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Review Article

An updated trend in nursing - Artificial intelligence A review Article

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ABSTRACT

Artificial intelligence (AI) is an umbrella term used to describe techniques developed to teach computers to mimic human-like cognitive functions like learning, reasoning, communicating and decision-making (Robert, 2019). The identical task can be completed with artificial intelligence more cheaply and effectively. Any artificial system that can carry out activities under a variety of uncertain conditions with little to no human supervision or that can gain knowledge from experience and perform better when given data sets. Nursing practice is geared towards assisting clients in achieving and maintaining optimal health in order to optimise their quality of life over the course of their lifetime however Artificial intelligence benefits nursing practice in : enhancing medical and nursing diagnostics; accelerating drug discoveries and Administration and many more. As of 2023, the use of AI in nursing holds much promises for the profession, hence to This article provides an overview of artificial intelligence (AI), including how AI algorithms and robots are altering the nurse's role and the challenges facing the nursing profession as AI is integrated into healthcare delivery.

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1. Introduction

Nursing education must change to keep up with the changing environment as health care continues to develop and become more complex. The incorporation of artificial intelligence (AI) technology is one key advancement in higher education that has the potential to revolutionize instruction by giving students more individualized and effective learning experiences.^{1,2}

Concerns and issues accompany the incorporation of AI into higher education, especially nursing degrees, as is the case with any new technology. Through an analysis of its historical origins, present uses, and potential future developments, this article seeks to provide an overview of the state of AI in nursing education.¹ This article invites nurse educators to consider the best ways to include

AI technology into their teaching to improve student learning and contribute to the development of skilled and compassionate nurses by examining the opportunities and limitations of AI in nursing education.

Since its inception as a specialized field of study with little public interest in the 1950s, the incorporation of AI technology into higher education has a long history.³ Artificial intelligence became more well-known in the 1970s and 1980s as a result of the advancement of contemporary computing technologies.⁴ Researchers started looking at the use of computer-assisted training in the 1960s, and by the late 1960s natural language processing had started. This system, which was one of the first examples of a functioning machine learning system, improved through self-play.⁵

As the usage of computer-assisted instruction increased in the 1970s, early computer-based teaching tools

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were developed, including multimedia learning resources ,interactive simulations,and online tutorials,which showed how AI might enhance the teaching experience.²

With numerous nations investing in AI education and research, the use of AI in higher education has attracted interest on a global scale. In order to make substantial advancements in AI research and innovation by 2030, China has launched a national AI development plan.⁶ With the intention of enhancing human capacity and preparing for changes in the labor market, South Korea is investing significant resources in the development of AI education and research. As part of its efforts to foster AI talent, the nation is increasing the number of AI graduate schools and providing short-term intensive educational programs.⁷ By encouraging the application of AI in education, the European Union's Digital Education Action Plan 2021–2027 seeks to improve student learning and support teachers and administrative personnel.^{8,9} The united states national science foundation AI technology holds significant implicit to produce more sophisticated and complex simulations that world patient care situations, simular simulations can give scholars develop critical chios and prepare for real –world patient situations ,allowing them to exercise their clinical chops and decision making in safe terrain .As AL technology advances,these simulations will come indeed more advanced and sophisticated ,offering an decreasingly reraltistic and immersive literacy experience .

The benefits of AI in nursing education, similar as interactive literacy gests and time saving opening, are inarguable, but implicit pitfalls bears a conservative and infomed approach to its use.

For case,the use of Chat GPT, an AI chatbot system ,in nursing education has inspired enterprises about breaches of academic intergrity and ethics and theft of intellectual property.¹

When enforced according to proper guidelines and immorally, still AI can significantly ameliorate learning gests for nursing scholars and better prepare them for the challenges of a fleetly changing health care geography.

2. Navigating the Opportunities and Challenges of AI in Nursing Education

The incorporation of AI into nursing education offers a wide range of benefits, such as better efficiency and learning outcomes, but it also comes with a number of risks relating to privacy and security, ethical concerns, and opposition to adoption. The preservation of student privacy is a major issue with AI integration. Maintaining student confidentiality and taking precautions against any potential data breaches that could jeopardize student privacy are crucial given that AI requires access to personal information. Data bias, exacerbated disparities, and adherence to professional norms are ethical concerns that need to be carefully explored and addressed. Promoting

moral AI practices, giving educators and students sufficient training and assistance, and putting in place strong privacy protections are all necessary to address these issues.

Nursing education programs will certainly encounter resistance to the use of AI-based tools and procedures, as with any new technology. Faculty members may worry about how AI might affect their workload or their position in the teaching process; some may worry that they will have to spend a lot of time learning how to utilize the tools, while others may worry that AI would completely replace human educators. In addressing these worries, it's critical to remember that when applied properly, AI technology supplements and enhances the teaching and learning process. AI-based tools can assist in streamlining administrative processes and provide individualized learning opportunities that are tailored to the specific requirements of each individual learner. By automating commonplace processes like grading, student progress tracking, and attendance monitoring, nurse educators have more time to devote to more difficult teaching assignments that call for their particular skill and insight.

Although AI-based tools and techniques can significantly improve nursing education, it is essential to make sure that they complement and enhance human interaction, critical thinking, and creativity rather than replacing them. The growth of capable and caring nurses depends on nurse educators' involvement in cultivating these fundamental abilities. Nursing schools may give students a more complete and productive educational experience by balancing the use of AI-powered technologies and interpersonal engagement. The importance of human interaction may be preserved while utilizing the advantages of technology in nursing education, thanks to the collaboration of AI researchers and nurse educators.

3. Conclusion

The integration of AI technology in nursing education has the potential to revolutionize by providing personalized learning experiences and improving efficiency and outcomes. However, the ethical and responsible use of AI must be ensured through careful consideration and effective strategies that address concerns such as privacy, security, bias, and adherence to professional standards. Furthermore, continued research and innovation in the field of AI in nursing education will be crucial to exploring the best practices for incorporating AI technology, examining its impact on student learning and program outcomes, and addressing ethical and legal concerns. With proper implementation and guidelines, AI tools can complement and enhance human interactions in nursing education, preparing nursing students for a rapidly changing health care landscape and advancing the nursing profession.

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5. Conflict of Interest

None.

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