Harnessing Generative AI (Gen AI) in Healthcare: Transformative Implications for Nursing Education

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Research Question

Which healthcare areas (medicine, nursing, and allied health fields) are researching the impacts of artificial intelligence (AI) on pedagogy, and how is AI being incorporated into education?

Introduction

- The advancement of AI is driving intentional and unintentional changes across educational and healthcare systems.
- AI offers novel strategies for improving learning, education, and evaluation.
- AI is being incorporated into industry, and nursing students will need to understand its strengths and weaknesses.
- Ethical and safety considerations may limit the use of AI in educational institutions; however, student use of AI may require novel techniques for evaluating knowledge and competency.

Method

- We conducted a scoping review using terms relating to nursing, medicine, allied health, AI, and education. Primary research, secondary research, and grey literature were included, considering the novelty of AI.
- Databases included CINAHL, Google Scholar, and ProQuest.
- Articles meeting the search criteria were sampled by relevance and impact for qualitative analysis.
- Articles selected for qualitative analysis were grouped by topic (researching AI-enhanced simulations, for example).

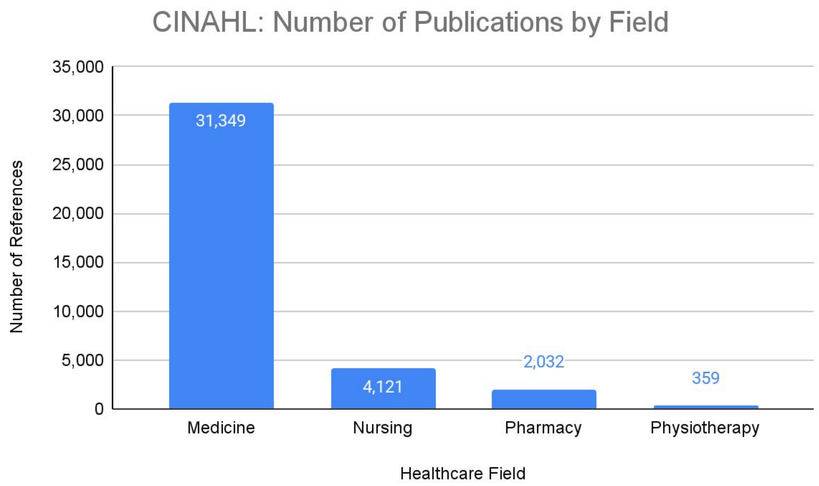


Figure 1: Compares the number of articles published by four prominent healthcare fields. Medicine has produced significantly more research than other areas, and may inform nursing curricula and further research.

Results

- Medical researchers have produced a massive amount of studies on AI, but the utility of AI in nursing remains highly debated.
- Significant research is being conducted in all healthcare areas on the impacts and opportunities of AI in industry, but it's role in education is still being explored.
- Main topics being explored:
  - AI-enhanced simulation[1].
  - Ethics of AI use and academic integrity[4].
  - Prompt engineering[3].
  - AI problem-solving, including diagnostics, care planning, and documentation (electronic medical records and note-taking)[5].
  - Pedagogical adaptation to AI use by students and industry[2].

Discussion/Conclusion

- Medicine and nursing are publishing more research on AI than each allied health field.
- Medicine has published more research on AI in education than nursing and allied health. Nursing schools could benefit from using models and techniques tested by medical researchers to enhance student learning.
- Given the dynamic nature of AI, the relative values of quantitative data are expected to change.
- Allied health categories were limited due to insufficient publications, with pharmacy and physiotherapy being the most prolific.
- The data suggest simulations are a high-interest application of AI[1].
- The data also indicate that AI use and misuse necessitate a change in evaluating students' knowledge and competency[5].

References