Editorial Letter

ChatGPT: How it Impacts Nursing and Health Science Education?

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New artificial intelligence (AI) models use large amounts of data and computing techniques to predict combining words meaningfully. Open AI, a company that develops artificial intelligence, released ChatGPT in November 2022 [1]. ChatGPT is a conversational model chatbot that can perform sophisticated functions in response to users' entries, including seeking and clarifying through follow-up questions, challenging underlying definitions, and stating and questioning assumptions. ChatGPT is different because it can be generative, create a new text based on various inputs, and is a free-to-use application. It provides virtually instant, comprehensive, and logical text responses in any format and genre requested and is undetectable by current plagiarism software [2]. This article highlights the challenges and opportunities this technology presents to nursing and health science education, including concerns about academic integrity and privacy and the need to ensure that staff training and comprehensive policies are in place. Nursing and other health professions face a challenging decision about whether or not to respond to the emergence of ChatGPT. Avoidance may stem from many causes, including fear of technology and its potential influence on higher education [3]. Ignoring ChatGPT will result in multi-level harm for nursing and the health sciences, a "head-in-the-sand" perspective that makes approaches to professional education appear irrelevant, and a lack of opportunity to integrate ChatGPT into learning [4]. Nursing and health science educators and educational institutions take a strong stance against the use of ChatGPT, positioning its use as a direct threat to academic integrity. However, such a stance may be ineffective given the complexity of monitoring a large student body and possibly bypassing established lockdown measures. While the prohibition stance carries many of the same shortcomings and challenges encountered in the avoidance stance, it also prevents educators from developing students' critical appraisal of ChatGPT's outputs [5]. Patients are also likely to turn to ChatGPT for information regarding their health problems or questions. Nurses and other health professionals must be familiar with ChatGPT in order to support and educate patients. ChatGPT, in addition to scientific writing, can help physicians in hospitals by reducing time and allowing them to focus on patient care [6]. Integrating ChatGPT into educational procedures and assessments is another option for nursing and the health professions [7]. According to one published article, students can readily utilize ChatGPT to cheat on tests, resulting in the loss of creative ideas and the inability to offer compelling arguments [8]. It can be utilized fairly and in accordance with students' competence levels, but it necessitates the acquisition of a skill set. As a result, educational institutions must adjust quickly to provide adequate staff training and thorough policies [9]. ChatGPT will change how learners engage with higher education and professional training, as well as how evaluation occurs; it must balance the threats to privacy, security, and academic integrity with the potential benefits of its implementation. Educators must understand ChatGPT's rapid improvements and impending scalability and provide a flexible evaluation method, as well as the resulting institutional approaches and rules, in order to stay up with this AI technology's current and constantly growing state [10]. ChatGPT provides several advantages, according to a study published in the Biology and Medicine Science Report, including

improved scientific writing, enhanced healthcare research, and the ability to rapidly evaluate information [11]. While some scientific professionals believe ChatGPT has the potential to transform medical writing by making it a more efficient and time-saving procedure, many others are skeptical due to concerns about its impact on medical education and research. It lacks critical thinking and provides information in an illogical and redundant manner [12]. Similarly, employing ChatGPT in scientific articles raises ethical difficulties, medicolegal concerns, and content inaccuracy. ChatGPT could assist with producing the substance of a paper using evidence, but it could not conduct a complete literature search or undertake critical analysis and discussion of articles. Rather than providing an original plan, it might review material and rewrite the text. However, there is growing concern that ChatGPT can be used to easily write papers without clinical reasoning and critical thinking [13]. Nursing education and research frequently necessitate critical review, evidence synthesis, and knowledge application, which can be difficult for an AI model to achieve [14]. Over-reliance on ChatGPT in nursing education and research may restrict opportunities for mentorship, collaboration, and developing critical thinking skills, potentially leading to mistakes in nursing education and research [15]. When using ChatGPT, however, various problems should be noted. While ChatGPT can provide information on a variety of nursing issues, it is critical to double-check the correctness and credibility of the information. It cannot fully comprehend the specific context or individual demands of a nursing student or researcher. It can deliver generic information but cannot adjust its responses to the specific needs of a certain learner or project [16]. When employing ChatGPT, user interactions and chats may be captured and archived for a variety of objectives, such as model enhancement or research [17]. It is critical to have strong safeguards in place to protect the security of this information and prevent unauthorized parties from accessing it. Data breaches can occur in any system or platform that stores user data, including discussions with ChatGPT [18]. According to Dr. Biswas' article, ChatGPT can extract information, assist with literature searches, and provide a rough copy for the medical writer. The application of ChatGPT in medical research is still debatable. While some experts say it can be used to easily write papers that lack clinical logic and critical thinking, others suggest that it can produce fresh hypotheses and aid in data analysis. It is crucial to stress, however, that ChatGPT is not a replacement for human intelligence and critical thinking [19]. Finally, ChatGPT has the ability to transform nursing education and research by making it a faster and more efficient process. Its impact on medical and nursing education and research, however, is still being disputed. Technology can help medical education and clinical decision-making, but it cannot replace human intelligence and critical thinking. As a result, it is critical to utilize ChatGPT carefully and with prudence. Human monitoring, essential information evaluation, and source verification continue to be critical for sustaining the quality and integrity of nursing education and research.

REFERENCES

1. OpenAI, "OpenAI," 2023. https://openai.com/ (accessed Mar. 25, 2023).
2. Churi PP, Joshi S, Elhoseny M, Omrane A. (Eds.). Artificial Intelligence in Higher Education: A Practical Approach (1st ed.). CRC Press; 2022. doi: 10.1201/9781003184157.
3. Alkhaqani AL. How artificial intelligence is revolutionizing the future uture of healthcare. *Int J Health Sci Nurs*. 2023;06(04):1–16. doi: 10.6084/m9.figshare.22670470.v1.
4. Alkhaqani AL. ChatGPT and nursing education: Challenges and opportunities. *Al-Rafidain J Med Sci*. 2023;4:50–51. doi: 10.54133/ajms.v4i.110.
5. Archibald MM, Clark AM. ChatGTP : What is it and how can nursing and health science education use it ? *J Adv Nurs*. 2023,1: 1–4. doi: 10.1111/jan.15643.
6. Salvagno M, Taccone FS, Gerli AG. Can artificial intelligence help for scientific writing? *Crit Care*. 2023;27(1):75. doi: 10.1186/s13054-023-04380-2.
7. Biswas S. ChatGPT and the future of medical writing. *Radiology*. 2023;307(2):e223312. doi: 10.1148/radiol.223312.
8. O'Connor S. Open artificial intelligence platforms in nursing education: Tools for academic progress or abuse? *Nurse Educ Pract*. 2023;66:103537. doi: 10.1016/j.nepr.2022.103537.
9. Alkhaqani AL. Can ChatGPT help researchers with scientific research writing ? *J Med Res Rev*. 2023;1(1):9–12. doi: 10.5455/JMRR.20230626013424.
10. Alkhaqani AL. Potential benefits and challenges of ChatGPT in future nursing education. *Ma'aen J Med Sci*. 2023;1–5. doi: 10.55810/2789-9136.1020.
11. Bin Arif T, Munaf U, Ul-Haque I. The future of medical education and research: Is ChatGPT a blessing or blight in disguise? *Med Educ Online* 2023;28(1):1–2. doi: 10.1080/10872981.2023.2181052.
12. Graham F. Daily briefing: Will ChatGPT kill the essay assignment? *Nature*. 2022. doi: 10.1038/d41586-022-04437-2.
13. Alkhaqani AL. ChatGPT and the future of medical writing. *J Med Clin Nurs Health*. 2023;1(1):1–4. doi: 10.6084/m9.figshare.23295551.
14. Roche C, Ireland SF, Lewis D, Wall PJ. Artificial intelligence discourse ? *Inf Digit Technol Dev*. 2021;643–658.
15. Wingard J. ChatGPT: A threat to hgher education? Forbes;2023. https://www.forbes.com/sites/jasonwingard/2023/01/10/chatgpt-a-threat-to-higher-education/?sh=5275514d1e76 (accessed Mar. 25, 2023).
16. Hagerty A, Rubinov I. Global AI ethics: A review of the social impacts and ethical implications of artificial intelligence. *Glob AI Ethics*. 2019. doi: 10.48550/arXiv.1907.07892.
17. Arinez JF, Chang Q, Gao RX, Xu C, Zhang J. Artificial intelligence in advanced manufacturing: Current status and future outlook. *J Manuf Sci Eng Trans*. 2020;142(11). doi: 10.1115/1.4047855.
18. Saleh Ibrahim Y, Khalid Al-Azzawi W, Hamad Mohamad AA, Nouri Hassan A, Meraf Z. Perception of the impact of artificial intelligence in the decision-making processes of public healthcare professionals. *J Environ Public Health*. 2022;2022:8028275. doi: 10.1155/2022/8028275.
19. Alkhaqani AL. ChatGPT and academic integrity in nursing and health sciences education. *J Med Res Rev*. 2023;1(1)5-8. doi: 10.2139/ssrn.4360052.