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Artificial Intelligence in Healthcare Education: Student Perceptions and Pedagogical Challenges in Physiotherapy

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Abstract

Background. Contemporary undergraduates inhabit a technology-rich ecosystem and routinely harness artificial intelligence (AI) applications to support their studies. While such tools promise personalised feedback and instant information retrieval, their uncritical adoption may undermine the cultivation of higher-order cognitive skills.

Objective. To analyse in depth how undergraduate physiotherapy students employ AI systems and to characterise their perceptions and behaviours towards these technologies.

Methods. A mixed-methods, descriptive design was applied. Seventy-one students completed an online questionnaire (Microsoft Forms) capturing socio-demographic variables, AI usage patterns, and attitudinal items. A qualitative sub-sample (n=23) was selected until thematic saturation was achieved. Descriptive statistics were calculated for quantitative data, and qualitative responses were coded inductively in ATLAS.ti Web v25.0.

Results. Of 71 respondents, 62.5% were women and 37.5% men. Seven thematic categories emerged. Early-year students primarily leveraged ChatGPT or Copilot to clarify core concepts, whereas third- and fourth-year students employed AI for study planning, literature exploration, and clinical reasoning. Participants valued AI's rapid information delivery but reported concerns over accuracy, completeness, and potential erosion of critical thinking. Uncritical reliance occasionally produced classroom errors.

Conclusions. Physiotherapy undergraduates display substantial confidence in AI tools, yet novice learners lack the evaluative frameworks required to appraise AI-generated content rigorously. Integrating pedagogical strategies that promote critical interrogation of AI outputs is therefore imperative.

Keywords: Artificial Intelligence; Critical Thinking; Educational Technology; Physiotherapy; Qualitative Research; Learning Behaviours; Pedagogical Implications.