Barriers and Facilitators to Using Digital Health Technology in an Outpatient Clinic: A Qualitative Study

👤 Bridget Fowler King, Jillian MacDonald, Sydney Achler, Miriam Rafferty

Design: Interviews
Approach: CFIR

BACKGROUND

Evidence shows that **digital health technology can aid in adherence to exercise** for people with PD, but it is **used infrequently in clinical practice.**

PURPOSE

To **describe barriers & facilitators** to using digital health technology.

INTERVIEW PARTICIPANTS

- People with Parkinson's disease (PwPD)
- Physical therapists (PT)
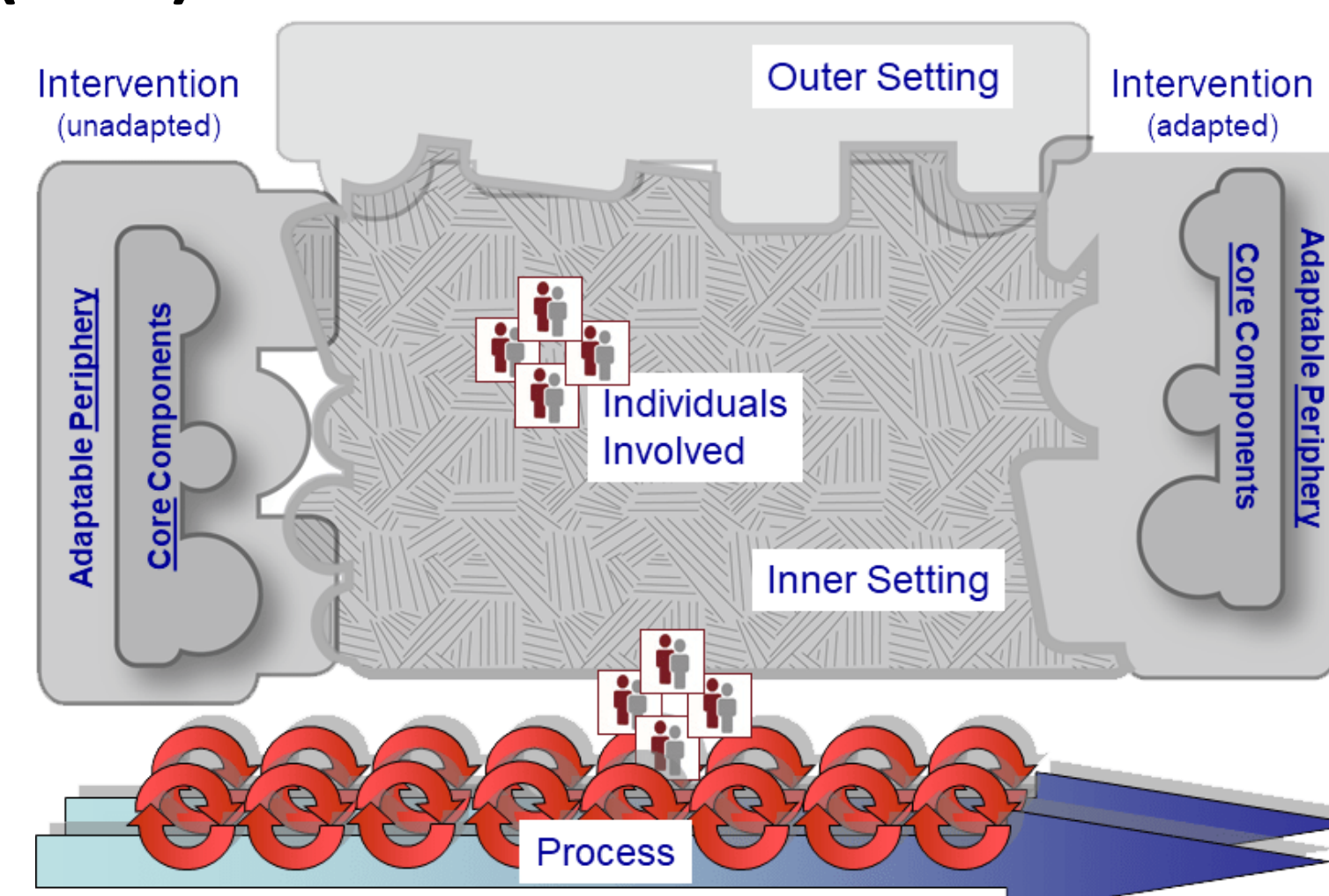- Technology stakeholders (Tech)

	PwPD	PT	Tech
Age years (mean ± SD)	65.31 ± 8.67	37.00 ± 6.35	47.38 ± 11.25
Characteristics	46% of PwPD were within 3 years of diagnosis	Average 11 ± 7 years in practice	Average 14 ± 11 years in field
Confidence with Using Technology (scale of 1-10)	8.8 ± 2.8 (10 highest)	7.3 ± 1.8 (10 highest)	N/A

ANALYSIS

Coded barriers and facilitators using **Consolidated Framework for Implementation Research (CFIR)**

https://cfirguide.org

RESULTS

BARRIERS (-) & FACILITORS (+) BY CFIR DOMAIN

Intervention Characteristics Domain

Construct	Barrier/Facilitator
Evidence Strength & Quality	-Poor quality of the device +High level of evidence +Good quality of the device
Relative Advantage	-Paper can seen be easier +Technology allows for passive monitoring +Technology won't be misplaced
Adaptability	-Wearables may not adapt to variable motor patterns for people with PD.
Complexity	-Can feel complicated -High variety and variability among technologies +Passive monitoring makes it easy
Design Quality & Packaging	-Needs to be charged +User-friendly dashboards +Some apps allow for goal setting +Provides immediate feedback
Cost	-High cost

Inner Setting Domain *Readiness for Implementation Construct*

Available Resources	-Clinicians have limited time to learn and use technology. +Providing easy-to-use resources
Access to Knowledge & Information	+Cheat sheets are helpful. +More exposure can build confidence +Support access to education and resources allows for integrated technology use in a hospital.

Characteristics of Clinicians & Patients Domain

Knowledge & Beliefs about the Intervention	-Can take a lot to learn +Can provide useful information about activity, daily patterns, intensity of workouts.
Self-Efficacy	+/- Self Efficacy +Simple technology is easy to use
Other Personal Attributes	+/- Digital Literacy -Motor symptoms like balance or coordination may interfere with use +Non-motor symptoms can interfere with exercise, technology may provide a tool to help address these barriers

Process Domain *Engaging Construct*

External Change Agents	+ Family members, friends and other medical providers can impact use.

Simplify digital health technology in PT to increase use by people with PD.

"If it frustrates me, I don't use it. I don't do things that frustrate me anymore. **And so it needs to be simple. It needs to be accurate.**"
— PwPD

"**Give me some recommendations** ... It would be easier if someone else had put the information in a concise [package] for me ... "
— PT

"Technology ... is **already being developed** in a way that **they can use it easily** ... at the end of the day, clinicians are very busy ... "
— Tech

Contact us for study info: **bfowler@sralab.org**

CLINICAL BOTTOM LINE

THERAPISTS SHOULD

- Identify user friendly features in apps
- Gather resources for PwPD and PTs
- Use individualized approaches
- Engage family, social and healthcare team supports

ACADEMY OF NEUROLOGIC PHYSICAL THERAPY