

From innovation to ethical impact: a bibliometric mapping of scientific production on Artificial Intelligence, Ethics and Global Health

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Abstract

Introduction

The advancement of Artificial Intelligence in healthcare represents a technological revolution with profound ethical and clinical implications. However, the benefits and risks of this progress are not equally distributed, raising questions about bioethical dilemmas and their impact on health and nursing practices. Investigating the global scientific production on Artificial Intelligence, ethics, and health makes it possible to identify established, emerging, and neglected topics that are essential for achieving the Sustainable Development Goals, particularly quality health, innovation, and the reduction of inequalities.

Objective

To map the global scientific production on Artificial Intelligence in healthcare, focusing on ethics, and identifying trends, gaps, and main contributors in the field.

Methods

A bibliometric analysis was conducted using the Scopus, Web of Science, and PubMed databases. The analysis included articles published between January 2015 and May 2025. The data was processed using the Bibliometrix package in R and visualized with Biblioshiny. The analysis covered annual scientific production, thematic trends, the evolution of keywords, collaboration networks, and the impact of the sources.

Results

A total of 1,390 documents were analyzed. Scientific production has grown exponentially since 2020. The thematic analysis showed that "Artificial Intelligence," "Ethics," and "Health" are key topics, while "Bioethics," "Privacy," and "Machine Learning" are fundamental topics that are still underdeveloped. The collaboration map revealed a concentration in North America and Western Europe, highlighting global asymmetries.

Conclusion

There is a strong focus on debates about ethics and Artificial Intelligence, but the development of topics such as bioethics and social justice remains limited. The practice of nursing and health professionals must play a strategic role in building inclusive technological solutions, contributing to the reduction of inequalities and strengthening health systems. Expanding international collaboration and investing in research in the Global South are urgent for digital equity and ethics in health.

Keywords

Artificial Intelligence; Bioethics; Healthcare; Bibliometrics; Health Professionals; Global Health.

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