Balkan Medical Journal Policy on the Use of Chatbots in Scientific Publications

The use of artificial intelligence (AI) in scientific publishing is not new. In 2005, three students at MIT developed SCIgen, a computer program that automatically generates nonsense computer science articles to get rid of spam emails and take revenge on predatory publishers. Just 9 years later, the scientific world was shaken by the shocking news that the Institute of Electrical and Electronics Engineers and Springer withdrew more than 100 papers identified as being produced through SCIgen.[1] The recent rapid increase in the use of AI in science and publishing necessitates publishing industry stakeholders to have knowledge and experience on these issues. In addition, the free launch of the ChatGPT chatbot by OpenAI a few months ago caused great excitement in the scientific world.

What is a chatbot? A chatbot is "a computer program that simulates and processes human conversation (either written or spoken), allowing humans to interact with digital devices as if they were communicating with a real person".[2] ChatGPT as a chatbot is considered one of the most powerful language models available today. It can understand context and produce text and abstracts so well that scientists have difficulty recognizing that a computer wrote them.

The use of AI in science for the benefit of humanity will of course pave the way for great developments. However, the risk of misuse of this technology worries editors and the scientific community. Recently, we even witnessed that ChatGPT was listed as an author in some articles.[3,4] Therefore, the World Association of Medical Editors (WAME) has made urgent recommendations to address this issue (Table 1).[5] Shortly thereafter, Nature announced that AI-based language models could not be listed as authors,[6] and science family journals have banned the use of AI-generated text, figures, images, and graphics or the listing of AI tools as authors.[7]

ChatGPT-generated content could significantly increase scientific misconduct. Furthermore, the misuse of this technology will increase the interest in predatory publishers and journals. Therefore, all authors, researchers, and editors must understand the strengths and weaknesses of AI tools (Table 2). Editors should be wary of fake articles generated by AI. A dozen AI-generated text detectors already exist or are being developed, including the OpenAI classifier, GPTZero, Copyleaks, GPT Radar, CatchGPT, and Turnitin's AI-writing detector. However, the accuracy rates of these detectors are far from satisfactory.[8]

TABLE 1. Recommendations of World Association of Medical Editors on ChatGPT and Chatbots in Relation to Scholarly Publications.

- Chatbots cannot be authors.
- The authors should be transparent when chatbots are used and provide information about how they were used.
- Authors are responsible for the work performed by a chatbot in their paper (including the accuracy of what is presented and the absence of plagiarism) and for appropriate attribution of all sources (including for materials produced by a chatbot).
- Editors need appropriate tools to help them detect content generated or altered by AI, and these tools must be available regardless of their ability to pay.

TABLE 2. What Authors and Editors Need to Know About ChatGTP

- The data used by ChatGPT provide information before 2021.
- Information compiled by ChatGPT is not always accurate.
- ChatGPT can list non-existent references.
- ChatGPT-created content is not completely free of plagiarism.
- ChatGPT-created content may contain subjective bias.
- ChatGPT could lead to a rapid increase in publications in predatory journals.
- AI-generated text detectors appear to have a low success rate.

Editors should adopt and implement a policy that prioritizes the responsible use of AI language models and transparency in knowledge production to protect the reliability and integrity of medical research. Accordingly, they should monitor chatbot practices in academic research and update journal policies. We would like to inform our authors and readers that we have adopted the WAME recommendations on ChatGPT and chatbots in relation to scientific publications and have incorporated the AI policy into our Editorial policy.

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