Patient outcomes of self-fitting hearing aids:

A scoping review

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Background

Advances in hearing aid (HA) technology have led to new hearing devices that manage the burden of hearing loss as efficiently as possible.

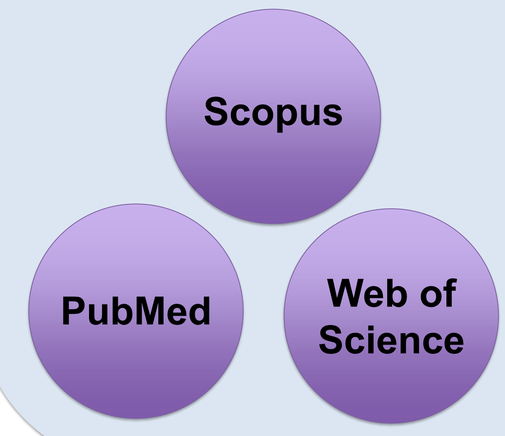
Self-fitting hearing aids (SFHAs) aim to measure, prescribe, and provide appropriate amplification to meet patients' hearing needs without requiring an audiologist to set up the device[1].

Self-fitting devices are now approved for sale in the UK private sector and have been available in the USA since 2022[2]. Their relative newness limits the literature on patient outcomes with these devices, and further research is needed to collate findings comparing patient outcomes of SFHAs to their audiologist-fitted counterparts[3].

Methods

This study aimed to systematically map the literature and identify gaps in patient outcomes for self-fitting hearing aids.

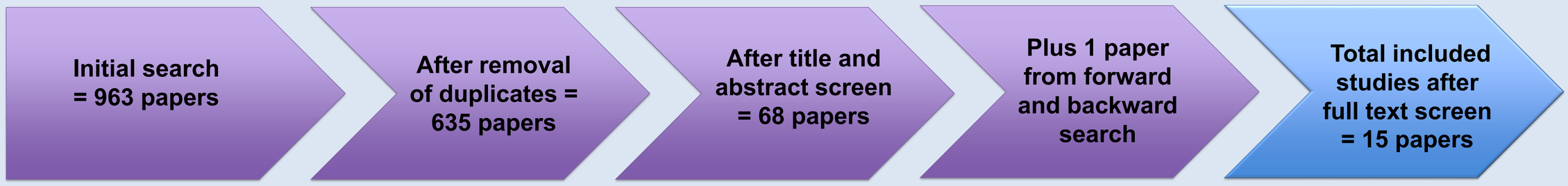
This scoping review was conducted in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews and was registered with the Open Science Framework.



The literature was systematically searched across three electronic databases.

The review included studies that assessed subjective outcomes (e.g., questionnaires) and objective outcomes (e.g., speech testing and gain verification).

Results



A total of 16 different specified outcome measures, six objective and ten subjective, were used across the studies, along with informal questionnaires and qualitative interviews. Nine studies compared outcomes between SFHAs and audiologist-fitted HAs.

- The most widely used subjective outcome measure was the Abbreviated Profile of Hearing Aid Benefit, used in seven of the included studies
- The most widely used objective outcome measure was the QuickSIN test, which was used in eight of the included studies

Discussion

Current evidence suggests that certain SFHAs can produce short-term patient outcomes comparable to audiologist-fitted HAs under controlled conditions in selected populations.

However, their consistent performance with more variable, real-world patients and complex listening environments remains unclear.

The heterogeneity of outcome measures used across studies, which limited comparisons, suggests scope for future research to develop a core set of outcome measures to explore SFHAs.

The discrepancies between subjective and objective outcome measures in Audiological research underscore the clinical need for a multimodal assessment framework for evaluating SFHAs.

References

1. Wong, L. L. N. (2012). 'Evidence on Self-Fitting Hearing Aids', *Trends in Hearing*, 15 (4), pp. 215-225.
2. U.S. Food and Drug Administration (2023). *OTC Hearing Aids: What you should know*. Available at: https://www.fda.gov/medical-devices/hearing-aids/otc-hearing-aids-what-you-should-know
3. Boothroyd, A., et al. (2025). 'Self-Fitting Hearing Aids: Effects of Starting Response and Field Experience', *Ear and Hearing*.

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