

Using smartphone technology to support the adult audiologic rehabilitation journey*



Smart apps can provide...

- adult clients additional support with their hearing rehabilitation
- important feedback to clinicians on difficulties faced by clients and patient-perceived benefits



Determine whether smartphone apps designed to help those with hearing loss are beneficial for an older population.

- **30** participants with average age of **69** years
- no history with hearing aids
- rated themselves as proficient smartphone users



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Assessment of individual barriers to app use via standardized measures:

- ✓ Measure of **A**udiologic **R**ehabilitation **S**elf-Efficacy for **H**earing **A**ids (MARS-HA)
- ✓ Grooved Pegboard Test
- ✓ **M**ontreal **C**ognitive **A**ssessment Test (MoCA)

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Task skill competency test – modified Practical Hearing Aid Skills Test (PHAST):

6 tasks utilizing app as guide:

- battery change
- turning hearing aid on / off
- inserting hearing aid in the ear on dominant side
- turning up the volume on both hearing aids
- removing the hearing aids and turning them off
- cleaning the dome

No prompt: 2 pts | 1 prompt: 1 pt | 2+ prompts: 0 pts

Patients aged 60+ were able to **successfully use the app**, demonstrate skill attainment, and rated it as a **positive experience**.

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- MARS-HA: **87% median score** on self-efficacy for hearing aids
- Grooved Pegboard Test: **86.7 s mean score** on finger dexterity
- MoCA: **20% abnormal findings** indicating cognitive impairment

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- **22 participants scored 10 or more points.**
- **Insertion of hearing aids** appeared to be the **hardest task.**
- **Poorer cognition** was associated with **greater difficulty** completing the tasks.

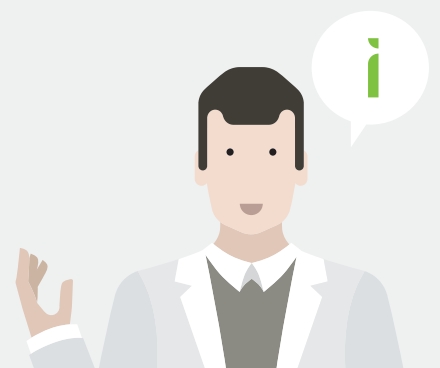


Majority would choose an app over printed materials although providing both was viewed favorably.



Considerations for practice

- **Remote hearing rehabilitative care** supported by smartphone apps appears to **provide patient benefit** and may be used to **augment patient care** beyond face-to-face audiological visits.
- Patients with **poorer cognition** may need **more support.**



* Timmer, B., Launer, S., & Hickson, L. (2020). Using smartphone technology to support the adult audiologic rehabilitation journey, *International Journal of Audiology*, DOI: 10.1080/14992027.2020.1854483