

Ethical Questions Surrounding a Generative Artificial Intelligence Platform in Medical Research and Education: A Scoping Review

Laura Furtado-Pessoa-de-Mendonca, M.D.¹, Christine Hunt, D.O.¹, Johanna Klasova, M.D.², Johanna Mosquera-Moscoso, M.D.¹, Sebastian Encalada, M.D.¹, Alejandro Hallo-Carrasco, M.D.¹, Abdul Karim Ghaith, M.D.², Victor Gabriel El-Hajj³, Eva Kubrova M.D.², Adaobi Ibe D.O., MPH¹, Carlos Hallo, M.D.⁴, Danielle Gerberi², Mohammad Bydon, M.D.²
¹ Mayo Clinic, Jacksonville, FL, ² Mayo Clinic, Rochester, MN, ³ Karolinska Institutet, Sweden, ⁴ Icahn School of Medicine at Mount Sinai, Elmhurst, NY

INTRODUCTION

- Generative artificial intelligence platforms (GAIP), such as ChatGPT, have become popular across multiple professional industries and applications.
- Ethical concerns surrounding the use of GAIP are particularly pertinent in medical applications.
- This study aims to evaluate the current use of ChatGPT in the medical scientific, research, and education communities and map potential ethical concerns.

METHODOLOGY

- We performed a scoping review with the existing literature that implemented ChatGPT at any stage of their research investigation on April 14th, 2023.
- Only original peer-reviewed manuscripts were considered in this study.

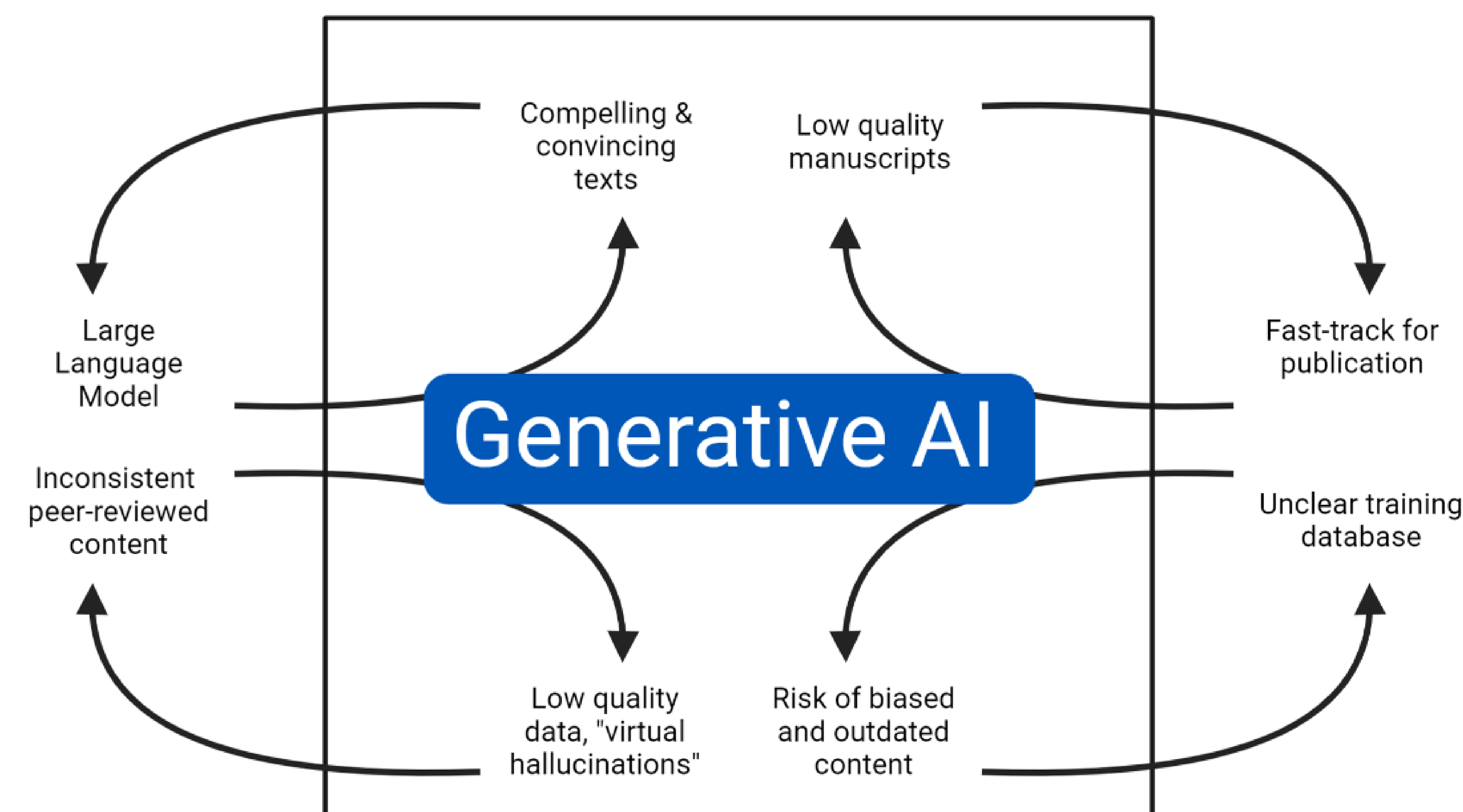
RESULTS

- We included 27 manuscripts, and 22 mentioned potential ethical concerns involving ChatGPT.
- Studies were from fifteen countries, and the United States of America contributed to the largest percentage of publications at 48.14%.

RESULTS

- Debated concerns were related to content authorship, scientific integrity and plagiarism, inconsistent quality of content, perpetuation of inaccurate or biased information, increase in disparities, education issues, and patient privacy.
- ChatGPT's knowledge was the most frequent topic of investigation (n = 12), followed by its ability to generate scientific or medical text (n = 7).
- Two studies considered ChatGPT as a co-author.
- The algorithm and training characteristics were pointed out as limitations of ChatGPT.
- ChatGPT was considered as a strong communication, educational, and research support tool.

FIGURE 1: Misinformation circuit



DISCUSSION

- The accuracy of AI-generated texts may be questionable, as depicted in Figure 1.
- An attractive and easy-to-use platform has the potential to drive people to rely on information and make decisions through GAIP.
- Having an unclear database used for GAIP's training may contain inherited biases and substantially impact scientific growth and healthcare.
- The indiscriminate use of GAIPs in scientific production may result in persuasive studies with inaccurate or biased information and hidden plagiarism.
- There is a duality in GAIPs' impact on disparities and its implementation in healthcare.
- The use of GAIP is controversial and still requires careful consideration due to its significant impact on the medical community.

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