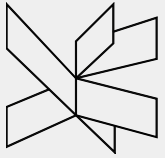


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Efficacy of using activity chairs - a single-case experimental design study of changes in occupational performance

WFOT Congress 2026

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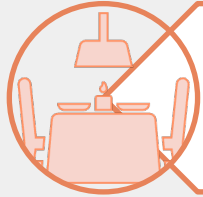
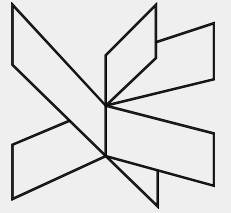
Docent **Tina Helle**, VIA University College, Denmark



The study is funded by VIA University College, the Danish Association of Occupational Therapists and the Danish Life Science Cluster



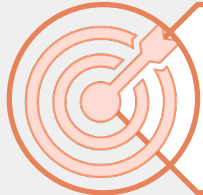
Background



Assistive technology (AT) promote activity and participation



Anticipation: AT makes occupational performance safer, more independent, and less physically demanding



Most AT studies evaluate use or non-use, adherence, satisfaction, or usability

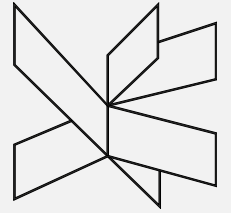


AIM: To explore how activity chair use impacts occupational performance





Method



Need for alternatives to RCT studies in AT research

Alternating treatments design

- Perform a standardized activity with and without the activity chair
- Familiar and relevant activities
- Natural environment

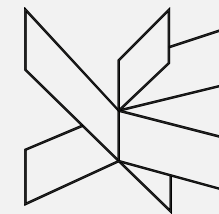
Outcome measures

- Observed occupational performance (AMPS)
- Self-reported occupational performance

Smith, E. M. (2023). The challenge of complexity: Research quality in assistive technology. *Assistive Technology*, 35(4), 291–291.

Krasny-Pacini, A., & Evans, J. (2018). Single-case experimental designs to assess intervention effectiveness in rehabilitation: A practical guide. *Annals of Physical and Rehabilitation Medicine*, 61(3), 164–179.

Fisher AG, Bray Jones K. Assessment of Motor and Process Skills. Volume 1: Development, standardization and administration manual / Anne G. Fisher; Kristin Bray Jones. Colorado: Three star press; 2010.



Who are the participants?



Six Danish first-time users of the activity chair



Aged 25+ and living in a regular home (not in institutional care)

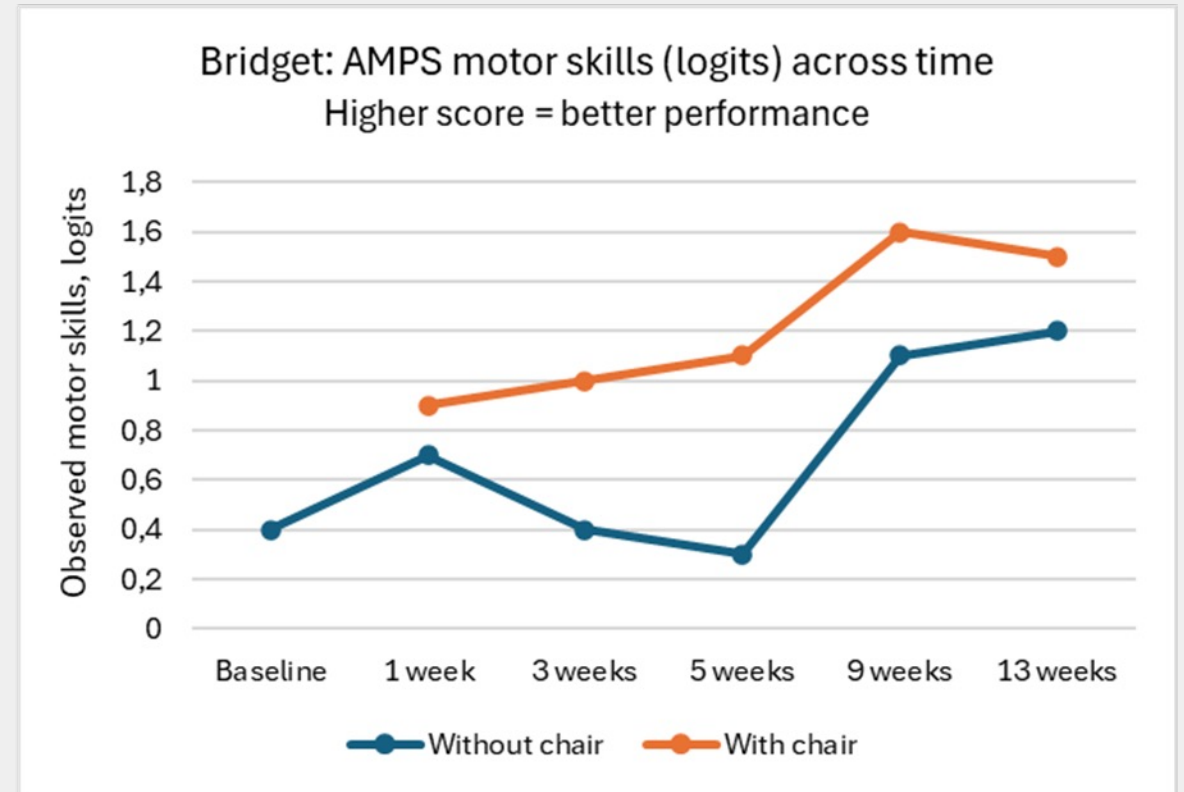
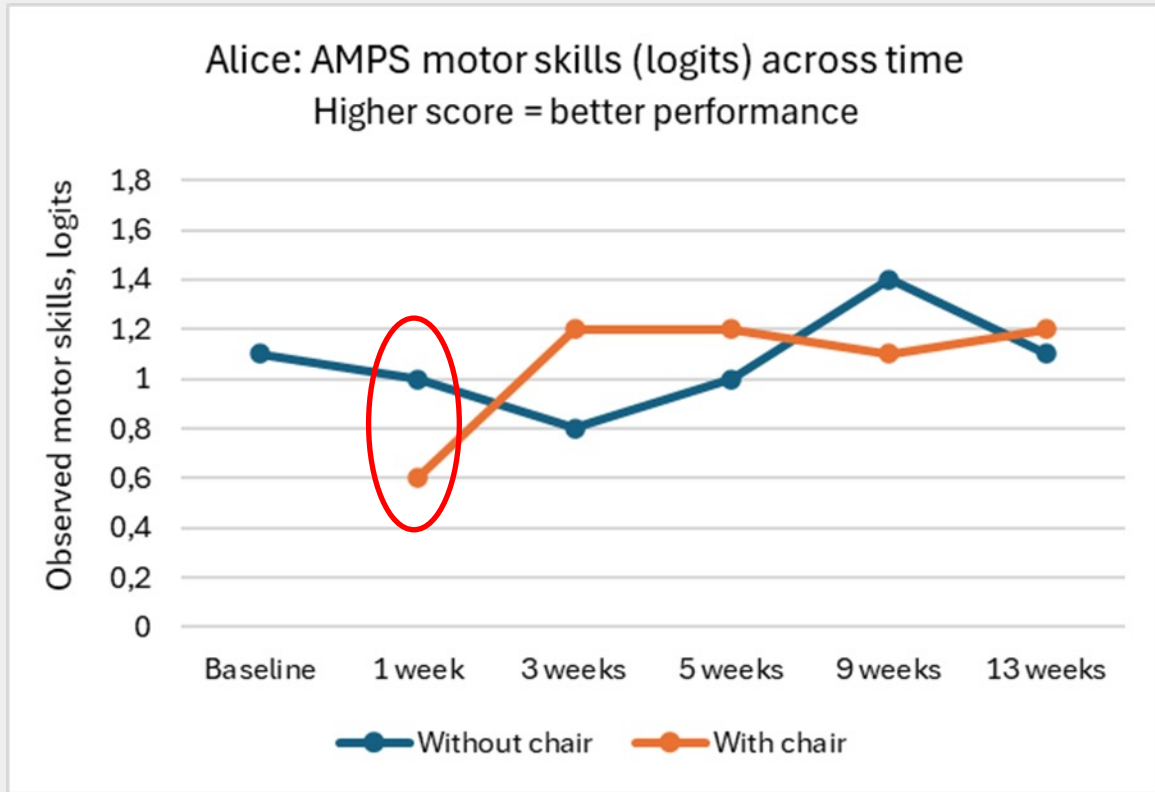
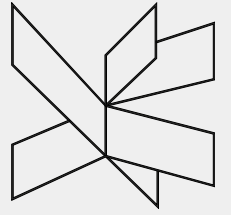


No known cognitive impairments



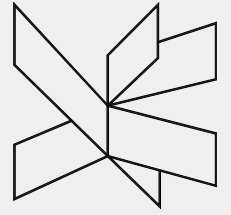
Occupational performance (AMPS)

MOTOR SKILLS

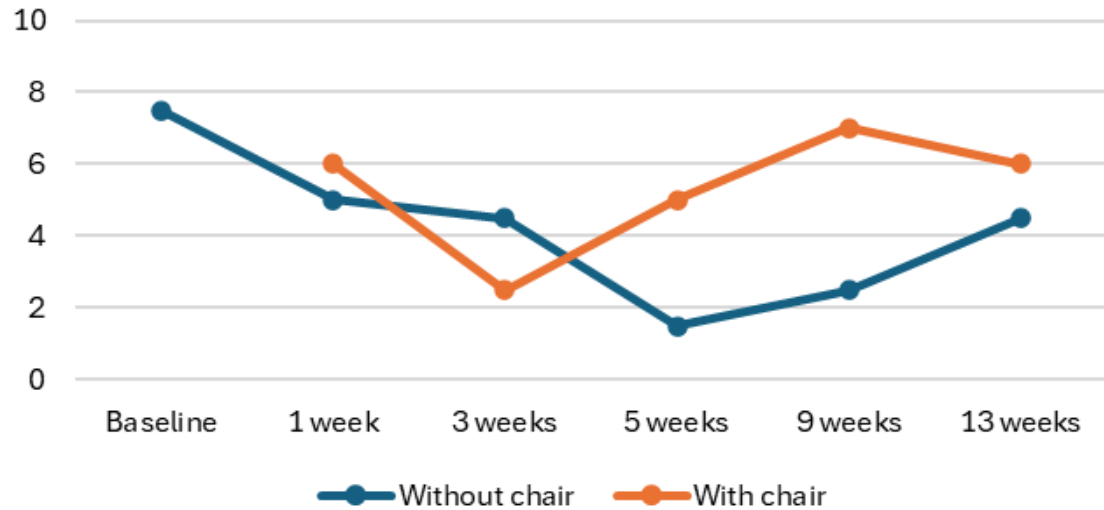


Self-rated occupational performance

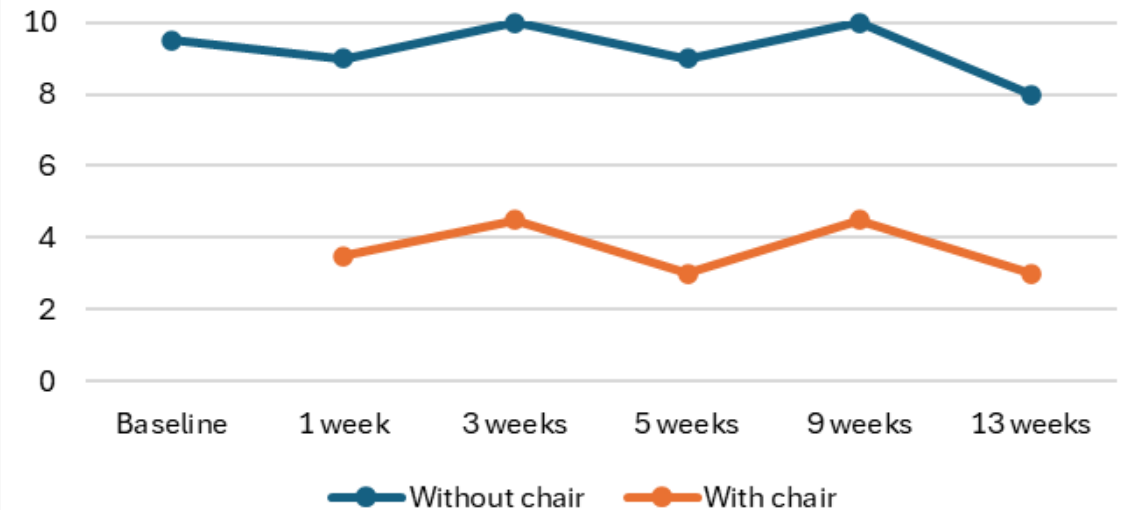
EFFORT



Alice: Self-rated effort across time
Higher score = higher effort

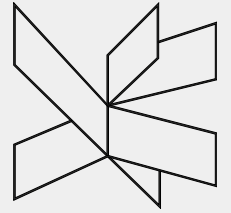


Bridget: Self-rated effort across time
Higher score = higher effort

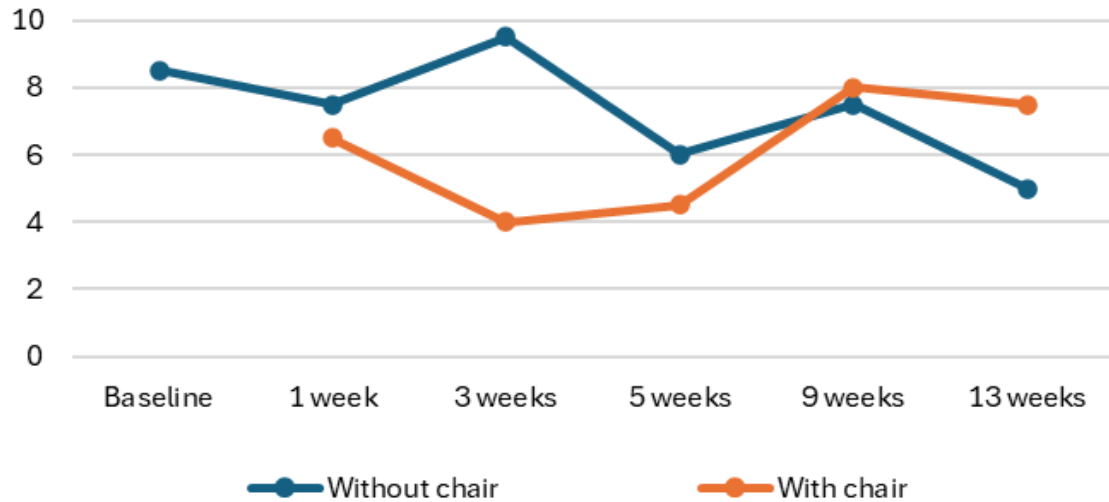


Self-rated activity performance

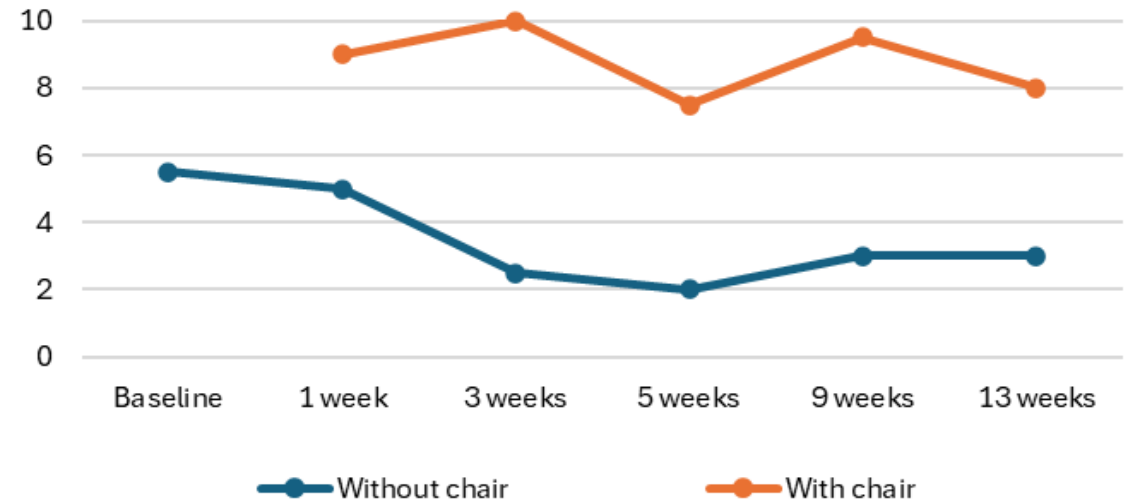
SAFETY

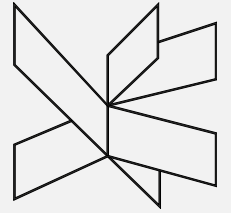


Alice: Self-rated safety across time
Higher score = higher safety



Bridget: Self-rated safety across time
Higher score = higher safety



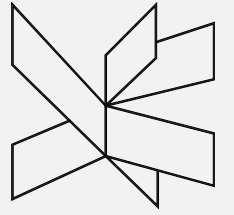


Why do we see these differences?

One key difference appears to be related to the provision process

- Assessment of needs
- Assessment of the transaction between the user, the activity chair, relevant activities and the physical environment
- Assessment of self-image and “readiness”

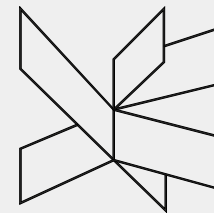
What have we learned?



If a systematic provision process is carried out, **then** the activity chair can substantially improve occupational performance

The impact of assistive technology largely depends on the quality of the provision process!

Single-case experimental designs hold strong potential for contributing to evidence-based practice in the field of rehabilitation and assistive technology



THANKS FOR LISTENING!

- **AND THANK YOU** to the participants, the municipalities, and all collaborators involved in the project

The study is funded by

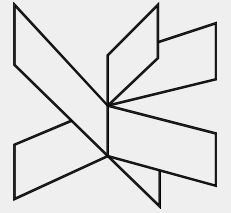
- ❖ VIA University College
- ❖ The Danish Association of Occupational Therapists
- ❖ The Danish Life Science Cluster

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on LinkedIn



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Key references



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