmission of HIV/AIDS in various countries. Based on the results of the analysis, the policy strategy can focus on policy strategy the prevalence of HIV/AIDS, which is based on gender, especially in women because they are

prone to the caught transmission of HIV/AIDS. Devising this strategy can be done through studies case to the transmission of HIV/AIDS that occurs in various countries. The analysis and determining the suitable model to produce the right strategy to cope with the global transmission of the HIV/AIDS virus.

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