

The Impact of ChatGPT on the Healthcare Domain: Perspectives from Healthcare Majors

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Abstract : ChatGPT has shown both strengths and limitations in clinical, educational, and research settings, raising important concerns about accuracy, transparency, and ethical use. Despite an improved understanding of user acceptance and satisfaction, there is still a gap in how general AI perceptions translate into practical applications within healthcare. This study focuses on examining the perceptions of ChatGPT's impact among 266 healthcare majors in Taiwan, exploring its implications for their career development, as well as its utility in clinical practice, medical education, and research. By employing a structured survey with precisely defined subscales, this research aims to probe the breadth of ChatGPT's applications within healthcare, assessing both the perceived benefits and the challenges it presents. Additionally, to further enhance the comprehensiveness of our methodology, we have incorporated qualitative data collection methods, which provide complementary insights to the quantitative findings. The findings from the survey reveal that perceptions and usage of ChatGPT among healthcare majors vary significantly, influenced by factors such as its perceived utility, risk, novelty, and trustworthiness. Graduate students and those who perceive ChatGPT as more beneficial and less risky are particularly inclined to use it more frequently. This increased usage is closely linked to significant impacts on personal career development. Furthermore, ChatGPT's perceived usefulness and novelty contribute to its broader impact within the healthcare domain, suggesting that both innovation and practical utility are key drivers of acceptance and perceived effectiveness in professional healthcare settings. Trust emerges as an important factor, especially in clinical settings where the stakes are high. The trust that healthcare professionals place in ChatGPT significantly affects its integration into clinical practice and influences outcomes in medical education and research. The reliability and practical value of ChatGPT are thus critical for its successful adoption in these areas. However, an interesting paradox arises with regard to the ease of use. While making ChatGPT more user-friendly is generally seen as beneficial, it also raises concerns among users who have lower levels of trust and perceive higher risks associated with its use. This complex interplay between ease of use and safety concerns necessitates a careful balance, highlighting the need for robust security measures and clear, transparent communication about how AI systems work and their limitations. The study suggests several strategic approaches to enhance the adoption and integration of AI in healthcare. These include targeted training programs for healthcare professionals to increase familiarity with AI technologies, reduce perceived risks, and build trust. Ensuring transparency and conducting rigorous testing are also vital to foster trust and reliability. Moreover, comprehensive policy frameworks are needed to guide the implementation of AI technologies, ensuring high standards of patient safety, privacy, and ethical use. These measures are crucial for fostering broader acceptance of AI in healthcare, as the study contributes to enriching the discourse on AI's role by detailing how various factors affect its adoption and impact.

Keywords : ChatGPT, healthcare, survey study, IT adoption, behaviour, application, concerns

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