





SHORT COMMUNICATION

## Identifying promising research areas in health using bibliometric analysis

### Identificación de áreas de investigación prometedoras en salud mediante análisis bibliométricos

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#### ABSTRACT

The increasing complexity and evolution of health research have led to the need to identify niches and potential research areas to drive innovation and improve results in medical care. Bibliometric analyzes provide an objective and quantitative tool to assess scientific production, impact and trends in the health field. Developing a strategy to find niches or potential research areas in the field of health based on bibliometric analysis helps to identify opportunities to advance scientific knowledge and improve the population's quality of life. Its use is expected to strengthen the competitive position of research institutions and positively impact medical care and public health.

**Keywords:** Health Research; Bibliometric Indicators; Strategy; Research Niches.

#### RESUMEN

La creciente complejidad y evolución de la investigación en salud ha llevado a la necesidad de identificar nichos y potenciales áreas de investigación para impulsar la innovación y mejorar los resultados en la atención médica. Los análisis bibliométricos proporcionan una herramienta objetiva y cuantitativa para evaluar la producción científica, el impacto y las tendencias en el ámbito de la salud. El desarrollo de una estrategia para encontrar nichos o potenciales áreas de investigación en el ámbito de la salud basada en análisis bibliométricos, contribuye a facilitar la identificación de oportunidades para avanzar en el conocimiento científico y mejorar la calidad de vida de la población. Se espera que su uso permita fortalecer la posición competitiva de las instituciones de investigación y a generar un impacto positivo en la atención médica y la salud pública.

**Palabras clave:** Investigación en Salud; Indicadores Bibliométricos; Estrategia; Nichos de Investigación.

#### INTRODUCTION

The increasing complexity and evolution of health research have led to the need to identify niches and potential research areas to drive innovation and improve results in medical care.<sup>(1)</sup>

In this context, developing a strategy based on bibliometric analysis becomes crucial to guide decision-making and allocate resources efficiently in the health field.

Bibliometric analyzes provide an objective and quantitative tool to assess scientific production, impact and trends in the health field. By focusing on indicators such as the number of publications, citations received, and collaborations, it is possible to identify emerging research areas and knowledge gaps. In addition, these analyzes allow decision-makers to set priorities and allocate resources strategically, ensuring that the most

pressing research needs are addressed, and innovation in the field is promoted.<sup>(2)</sup>

## CONCEPTION OF THE STRATEGY

An efficient strategy is structured in four steps: analysis, diagnosis, strategy and action plan. The analysis allows collection and evaluation of relevant information to identify opportunities and challenges. The diagnosis focuses on understanding strengths and weaknesses and identifying priority areas. The strategy phase involves developing approaches and policies to address the identified priorities, while the action plan sets out the concrete actions, resources, and timeframe for implementing the strategy. These four steps ensure informed decision-making, effective implementation, and proper progress monitoring.<sup>(3)</sup>

## STRATEGY PROPOSAL

### 1. Analysis:

- a. Data collection: identify and compile relevant scientific publications in the health field using bibliographic databases such as PubMed, Scopus, and Web of Science, among others.
- b. Identification of research areas: categorize publications according to specific thematic areas in the health field, making it possible to identify trends and patterns in research.
- c. Co-word analysis and co-citation: apply co-word analysis and co-citation techniques to identify emerging themes and areas of interest in health research.

### 2. Diagnosis:

- a. Identification of emerging areas: analyze the publication and citation trends in the identified thematic areas, highlighting those that show rapid growth or increased attention to the scientific community.
- b. Identification of research gaps: evaluate subject areas based on scientific production and citations received to identify gaps with opportunities to contribute new knowledge.
- c. Collaborative Network Analysis: examine collaborative networks between researchers and institutions to identify research areas where few connections or collaborations exist.

### 3. Strategy:

- a. Prioritization of research areas: based on the previous diagnosis, identify and prioritize emerging areas and research gaps that represent opportunities for innovation and the development of new knowledge in the field of health.
- b. Promotion of interdisciplinary collaboration: design policies and programs that encourage collaboration between researchers from different disciplines, which can contribute to identifying and exploring new niches in health research.
- c. Establishment of research objectives and goals: define specific objectives and goals for research in priority areas, considering the impact on the population and scientific relevance.

### 4. Action plan:

- a. Implementation of policies and programs: implement the policies and programs designed in the strategy stage, monitoring their progress and effectiveness in identifying and exploring new niches for health research.
- b. Training and education: offer training and research training programs to strengthen scientific personnel's skills and competencies and promote new researchers' training in priority areas.
- c. Evaluation and adjustments: establish a system of periodic evaluation of the policies and programs implemented, using bibliometric indicators and other relevant indicators to measure the success of identifying and exploiting new research niches. Adjust policies and programs as necessary based on results and context.

## FINAL CONSIDERATIONS

Developing a strategy to find niches or potential research areas in the field of health based on bibliometric analysis helps to identify opportunities to advance scientific knowledge and improve the population's quality of life. Its use is expected to strengthen the competitive position of research institutions and positively impact medical care and public health.

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#### **FINANCING**

None.

#### **CONFLICTS OF INTEREST**

None.

#### **AUTHORSHIP CONTRIBUTION**

*Conceptualization:* José Ignacio Robaina Castillo.

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