RESEARCH ARAŞTIRMA

DOI: 10.5336/mdethic.2023-100296

## The Research Topics on Health Equality, Nursing and Ethics: A Bibliometric Analysis Study

## Sağlıkta Eşitlik, Hemşirelik ve Etik Üzerine Araştırma Konuları: Bibliyometrik Bir Analiz Çalışması

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ABSTRACT To identify and via bibliometric analysis visualize the studies conducted in the field of health equity and ethics. Data were obtained from the "Web of Science Core Collection" database. VOSviewer (1.6.15) software program was used for performance analysis, scientific mapping and bibliometric analysis. For bibliometric data, the WoS database was searched with the keywords "Health Equality" and "Ethical" and analyzed with the data of 284 publications. As a result of the analysis, the most used keywords in the Web of Science category are "Health equity", "Ethics", "Social Justice", "Health Policy", "Equity", "Global Health". The journal with the most publications (n=11 publications) is "British Medical Journal Open"; the most articles (n=52 articles) were published in 2022; the most active institution (n=20 articles) is "University of California System"; the country with the most publications (n=144 publications) is "United States"; the largest funding agency (n=35 funding agencies) was the "United States Department of Health Human Services"; and the author who published the largest number of articles (n=9 articles) was Bernard Pratt. The results of the bibliometric analysis showed that studies on equity and ethics in health have gradually increased in recent years since 2019. It is recommended to focus on the field of nursing on these issues.

Anahtar Kelimeler: Bibliyometrik; etik; hakkaniyet; sağlıkta eşitlik; hemşirelik

konularda hemşirelik alanına odaklanılması önerilmektedir.

**Keywords:** Bibliometric; ethics; equity; health equality; nursing

Equality in health can be achieved when all individuals have full access to health and well-being.<sup>1,2</sup> Health equality is the principle or goal that motivates efforts to eliminate health inequalities between economically or socially worse-off groups of people and their better-off counterparts.<sup>3</sup> One of the goals of

"health equality" is to improve the health of disadvantaged groups and eliminate health and economic/social inequalities, rather than to continuously improve the health status of healthy individuals. The basis of definitions in ethical and human rights principles is greater health equality. Political determi-

ÖZET Bu çalısmanın amacı, sağlıkta esitlik ve etik alanında yapılan ça-

lışmaları tespit etmek ve bibliyometrik analiz ile görselleştirmektir. Veriler "Web of Science Core Collection" veri tabanından elde edilmiştir.

Performans analizi, bilimsel haritalama ve bibliyometrik analiz için

VOSviewer (1.6.15) yazılım programı kullanılmıştır. Bibliyometrik ve-

riler icin Web of Science veri tabanı "Health Equity" ve "Ethical" anah-

tar kelimeleri ile taranmış ve 284 yayının verileri ile analiz edilmiştir.

Analiz sonucunda WoS kategorisinde en çok kullanılan anahtar keli-

meler "Health equity", "Ethics", "Social Justice", "Health Policy",

"Equity", "Global Health" olmuştur. En çok yayın yapılan dergi (n=11

yayın) "British Medical Journal Open"; en çok makale (n=52 makale)

2022 yılında yayımlanmış; en aktif kurum (n=20 makale) "University

of California System"; en çok yayın yapılan ülke (n=144 yayın) "Uni-

ted States"; en çok fon sağlayan kurum (n=35 fon sağlayan kurum)

"United States Department of Health Human Services"; en çok makale

yayımlayan yazar (n=9 makale) Bernard Pratt'tir. Bibliyometrik analiz

sonuçları, sağlıkta eşitlik, hemşirelik ve etik alanındaki çalışmaların 2019 yılından bu yana son yıllarda giderek arttığını göstermiştir. Bu

#### TO CITE THIS ARTICLE:

Azizoğlu F, Terzi B. The research topics on health equality, nursing and ethics: A bibliometric analysis study. Turkiye Klinikleri J Med Ethics. 2024;32(2):87-98

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Peer review under responsibility of Turkiye Klinikleri Journal of Medical Ethics, Law and History.

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nants-political, legal, economic, etc.-as well as social norms and institutional processes shape the distribution of people's power and resources. Health and health equality are therefore determined by biological determinants as well as the conditions of the environment in which people are born, grow, live, work, play and age.<sup>1</sup>

Health inequality refers to the existence of unfair and unavoidable health disparities between population groups defined by social, economic, demographic and geographical characteristics.5 The terms "health equality" and "health inequality" have become increasingly important to health professionals over the last two decades, yet are rarely defined. Capitalism, neo-liberalization and globalization, and market-oriented approaches to health care based on a competitive framework underlie the problems of inequity in the health sector. In terms of the social determinants of health, this leads to inequalities and undermines equal opportunities to access health services and achieve health equality. Redistributing income and wealth to reduce social inequality is possible. But due to globalization, the situation for policymakers is becoming more challenging. Initiatives to reduce health inequalities are hampered by ethical issues related to prioritization and value conflicts.7

Health is a fundamental human right. Health equality is an ethical concept based on principles of distributive justice. Therefore, "equality in health and ethics" are important concepts that need to be examined together. In this study, studies on "Equality and ethics in health" were identified and visualized by bibliometric analysis method. In addition to fulfilling the advocacy role of the nurse in solving inequalities, there is also a need for political research. The goal of nursing's political action should be to ensure that the country's health system is for the benefit of society. Nurses should know the structure of the society they live in, monitor the changes in the society and renew themselves according to these changes. Identifying inequalities and taking measures against them is a priority task for those working in the field of public health. Public health nurses should be more sensitive to socioeconomic inequalities since they are closer to individuals with poor socioeconomic status in terms

of their position and should be aware of the factors that reveal inequalities.

Bibliometric analysis is a quantitative statistical approach that analyzes scientific literature to identify trends and hotspots of research activity over time. This approach is a common method of analysis when the rapidly growing literature in a research area makes it difficult to analyze it holistically. This analysis method provides researchers with an in-depth understanding of the literature by providing quantitative information on authors, institutions, countries, journals, keywords and research themes in the literature published in a specific research area.8 In addition, bibliometric analysis method enables researchers to examine their own field of study, to have information about important authors, institutions, countries, journals, organizations that fund research, and the most studied topics in the research field, and to identify gaps in the field.9 It thus provides researchers with important insights into the trends and hotspots of the research field and can guide future studies, health policy development and evidence-based practice by providing a better understanding of the field.<sup>8,9</sup> In the literature, there is no bibliometric analysis that examines the popular points and trends of studies in the field of "Health equality and ethics". It is believed that this study will help researchers, health professionals and institutions to understand the trends, current issues and hotspots in the field of "Equality and ethics in health" and help to generate innovative ideas. It can shed light on studies to reorganize institutional and national conditions in order to ensure equality in health. Health policies to be developed in this regard can be guided. This study was conducted to identify and visualize the studies conducted in the field of health equality and ethics between 1995 and 2023, to reveal the trends in this field and to contribute to researchers.

The following questions were answered in the study:

- How are publications distributed by year?
- What are the top contributing authors, countries, institutions, funding agencies and journals?
- What are the most cited publications?

- What is the publication language of the studies?
- What is the network map of co-author-author, institution and country affiliation?
- What is the common keyword network map?
- What is the network map of articles, journals, institutions and countries?

## MATERIAL AND METHODS

#### **DATA SOURCE**

It was aimed to reveal the international interest by examining the researches published in the Web of Science-WoS (Institute for Scientific Information, Philadelphia and London) Core Collection database in the field of equality and ethics in health from a bibliometric perspective. Bibliometrics is the science of information and documentation that quantitatively analyzes bibliographic data. 10 Bibliometric analysis is a scientific method that provides quantitative and qualitative analysis of large bibliometric data to provide information on key research components, including authors, countries, journals and emerging trends. Pritchard, one of the first authors to define the term bibliometrics, defined bibliometric analysis as "the application of statistical and mathematical methods to describe the processes of written communication, the nature and development of scientific disciplines, and the application of such communication using recensus techniques and analysis". 11 The bibliometric analysis technique is applicable to all fields of knowledge, so all disciplines are open to be analyzed with this tool. Unlike other commonly used review methods, such as systematic reviews, which are limited to specific and restricted aspects of a research question, bibliometric analysis provides an objective and comprehensive overview of the literature in a particular research area to show general research trends and reveal future directions. It can accommodate large datasets and is more suitable for large study scopes. The most important feature of bibliometric analysis is that the database from which the data set will be created is specific. Today, more than one database is used for bibliometric analysis. These databases include PubMed (National Library of Medicine, USA), Embase (Elsevier, Netherlands),

Scopus (Elsevier, Netherlands), Springerlink (Axel Springer, Germany), Google Scholar (Google, USA), SienceDirect (Elsevier, Netherlands). <sup>12</sup> Among these, WoS is the most preferred database for bibliometric analysis. <sup>13</sup>

#### STUDY SELECTION AND EXTRACTION

For bibliometric data, 323 studies were reached as a result of a search using the keywords "Health Equtiy", "Ethical" in the WoS database. The inclusion criteria were: author, country, type of publication, journal, article, review, language of publication, institution supporting the study and studies published between 1995 and 2023. As a result of the searches, a data set was created and analyzed with 284 articles obtained from the WoS database. In the bibliometric analysis, numerical distribution by years, prominent countries, most published languages, indexes, active institutions, productive researchers, and common used keywords were analyzed (Figure 1).

#### DATA COLLECTION

The study was conducted on June 4, 2023 via the publications in the "WoS Core Collection" database between 1995-2023.

#### ETHICAL ISSUES

Since study was not conducted on any individual, and the analysis used was the data collection method, ethical permission was not obtained.

#### DATA ANALYSIS

VOSviewer is a package program developed by Nees Jan van Eck and Ludo Waltman, researchers at the Center for Science and Technology Studies at Leiden University in the Netherlands. In the bibliometric analysis study, VOSviewer (1.6.15) software package was used to visualize the findings. VOSviewer software is a program that displays data in clearly understandable graphs for a better understanding of the results. <sup>14</sup> Graphical interpretation in bibliometric analysis helps researchers to better understand the main trends in their field of interest. VOSviewer software program is frequently preferred for bibliometric analysis of data obtained from publications scanned in different databases such as WoS, Scopus, PubMed. <sup>15,16</sup> When two articles are cited by

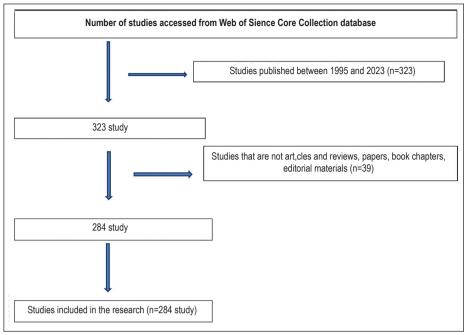


FIGURE 1: Publication selection flow diagram.

a third article, this is called "co-citation". Linking from a bibliographic point of view indicates co-cited articles that cite the articles in the analysis more frequently. Co-authorship, which shows the relationship between countries, authors and institutions. The keywords frequently used in the articles published during the analysis are called "co-occurrence of keywords", meaning the most frequent and common keywords used by the articles in the observation. It is a software tool for quantifying data, creating maps based on network data and visualizing these maps.<sup>14</sup> VOSviewer is one of the most preferred programs in bibliometric analysis due to its features. Bibliometric analysis is a powerful statistical analysis method used to analyze articles in terms of number and content.9,17

## RESULTS

#### PUBLICATIONS BY YEAR (1995-2023)

In the study, of the 284 studies published and analyzed in the field of "Health equality and ethics", 239 were articles and 45 were reviews. In the bibliometric analysis, publications between 1-52 were included in the study. The highest number of publications (n=52, 18.31%) was published in 2022 and the low-

TABLE 1: Distributio	n of publications by year	(1995-2023).
Publication years	Record count	% of 284
1995	1	0.352
1998	1	0.352
2003	2	0.704
2005	1	0.352
2006	2	0.704
2007	1	0.352
2008	1	0.352
2009	1	0.352
2010	2	0.704
2011	6	2.113
2012	8	2.817
2013	6	2.113
2014	8	2.817
2015	13	4.577
2016	16	5.634
2017	16	5.634
2018	18	6.338
2019	28	9.859
2020	32	11.268
2021	46	16.197
2022	52	18.310
2023	23	8.099

est number and first publication (n=1, 0.35%) was published in 1995 (Table 1).

## THE TOP 10 PUBLICATIONS CONTRIBUTING THE MOST TO THE FIELD

The authors who contributed the most with their publications are Pratt (n=9), Hunt (n=5) and Hyder (n=4), respectively. In the distribution of publications according to countries; USA (n=144) Canada (n=76) and England (n=28) are predominant respectively. University of California System (n=20), Harvard University (n=19), Johns Hopkins University (n=19) stand out in terms of the number of publications by institution. The United States Department of Health Human Services (n=35) provided the most funding for studies on "Health equality and ethics". The journals with the highest number of publications in the field of "Health equality and ethics" are BMJ Open (n=11), Health Equality (n=8) and Bioethics (n=7), respectively (Table 2).

#### CATEGORIES OF FIELD

The highest number of studies were conducted in Public Environmental Occupational Health (n=102), the lowest number in Clinical Neurology (n=4), Education Scientific Disciplines (n=4), Gerontology (n=4), Pediatrics (n=4), Psychology Multidisciplinary (n=4), Rehabilitation (n=4) and Tropical Medicine (n=4). Among the 284 studies analyzed, there were 23 records in the field of Nursing (Table 3).

#### PUBLICATIONS BY LANGUAGE

The studies were published in "English" (n=277), "Spanish" (n=5), "German" (n=1) and "Portuguese" (n=1) (Table 4).

#### THE HIGHLY PRODUCTIVE PUBLICATIONS

As a result of the analysis, the top three most cited publications are; "Defining equality in health", published in 2003 by "Braveman and Gruskin" in the "Journal of Epidemiology and Community Health" and the total number of citations is 790, "Health Disparities and Health Equality: The Issue is Justice", written by "Braveman et al.", published in 2011 in the "American Journal of Public Health" and the total number of citations was 443, the publication titled "From victim blaming to upstream action: tackling the social determinants of oral health inequalities" was written by "Watt", published in 2007 in the "Community Dentistry and Oral Epidemiology" and the total number of citations was 321 (Table 5).

# THE TOP 10 HIGHLY PRODUCTIVE CO-AUTHOR-AUTHOR, INSTITUTION, COUNTRY AND NETWORK MAP

In the analysis from 1995 to 2023, the top 10 highly productive authors and their affiliations were shown in Figure 2. Tugwell (3

		TAE	TABLE 2: Distribution of the t	oution of the top 10 authors, cou	untries, instit	top 10 authors, countries, institutions, funding institutions and journals contributing the most to the field.	the most to tl	ne field.	
Author	Article count Country	Country	Article count Institution		Article count	Article count Institution providing funding	Article count	Journal	Article count
Pratt B	တ	NSA	144	University of California System	20	United States Department of Health Human Services	35	BMJ Open	#
Hunt M	2	Canada	9/	Harvard University	19	National Institutes of Health National Institutes of Health USA	33	Health Equity	80
Hyder AA	4	England	28	Johns Hopkins University	19	Canadian Institutes of Health Research	59	Bioethics	7
Jecker NS	4	Australia	21	University of London	14	National Health and Medical Research Council of Australia	∞	Journal of Medical Ethics	7
Labonte R	4	South Africa	15	Harvard Medical School	13	National Institutes of Health National Institute on Drug Abuse	2	Advances in Nursing Science	5
Boyer Y	က	Brazil	∞	Johns Hopkins Bloomberg School of	13	European Commission	4	International Journal For	5
				Public Health				Equity in Health	
Chung R	က	Germany	80	University of Ottawa	13	Medical Research Council UK	4	American Journal of Public Health	4
Ull J	က	Sweden	∞	Universite De Montreal	12	National Institutes of Health National Institute of Nursing Research	h 4	BMC Public Health	4
Spiegel JM	3	Switzerland	80	University of California San Francisco	12	UK Research Innovation	4	BMJ Global Health	4
Tugwell P	3	India	9	University of Toronto	12	Wellcome Trust	4	Health Research Policy and Systems	ms 4

TABLE 3:	Distribution of publications by
Web of Sc	ience category (3 and above).

Web of Science Categories	Record Count	% of 284
Public Environmental Occupational Health	102	35.915
Ethics	43	15.141
Medical Ethics	41	14.437
Social Sciences Biomedical	30	10.563
Health Policy Services	29	10.211
Health Care Sciences Services	26	9.155
Medicine General Internal	26	9.155
Nursing	23	8.099
Social Issues	20	7.042
Medicine Research Experimental	7	2.465
Medical Informatics	6	2.113
Genetics Heredity	5	1.761
Pharmacology Pharmacy	5	1.761
Social Sciences Interdisciplinary	5	1.761
Surgery	5	1.761
Clinical Neurology	4	1.408
Education Scientific Disciplines	4	1.408
Gerontology	4	1.408
Pediatrics	4	1.408
Psychology Multidisciplinary	4	1.408
Rehabilitation	4	1.408
Tropical Medicine	4	1.408

TABLE 4: Distr	ibution of publications by la	inguage.
Languages	Record Count	% of 284
English	277	97.535
Spanish	5	1.761
German	1	0.352

Portuguese

1

0.352

publications in co-authorship, 96 citations and 10 total link strength), Kristjansson (2 publications in co-authorship, 94 citations and 7 total link strength), Boyer (3 publications in co-authorship, 49 citations and 12 total link strength), Mbuagbaw (2 articles, and 10 total link strength), Stacey (2 articles, 41 citations and 6 total link strength), Giles (2 articles, 41 citations and 6 total link strength), Jull (3 articles, 49 citations and 12 total link strength) dominated the network map of publications (Figure 2A). The number of collaborating institutions meeting the thresholds was 122 (Figure 2B). When co-author analysis was limited to a minimum of 2 publications and 2 ci-

tation depths per country, the average number of countries collaborated was found to be 58. The number of cooperating countries that meet the requirements was found as 31 (Figure 2C).

#### TOPICS TRENDS AND THEMES

In the common word network analysis, it was seen that the network consisted of 149 keywords, 17 clusters, 755 links that exceeded the threshold value, and the total link strength was 1,053. In the common keyword network map analysis in the field of "health equality and ethics"; "health equality" has 4 clusters, 106 links, 90 network formations and their connections with each other of 249; "ethics" has 4 clusters, 70 links, 48 network formations and their connections with each other of 125; "social justice" has 14 clusters, 36 links, 21 network formations and their connections with each other of 63; "health policy" has 17 clusters, 39 links, 20 network formations and their connections with each other of 20; "global health" has 5 clusters, 36 links, 18 network formations and their connections with each other of 62 (Figure 3).

#### THE NETWORK MAP OF CITATIONS

The number of publications that met the thresholds according to the minimum number of citations was found as 194. The three most cited publications according to the number of citations are Braveman's (2003) article with 1 cluster, 16 links and 790 citations, Braveman's (2011) article with 2 clusters, 4 links and 443 citations, and Braveman's (2014) article with 4 clusters, 4 links and 98 citations (Figure 4A). The most cited journals are "Journal of Epidemiology and Community Health" (n=790 citations), "American Journal of Public Health" (n=443) citations, "Community Dentistry and Oral Epidemiology" (n=321 citations) (Figure 4B). Calif. San Francisco received 1,395 citations, Harvard Univ. received 830 citations, Johns Hopkins Bloomberg Sch. Publ. Hlth. has 584 citations, Univ. Calif. Los Angeles received 470 citations, and Univ. Ottawa received 323 citations (Figure 4C). According to country citation analysis; USA received 2658 citations, Canada 876 citations, England 695 citations and Australia 193 citations (Figure 4D).

		TABLE 5: Top 15 most cited publications (1995-2023)	(1995-2023).			
Ž	No Publication	Author	Year	Journal	Average citation	Total citation
_	Defining Equity in Health	Braveman P, Gruskin S	2003	Journal of Epidemiology and	37.62	790
2	Health Disparities and Health Equity:	Braveman PA, Kumanyika S, Fielding J,		Community Health		
	The Issue is Justice	LaVeist T, Borrell LN, Manderscheid R, Troutman A	2011	American Journal of Public Health	34.08	443
က	From Victim Blaming to Upstream Action:	Watt RG	2007	Community Dentistry and	18.88	321
	Tackling the Social Determinants of Oral Health Inequalities			Oral Epidemiolog		
4	Framing Health and Foreign Policy:	Labonte R, Gagnon ML	2010	Globalization and Health	9.07	127
	Lessons for Global Health Diplomacy					
5	What is Health Equity: And How Does a Life-	Braveman, P	2014	Maternal and Child Health Journal	9.8	86
	Course Approach Take Us Further Toward It?					
9	Damned if you Do, Damned if you don't:	Petticrew M, Tugwell P, Kristjansson E,	2012	Journal of Epidemiology and	7.17	98
	Subgroup Analysis and Equity	Oliver S, Ueffing E, Welch V		Community Health		
7	Place-Focused Physical Activity Research,	Blacksher E, Lovasi GS	2012	Health and Place	6.83	82
	Human Agency, and Social Justice in Public Health:					
	Taking Agency Seriously in Studies of the Built Environment					
∞	Ethics and Governance of Global Health Inequalities	Ruger JP	2006	Journal of Epidemiology and Community Health	4.33	78
o	50th Anniversary of the Declaration of Helsinki: The Double Standard Was Introduced	Hellmann F, Verdi M, Schlemper BR, Caponi S	2014	Archives of Medical Research	6.5	65
10	0 Ethical Guidance for Disaster Response,	Leider JP, DeBruin D, Reynolds N,	2017	American Journal of Public Health	9.14	64
	Specifically Around Crisis Standards of Care:	Koch A, Seaberg J				
	A Systematic Review					
7	1 Public Health and Solitary Confinement in the United States	Cloud DH, Drucker E, Browne A, Parsons J	2015	American Journal of Public Health	7.11	64
12	2 COVID-19 Interconnectedness:	Watson MF, Bacigalupe G, Daneshpour M,	2020	Family Process	15.75	63
	Health Inequity, the Climate Crisis,	Han WJ, Parra-Cardona R				
	and Collective Trauma Palabras clave					
13	3 The Future of Global Health Education:	Adams LV, Wagner CM, Nutt CT, Binagwaho A	2016	BMC Medical Education	7.5	09
	Training for Equity in Global Health					
14	4 Ethical Review of Global Short-Term Medical Volunteerism	DeCamp, M	2011	HEC Forum	4.31	56
15	5 The Social Value of Vaccination Programs:	Luyten J, Beutels P	2016	Health Affairs	6.88	55
	Beyond Cost-Effectiveness					

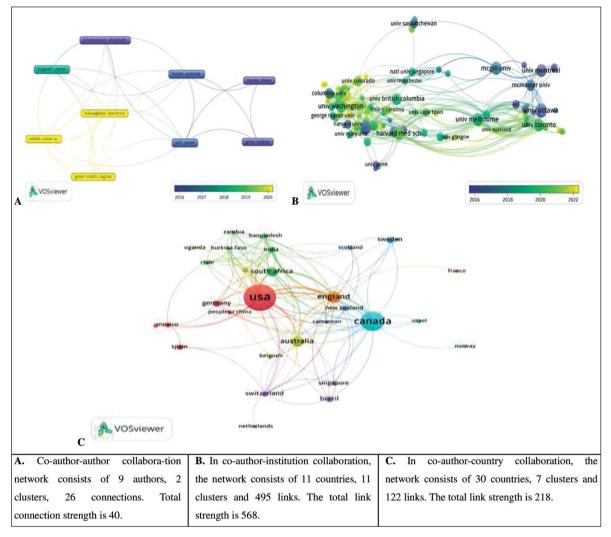


FIGURE 2: Co-author-author, institution, country analysis network map.

## DISCUSSION

In this study, a bibliometric analysis of 284 articles published between 1995 and 2023 on "Health equality and ethics" research was conducted using the WoS database and VOSviewer software program. According to the analysis, the first study and the least number of studies in this field were published in 1995, and the number of publications increased gradually after 2015. As a result of both the economic development of countries and the ease of access to social justice and health services that accept human welfare in the 1990s, there was an increase in publications in the field of health equality in the early 2000s. Publications on health inequalities have in-

creased in the last 20 years.<sup>18</sup> The increasing interest in the issue of health inequalities over the years may be due to the politico-economic consequences that cause the complexity of the effort to be superior among people.<sup>18,19</sup> On the other hand, no other similar study could be found in the literature in which the issue of "Equality and ethics in health" was examined with bibliometric analysis.

In the analysis, the country with the highest number of publications in the field of "Health equality and ethics" was USA and the institutions with the highest number of publications were University of California System, Harvard University and Johns Hopkins University. The United States Department of Health Human Services provides the most funding

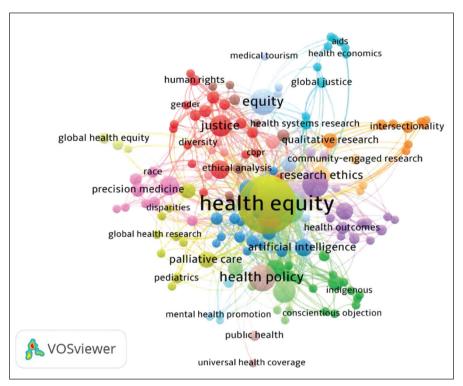


FIGURE 3: Common word keyword analysis.

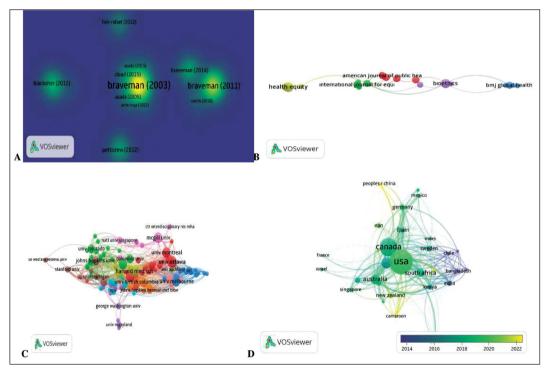


FIGURE 4: Article, journal, institution, country network map according to citation analysis.

for studies in this field. In this study, it is noteworthy that while developed countries such as the USA and Canada have the most research in this field, less developed countries such as South Africa and India are also working in this field. In another bibliometric study on health inequalities, the USA was found to be the country with the highest number of studies in this field.<sup>20</sup> Another study found that the United States, one of the highest-income countries, contributed the most to publications on health unequality.<sup>18</sup> Knowing the best research countries can help to create or expand research networks in countries or organizations where such research is in its infancy.<sup>17</sup>

According to the WoS category, the most research on "Health equality and ethics" was conducted in the field of Public Environmental Occupational Health. In the field of nursing, it can be said that there are few studies on "Health equality and ethics". The analysis revealed that the most cited article was Braveman and Gruskin's study titled "Defining equality in health" published in the Journal of Epidemiology and Community Health. Journals in the fields of ethics, medical ethics, nursing and health equality were also among the top 10 active journals. Among the publications included in the bibliometric analysis, the number of publications of the 10 most prolific authors ranged from 3 to 9, and these authors were from the USA, Canada, England, Australia, South Africa, Brazil, Germany, Brazil, Sweden, Switzerland and India. The geographical distribution of publications on "Health equality and ethics" is almost global, but there are differences in the size of research outputs across the world. Also, geographical differences, poverty, remote healthcare or global pandemics, etc. There are more publications on these subjects.<sup>21-23</sup> This study highlights the United States as the country that publishes the most on this subject. America was followed by countries such as South Africa and Brazil. In many countries around the world, especially in the USA and European countries, the social welfare state concept has weakened since the 1970s as neoliberal economic policies have been prioritized. Neoliberal ideology advocates individualism and privatization. In order to create the necessary environment for free trade, the elimination of state intervention allows the private sector to play an active role in the financing and delivery of services. When these policies gain weight in health service delivery and financing, they lead to negative health outcomes and inequalities for disadvantaged groups in terms of access to health services.24

The co-author-author collaboration network consists of 9 authors, 2 clusters and 26 links, the co-author-institution collaboration network consists of 11 countries, 11 clusters and 495 links, and the co-author-country collaboration network consists of 30 countries, 7 clusters and 122 links. This network analysis can provide information about potential collaborators and help to establish collaboration, benefiting researchers.<sup>25</sup> Collaboration among researchers can contribute to sharing knowledge, resources and ideas, generating new knowledge, revealing innovations in the field of "Health equality and ethics" and increasing research productivity. It is therefore recommended that future researchers build strong collaborations.

The keyword network analysis shows that the keywords "health equality", "ethics", "social justice", "health policy" and "global health" were widely used in research on health equality and ethics between 1995 and 2023. It was determined that the "health equality" word network had the highest link strength. In addition, the analysis revealed that the keyword "nursing" was not included. This result shows the need for nursing research on "Health equality and ethics" and the research gap in nursing practice on this issue. Keyword analysis can help researchers understand hotspots in the field of "Health equality and ethics" and global trends in this research area.<sup>26</sup> The word network analysis in this research also reveals the main contents of the literature and research themes. Therefore, future researchers, academics and practitioners may focus on less researched topics, which may contribute to expanding the literature on "Health equality and ethics" in nursing. Significant progress has been made in measuring health equality and disaggregating the contributions of the various determinants of health inequality. However, evidence is lacking to show that social determinants of health lead to inequalities. Existing studies have been criticized for focusing more on socioeconomic factors. This limits the use of health equality studies in policy decision-making. The focus of health equality work has been on the victimization and discrimination experienced by sexual minorities, persons with disabilities and those with mental health problems, as well as the poor health services and their consequences as a result of stigmatization.<sup>27</sup> Health inequalities result from an unequal distribution of health determinants, which disadvantages those who lack wealth, power or prestige. While health inequality is inversely proportional to social prestige; It is directly proportional to substance use, deterioration in mental health, and difficulties in accessing health services. In addition, the stigma and discrimination associated with these negatively affect health and well-being.<sup>28</sup>

Ethical principles are basic and clear moral truths that guide intentions and actions. These principles provide guidance for nurses to be aware of the moral aspect of their profession, to develop moral sensitivity, and to provide adequate and quality care to society by better understanding their responsibilities in clinical practice.

An important limitation is that there is almost no research on the causes of health inequalities involving nurses and the development of policies to eliminate these inequalities. Therefore, these studies should be increased.

### CONCLUSION

This research was carried out to identify and visualize the studies conducted in the field of "Health equality and ethics", to unveil the trends in this field and to provide a literature-based perspective to researchers by pointing out the gaps in the literature. It was observed that there is a need for more studies in this field. It has been observed that ethics has been

studied more in the field of law and less in the field of health.

There is no single cause of inequality, so teamwork is important to achieve social justice. For social justice to be realized, the causes of inequalities should be explained to society and the whole community should collaborate to solve them. Nurses should be involved in district commissions, legislative roles and political environments to shape policies. Nurses can take a leadership role through interdisciplinary collaboration, advocacy, political participation and community partnerships. Eliminating health inequalities can only be possible by identifying the social determinants of health and addressing deficiencies in these determinants.

#### Source of Finance

During this study, no financial or spiritual support was received neither from any pharmaceutical company that has a direct connection with the research subject, nor from a company that provides or produces medical instruments and materials which may negatively affect the evaluation process of this study.

#### Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm

#### **Authorship Contributions**

All authors contributed equally while this study preparing.

### REFERENCES

- World Health Organization [Internet]. ©2023 WHO [Cited: July 18, 2023]. Health equity. Available from: [Link]
- Rivera-Romero O, Gabarron E, Miron-Shatz T, Petersen C, Denecke K. Social media, digital health literacy, and digital ethics in the light of health equity. Yearb Med Inform. 2022;31(1):82-7. [Crossref] [PubMed] [PMC]
- Braveman P. What is health equity: and how does a life-course approach take us further toward it? Matern Child Health J. 2014;18(2):366-72. [Crossref] [PubMed]
- Braveman P. Health disparities and health equity: concepts and measurement. Annu Rev Public Health. 2006;27:167-94. [Crossref] [PubMed]
- Richardson ET. Epidemic illusions: On the coloniality of global public health. Medicine Anthropology Theory. 2019;6(4):101-18. [Link]
- 6. Chang WC, Fraser JH. Cooperate! A paradigm shift for health equity. Inter-

- national Journal for Equity in Health. 2017;16:12. [Crossref] [PubMed] [PMC]
- Haverkamp B. How to support equal standing in local health equity? Bioethics. 2022;36(5):597-604. [Crossref] [PubMed] [PMC]
- Liu W, Tang L, Hu G. Funding information in Web of Science: an updated overview. Scientometrics. 2020;122(3):1509-24. [Crossref]
- Donthu N, Kumar S, Mukherjee D, Pandey N, Lim WM. How to conduct a bibliometric analysis: an overview and guidelines. Journal of Business Research. 2021;133:285-96. [Crossref]
- Mas Tur AS, Kraus M, Brandtner R, and Kürsten W. Advances in management research: a bibliometric overview of the review of managerial science. Review of Managerial Science. 2020;14(5):933-58. [Crossref]
- Pritchard A. Statistical bibliography or bibliometrics. Journal of Documentation. 1969;25(4):348-9. [Link]

- Moral-Munoz JA, Herrera-Viedma E, Santisteban-Espejo A, Cobo MJ. Sofware tools for conducting bibliyometric analysis in sience: An -up-to-date rewiew. El Profesional de la Informacion. 2020;29(1):273-89. [Crossref]
- Karagöz B, Şeref İ. Değerler eğitimi dergisinin bibliyometrik profili (2009-2018) [The bibliometric profile of the journal of values education (2009-2018)]. Journal of Values Education. 2019;17(37):219-46. [Crossref]
- van Eck NJ, Waltman L. Software survey: VOSviewer, a computer program for bibliometric mapping. Scientometrics. 2010;84(2):523-38. [Crossref] [PubMed] [PMC]
- Leydesdorff L, Rafols I. Interactive overlays: a new method for generating global journal maps from Web of-Science data. Journal of Informetrics. 2022;6(2):318-32. [Crossref]
- Guo YM, Huang J, Guo J, Guo XR, Li H, Liu MY, et al. A bibliometric analysis and visualization of blockchain. Future Generation Computer Systems. 2021;116:316-32. [Crossref]
- Baber H, Fanea-Ivanovici M. Fifteen years of crowdfunding-a bibliometric analysis. Technology Analysis & Strategic Management. 2022;1-15. [Cross-ref]
- Cash-Gibson L, Rojas-Gualdrón DF, Pericàs JM, Benach J. Inequalities in global health inequalities research: A 50-year bibliometric analysis (1966-2015). PLoS One. 2018;13(1):e0191901. [Crossref] [PubMed] [PMC]
- Navarro V. What we mean by social determinants of health. Int J Health Serv. 2009;39(3):423-41. [Crossref] [PubMed]
- Collyer TA, Smith KE. An atlas of health inequalities and health disparities research: "How is this all getting done in silos, and why?". Soc Sci Med. 2020;264:113330. [Crossref] [PubMed] [PMC]

- Sweileh WM, Al-Jabi SW, Sawalha AF, AbuTaha AS, Zyoud SH. Bibliometric analysis of medicine-related publications on poverty (2005-2015). Springerplus. 2016;5(1):1888. [Crossref] [PubMed] [PMC]
- Sweileh WM, Al-Jabi SW, AbuTaha AS, Zyoud SH, Anayah FMA, Sawalha AF. Bibliometric analysis of worldwide scientific literature in mobile - health: 2006-2016. BMC Med Inform Decis Mak. 2017;17(1):72. [Crossref] [PubMed] [PMC]
- Sweileh WM. A bibliometric analysis of global research output on health and human rights (1900-2017). Glob Health Res Policy. 2018;3:30. [Crossref] [PubMed] [PMC]
- Gönç T. Neoliberal politikaların küresel düzeyde sağlık üzerindeki etkileri [The global impacts of neoliberal policies on health]. Anadolu University Journal of Social Sciences. 2017;17(1):159-78. [Crossref]
- Fonseca Bde P, Sampaio RB, Fonseca MV, Zicker F. Co-authorship network analysis in health research: method and potential use. Health Res Policy Syst. 2016;14(1):34. [Crossref] [PubMed] [PMC]
- Chen C, Ibekwe-Sanjuan F, Hou J. The structure and dynamics of co-citation clusters: a multiple-perspective co-citation analysis. Journal of the American Society for Information Science and Technology. 2010;61(7):1386-409. [Crossref]
- Yao Q, Li X, Luo F, Yang L, Liu C, Sun J. The historical roots and seminal research on health equity: a referenced publication year spectroscopy (RPYS) analysis. Int J Equity Health. 2019;18(1):152. [Crossref] [PubMed] [PMC]
- Pauly B, Revai T, Marcellus L, Martin W, Easton K, MacDonald M. "The health equity curse": ethical tensions in promoting health equity. BMC Public Health. 2021;21(1):1567. [Crossref] [PubMed] [PMC]