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Navigating a Path to Integrity: Ethical Dilemmas of Artificial Intelligence in Publishing Midwifery and Reproductive Health Research

Robab Latifnejad Roudsari (PhD) [1, 2*]

[1] Professor, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran
[2] Department of Midwifery, School of Nursing and Midwifery, Mashhad University of Medical Sciences, Mashhad, Iran

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Artificial intelligence (AI) is becoming increasingly adopted across various disciplines. The integration of artificial intelligence technologies into medical research introduces significant ethical challenges that necessitate the strengthening of ethical frameworks (1). Specifically, in midwifery and reproductive health research—a field defined by profound ethical sensitivity and human impact—the use of AI tools like large language models (LLMs) to draft manuscripts, generate literature reviews, or even formulate hypotheses presents a new frontier of ethical challenges that the scientific community must urgently address (2).

While AI offers significant benefits—such as increased efficiency, reduced workload, and enhanced precision—they also raise pressing ethical concerns regarding authorship, transparency, data privacy, accountability, trustworthiness, reproducibility, fairness, objectivity and scientific integrity (2-3). This editorial explores the current and potential uses of AI in midwifery and reproductive health research, highlighting ethical considerations associated with its implementation, particularly in the realm of academic writing and research dissemination.

A major ethical challenge is the question of authorship. Current guidelines from the International Committee of Medical Journal Editors (ICMJE) emphasize that authorship should be based on substantial contributions to the conception, design, interpretation, final approval of the manuscript and accountability (4). Since AI lacks consciousness, intent, and ethical agency, the prevailing practices and ethical standards do not recognize AI as an author. Although a clear standard has yet to be established, it is generally considered appropriate to explain how artificial intelligence tools were utilized in the preparation of a manuscript (5).

Another ethical dilemma lies in the potential misuse of generative AI, which is worse than plagiarism, to bypass rigorous academic standards, especially among students and early-career researchers under pressure to publish. There is concern that some may use AI to write entire sections of manuscripts without adequate oversight, potentially compromising the quality of research and undermining the principles of academic honesty (6).

Misuse of AI leads to another key concern i.e. transparency and disclosure. In response a growing number of journals are updating their policies to require explicit statements regarding the use of AI in manuscript preparation. This transparency is essential to maintain the

* *Corresponding author:* Robab Latifnejad Roudsari, Professor, Nursing and Midwifery Care Research Center, Mashhad University of Medical Sciences, Mashhad, Iran. Tel: 05138591511; Email: rlatifnejad@yahoo.com, LatifnejadR@mums.ac.ir

integrity of the peer-review process and to ensure that readers can assess the origin of the content (2). Furthermore, editorial boards and peer reviewers must be equipped with tools and knowledge to detect AI-generated content and ensure its compliance with ethical standards.

Moreover, there are growing concerns about bias and equity in AI-generated research. AI models are trained on existing datasets, which often reflect historical biases in healthcare literature. This can lead to skewed representations of certain populations, reinforcing disparities in maternal and reproductive health research. For instance, if an AI model is trained primarily on data from high-income countries, it may not accurately represent the reproductive health needs or outcomes of populations in low- and middle-income settings (7). This raises ethical questions about inclusivity and the potential reinforcement of global health disparities through AI-assisted research.

Another critical issue is the accuracy and reliability of AI-generated content. AI-generated text can sometimes produce misleading or factually incorrect information—a phenomenon known as "hallucination" i. e. generating plausible-sounding but inaccurate or fabricated references or conclusions. This poses serious risks to the accuracy and reliability of the scientific literature. In midwifery and reproductive health research, where decisions often impact maternal and neonatal outcomes, this poses a serious risk, especially when summarizing clinical guidelines or referencing scientific studies. In this regard, Alkaissi and McFarlane (2023) have argued that misinformation in peer-reviewed literature can have downstream effects on policy, education, and clinical practice Therefore, human oversight remains essential to verify all AI-generated content before publication (8).

Additionally, intellectual property rights and data privacy remain unresolved legal and ethical challenges. It is not clear who owns the content generated by AI? Furthermore, inputting sensitive or unpublished data into AI systems may compromise confidentiality and informed consent (9).

To address these issues, since AI continues to advance rapidly, institutions, scientists, funding agencies and publishers as well as regulatory bodies must work together to discuss AI's impact on research and to develop clear ethical frameworks for the responsible use of AI in midwifery and reproductive health research. Guidelines should include mandatory disclosures, limits on AI usage in writing, and training for researchers on how to critically assess AI-generated content. Also, it should be periodically revised as AI becomes woven into the fabric of scientific practice and researchers learn about it, adapt to it, and use it in novel ways (2).

In conclusion, it should be noted that the rise of AI in midwifery and reproductive health research presents both exciting opportunities as well as significant challenges. While AI can enhance efficiency, expand access, and support data-driven insights, it also threatens to erode authorship standards, introduce bias, and compromise scientific integrity. To navigate this evolving landscape responsibly, the midwifery community must engage proactively in discussions about the principles of ethics, accountability, and scientific rigor. By embracing AI as a supportive tool rather than a replacement for human expertise, midwifery and reproductive health researchers can take advantage of its benefits while upholding the core values of ethical scholarship. Only through thoughtful regulation, education, and vigilance can we ensure that AI serves as a force for good in the advancement of midwifery and reproductive health sciences. Indeed, while AI can be a powerful tool to support academic writing, it should not replace human judgment, expertise, and ethical responsibility. The core values of scholarly inquiry including integrity, originality, and accountability must remain at the forefront of all research communication efforts including midwifery and reproductive health researchers.

Conflicts of interest

The author is the Chief Editor of JMRH. However, to ensure a fair and unbiased review, she was not involved in any part of the peer-review or decision-making process for this article. The full responsibility for the editorial process was delegated to the journal's managing editor.

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