A Preliminary Analysis of Older Adults' Reactions to Design Concepts for Physical Activity Support

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PROBLEM STATEMENT

Older adults living alone often encounter interrelated barriers to engaging in physical activity (PA).

RESEARCH QUESTION

How can technology be better designed to support older adults living alone in maintaining their PA routines?
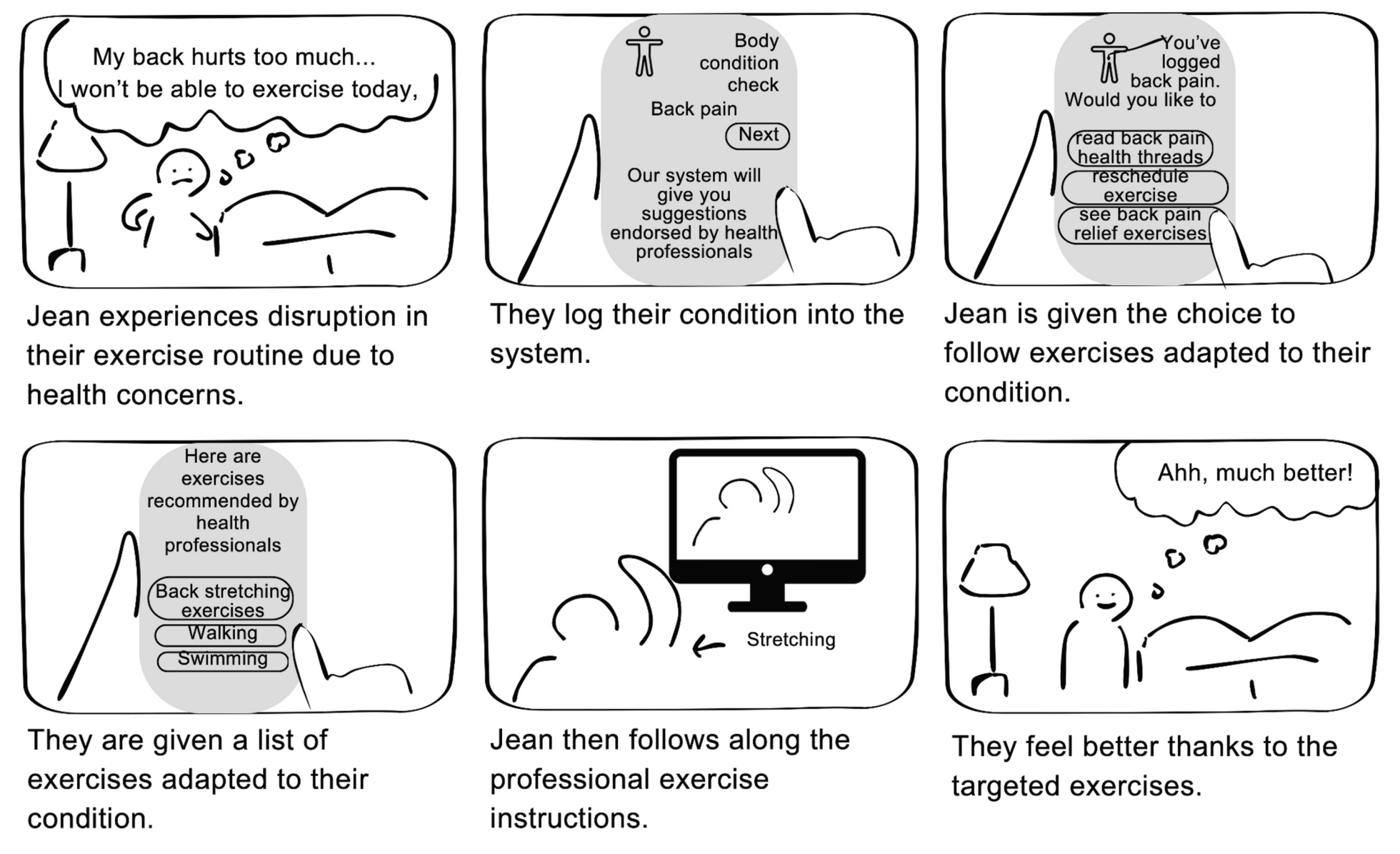
METHODS

- Semi-structured interview (n=15) to elicit participants' views on 15 design concepts (drawn from prior work [1, 2]) envisioning potential tools for tackling interrelated barriers to PA engagement.
- Questionnaire (5-point Liker scale): perceived helpfulness and perceived intention.

Charles' doctor stays updated on his health and physical activity.

He does his walk today and has his phone with him during his exercise.

Charles views his activity log at the end of his session.

He receives notifications about his log.

Charles obtains social support from friends.

Charles gets recognition and feedback from his friends.

PRELIMINARY FINDINGS

Participants considered it helpful to provide alternative exercises in response to routine disruptions, while being concerned about the lack of professional guidance.

- Patricia (F, 70): *People who find they can't do one thing might be able to do something else. Doing anything is better than doing nothing.*
- Josette (F, 76): *How I should do it correctly?*

Jean experiences disruption in their exercise routine due to health concerns.

They log their condition into the system.

Jean is given the choice to follow exercises adapted to their condition.

They are given a list of exercises adapted to their condition.

Jean then follows along the professional exercise instructions.

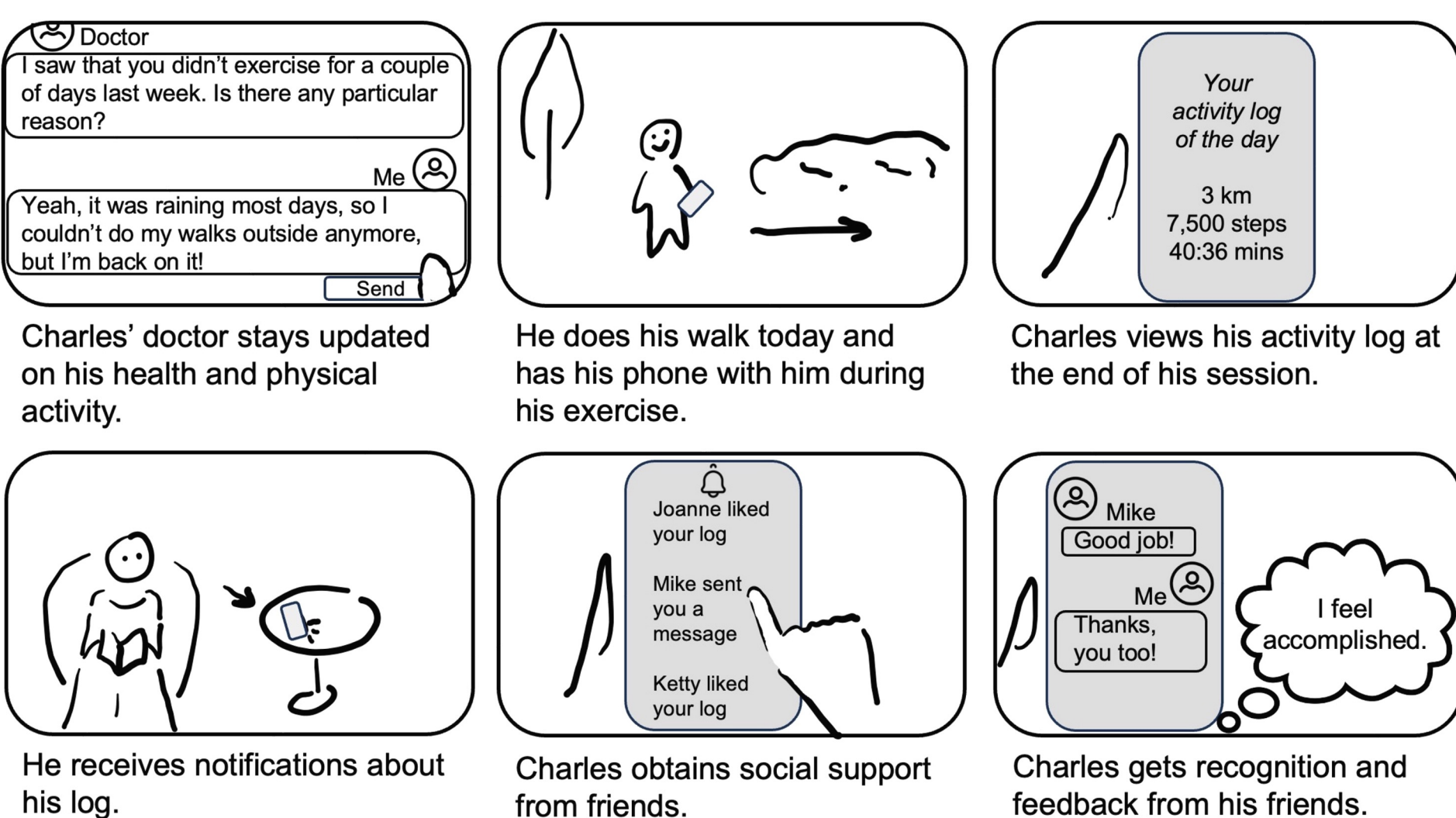They feel better thanks to the targeted exercises.

Participants responded least favourably to design ideas about sharing tracked activity data with accountability partners.

- Janet (F, 83) : *I don't need pats on the back.*
- Laura (F, 66): *I don't really have anybody to tell, who would say 'You're doing great.'*

THIS RESEARCH

- **Highlights the misalignment between existing PA promoting technologies and older adults' unique PA needs.**
- **Reinforces the need for specific designs for older adults.**

NEXT STEPS

We will perform a full thematic analysis of the interview data to more deeply understand participants' views on the design concepts and identify design implications for future PA promoting technologies.

References
[1] Muhe Yang and Karyn Moffatt. 2024. Navigating the Maze of Routine Disruption: Exploring How Older Adults Living Alone Navigate Barriers to Establishing and Maintaining Physical Activity Habits. In *Proceedings of the CHI Conference on Human Factors in Computing Systems* (CHI '24), 2024. Association for Computing Machinery, New York, NY, USA.
[2] Chloe Fan, Jodi Forlizzi, and Anind Dey. 2012. Considerations for technology that support physical activity by older adults. *ASSETS'12 - Proceedings of the 14th International ACM SIGACCESS Conference on Computers and Accessibility*, 33–40.

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