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# Community Health Nursing and Artificial Intelligence: Empowering Data-Driven Interventions and Personalized Care

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Community health nursing is a discipline that incorporates evidenced-based research along with advances in science and new approaches for improving the health, focusing on promoting and preserving the health of individuals and populations within a community. Community health nurses play a crucial role as a bridge connecting the community and healthcare facilities. They possess the ability to comprehend and analyze the community's requirements and the goals set by health policymakers. Furthermore, community health nurses hold a significant position and status when it comes to tackling various healthcare challenges such as immigration, bioterrorism, homelessness, unemployment, violence, and the obesity epidemic etc. (1, 2).

Artificial intelligence can assist community health nurses in various ways. One significant benefit is the ability to analyze vast amounts of health data efficiently. AI algorithms can process this data to identify patterns, trends, and risk factors, enabling nurses to make informed decisions and develop targeted interventions for specific populations. This data-driven approach improves the accuracy and effectiveness of community health interventions, ultimately leading to better health outcomes. Moreover, AI-powered technologies, such as remote monitoring devices and wearable sensors, enable continuous health monitoring of individuals in the community. These devices can collect real-time health data, including vital signs, activity levels, and sleep patterns. Community health nurses can utilize this information to proactively identify health issues, provide timely interventions, and offer personalized care to individuals without requiring them to visit healthcare facilities regularly (3, 4).

Additionally, AI can support community health nurses in the realm of patient education and health promotion. Virtual assistants and chatbots powered by AI can disseminate evidence-based health information, answer common questions, and provide guidance on healthy behaviors. This not only empowers individuals to take charge of their





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own health but also reduces the workload on nurses, allowing them to focus on more complex cases and direct patient care. Although AI brings immense potential to community health nursing, it is essential to recognize the importance of maintaining the human element in healthcare. AI should augment the skills and expertise of nurses rather than replace them. The compassionate care, empathy, and critical thinking abilities that nurses bring cannot be replicated by machines. Therefore, a balance between technological advancements and human touch is crucial (4, 5).

In conclusion, the integration of artificial intelligence into community health nursing presents tremendous opportunities to enhance healthcare delivery, improve patient outcomes, and promote community well-being. Embracing these technological advancements while upholding the core values of nursing can lead to a brighter future for community health.

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## Ethical considerations

Not applicable, as this study did not involve human participants or animal subjects.

## Code of ethics

Not applicable

## Authors' contributions

All the authors contributed to the initial writing and subsequent revisions of the article. They had collectively approved the final version of the manuscript and taken the responsibility for the accuracy and integrity of its content.



## Keywords

Community Health Nursing, Artificial Intelligence, Personalized Care

## References

1. Hosseinnejad A, Rassouli M, Jahani S, et al. Community Health Nursing in Iran: A Review of Challenges and Solutions (An Integrative Review). Frontiers in Public Health. 2022; 10: 899211. [Persian]
2. Kuo C-P, Hsieh P-L, Chen H-M, et al, editors. Community health nursing competency and psychological and organizational empowerment of public health nurses: A cross-sectional survey. Healthcare; 2021: MDPI.
3. Davenport T, Kalakota R. The potential for artificial intelligence in healthcare. Future Healthcare Journal. 2019; 6(2): 94.
4. Robert N. How artificial intelligence is changing nursing. Nursing management. 2019; 50(9): 30.
5. Javaid M, Haleem A, Singh RP, et al. Significance of machine learning in healthcare: Features, pillars, and applications. International Journal of Intelligent Networks. 2022; 3: 58-73.



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