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Background

The rapid development of Artificial Intelligence (AI) technologies offers promising opportunities to transform sectors such as healthcare and education.

In physiotherapy, AI has the potential to enhance teaching and research in higher education by introducing innovative learning tools, improving data analysis, and supporting personalized student engagement. AI could also optimize data management, increase the accuracy of clinical studies, and promote interdisciplinary collaboration.

However, the integration of AI in physiotherapy education and research presents challenges, particularly regarding ethical issues such as data privacy and bias in AI algorithms, which require careful consideration.

Purpose

This survey aimed to assess physiotherapy educators and researchers self-reported knowledge, usage, attitudes, concerns, and needs regarding AI integration in education and research.

Methods

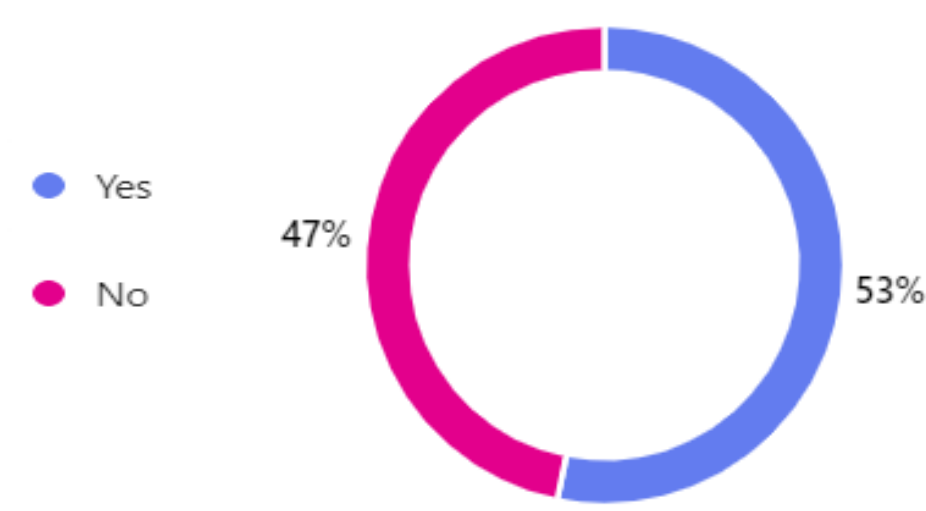
This study used an online survey to gather data from physiotherapy educators and researchers. The survey was distributed via the European Network of Physiotherapy in Higher Education (ENPHE) newsletter and online platforms between October 2023 and April 2024. The questionnaire was designed to explore several dimensions of AI integration in physiotherapy education and research.

The survey included questions on five key areas:

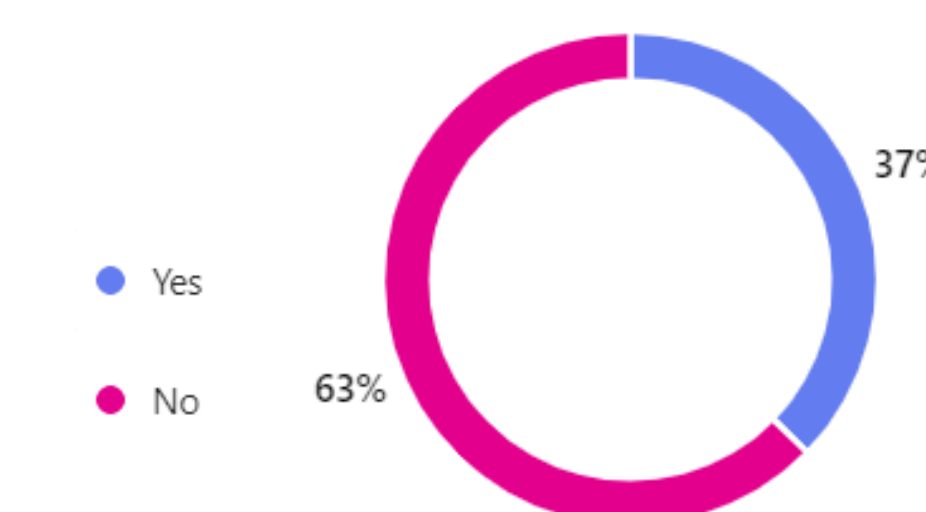
- **Knowledge of AI:** Participants were asked about their familiarity with AI technologies, including their awareness and understanding of AI applications in education and research.
- **Usage Patterns of AI:** This section explored how respondents currently use AI tools, if at all, in their teaching 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

Results

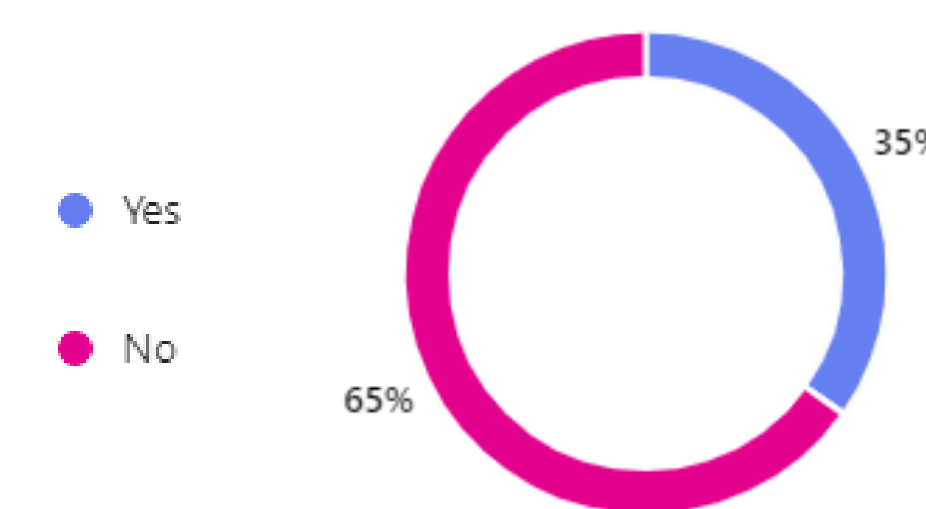
Usage of AI for productivity or support in personal organization



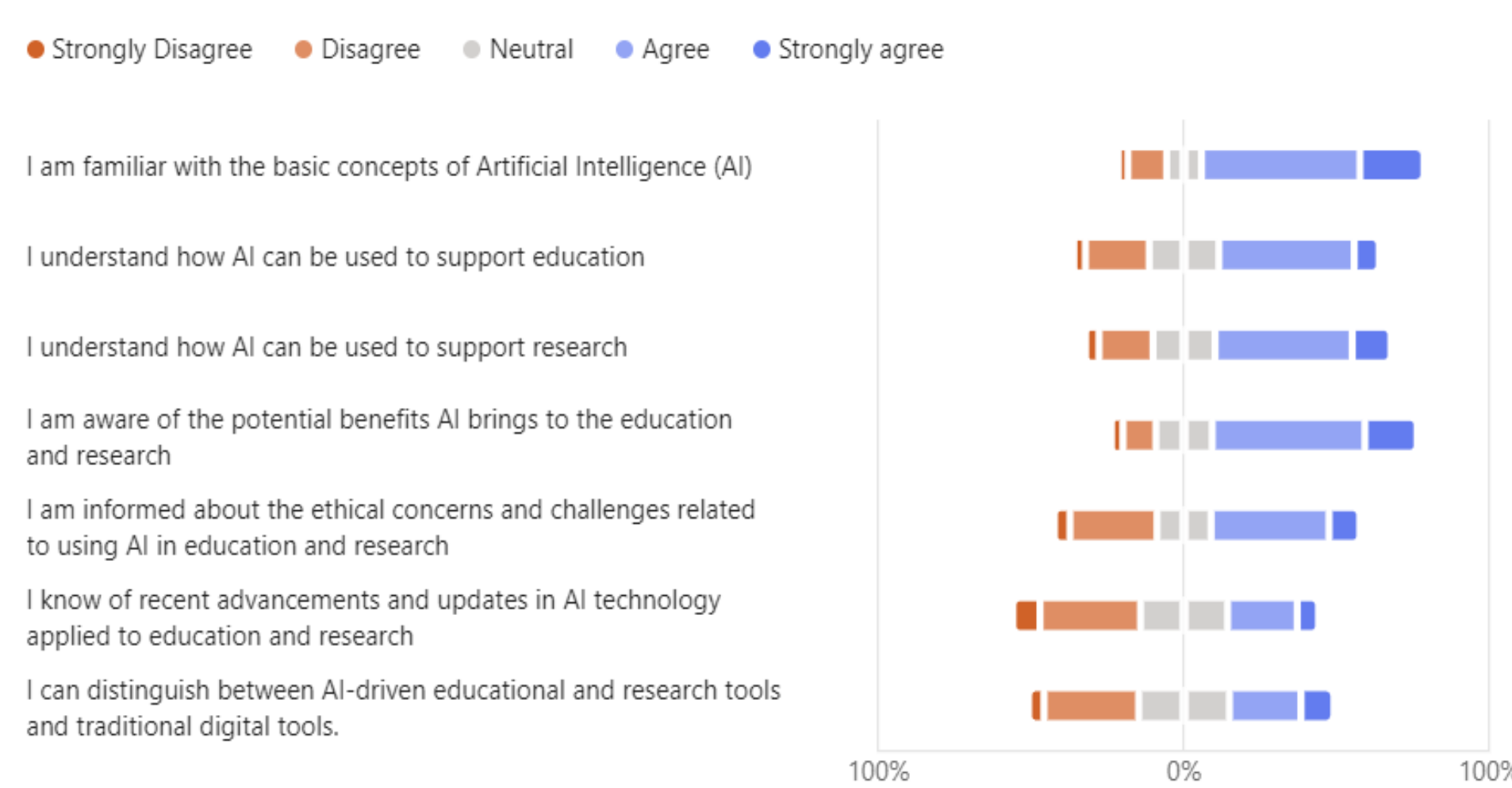
Usage of AI in the context of education



AI in the context of research



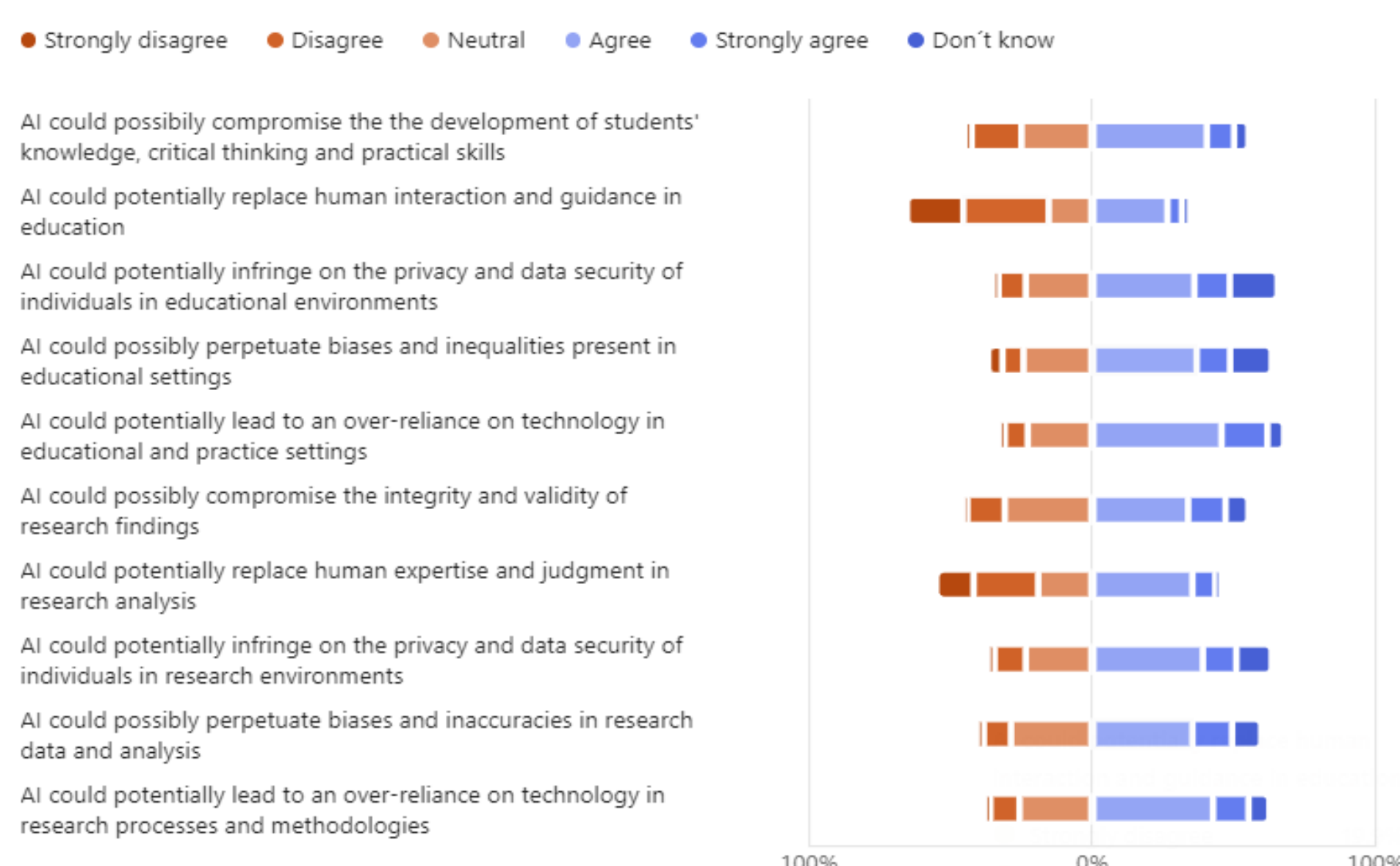
Perceived knowledge about the use AI in education and research



Perceived necessities regarding the integration of AI in education and research



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



Results (cont)

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.

The results of the study show 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, 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.

Conclusions

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.

Implications

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.

Contacts

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