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Applying the science of health behaviour change to improve hearing aid use: from theory to practice

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Research Aim

The process of adjusting to using hearing aids requires a change in health behaviour. For actions that need to be repeated regularly (such as hearing aid use), typically effective behaviour change techniques such as *implementation intentions*, or *if-then plans*, are unlikely to lead to action. Instead, new habits form as a product of repeated behaviours in the service of goal pursuit[1].

Goal setting is one of the most widely used and evidence-based behaviour change techniques (BCTs) to support individuals to make changes in their behaviour[2]. Goals are particularly important initially, to move from behaviour change to habit formation[3].

Following guidance for the development of complex interventions[4], and the person-based approach[5], we have developed a multi-component 'toolkit' to encourage the repeated use of hearing aids by **promoting facilitators** and **overcoming barriers** to use. Within the toolkit, goal setting is accompanied by additional components to increase capability, opportunity and motivation to use hearing aids[6].

Research Aim: To develop a theory- and evidence-based goal setting tool to initiate the habitual successful use of hearing aids by adults with hearing loss.

Methods

Phase 1: Defining the target behaviour

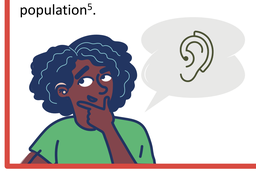
A three-stage priority setting exercise was undertaken with a) 113 hearing aid (HA) users, and b) 51 hearing healthcare professionals to generate priority definitions of 'hearing aid use success'.

Phase 2: Developing the toolkit

To identify barriers and facilitators to the use of HAs, a) published evidence was synthesised, b) focus groups were held with audiologists (1 group of 7 participants) and with HA users and their communication partners (CPs), (2 groups with 16 total participants; 12 HA users and 4 CPs), and c) inclusive semi-structured interviews with 24 people who had hearing aids but did or did not use them.

'*Guiding principles*' for how the intervention should be framed and delivered were generated via interview data and through intervention development workshops with HA users (n=5 workshops with 7 total participant) and key stakeholders (n=2 workshops with 8 total participants).

A *behavioural analysis* was conducted to establish intervention components and targeted Behaviour Change Techniques[7] aligned to promote facilitators and overcome barriers, that also met the APPEASE criteria[8]. Throughout the development process, intervention content was tested by end-users and iteratively refined to ensure it was *engaging*, *effective* and *meaningful* for the target population[5].



The toolkit, '***Getting the most from my hearing aids***' will be hosted online by RNID, the UK charity for people who are deaf, have hearing loss or tinnitus.

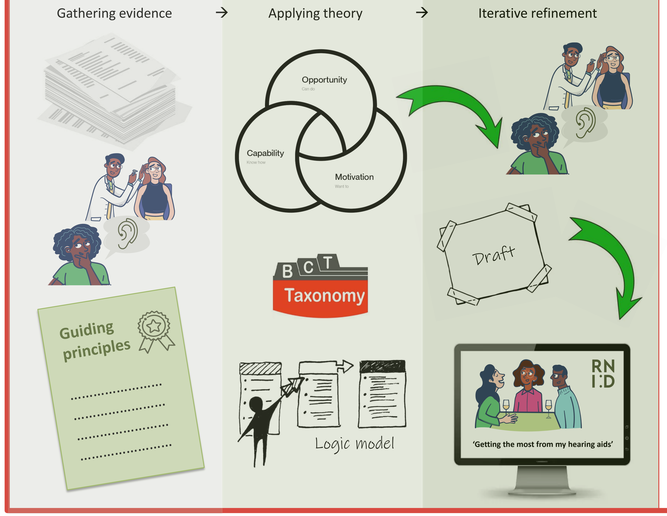
Phase 3: Pre-launch testing

Final end-user testing will include 'think aloud' interviews (n=5-8) and retrospective user interviews (n=5-8). Any final changes will be prioritised using the MoSCoW method[9].

Toolkit development

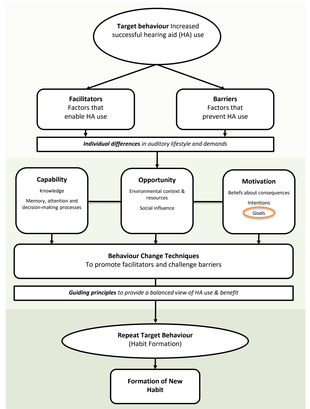
Phase 1: Patient and audiologist definitions of hearing aid use 'success'

Phase 2: A person-based approach[4] to intervention development



Hearing aid habit formation

The toolkit aims to increase repetition of the target behaviour (successful hearing aid use) via intervention components and BCTs designed to **promote facilitators** and **overcome barriers** to use.



The goal setting tool

I would like to...

- ✓ Master the basics of hearing aid use
- ✓ Remember to wear my hearing aids
- ✓ Increase my daily hearing aid use
- ✓ Be more mindful of the benefits my hearing aids provide
- ✓ Plan ahead for listening in challenging situations
- ✓ Use my hearing aids in different listening situations
- ✓ Let others know that I have hearing loss and use hearing aids
- ✓ Let others know how they can help me hear
- ✓ Try different things with hearing aids, e.g. connectivity

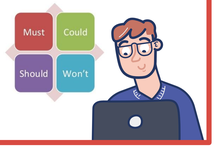
Key features

- Select and define goal, action plan, review timeline and method
- Drop down menus and free text descriptions
- Option to download and email goal
- User directed to other toolkit content relevant to achieving their goal
- Review progress: current goal can be amended, or a new goal set.

Phase 3: Next steps

Usability of the toolkit prototype, including the goal setting tool, will take place in **September 2024**, prior to launch.

Important changes will be incorporated within the final version.



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