

ORIGINAL

## Indicators of scientific production on Health Policy

### Indicadores de producción científica sobre Health Policy

Javier Gonzalez-Argote<sup>1</sup>  , Emanuel Jose Maldonado<sup>2</sup>  

<sup>1</sup>Universidad Abierta Interamericana, Facultad de Medicina y Ciencias de la Salud. Ciudad Autónoma de Buenos Aires, Argentina.

<sup>2</sup>AG Editor. Montevideo, Uruguay.

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#### ABSTRACT

**Introduction:** health and its maintenance constitute one of the main assets of man at any stage of his history. The implementation of health policies is aimed at solving global health problems that affect the population.

**Objective:** characterize the scientific production on Health Policy in SCOPUS.

**Method:** an observational, descriptive, bibliometric study was developed. A total of 229,339 articles were worked on. The SCOPUS database was used to collect the information; especially the SciVal tool for the analysis of information and the study of indicators. Descriptive statistics were applied to analyze the information.

**Results:** a total of 229,339 articles were analyzed; equivalent to 2,471,305 appointments in the study period. I highlight the year 2023 with the highest number of articles published (31,982; 13,94 %). The United States stood out with the highest number of articles published with 79,708 investigations (34,75 %). The articles published in the journal BMC Health Services Research stood out with 10,425 investigations (23 %). The largest number of articles were located in the health and health services category

**Conclusions:** scientific production related to Health Policy showed heterogeneous but constant growth, in contrast to the number of citations. The publications were related to the largest centers of scientific production. The research topics were directed with greater interest towards the quality of health services and assistance according to age groups.

**Keywords:** Bibliometrics; Health Policy; Scientific Production Indicators; Scientific Production.

#### RESUMEN

**Introducción:** la salud y el mantenimiento de la misma a constituyen una de las principales riquezas del hombre en cualquier etapa de su historia. La puesta en práctica de políticas de salud se encamina a la resolución de problemas sanitarios globales que afectan a la población.

**Objetivo:** caracterizar la producción científica sobre *Health Policy* en SCOPUS.

**Método:** se desarrolló un estudio observacional, descriptivo, de corte bibliométrico. Se trabajaron con un total de 229 339 artículos. Para la recolección de la información se empleó la base de datos SCOPUS; en especial la herramienta SciVal para el análisis de la información y el estudio de los indicadores. Se aplicó la estadística descriptiva para el análisis de la información.

**Resultados:** se analizaron un total de 229 339 artículos; equivalentes a 2 471 305 citas en el periodo de estudio. Destaco el año 2023 con el mayor número de artículos publicados (31 982; 13,94 %). Sobresalió Estados Unidos con el mayor número de artículos publicados con 79 708 investigaciones (34,75 %). Destacaron los artículos publicados en la revista *BMC Health Services Research* con 10 425 investigaciones (23 %). El mayor número de artículos se ubicaron en la categoría de salud y servicios de salud.

**Conclusiones:** la producción científica relacionada con Health Policy mostro un crecimiento heterogéneo pero constante, en contraposición con el número de citaciones. Las publicaciones guardaron relación con los mayores centros de producción científica. Los temas de investigación se encaminaron con mayor interés hacia la calidad de los servicios de salud y la asistencia según grupos de edades.

**Palabras clave:** Bibliometría; Health Policy; Indicadores de Producción Científica; Producción Científica.

## INTRODUCTION

Health and its maintenance constitute one of the main riches of humanity at any stage of its history. There have been many categories of health in every era. However, none have a greater connotation than the definition of health as physical, mental, and social well-being and equilibrium, not only the absence of disease.

Health policy implementation aims to solve global health problems affecting the population. They are responsible for ensuring the maintenance of the basic health indicators of the population to achieve higher values of life expectancy and births and to deal with unhealthy situations generated by poverty and underdevelopment to achieve health equity.<sup>(1)</sup>

Health policies must be based on a wide range of factors. In turn, they must be related to other sectors, such as the economic and political system in general. These, in turn, must provide the necessary elements for the exercise and fulfillment of the health guidelines of each territory. Aspects that allow the adequacy of these policies to face crisis or contingency situations.<sup>(2)</sup>

One of the greatest crises in the health field was undoubtedly COVID-19. Classified as a pandemic, at the beginning of the year 2020, the World Health Organization (WHO) issued a global health alert on the behavior of the disease. In this sense, many countries applied and adjusted their health policies in the new context. Telemedicine, confinement, and other actions were adopted to slow the disease's advance.<sup>(3)</sup> Each of these measures impacted the development of public health in general.

Each health policy is outlined in terms of the development goals in the 2030 Agenda on Sustainable Development of the United Nations (UN). One of its main strategies is to achieve Universal Health Coverage for the universal population against financial risks by providing quality services.<sup>(4)</sup> In this sense, it becomes important to analyze the health policies put into practice, on which branches the main research on health guidelines and equity is being developed. For this reason, it was defined as an objective to characterize the scientific production on *Health Policy in SCOPUS*.

## METHODS

An observational, descriptive, bibliometric study was developed on the scientific production published in SCOPUS related to the category Health Policy between 2014 and 2023 with global scope. Two hundred twenty-nine thousand three hundred thirty-nine articles were worked with; no sampling techniques were applied, so the entire universe was used.

The SCOPUS database was used to collect the information, especially the SciVal tool for analyzing the information and studying the indicators. Among the indicators analyzed were:

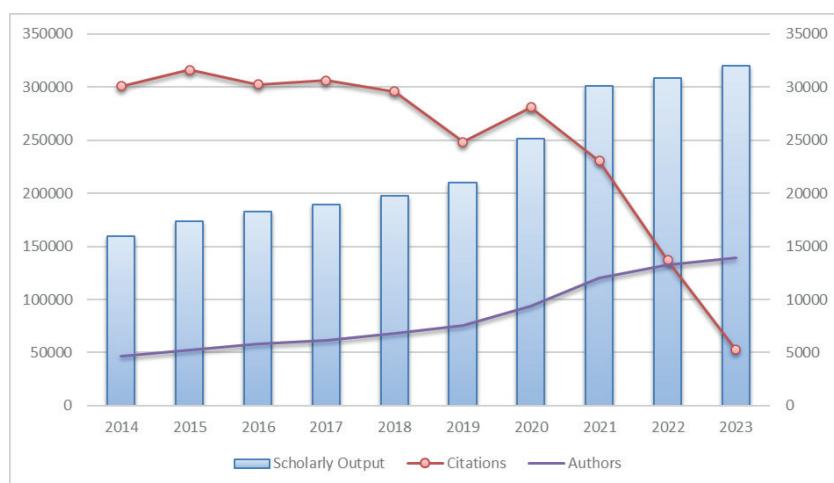
- Number of articles published (Nodoc)
- Years of publication.
- Number of citations received
- Citations received by articles
- Journals where articles were published
- Countries or regions with the highest publication rate
- Research topics and themes related to the category.

Descriptive statistics were used for data analysis. The ethical norms for developing health research and the II Declaration of Helsinki were complied with.

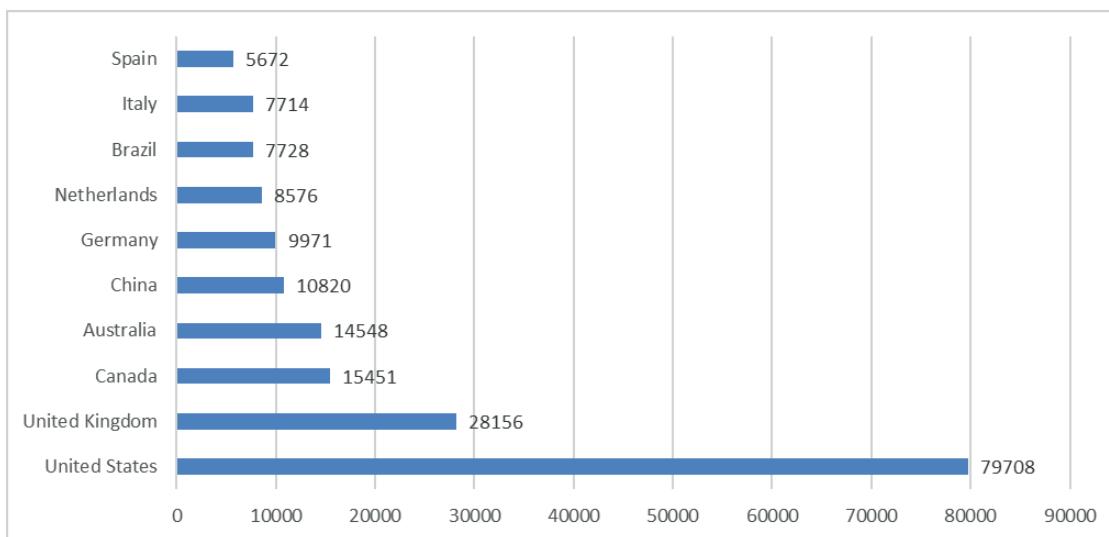
## RESULTS

229 339 articles were analyzed, equivalent to 2 471 305 citations in the study period. The average number of citations ranged from 10 to 18, depending on the year analyzed. A total of 848 515 authors were found. The year 2023 stood out with the highest number of published articles (31 982; 13,94 %), in contrast to 2014, which presented the highest number of citations (300 904; 12,17 %) (figure 1).

The United States stood out with the most published articles, with 79,708 research papers (34,75 %). The United Kingdom followed this with 28 156 papers (12,27 %) (figure 2).

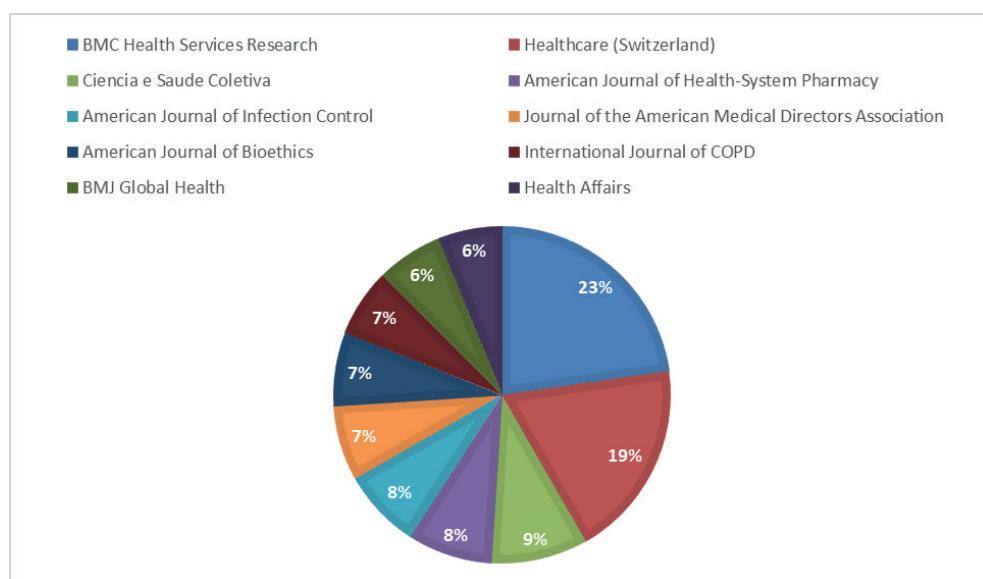


**Figure 1.** Distribution of articles according to years of publication, citations and authors.



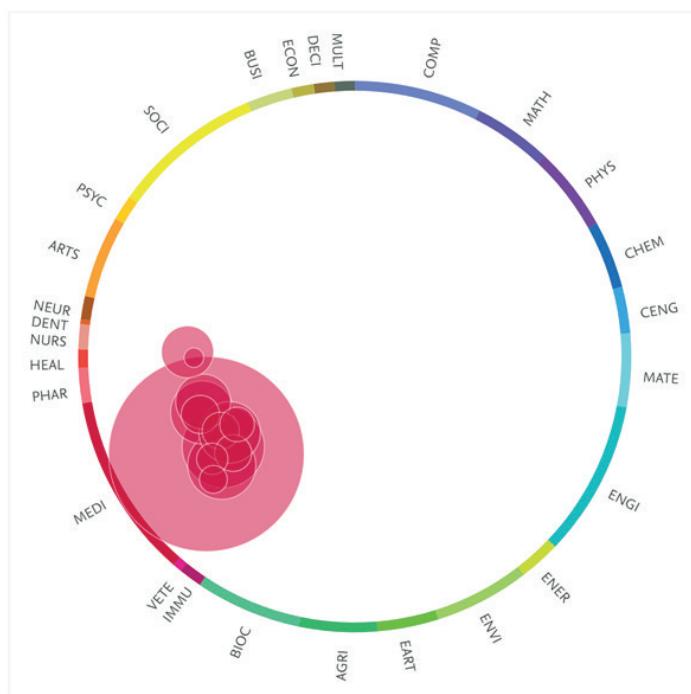
**Figure 2.** Distribution of articles by country.

The articles published in the journal BMC Health Services Research stood out with 10,425 investigations (23 %), followed by Healthcare (Switzerland) with 8,712 articles (19 %) (figure 3).



**Figure 3.** Distribution of articles according to journals.

The largest number of articles were in the health and health services category. The topics with the highest number of articles were Patient Safety, Medication Error, Pharmacovigilance and Health Service, Neonatal Infant, and Rural Population, with 54,078 and 23,726 articles, respectively (figure 4).



**Figure 4.** Distribution of the articles according to topics.

## DISCUSSION

The generation of scientific knowledge is key to the development of society.<sup>(5,6,7)</sup> In this sense, research related or oriented to health policies makes it possible to outline strategies to achieve equitable health care for the entire population.<sup>(8,9)</sup>

The temporal relationship analyzed shows an upward and sustained growth over time, an aspect that supports the growing interest of researchers in this branch of knowledge. These results differ from those presented by Haidee Aguirre et al.<sup>(10)</sup> Similar results were shown by Sanz-Valero et al.<sup>(11)</sup> in their study on health services, which showed a heterogeneous but growing behavior of the articles analyzed in their temporal relationship. In turn, this author provided several authors and citations for the data presented in this study.

The study of scientific production by country by Montenegro Martínez et al.<sup>(12)</sup> reflects a greater production in countries such as Brazil and Canada. These results differ from those presented in this study. The United States concentrates on the largest number of research centers and high-impact scientific journals, which may support the data shown in the present study. Similar data were shown by Sanz-Valero et al.<sup>(13)</sup>

Scientific journals constitute one of the main means for the socialization of scientific knowledge. About the above, Zacca-González<sup>(14)</sup> shows results that differ from those presented in this study; the difference may be based on the methodology used by each study.

The areas of knowledge related to health policies are diverse; however, the main focus of the research was on patient care, attention to different age groups (infants and older adults in general), and health services. About the above, studies such as the one conducted by Salas Padilla<sup>(15)</sup> support research related to health services as one of the most interesting for researchers. Another of the key elements related to quality and assistance in the services has been the training and distribution of health personnel, analyzed by Silberman.<sup>(16)</sup>

In turn, other research, such as that carried out by León-Quenguan et al.<sup>(17)</sup>, includes an analysis of health policies aimed at the prevention and promotion of oral health, where different intervention strategies are studied by country, which is developed by age and risk groups according to their characteristics and risk factors. Aspects that support the studies are aimed at different age groups.

## CONCLUSIONS

Scientific production related to Health Policy showed a heterogeneous but steady growth, in contrast to the number of citations. Publications were related to the largest centers of scientific production. The research topics were directed with greater interest towards health services and care quality according to age groups.

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## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

## AUTHORSHIP CONTRIBUTION

*Conceptualization:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Data curation:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Formal analysis:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Research:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Methodology:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Project Management:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Resources:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Software:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Supervision:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Validation:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Visualization:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Editing - original draft:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.

*Editing and proofreading:* Javier Gonzalez-Argote, Emanuel Jose Maldonado.