

Introduction

The rapid advancement of Artificial Intelligence (AI) technologies has the potential to significantly transform various sectors, including healthcare and education (Veras, 2024). Within the field of physiotherapy, AI presents opportunities to enhance both teaching methods and research capabilities in higher education institutions.

The integration of AI into educational practices can provide innovative tools for learning, data analysis, and the development of personalized approaches to student engagement. Additionally, AI's role in research holds the promise of optimizing data management, improving the accuracy of clinical studies, and fostering interdisciplinary collaboration. Despite these potential benefits, the implementation of AI in physiotherapy education and research is not without challenges. Ethical considerations, such as data privacy and the potential for bias in AI algorithms, raise concerns among educators and researchers.

Understanding the attitudes, usage patterns, and concerns of physiotherapy professionals is crucial for fostering an environment where AI can be successfully and ethically integrated into curricula and research methodologies. This study aims to explore the perceptions, knowledge, and experiences of physiotherapy educators and researchers across Europe regarding AI integration. By identifying current trends, challenges, and needs, this research seeks to contribute to a better understanding of how AI can be effectively utilized to improve both educational outcomes and research efficiency in the field of physiotherapy.

Material / Methods

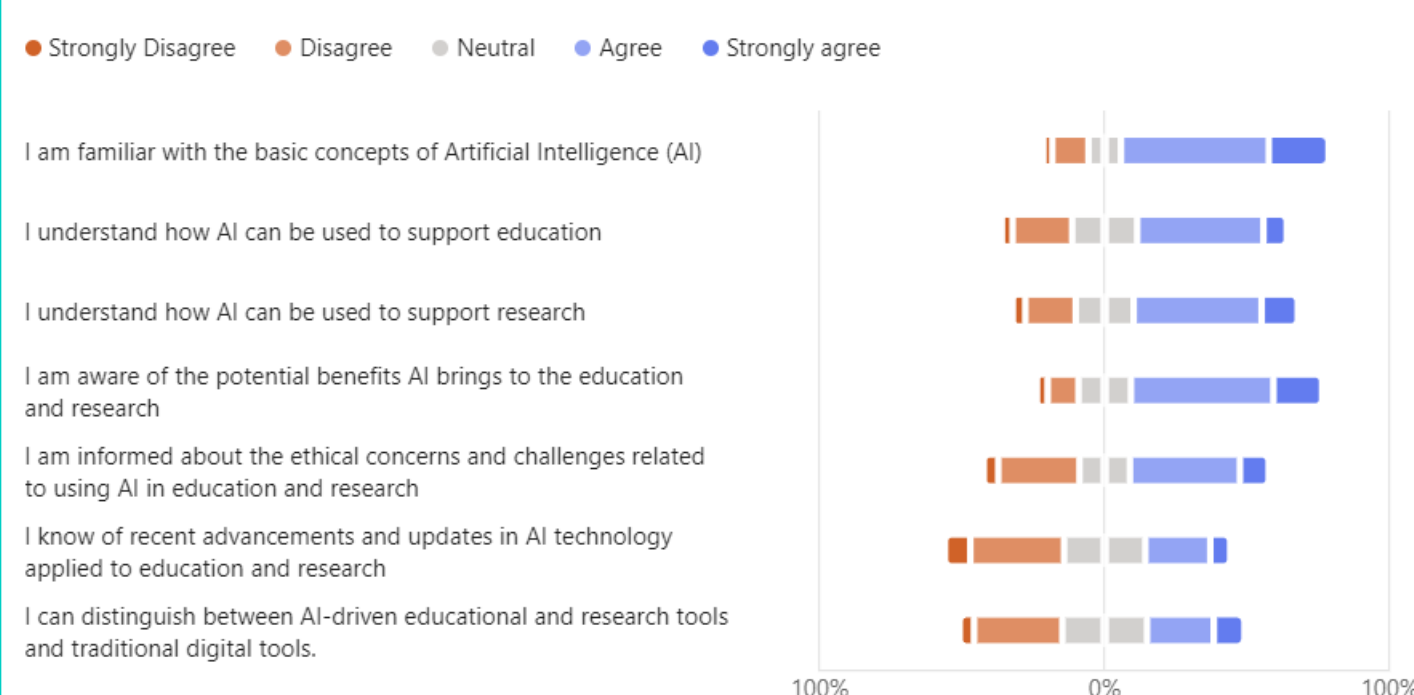
This study used an online survey to gather data from physiotherapy educators and researchers across Europe. The survey was distributed via the European Network of Physiotherapy in Higher Education (ENPHE) newsletter and online platforms between October 2023 and April 2024.

The questionnaire was designed to explore several dimensions of AI integration in physiotherapy education and research. The survey included questions on five key areas: Knowledge of AI: Participants were asked about their familiarity with AI technologies, including their awareness and understanding of AI applications in education and research. Usage Patterns of AI: This section explored how respondents currently use AI tools, if at all, in their teaching or research practices, and which specific tools or technologies are most applied. Attitudes Toward AI Integration: Using Likert-scale questions, the survey assessed participants' perspectives on the advantages and challenges of incorporating AI into educational and research activities. Concerns and Perceived Risks: Respondents were asked to express concerns about AI, such as data security, ethical implications, and the potential for bias or misuse in educational settings. Perceived Necessities for AI Integration: This section focused on identifying what participants see as essential for the successful incorporation of AI, such as training, institutional support, and clear ethical frameworks.

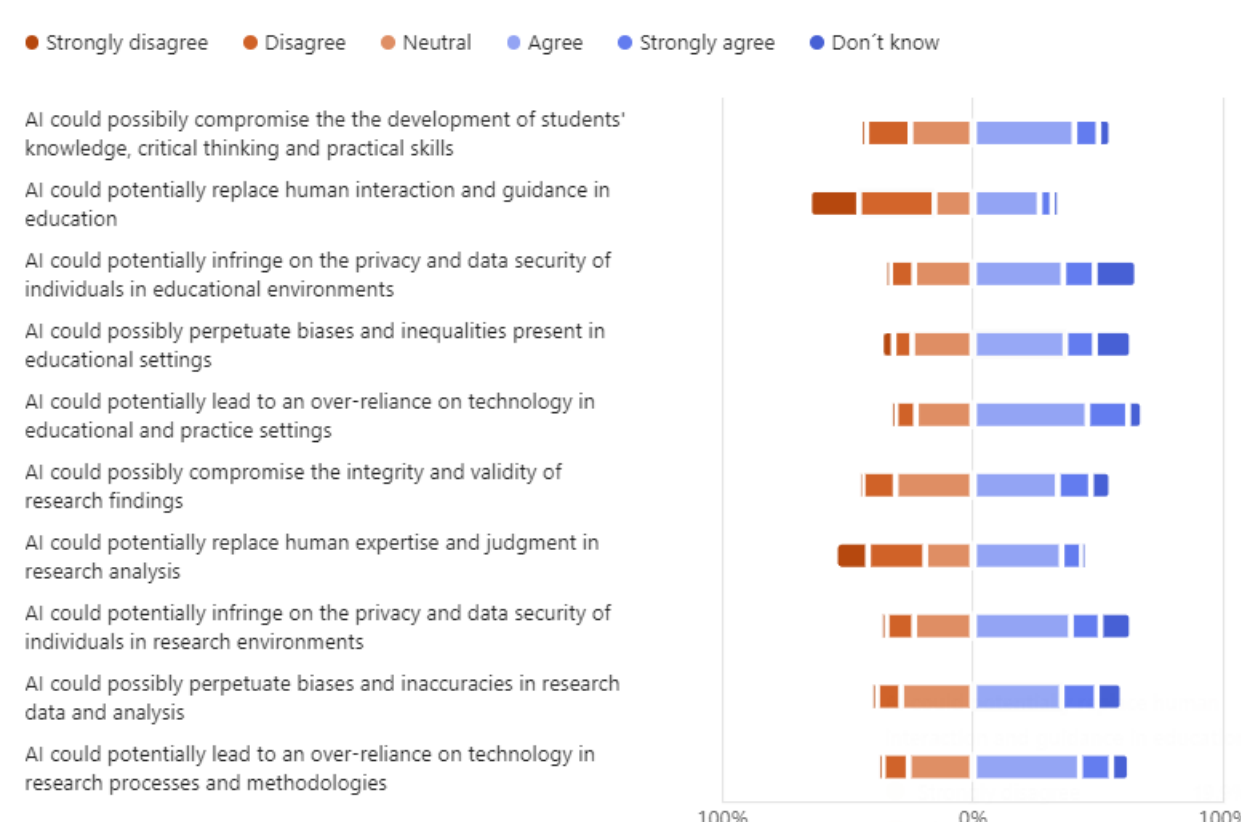
A total of 129 responses were collected from participants across 24 different European countries. The collected data was analyzed using descriptive statistics, providing insights into the current state of AI knowledge, usage, and attitudes among physiotherapy educators and researchers.

Results

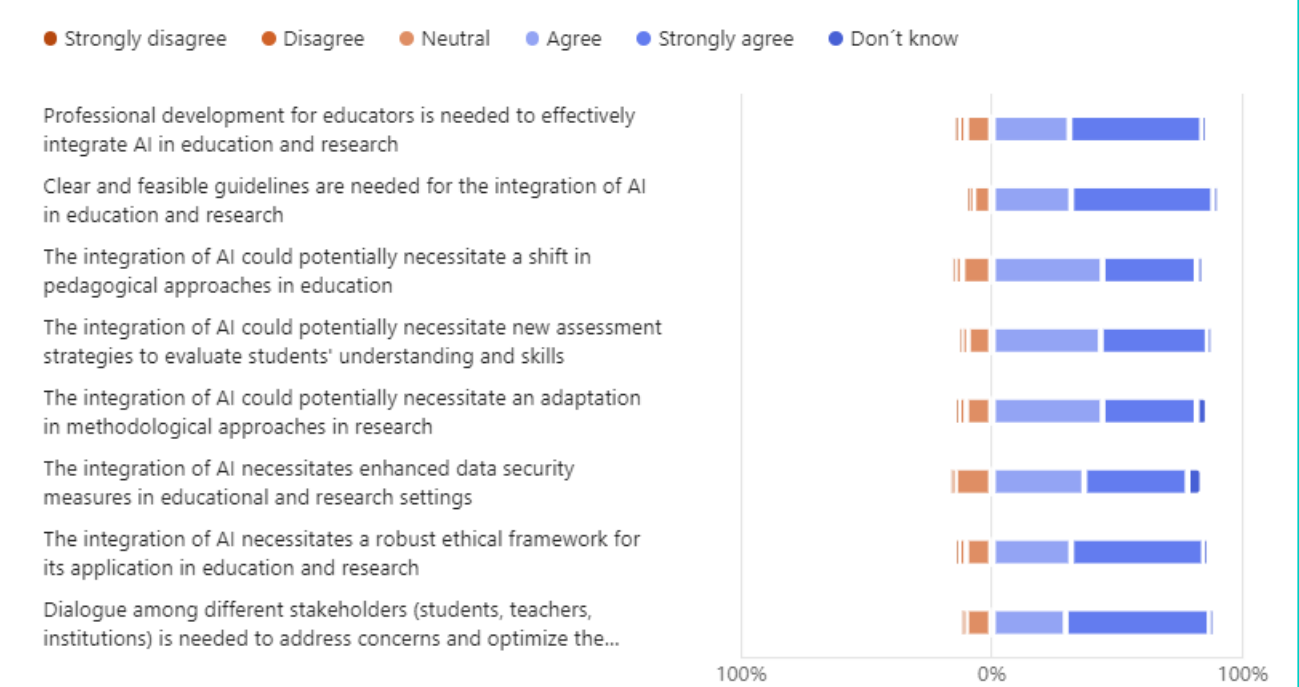
Perceive knowledge about the use AI in education and research.



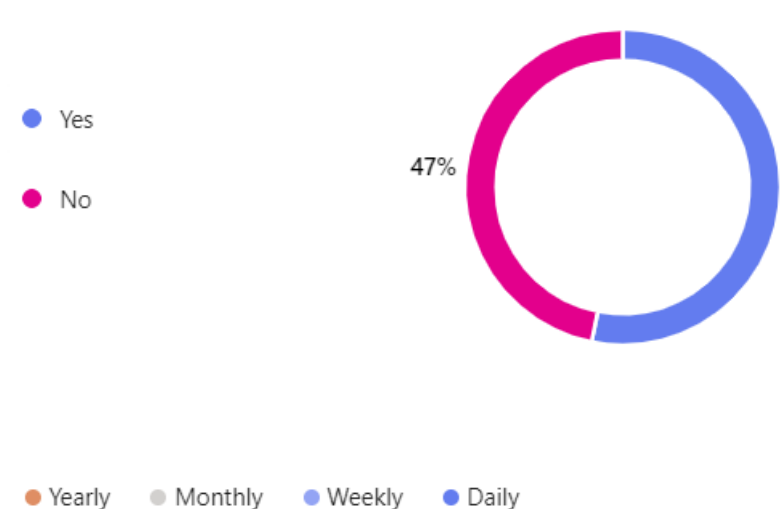
Concerns and perceive risks of the integration of AI in education and research



Perceive necessities regarding the integration of AI in education and research



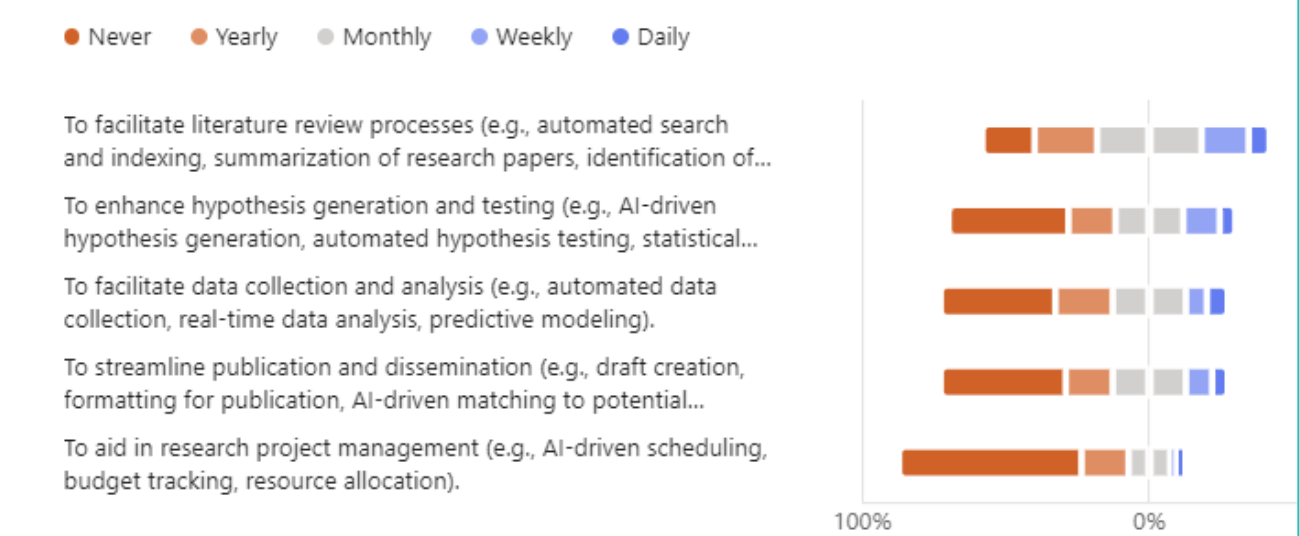
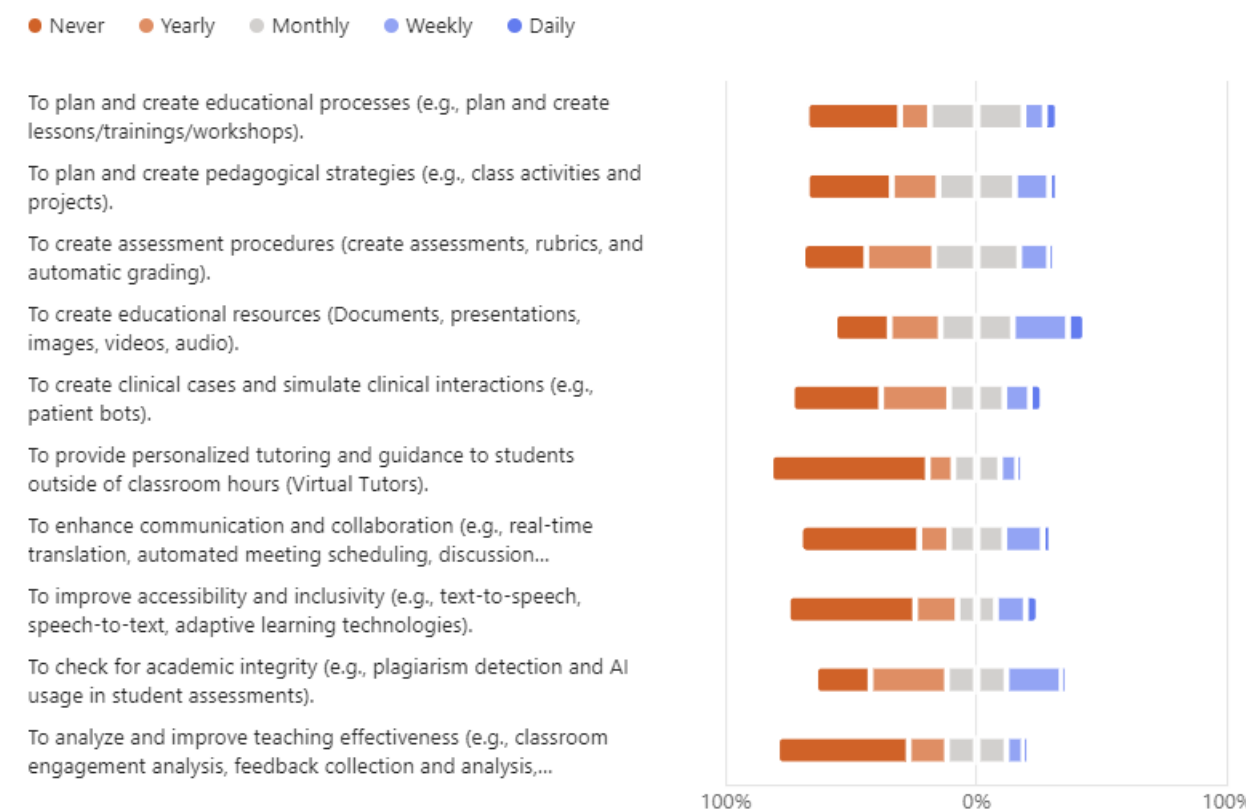
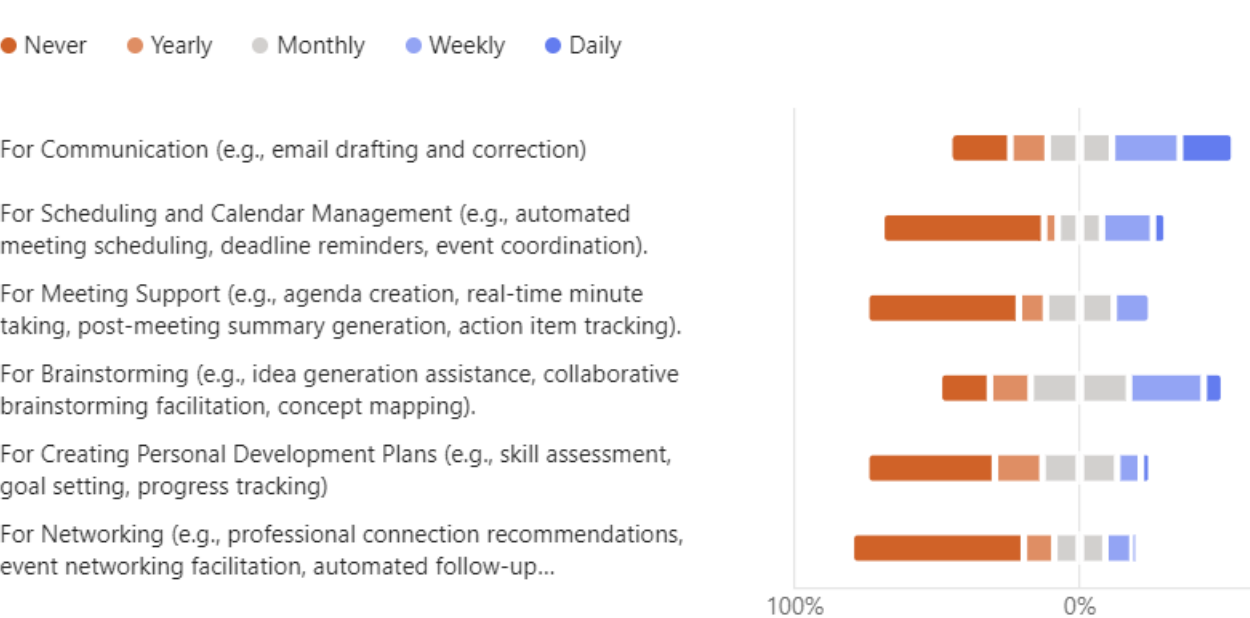
Usage of AI for productivity or support in personal organization



Usage of AI in the context of education



AI in the context of research



The results of the study indicate that physiotherapy educators and researchers generally have a positive perception of AI, recognizing its potential to enhance both education and research within their field. Most respondents acknowledge the benefits AI can bring to teaching, such as improving educational processes and personalizing student engagement, as well as optimizing research by enhancing data management and analysis. However, as identified in other studies (Shorey et al., 2024), ethical concerns persist, with over respondents expressing reservations. Key concerns include data privacy, and the necessity for clear ethical guidelines to govern the use of AI in educational and research contexts. Additionally, respondents identified a need for increased training and institutional support to effectively integrate AI into their work.

Conclusion

The findings of this study highlight a generally positive attitude towards the integration of AI in physiotherapy education and research, with educators and researchers recognizing its potential to improve teaching and research outcomes. However, significant concerns remain regarding ethical issues such as data privacy and algorithmic bias. To address these concerns and ensure a successful integration of AI, there is a clear need for increased AI literacy, targeted training, and the development of comprehensive ethical guidelines. Enhancing institutional support and fostering open dialogue on these issues are crucial steps to promote informed, responsible, and effective use of AI in physiotherapy education and research.

References

Veras, M., Dyer, J. O., & Kairy, D. (2024). Artificial Intelligence and Digital Divide in Physiotherapy Education. *Cureus*, 16(1).
Shorey, S., Mattar, C. N., Pereira, T. L. B., & Choolani, M. (2024). A scoping review of ChatGPT's role in healthcare education and research. *Nurse Education Today*, 106121.

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