The Importance of Ethics in the Use of Artificial Intelligence and Its Challenges in Health-Related Articles

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Article Type	ABSTRACT
Review Paper	**Background and Objective:** There is much ethical concern regarding the use of artificial intelligence in various aspects of human life. The use of artificial intelligence should be in line with protecting the rights of subjects and observing ethics so that it will not to lead to widespread abnormalities. Observing ethical principles in the use of artificial intelligence will be the same as observing the laws related to subjects, and not being racist. The present study was conducted to identify important ethical challenges related to the use of artificial intelligence in the field of health, the proposed solutions to solve these challenges, and the impact of artificial intelligence on the quality and access to medical and health services in the field of health regarding the use of artificial intelligence.

Methods: In this systematic review, articles related to the ethics of artificial intelligence in the field of health were examined using the scientific databases PubMed, Scopus, Google Scholar, and Web of Science, and using the keywords artificial intelligence, ethics, health, challenges of artificial intelligence, and plagiarism from 2000 to 2025.

Findings: 820 studies were retrieved after conducting the search, of which 740 were excluded because they were outside the target time period or the topic was not related to the health field, and 80 studies were finally reviewed for their relevance. The results indicated that the use of this important technology in the health field, while providing a good opportunity for medical care, also poses ethical challenges. The correct use of artificial intelligence requires ethical, legal, and social decision-making.

Conclusion: Based on the results of this study and the increasing advancement of artificial intelligence, researchers and scholars should consider observing the ethical and legal aspects of using artificial intelligence in research when writing scientific articles.

Keywords: *Artificial Intelligence, Artificial Intelligence Challenges, Ethics, Health, Plagiarism.* |

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Introduction

Ethics play a crucial role in the use of artificial intelligence (AI) in the fields of treatment, medical health, and article writing. This technology has great potential in diagnosis, treatment, and prevention, and also plays a profound role in human life. At the same time, it also brings serious ethical challenges. Researchers and scholars use it in various cases such as coding, abstract writing, research literature, etc. (1, 2). Artificial intelligence operates as a separate human thought and has the ability to change human values. It has also caused ethical challenges in maintaining and observing ethical principles in article writing for authors, and more awareness is necessary to resolve these issues. Writing research articles requires a detailed, extensive, and organized research process (2). In a study by Zahed Pasha et al., it was demonstrated that ethical sensitivity in conducting research has a significant impact on the quality of research (3).

While AI is a powerful tool for researchers in various fields of research, such as abstract writing, article searching, etc., it is considered an advantage, but there are many concerns about its use for publication and the confidentiality of its data. Excessive dependence on this software can have a dangerous impact on the research process and subsequent publication of articles (4).

The strong link between AI and the health sector not only reveals opportunities, but also reveals challenges in the field of ethics. The nature of AI systems raises the question of how to ensure that its outputs are aligned with human values and the principles and standards of medical ethics (1).

Given the technical and ethical complexity associated with AI systems, it is important to provide the right solutions for the correct use of this technology and its alignment with the value of medical ethics, and it is important to develop a sound and robust regulatory and ethical framework to reduce potential risks and increase trust in this software in healthcare settings.

Therefore, this study aims to examine the importance of observing ethical principles in the application of artificial intelligence in the field of health and the publication of scientific articles. It seeks to provide a practical solution for the correct and accurate use of this technology and emphasizes the need to develop and formulate an honest, transparent and comprehensive ethical regulatory framework to minimize its potential risks and to gain the trust of the general public and health professionals in this tool to get full advantage of its benefits for the sake of health promotion.

Methods

In this systematic review, articles related to AI ethics in the field of health were searched and reviewed using the scientific databases PubMed, Scopus, Google Scholar, and Web of Science, and using the keywords artificial intelligence, ethics, health, challenges of artificial intelligence, and plagiarism from 2000 to 2025.

Results

820 studies were retrieved after conducting the search, of which 740 articles were excluded because they were outside the desired time period or the topic was not related to the health field, and finally 80 studies were reviewed for their exact thematic relevance (Figure 1).

Artificial Intelligence and Ethical Values: Integrating AI and publishing articles is good, but it can also pose ethical challenges. Given that AI is a powerful tool that can be helpful in publishing articles, many scientists do not accept using AI as a writer alone (1, 4). One of the most important drawbacks of AI is the

nature of data. In this way, it finds the desired pattern upon request and makes a suggestion based on the data found. It may seem correct, but the data that has been coded by a person may not be correct and real (5). Therefore, what AI finds is not always correct and can lead to incorrect reporting. Therefore, researchers must be extremely ethical in using AI. AI is faster than humans, has access to a higher volume than humans, and is easy to interpret and process the information obtained (6). AI and ethics should be in parallel and aligned (7). It is necessary to use ethical rules in the development of learning machines. The effect of this powerful tool on ethical values is not hidden from anyone, and its role in human life cannot be denied. AI is actually a person with new ideas and is capable of acting. Depending on its development, it can sometimes take steps to continue preserving human moral values and promote them (6, 7). The use of this important technology in the field of health, while it creates a great opportunity for medical care, also poses ethical challenges. The correct use of AI requires ethical, legal and social decision-making, and only then can the full capabilities of this technology be used in the field of medicine while preserving intellectual property rights and observing ethical principles (8). Especially in cases where research tools and questionnaires are used, it is necessary to obtain permission from their designers.
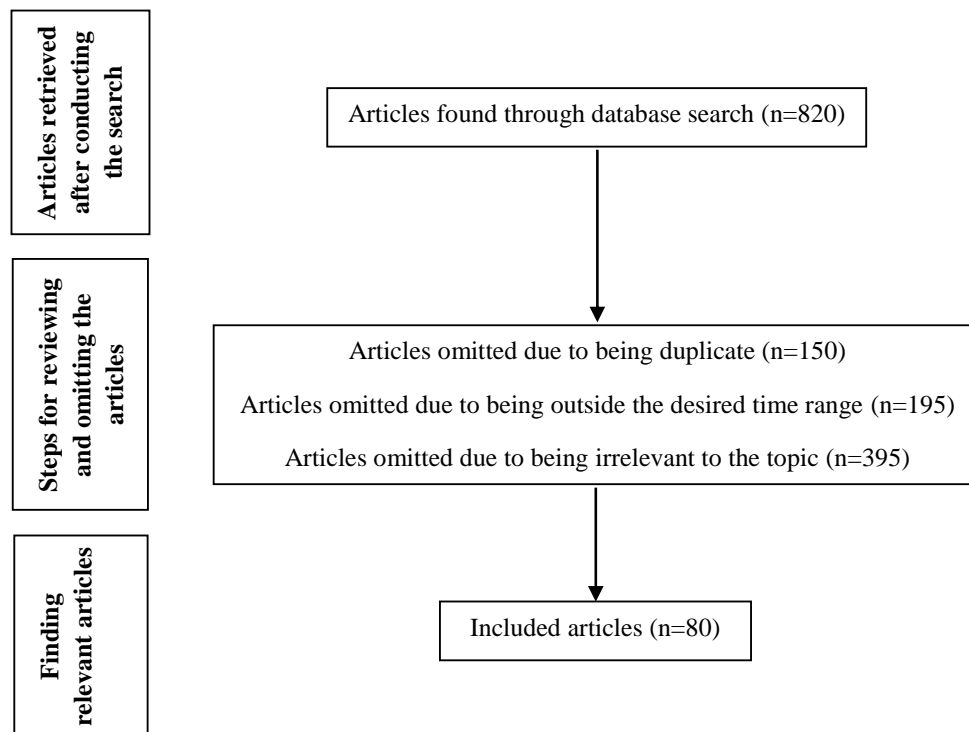

Figure 1. Prism graph, stages of inclusion, evaluation and screening of searched studies

Data security: One of the most important issues affected by this emerging technology is the issue of data security for users in cyberspace. Privacy for the use of data is an ethical dilemma. To regulate AI, we need data, it is important to know how this data was obtained and how to use it. For proper use, strong laws and methods are needed to protect data and maintain privacy. There is a significant ethical challenge to maintain the right balance between using data for AI advancements and respecting the privacy rights of individuals, which requires continuous and special attention (9). Data security is of great importance in health publications. That's because most of this information is related to patients and their medical and treatment

details, the unintended disclosure of which has legal and ethical consequences. If the data for an article is generated with the help of AI, it must be determined whether this data is allowed to be reproduced or not. Of course, some of these AI tools are programmed based on public information (10, 11).

Strategies to reduce ethical risks: To reduce ethical risks, AI data for use in articles should be reviewed for bias to prevent the publication of unfair information. Also, the use of tools for coding, limiting the use of information, continuous review of data security in article processing, continuous training of researchers on security and privacy, clarity of the role of AI in the publication of the article, citing the source of AI, supervision and cooperation of ethics committees in research for the use of AI, and adherence to ethical standards in the use of this tool should be considered.

Plagiarism: Plagiarism is a type of research misconduct in an article and is an unforgivable professional offense that can seriously damage the reputation of researchers. However, sometimes students or writers may unknowingly make mistakes in writing proposals, theses, and articles due to lack of time and lack of skills, which leads to plagiarism. One of the applications of AI is to help eliminate scientific and literary similarities. The most important feature of AI regarding plagiarism includes the following:

- Content analysis: AI can analyze text and check and compare it with other texts for similarities.
- High speed of AI: AI can quickly recognize the structure of texts and compare it with other databases and check the data in a short period of time.
- Fast update: AI is able to update itself constantly, so it has high accuracy.

AI can be programmed in accordance with ethical laws and regulations. However, there may be challenges such as computational errors, privacy issues, idea theft and inventions of other researchers, etc. (12, 13). This unique feature of AI has found an important application in eliminating plagiarism or literary plagiarism of articles. For example, if a person has copied a paragraph from an online source for the text of his/her article, he/she can use AI to rewrite those paragraphs in his/her own language, without changing the meaning or concept (10).

Lack of transparency and accountability: AI tools can make decisions autonomously and take steps that raise questions about their accountability. When an AI produces undesirable results or causes defects or damage, it is important and necessary to determine who is responsible. Establishing transparent accountability and responsibility for AI decision-making is an important ethical consideration. In addition, transparency in AI algorithms and decision-making processes is important and necessary to ensure trust and enable meaningful human supervision (12, 13). Therefore, the lack of transparency leads to public distrust and misuse of this technology.

Solutions to increase transparency and accountability: Suggested solutions: the development of interpretable AI, the right to know for AI users (how to review), the creation of a legal framework and rules for accountability for errors, the creation of ethical oversight bodies in terms of accuracy and bias, and the raising of public education in the use of AI.

Discussion

This review showed that the use of AI has great potential in the field of health. In a study by Weiner et al., which is consistent with this study, it was demonstrated that AI has rapidly transformed various sectors of health and article writing, and its integration into health brings significant ethical challenges (1) that require careful consideration. AI has entered a new cycle of human and researcher life, which can have a positive impact on research through progress and deep learning. In studies by Matheny et al. and ElHassan

et al., it was shown that ensuring the correct and effective use of this tool in research to support science and provide services in the health field is a great responsibility (14, 15). This study showed that AI is a vital tool for scientific research, which is consistent with the opinion of Sahoo et al. (16). According to Shrestha et al., AI helps provide guidance for designing privacy-focused systems that align with social values and build trust among users (17).

According to a study by Karuppal, AI continues to advance in various areas and presents exciting opportunities and unique challenges to perform tasks previously performed by the human brain, such as learning, problem solving, and decision making (18). Therefore, it is crucial to acknowledge that AI can be both an advantage and a hindrance, and its ethical and practical implications must be carefully considered to ensure its responsible and useful integration into the spectrum of medical writing.

Although the basic ethical principles of the Declaration of Helsinki on medical ethics remain enduring, the Declaration has been revised several times (19) to keep pace with contemporary issues facing health research (20). The results of a study by Baleghi Damavandi et al. showed that attention to researcher ethics has a significant impact on the quality of research (21).

According to Imam et al., the implementation of AI in medical systems has the potential to improve the quality of results, diagnostic operations and productivity. However, with the integration of AI in the health sector and the growth of its applications, the issues of compliance with its principles and laws, ethics and regulations are raised. The legal areas of concern are mainly liability, the existing wide legal gaps and intellectual property rights and the legal frameworks that need to be developed to address these growing legal issues (22).

This study emphasizes the concept of AI innovation and accountability. Therefore, regulatory authorities are required to adopt a strategic and systematic approach to the technology and encourage AI to declare its positions. It also develops ways to counter bias through data diversity, which is in line with studies by Webster et al. and Ahmed et al. (23, 24). Legitimizing and incentivizing community participation in implementing AI as a modern technology, while respecting its principles and regulations, is essential (24). Supporting the correct and ethical use of this technology and justifying its implementation is essential (25-27).

With all the issues raised in this study, the ethical challenges associated with AI must be seriously considered and solutions must be considered to manage them. This requires cooperation between AI experts and users, doctors, educators, and policymakers, to ensure that AI is used responsibly, fairly, and in the interests of all. In order to formulate laws and observe ethical principles in the use of AI, the following must be considered:

It should be in accordance with the law and should respect ethical rules, adhere to human values and related laws, be powerful and accurate, act in accordance with scientific standards, ensure the independence of the individual, do not cause physical or psychological harm to the user, adhere to the principle of justice, be transparent and traceable, and cultural diversity must be taken into account when developing codes of ethics for AI articles and also when developing ethical issues in AI.

Considering the above-mentioned issues and the increasing progress of AI, researchers and scholars should pay attention to the use of AI in writing scientific articles with further studies and observing the ethical aspects of using it in research. Artificial intelligence technology in the field of health is both a good opportunity and a threat. On the one hand, it increases the speed, accuracy, and quality in the field of health and treatment, and on the other hand, it may be implemented without observing the principles and ethical framework, which in this case leads to discrimination, lack of responsibility, and failure to respect the rights of the patient. For the proper use of AI, cooperation is needed between the group of experts in this field

(for correct and transparent design), the medical community (ethical and clinical supervision, as well as the role of humans in this decision-making), and policymakers to formulate and design correct, strong, and principled laws to protect the rights of patients in the use of AI. Its use in the field of health must be fair, transparent, and human-centered so that it can act towards a positive change in this field.

Acknowledgment

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