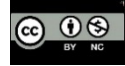


ОБЩИЕ ВОПРОСЫ ОБРАЗОВАНИЯ

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The philanthropic model of scientific knowledge dissemination: a historical and ethical analysis (1982–2024)

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Abstract. *Introduction.* The principle of beneficence is one of the fundamental pillars of bioethics, ensuring the protection of the dignity of participants in scientific research. Its significance extends to medical practice, technology, and professional ethics. *Aim.* This study aims to analyse the body of scholarly work relating to the principle of beneficence in the dissemination of scientific knowledge, and to identify key academic journals, authors, publications, terminology, and general characteristics of such works. *Methodology and research methods.* A bibliometric analysis was conducted on articles indexed in the Scopus database, in accordance with PRISMA guidelines. A total of 581 documents were analysed using the Biblioshiny interface. *Results and scientific novelty.* The findings of the study demonstrate an increase in the number of publications linking the principle of beneficence to medical ethics, autonomy, informed consent, distributive justice, and palliative care. The most prominent journals identified were the “Journal of Medical Ethics”, the “AMA Journal of Ethics”, and “Nursing Ethics”, all of which are ranked in the first quartile in Scopus. The most cited document (420 citations) was the article “Beyond ‘Do No Harm’: The Challenge of Constructing Ethical Relationships in Refugee Research”. Thematic evolution revealed the integration of the principle of beneficence with issues relating to scientific education and bioethical training. *Practical significance.* The results highlight the importance of enhancing scientific and bioethical education, which could be beneficial for professional practice and the training of future researchers.

Keywords: beneficence, quality, education, ethics, scientific research

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Филантропическая модель распространения научных знаний: историко-этический анализ (1982–2024 гг.)

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Аннотация. Введение. Принцип благотворительности – один из фундаментальных столпов биоэтики, обеспечивающий защиту достоинства участников в ходе научных исследований. Цель исследования – проанализировать пул научных работ, связанных с принципом благотворительности в распространении научных знаний, и выявить ключевые научные издания, авторов, публикации, термины и общие характеристики подобных работ. *Методология, методы и методики.* Проведен библиометрический анализ статей, проиндексированных в базе данных Scopus, в соответствии с рекомендациями PRISMA. Был проанализирован 581 документ с использованием интерфейса Biblioshiny. *Результаты и научная новизна.* Результаты исследования демонстрируют рост числа публикаций, связывающих принцип благотворительности с медицинской этикой, автономией, информированным согласием, распределительной справедливостью и паллиативной помощью. Наиболее значимыми журналами стали Journal of Medical Ethics, AMA Journal of Ethics and Nursing Ethics, все они входят в первый квартиль Scopus. Самым цитируемым документом (420 цитирований) оказалась статья «Beyond „Do No Harm“: The Challenge of Constructing Ethical Relationships in Refugee Research». Тематическая эволюция показала интеграцию принципа благотворительности с вопросами научного образования и биоэтической подготовки. *Практическая значимость.* Результаты подчеркивают важность укрепления научного и биоэтического образования, что может быть полезно для профессиональной деятельности и подготовки будущих исследователей.

Ключевые слова: благотворительность, качество, образование, этика, научное исследование

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Introduction

Scientific research is an organised and systematic process that begins with identifying a problem and culminates in presenting results. Its development requires the incorporation of the scientific method, and its scope extends beyond the operations inherent to a laboratory. In this context, C. A. Chinn and B. A. Malhotra [1], and K. D. Squire and M. Jan [2] agree that universities assume a leading role, implementing various strategies to strengthen scientific training. It is essential to emphasise student training, for example, through the development of reasoning and research skills. To achieve this, it is necessary to strengthen the work of the faculty, who, through their leadership, will guide future researchers.

According to C. Weil, M. Larraín, C. Galaz et al. [3] and R. Driver, H. Asoko, J. Leach et al. [4], scientific competence can be acquired at all educational levels, as it is grounded in inquiry and in the identification of problems in everyday life. However, according to D. Hodson [5] and L. Berland and K. A. McNeill [6], scientific education has not been incorporated into the curricula of all universities, highlighting the need to implement scientific literacy processes as an integral part of students' cognitive development. Learning is strengthened when argumentation and the critical interpretation of real-world phenomena are promoted, which remains a pending challenge in higher education. Scientific training must include bioethical principles, as their function is to guide the researcher's conduct.

In this regard, although there is extensive literature on the principle of beneficence, there is a lack of up-to-date studies related to the bibliometric analysis of its scientific production. This situation makes it difficult to understand the bioethical foundations from a holistic perspective. The absence of a comprehensive mapping limits the identification of trends in scientific production, creating a thematic gap that requires attention within the scientific community.

The present study has theoretical relevance in that it provides a systematic mapping of the scientific production related to the principle of beneficence, and practical relevance because its results will serve as a basis for researchers' decision-making, allowing them to strengthen their scientific training from a bioethical perspective.

The objective of this study is to analyse the scientific production on the principle of beneficence, and the following research questions were formulated:

RQ1: Which journals and authors are the most relevant on the principle of beneficence?

RQ2: Which documents are the most highly cited?

RQ3: Which words are the most frequent in the scientific production on the topic?

RQ4: What are the common characteristics of the scientific production related to the principle of beneficence?

This study has the limitation of considering only a single database, which excludes relevant documents indexed in other sources.

In this regard, the study hypothesis proposes that the scientific production on the principle of beneficence is related to clinical practice and ethical training in the educational field. In this way, the present study acquires particular significance in strengthening the importance of bioethical foundations in scientific research.

Literature Review

The principle of beneficence is one of the fundamental pillars of research ethics and professional practice. According to C. Mackenzie, C. McDowell, E. Pittaway et al. [7], it is grounded in the moral obligation to protect participants by avoiding harm and maximising benefits in the development of scientific research. This conceptualisation prioritises human well-being and the protection of human dignity.

In medicine and genetics, the principle of beneficence has gained particular significance in recent decades. The studies of V. Ravitsky and B. Wilfond [8] demonstrated that, in the communication of individual genetic results, psychological harm derived from the right to information must be avoided. Likewise, D. Thomasma [9] and J. A. Sacristan, A. Aguaron, C. Avendaño [10] emphasised the importance of respecting patient autonomy, which allows for better clinical and scientific decision-making. Along the same lines, the principle of beneficence is linked to justice and solidarity [11]. In the field of anatomy, authors such as G. Jones and M. Whitaker [12] have stated that the use of unclaimed bodies is useful for education; however, this practice is ethically contested and therefore requires critical review.

Medical practice requires bioethical principles that contribute to interdisciplinary integration. In this regard, studies such as that of F. Alcântara [13] highlight that every professional must promote respect and empathy towards the patient, while K. A. Jones and M. Semple [14] emphasise the importance of updating clinical protocols to prevent the violation of rights and protect human dignity.

Similarly, M. Beil, I. Proft, D. Van Heerden et al. [15] argue that in the development of new technologies, the practice of telemedicine and the use of artificial intelligence are aligned with preserving patient well-being and supporting evidence-based decision-making. In this regard, P. R. Padala, A. M. Jendro, K. P. Padala et al. [16] add that it is noteworthy that during the COVID-19 pandemic, the principle of beneficence guided clinical research, ensuring the protection of participants and healthcare personnel. In this way, S. Gauthier, A. Leuzy, E. Racine et al. [17] state that the relationship between the principle of beneficence and the Declaration of Helsinki is highlighted, as it promotes fairer practices in favour of the patient.

On the other hand, H. D. Caro-Romero [18] promotes the link between the principle of beneficence and the common good, while L. A. Jansen [19] adds that the

ethical obligation is to be considered in clinical decision-making. In response, I. Tucak and M. Vinković [20] point out that, for example, in the field of public health, the tension and debate between professional autonomy and patient well-being can be observed in the context of mandatory vaccination for healthcare personnel. Similarly, for A. R. Felthous [21], the principle of beneficence applies to the care of people deprived of their liberty, demonstrating that the application of this principle does not require distinctions based on the person's legal status.

G. Niveau and I. Welle [22], J. M. Louw, T. S. Marcus, and J. F. M. Hugo [23] agree that objectivity and impartiality are among the main characteristics of the principle of beneficence, allowing for the resolution of conflicts or tensions arising from different disciplines. In this regard, A. M. A. Acuña, J. C. R. Moreno, J. Neira et al. [24], J. B. Kayser, K. Mooney-Doyle, and P. N. Lancken [25], and M. Fadda, M. Fiordelli, R. Amati et al. [26] maintain that the application of the principle focuses exclusively on the person and not on a clinical condition.

Regarding patient care, A. Hirsch [27] and D. W. Robertson [28] assert that the principle of beneficence can enhance professional interpretation. Furthermore, K. Raus, E. Mortier, and K. Eeckloo [29], along with B. N. Schultz, B. Tolchin, and K. L. Kraschel [30], maintain that achieving this requires the integration of communication networks and the determination of their application limits.

Along the same lines, L. B. McCullough, J. Coverdale and F. A. Chervenak [31] and E. C. Reisman [32] emphasise that bioethical training is necessary, which will provide useful criteria for professional practice.

In this regard, the literature shows a clear consensus on the protective function of the principle of beneficence. In response, D. Thomasma [9] and R. Macklin [33] add the perspective of autonomy in clinical decision-making. Likewise, V. Ravitsky and B. Wilfond [8] emphasise the minimisation of psychological harm. However, G. Jones and M. Whitaker [12] focus on the ethical tension generated by the use of telemedicine and artificial intelligence. Ultimately, these issues represent a challenge that each field must address through practical cases, giving rise to new lessons that can be shared with the scientific community.

Methodology

Study Design

The design of the present study is bibliometric and descriptive. It is aimed at mapping the scientific production on the principle of beneficence.

Protocol Used

The study was conducted in accordance with the PRISMA guidelines, which ensure the transparency and reproducibility of the research.

Selected Database

The Scopus database was selected based on the following criteria:

- a) It is a multidisciplinary database that indexes journals from various fields of knowledge.
- b) It indexes high-impact journals with recognised scientific quality.

c) It is compatible with bibliometric software for the analysis of extracted data.

Search Formula

The search formula used was TITLE-ABS-KEY (“Principle of Beneficence”), which considered the title, abstract, and keywords. The exclusion criteria corresponded to documents that were not related to the search. This process was carried out by two researchers, and in cases of uncertainty, the intervention of a third author was requested. The documentary review technique was applied.

The data collection and analysis process was conducted between August and October 2025, and this year was not considered in the analysis because the scientific publications had not yet been completed.

Inclusion and Exclusion Criterio

The inclusion criteria were as follows: the period from 1982 to 2024, final publication status, English language, and all document types. Documents that were not related to the subject of study were excluded. The initial search yielded 714 documents, and the final search resulted in 582 documents, which constituted the selection that was analysed.

It is also important to note that, given the nature of this study, it was not necessary to request authorisation from an Institutional Ethics Committee, since the research was not conducted on human beings or living organisms. The information obtained is based on documents indexed in one of the most representative databases of the scientific community.

Screening Process

The 582 retrieved documents were subjected to a manual screening process, which ensured their relevance to the present study. The screening was conducted by identifying non-pertinent documents and applying the document review technique.

Tool Used

R-Studio 4.1.0, the bibliometrix package, and the Biblioshiny interface were utilised.

Bibliometric Analyses Conducted

The data analysis is structured according to the research questions. For example, to address RQ1, the sources with the highest number of publications on the study topic were identified, and their indexing quartile was determined. For RQ2, a citation analysis was performed, and the documents were ranked according to the total number of citations received. For RQ3, a co-occurrence analysis of the extracted terms was conducted, and for RQ4, a thematic analysis of the documents was carried out.

Procedure Used

The procedure followed in the development of the study topic involved the identification of the following stages:

1. *Selection of the study topic.* The topic was selected because the authors have experience in conducting scientific research, and one of the areas they highlight is bioethical principles, specifically the principle of beneficence.

2. *Identification of the search formula.* The search term “principle of beneficence” was established and applied within the title, abstract, and keyword fields.

3. *Selection of the database.* Scopus was chosen as the database due to its multidisciplinary scope and high indexing quality.

4. *Identification of inclusion and exclusion criteria.* Inclusion and exclusion criteria were established to ensure the relevance of the selected documents. After applying these criteria, from the 714 documents initially identified, 582 were selected and included in the present bibliometric analysis.

5. *Screening and validation.* Documents not directly related to the study topic were removed to avoid biases in the interpretation of the results.

6. *Analysis of the information.* The records were extracted in CSV format and processed using the Biblioshiny interface, producing results related to productivity, collaboration, impact, and thematic evolution.

Validity and Reliability

The validity of this study lies in the use of one of the most representative databases in scientific research, which ensured the quality of the analysed documents. Inclusion and exclusion criteria were applied, guaranteeing transparency and replicability in the selection process. One of the most representative software tools for bibliometric analysis was used, and the guidelines established in the PRISMA statement were followed, thereby reducing potential biases.

Reliability was ensured through the independent review conducted by two researchers involved in the study, along with the participation of a third evaluator in cases of discrepancies regarding the inclusion or exclusion of documents.

Results

The following results derive from the bibliometric analysis conducted on the scientific production related to the principle of beneficence and do not include additional interpretations. In the discussion section, the explanations derived from the findings are presented.

Most Relevant Journals and Authors

Table 1 presents the ten most relevant journals according to the number of published documents, their country of origin, and their quartile classification. Table 1 shows the journals that stand out for their scientific output. It can be seen that there is a predominance of sources belonging to Scopus quartile 1 corresponding to the United Kingdom and the United States.

Table 1

Most relevant sources

N	Sources	Country	Quartile	Documents
1	Journal of Medical Ethics	United Kingdom	Q1	22
2	Ama Journal of Ethics	United States	Q2	7
3	Nursing Ethics	United Kingdom	Q1	7
4	BMC Medical Ethics	United Kingdom	Q1	6

5	Journal of Clinical Ethics	United States	Q4	5
6	American Journal of Bioethics	United Kingdom	Q1	4
7	Clinical Ethics	United Kingdom	Q2	4
8	Continuum Lifelong Learning in Neurology	United States	Q1	4
9	Developing World Bioethics	United Kingdom	Q3	4
10	Ethics and Behaviour	United States	Q2	4

The most relevant journal is Journal of Medical Ethics (ISSN: 0306-6800 / E-ISSN: 1473-4257), published by BMJ Publishing Group, with an H-index of 93, and indexed in Scopus since 1975. The thematic areas of the journal are Arts and Humanities, Health Policy, Ethics, Legal Aspects, and Health (Social Sciences).

The second most relevant journal is AMA Journal of Ethics (ISSN: 2376-6980), published by the American Medical Association, with an H-index of 47, and indexed in Scopus since 2015. The thematic areas of the journal are Medicine (Health Policy), Nursing (Ethics and Legal Aspects), and Social Sciences (Health).

The third most relevant journal is Nursing Ethics (ISSN: 0969-7330 / E-ISSN: 1477-0989), published by SAGE, with an H-index of 82, and indexed in Scopus since 1994. The thematic areas of the journal are Nursing (Ethics and Legal Aspects).

In response to research question 1, it can be observed that there is a concentration of publications on the subject under study, mainly in high-impact journals focused on medical ethics and professional practice. This highlights the academic relevance and the scientific community's intention to continue publishing on the principle of beneficence.

Table 2 lists the five most relevant authors who stand out in the scientific production on the principle of beneficence.

Table 2

Most relevant authors

N	Authors	Documents	Most cited document
1	L. McCullough ¹	30	Perinatal ethics: a practical method of analysis of obligations to mother and fetus
2	F. Chervenak ²	27	Perinatal ethics: a practical method of analysis of obligations to mother and fetus
3	R. Macklin [33]	4	Applying the four principles
4	D. Skupski [34]	3	Ethical issues in the management of pregnancies complicated by fetal anomalies
5	F. Rosner [35]	3	Ethical dilemmas for physicians in time of war

It is observed that authors Laurence McCullough and Frank Chervenak co-authored the most cited document related to the topic of study. The most cited document is “Perinatal ethics: a practical method of analysis of obligations to mother

¹ Chervenak F.A., McCullough L.B. Perinatal ethics: a practical method of analysis of obligations to mother and fetus. *Obstetrics & Gynecology*. 1985;66(3):442–446.

² Ibid

and fetus”¹, published in 1985, with 95 citations. This document highlights the importance of bioethical principles, such as the principle of beneficence, for resolving conflicts in medical practice.

Likewise, the list also includes Ruth Macklin, who stands out for the document titled “Applying the four principles” [33]. This document was published in 2003 and has 59 citations. It highlights the usefulness of the principle of beneficence for resolving cases from an ethical perspective.

With regard to authorship patterns, Table 2 shows the authors who stand out for the number of publications on the principle of beneficence. These authors are notable because they addressed issues related to ethical decision-making in medical practice.

Most Cited Documents

Table 3 presents the list and main idea of the 10 most cited documents in the scientific production on the principle of beneficence. It is observed that the most cited document is “Beyond ‘do no harm’: the challenge of constructing ethical relationships in refugee research” [7], which has 420 citations. The second most cited document is “A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence” [36], with 384 citations, and the third most cited is “Patient involvement in clinical research: why, when, and how” [10], with 268 citations.

It can be seen that the documents in Table 3 cover topics such as complex ethical decisions, justice, and the use of emerging technologies in clinical settings.

Table 3

Most cited documents

N	Title	Total citations	Main idea
1	Beyond ‘do no harm’: the challenge of constructing ethical relationships in refugee research [7]	420	In research, involving refugees in conflict settings, obtaining informed consent is not an easy task. In this context, researchers must minimise harm and generate benefits for both the communities and the refugees.
2	A critical analysis of evaluation practice: the Kirkpatrick model and the principle of beneficence [36]	384	It is a study grounded in the ethical duty derived from the principle of beneficence.
3	Patient involvement in clinical research: why, when, and how [10]	268	The traditional conception of the principle of beneficence promotes conducting research for patients, but not with them. Consequently, the need for effective structural modifications becomes evident.
4	Disclosing individual genetic results to research participants [8]	260	Informed consent for the participant must be based on the information provided.
5	Globalising justice: the ethics of poverty and power [11]	173	The principle of beneficence presents limits in the application of duties derived from justice.

¹ Chervenak F.A., McCullough L.B. Perinatal ethics: a practical method of analysis of obligations to mother and fetus. *Obstetrics & Gynecology*. 1985;66(3):442–446.

Thematic Evolution of the Scientific Production on the Principle of Beneficence

Figure 2 shows the thematic evolution of the topic under study over time.

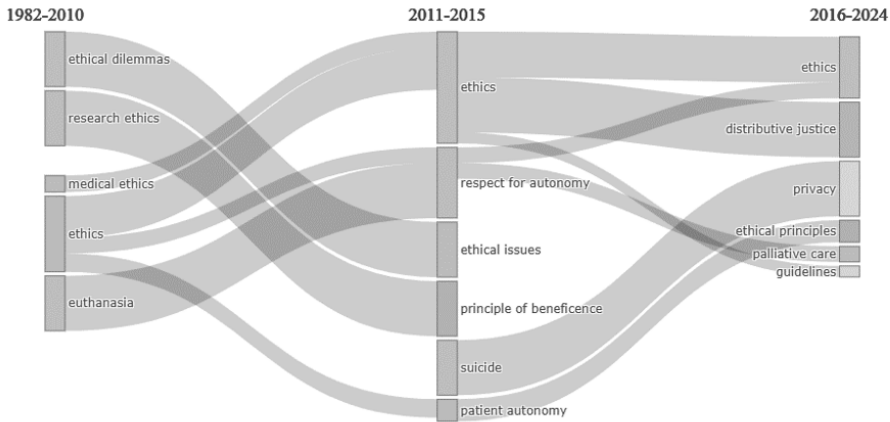


Fig. 2. Thematic evolution

In the first period, the main themes focused on ethics, medical ethics, research ethics, ethical dilemmas, and euthanasia. This indicates researchers’ interest in the moral implications derived from medical decision-making.

In the second period, the terms respect for autonomy, ethical issues, principle of beneficence, suicide, and patient autonomy stand out. The results show that the principle of beneficence becomes a central theme and reflects the sustained interest in ethical foundations for decision-making in patient care.

In the most recent period, the terms that emerge most prominently are ethics, distributive justice, privacy, ethical principles, palliative care, and guidelines. These findings indicate that the scientific community’s interest is grounded in protecting privacy and upholding patient dignity.

In that line of thought, it is clear that the principle of beneficence acquired conceptual autonomy, which led to it being considered a central theme that is destined to face contemporary ethical challenges.

Common Characteristics in the Scientific Production

Table 4 identifies the main characteristics contained in the scientific production on the principle of beneficence.

Table 4

Characteristics

Characteristic	Authors
It is linked to the common good and to the interests of the patient	[18–19]
It focuses on providing the best care, well-being, and safety for patients	[20–21]
It is objective and impartial.	[23]
It is complementary to the concept of quality of life	[24–25]
It is essential in medical decision-making	[26]

Table 4 summarises the main characteristics identified in scientific literature on the principle of beneficence. These results show that the subject of study is associated with patient interests, quality of life, and medical decision-making. These characteristics strengthen future research with a multidisciplinary approach.

In response to RQ4, Table 4 shows the study topic as a guiding principle of bioethics, enabling it to integrate clinical care with professional conduct for the benefit of the community.

Discussion

The analysis conducted in this study revealed that the scientific production examined establishes that the principle of beneficence is grounded in the mandate to do no harm. The findings of this research demonstrate a significant increase in scientific output on the principle of beneficence. In this way, the international consensus regarding the relevance of this principle in medical practice and in the protection of human dignity is confirmed. Ethics is consolidated as an obligation aimed at promoting well-being and preventing any form of harm. Various authors adopt this perspective and present it as one of the key approaches to prioritising autonomy in decision-making [27–28]. In the same vein, an aspect to be considered is informed consent, which is mandatory because it ensures transparency and adequate communication in interactions with the patient [29–32].

Likewise, the results identified the highest-impact journals that stood out for the number of documents published. For example, *Journal of Medical Ethics*, *AMA Journal of Ethics*, and *Nursing Ethics* concentrate most of the publications on the principle of beneficence. It is important to highlight the growing interest among researchers in addressing topics related to bioethics, as reflected in publications from journals based in the United Kingdom and the United States. In the same vein, the contributions of researchers Laurence McCullough and Frank Chervenak are noteworthy, as they are the most prominent authors in terms of scientific output. The most cited document is “Beyond ‘do no harm’: the challenge of constructing ethical relationships in refugee research” [7], with 420 citations, which underscores the need to generate benefits for vulnerable communities and emphasises the obligation to avoid causing harm to others.

The results showed that scientific output on the principle of beneficence grew steadily following the grouping and predominance of terms such as autonomy, informed consent, justice, and palliative care. These terms focus on preventing harm and promoting patient well-being, especially in complex clinical situations.

In the same vein, an analysis of the results shows that certain countries have consolidated bioethical practice within scientific training. This is the case of the United Kingdom and the United States, whose journals account for the largest number of publications on the principle of beneficence. Accordingly, the identification of the most frequently cited terms reveals a focus on informed consent, distributive justice, and new technologies. In this way, in regions such as Western Europe and

North America, a thematic evolution is observed, which is reflected in the emergence of new ethical dilemmas that can be examined in complex contexts.

Building on previous findings, F. Bouquet [38], D. A. Nnate [39] and R. Bourret, F. Vialla, and E. Martinez [40] highlight that, in relation to the most cited documents, the application of the principle of beneficence has expanded to new contexts. Some examples include clinical research, genetic research, public health, telemedicine, and the use of artificial intelligence in intensive care. Furthermore, a cross-cutting theme can be identified that prioritises patient well-being and protection through transparent and well-justified ethical actions.

In this regard, the results confirmed the hypothesis that the principle of beneficence is linked to clinical practice and ethical training in educational contexts, where scientific knowledge applicable to personal and professional spheres must be learned.

Despite these developments, it is still not possible to affirm the absence of new conflicts arising from the principle of beneficence, as new scenarios continue to emerge in which patient care may generate debates in ethically complex contexts [20–21]. For example, I. V. Ezeome [41] and T. F. Akard, M. J. Gilmer, and V. L. Hendricks-Ferguson added [42] that during the COVID-19 pandemic and technological innovation, mechanisms were reformulated to prioritise patient care and prevent loss of trust in institutions. In this sense, the results coincide with what was mentioned by J. Keown [43] and M. Murphy [44], who maintain that the principle of beneficence is not limited to the clinical field, which should be designed to protect the patient.

In addition to the ethical challenges identified, Beyond the clinical implications, the scientific production shows a growing connection between the principle of beneficence and the educational sphere. In this regard, J. E. Sabin, N. M. Cocoros, C. Garcia et al. [45] stated that scientific and bioethical training is essential for responsible professional practice, as it allows for the integration of ethical values into decision-making and strengthens a culture of respect for the human person. This perspective reinforces the idea that bioethics education constitutes a strategic component for consolidating just practices and preventing violations [45]. In this sense, scientific education is configured as a formative mechanism that guides research conduct towards the protection of human dignity and the pursuit of the participant's well-being.

Finally, the present study helped to fill this gap and provides a holistic view of the contexts and themes related to the principle of beneficence, as well as its importance in scientific training. Furthermore, as has been demonstrated, it is important to recognise the need to integrate bioethics education into scientific training. To this end, it is necessary to ensure that future professionals are prepared to face ethical challenges in the clinical setting.

Limitation

Only the Scopus database was considered.

Conclusion

The bibliometric analysis of 582 documents published in Scopus between 1982 and 2024 made it possible to map the sustained growth of scientific production on the principle of beneficence. The results identified that this topic of study constitutes a transversal axis of bioethics and is supported by two pillars: the obligation to do no harm and the promotion of the patient's well-being.

With respect to the journals contributing to this growth, the most relevant sources, distinguished by the total number of publications, belong to Scopus Quartile 1 and include Journal of Medical Ethics, AMA Journal of Ethics, and Nursing Ethics. Likewise, the most prominent authors were Laurence McCullough, Frank Chervenak, Ruth Macklin, Daniel Skupski, and Fred Rosner, whose scientific production is related to the clinical application of the principle of beneficence.

The most cited document was “Beyond ‘do no harm’: the challenge of constructing ethical relationships in refugee research”, with 420 citations. This study demonstrates that the principle of beneficence is applicable in contexts of high social vulnerability and emphasises the duty to minimise harm and generate benefits for communities involved in refugee research in conflict settings.

In terms of thematic focus, the most frequently used terms in the scientific production on the principle of beneficence were ethics, beneficence, autonomy, informed consent, justice, and palliative care. In this way, the relationship between the principle of beneficence and the principles of autonomy and justice was confirmed. Likewise, the following common characteristics were identified in the literature: (a) the protection and well-being of the patient; (b) ethical responsibility in medical practice; (c) respect for patient autonomy; and (d) the importance of bioethical education in professional training. These characteristics show that the topic of study is dynamic and fosters the design of ethical research.

The findings indicate that the principle of beneficence continues to be a key reference in clinical decision-making. Future researchers must take bioethical principles into account, as doing so ensures the protection of human beings throughout the scientific research process.

The results showed that scientific and bioethical education play a fundamental role in understanding the principle of beneficence, making its development at the university level essential for contributing to the training of future researchers.

Taken together, these findings indicate that the proposed hypothesis is confirmed demonstrating that the scientific production on the principle of beneficence is linked to clinical practice and ethical training within educational programmes, thereby contributing to the scientific conduct of future professionals.

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