

Ethical use of Artificial Intelligence in Research Publications: A collective responsibility

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"Artificial intelligence is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity."— Fei-Fei Li

The rapid integration and transformation^{1,2} of Artificial Intelligence (AI) such as ChatGPT (Generative Pre-trained Transformer) into medical research² necessitates clear guidelines to provide a framework for researchers, authors, reviewers and editors. Through transparent reporting, rigorous evaluation³ and a commitment to open science, we aim to advance knowledge and innovation in AI while upholding the highest standards of integrity, equity and ethical conduct. This increasing use of generative AI in academic publications necessitates timely and thoughtful policy reforms that carefully align technological advancements with the principles of scholarly integrity. Journals have a central role in guiding this transition by establishing AI policies that are transparent, enforceable, and firmly grounded in ethical standards.

In Pakistan, National AI Policy-2022 is under process, and the use of AI in healthcare is still in the infancy stage.¹ Every journal should derive AI Policy from the guidelines of Committee on Publication Ethics (COPE), International Committee of Medical Journal Editors (ICMJE), Journal of the American Medical Association (JAMA) network and World Association of Medical Editors (WAME) with following considerations:-

1. Ethical Considerations:

Authors must ensure transparency³ in use of AI, disclosing methodologies, data sources, algorithms used and any biases present.¹ They must prioritize fairness, address data quality, mitigate biases and uphold privacy and data protection regulations. Authors must adhere to ethical standards, respecting patient privacy¹ and informed consent, any potential harm resulting from AI predictions should be carefully evaluated and disclosed. Authors should elucidate how AI predictions are generated, enabling readers to understand the decision-making process.

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2. Reporting Guidelines and Author Responsibilities:

Authors must declare the use of AI⁴ in research and ensure compliance with ethical guidelines and regulations. They bear responsibility⁴ for transparency, fairness and ethical conduct in their AI research. Clear and detailed descriptions of AI methodologies,⁵ codes,⁵ datasets⁵ and evaluation procedures are essential for reproducibility and transparency. AI models⁵ should undergo rigorous validation and authors should report sensitivity, specificity, as well as any limitations in the model's applicability.

3. Peer Review:

Expert reviewers with relevant AI expertise should evaluate the rigor, transparency⁵ and ethical considerations of AI research submissions. Evaluation criteria include novelty, significance and adherence to ethical guidelines,² ensuring quality and integrity of AI research.

4. Editorial Oversight and open science:

The editorial board will oversee the implementation of this policy, ensuring adherence to ethical standards² and reporting guidelines. Regular policy reviews will incorporate advancements in AI and evolving ethical considerations. Journals should support open science publication of AI research, enhancing accessibility and transparency.

COPE along with WAME and JAMA^{4,5} state that nonhuman⁴ AI tools cannot be listed as an author or co-author of a paper, as it can only be related to the human beings. As non-legal entities, they cannot assert the presence or absence of conflicts of interest nor manage copyright and license agreements.

In this era of pervasive misinformation and mistrust,⁴ AI used for author's work is strictly not allowed. Authors can use AI under their oversight and control only to improve readability, grammar⁶ and language of their manuscript. However, authors can declare the use of AI⁵ in the writing process but ultimately authors are responsible and accountable for the contents of the work. Any similarity found in the manuscript with AI-generated text will be considered as plagiarized material⁶ and hence subject to rejection by the editorial team.

5. Recent ICMJE recommendations on AI use:⁷

Authors using AI for writing assistance must disclose this in the acknowledgment section, and at submission should declare its use in the cover letter as well as in the relevant sections of their submitted work. For example, if AI was used for data collection, analysis or figure generation, authors should describe its use in the methods.

AI should not be listed as an author or co-author and authors being humans must ensure the accuracy and integrity of AI-generated content. Authors should carefully review and edit the result because AI can generate authoritative-sounding output that can be incorrect, incomplete or biased. Authors should declare that there is no plagiarism in their manuscript, including in text and images produced by the AI.

Editors should take caution against AI use potentially breaching confidentiality and instruct reviewers to maintain strict confidentiality, including refraining from uploading manuscripts to AI software without permission. Reviewers should take permission from the journal before using AI and be mindful of AI's potential errors and biases. Primary source referencing from AI-generated material should not be permitted.

6. Journal Policy on AI use and way forward:

To ensure adherence, every journal should implement clear author instructions and apply AI-related policies consistently through transparent editorial practices. Failure to disclose or inappropriate use of AI may lead to editorial measures, such as manuscript rejection or post-publication retraction.⁸ Although AI can be beneficial for tasks such as language refinement and plagiarism screening, it cannot substitute for human oversight and decision-making. Continuous discussion, regular revision of journal policies, and alignment with international standards are essential to address the expanding role of AI in scientific publications while preserving academic integrity.

7. Recommendations:

- Robust AI disclosure requirements, clear human responsibility, and harmonized editorial guidelines are critical in reducing the risks of misinformation, inappropriate authorship attribution, and misrepresentation of the data.

- As AI tools continue to advance, publication frameworks must evolve accordingly, with an emphasis not only on operational efficiency but also on maintaining trust.
- Sustained collaboration among international editorial and publishing bodies (COPE, ICMJE, JAMA and WAME) is essential to ensure that AI should enhance the core values of scientific publications instead of compromising it.

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References

1. Siddiqui R, Zafar A, Qazi SA. Artificial Intelligence and the Future of Healthcare in Pakistan: Opportunities and Challenges. *J Pak Med Assoc.* 2023; 73 : 1944–1946. doi: 10.47391/JPMA.23-70.
2. Salybekov AA, Wolfien M, Hahn W, Hidaka S, Kobayashi S. Artificial Intelligence Reporting Guidelines' Adherence in Nephrology for Improved Research and Clinical Outcomes. *Biomedicines.* 2024; 12 : 606. doi: 10.3390/biomedicines12030606.
3. Campbell JP, Lee AY, Abràmoff M, Keane PA, Ting DSW, Lum F, et al. Reporting Guidelines for Artificial Intelligence in Medical Research. *Ophthalmology.* 2020; 127: 1596-1599. doi: 10.1016/j.ophtha. 2020. 09.009.
4. Flanagan A, Bibbins-Domingo K, Berkwits M, Christiansen SL. Nonhuman "Authors" and Implications for the Integrity of Scientific Publication and Medical Knowledge. *JAMA.* 2023; 329: 637–639. doi:10.1001/jama.2023.1344.
5. Flanagan A, Pirracchio R, Khera R, Berkwits M, Hswen Y, Bibbins-Domingo K. Reporting Use of AI in Research and Scholarly Publication-JAMA Network Guidance. *JAMA.* 2024; 331: 1096-1098. doi: 10.1001/jama.2024.3471.
6. Osama M, Afridi S, Maaz M. ChatGPT: Transcending Language Limitations in Scientific Research Using Artificial Intelligence. *J Coll Physicians Surg Pak.* 2023; 33: 1198-1200.
7. Fees F. Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals. <https://www.icmje.org/icmje-recommendations.pdf>. Accessed on May 11, 2024.
8. Misra DP, Chandwar K. ChatGPT, artificial intelligence and scientific writing: what authors, peer reviewers and editors should know. *J R Coll of Physicians Edinb.* 2023; 53 : 90–93. doi: 10.1177/14782715231181023.