COMPARING SELF-FITTING STRATEGIES FOR OVER-THE-COUNTER HEARING AIDS: A CROSSOVER CLINICAL TRIAL

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Introduction

- Fewer than 20% of US adults with hearing loss use hearing aids (HAs) due to barriers like high cost
- Over-the-counter (OTC) HAs offer a potential solution, incorporating self-fitting strategies via smartphone apps
- Self-fitting strategies have been validated for Food and Drug Administration (FDA)–approved OTC HAs compared with prescription-based approaches
- However, no direct comparative analysis exists between in situ audiometry (IA) and self-adjustment (SA) strategies using self-fitting OTC (OTC-SF) HAs

Objective

To compare SA and IA self-fitting strategies in OTC-SF HAs for adults with mild to moderate hearing difficulties

Methods

- A crossover, within-participant pseudorandomized clinical trial was conducted
- 28 participants were pseudo-randomly assigned to 1 of the 2 self-fitting strategies, and experienced both interventions for 4 weeks

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Methods (continue)

- SA group manually adjusted settings, including overall gain and spectral tilt, using Lexie B2 HAs
- IA group used Lexie B2 Plus HAs with an automated fitting based on in situ tests conducted through the app
- Primary outcome: APHAB
- Secondary outcomes: IOI-HA, speech-in-noise (DIN and QuickSIN), and REMs

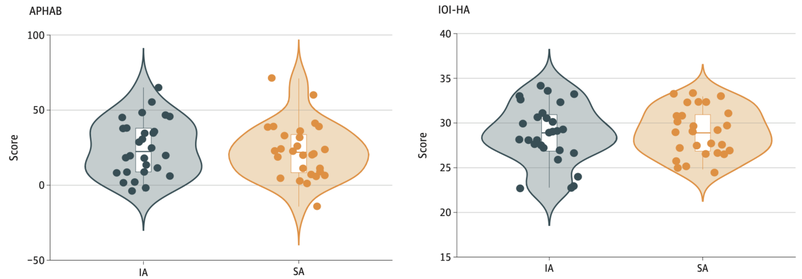

Figure 1. APHAB and IOI-HA Total Scores Across the Trial For IA and SA Self-Fitting

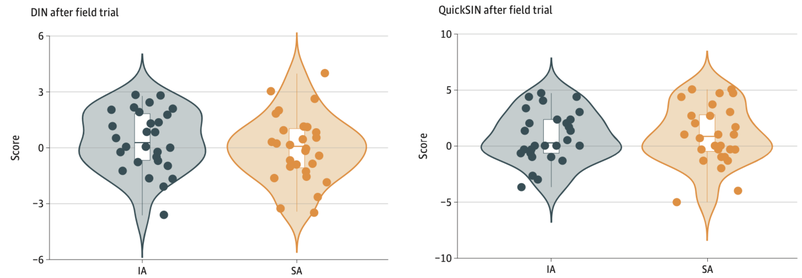

Figure 2. DIN and QuickSIN After the Trial For IA and SA Self-Fitting

Results

- 28 participants (14 men and 14 women, mean [SD] age, 60.2 [12.0] years) were included
- SA and IA strategies produced no clinically meaningful differences across various outcome measures, including:
- Overall APHAB (Cohen *d* = 0.2; 95% CI, −0.2 to 0.6) and total IOI-HA scores (Rosenthal *r* = 0.0; 95% CI, −0.3 to 0.2)
- SA users reported higher satisfaction (Rosenthal *r* = −0.4; 95% CI, −0.6 to −0.1) and longer daily use (Rosenthal *r* = −0.3; 95% CI, –0.5 to 0.0) than IA users
- No clinically meaningful differences were observed in DIN, QuickSIN or REMs

Conclusion

- SA and IA strategies resulted in similar outcomes
- However, SA may produce higher satisfaction and longer daily use, highlighting the potential advantages of active user involvement in the fitting process
- Further investigation is needed for long-term outcomes

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A Crossover Clinical Trial

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