

# Ethical Considerations for using Chatbots in Research

Rehan Ahmed Khan\*

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The utilization of artificial intelligence (AI) chatbots for generating original written content, including articles, thesis, and assignments, has experienced a significant surge (Khan, R. A., Jawaid, M., Khan, A. R., and Sajjad, M 2023). Researchers now have the ability to command chatbots, such as ChatGPT, to draft complete research papers, including systematic reviews, case reports, and original research. However, this widespread adoption has raised several ethical concerns regarding the appropriate usage of chatbots in academic writing (Fatani., 2023). This editorial explores the ethical implications associated with utilizing chatbots in research and highlights the need for clear guidelines and distinctions between plagiarism and legitimate support from AI chatbots.

## Ethics of Chatbot Use in Research

The use of chatbots as co-authors or main authors in research papers contradicts the guidelines provided by reputable associations such as the World Association of Medical Editors (Zielinski, C et al., 2023). Researchers face a dilemma when deciding whether to utilize the assistance of chatbots while remaining within the confines of ethical research paper writing (Farhat, Sohail, and Madsen., 2023). It is crucial to differentiate between plagiarism and seeking support from chatbots. Moreover, the challenge lies in detecting whether a research paper has been entirely produced by chatbots, thereby compromising the integrity of the research process. (Fatani, 2023; Kooli, 2023)

## Chatbot Assistance in Manuscript Writing

Chatbots can aid in the generation of manuscript content through simple commands (Kooli., 2023). For instance, researchers can ask chatbots to write original articles based on a specific research topic, such as training ChatGPT in assessing short essay questions within the discipline of anatomy. Alternatively, researchers can provide chatbots with key ideas or existing research data to construct a manuscript. It is essential to examine the scenario in which Chat GPT can produce a paper, as each scenario will present a different ethical standpoint. In a situation, where no work is conducted by the researcher, it is considered wholly unethical to use chatbots to generate the entire manuscript. This practice undermines the principles of academic integrity and original research whereas if a researcher

conceives a research idea, collects data, and employs chatbots to assist in writing the manuscript, the resulting paper can become an original research paper when appropriately rephrased by the researcher. It is vital to acknowledge the support provided by the chatbot in the acknowledgement section of the paper (Flanagin, Bibbins-Domingo, Berkwits, and Christiansen., 2023).

## Enhancing Manuscript Presentation

ChatGPT or similar AI-powered software can be utilized to improve the presentation of a manuscript after it has been written by an individual researcher. This practice parallels the established norm of professional manuscript editing services, where agencies are employed to rephrase articles for authors, often for a fee. In this case, the AI software acts based on similar principles, aiding researchers who may struggle with academic writing or English as a non-native language (Kim., 2023).

## Formulating Ethical Guidelines

As chatbot technology is relatively new, ethical guidelines concerning its use are still in their infancy. Striking a balance in the judicious application of such software is paramount (Ali, Ahmad, and Younus A., 2023). The historical analogy can be drawn to the advent of cut-and-paste practices in research, which were later identified and addressed through plagiarism detection tools. Moving forward, the ethical use of AI in research must be carefully considered and regulated, while recognizing the potential for generating new ideas and advancing research through neural networks and deep learning embedded in chatbot systems (Fatani., 2023).

## CONCLUSION

The rising use of chatbots in research necessitates a comprehensive examination of the ethical implications involved. Researchers must exercise caution to ensure that chatbots are used appropriately, without compromising the integrity of academic writing and research. As the field progresses, it becomes imperative to establish clear ethical guidelines to govern the responsible and beneficial use of AI in research, fostering further improvements and innovations in the generation of knowledge (Ali et al., 2023).

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## \*Correspondence

Prof. Dr. Rehan Ahmed Khan

Editor in Chief, Health Professions Educator Journal, Lahore, Pakistan.

E-mail: [surgeonrehan@gmail.com](mailto:surgeonrehan@gmail.com)

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