

Applying behavioural science to increase hearing check uptake among adults in the UK: designing and evaluating health interventions

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1. Background: Why does this matter?

Hearing loss is common among UK adults, yet often remains unrecognised and untreated for years, increasing the risk of social isolation, depression, and cognitive decline. Hearing aids are effective, can improve quality of life and are freely available through the NHS. However, an estimated 7 million people could benefit from hearing aids and don't use them .

A UK Health Technology Assessment report found that adult hearing screening is acceptable, provides substantial benefit and is cost effective, and the World Health Organisation recommends it globally (WHO, 2021). Yet the UK National Screening Committee has repeatedly rejected a standalone programme (NSC, 2021). Research shows hearing check uptake would rise if the NHS promoted screening. With the NHS 10 year plan and the prominence of the NHS app, it is timely to explore how opportunistic screening could be integrated into existing pathways.

This research addresses a critical gap in understanding barriers and facilitators to adult hearing screening uptake. Existing reviews focus on help-seeking, , less is known about factors influencing participation in hearing screening among adults who may not yet recognise or act on hearing difficulties.

Consequently, evidence specific to screening uptake remains fragmented.

Findings will inform policy and guide development of interventions that integrate into existing touchpoints, such as the NHS Health Check.

4. Aims and objectives

Aim
To understand the influences on hearing screening uptake among UK adults and to develop a theory-informed approach to improve access, acceptability, and integration of screening within health systems.

Objectives
1. Systematic review to understand the influences on hearing screening uptake among adults in the UK. (Stage 1)
2. Qualitative analysis using COM-B and the Theoretical Domains Framework (TDF) to identify barriers and facilitators to hearing screening behaviour. (Stage 1)

3. Co-design intervention strategies to address identified barriers and enablers,using the Behaviour Change Wheel (BCW) and participatory approaches to ensure feasibility and acceptability (Stage 2)
4. Pilot intervention and evaluate its feasibility, acceptability, and preliminary effectiveness. (stage 3).

The systematic review will be used to inform if the focus will be to understand barriers/enablers to uptake (service users) or to understand barriers/ enablers to implementation.

5. PhD programme

Systematic Review

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Qualitative analysis

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Co-design -of interventions

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Piloting the intervention

6. Current progress

Systematic review progress

Search strategy completed
Database searches completed
Screening completed/in progress
Data extraction underway
42 studies identified across 17 countries
Early examples of emerging barriers and enablers

COM-B Domain	Emerging barriers and enablers
Capability	Physical capability: Ease of using the screener (enabler)
Opportunity	Physical opportunity: Quick to fit around work (enabler) Lack or time and resources (healthcare professionals) (barrier). Social opportunity: family and friends are a negative and positive influence to take a screen (barrier and enabler)
Motivation	Reflective motivation: Perceived severity of hearing loss (barrier) Distrust in Accuracy of results (barrier) Automatic motivation: Fear of finding out you have hearing loss (barrier)
Behaviour	Hearing check uptake

7. Potential intervention opportunities

Potential intervention opportunities will be explored and refined through relevant stakeholder engagement and co-design.

8. Expected impact

This research aims to develop theory-informed, feasible and scalable approaches to increase hearing check uptake. By promoting earlier identification of hearing loss, the project has potential to support timely intervention, reduce delays to treatment and contribute to prevention-focused hearing healthcare within the NHS.

References

National Screening Committee. UK Government. (2021). Hearing loss in adults: Screening recommendations. View health screening recommendations. <https://view-health-screening-recommendations.service.gov.uk/hearing-loss-adult/>

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. Implementation Science, 6(1), 42. <https://doi.org/10.1186/1748-5908-6-42>

World Health Organization. (2021, September 3). Hearing screening: considerations for implementation. World Health Organization. <https://www.who.int/publications/i/item/9789240032767>

This research is funded by RNID.

3. Behavioural science framework

The PhD applies the Behaviour Change Wheel (BCW), COM-B model and Theoretical Domains Framework (TDF) to understand hearing check uptake and inform intervention development.

The Behaviour Change Wheel (Michie et al, 2011).

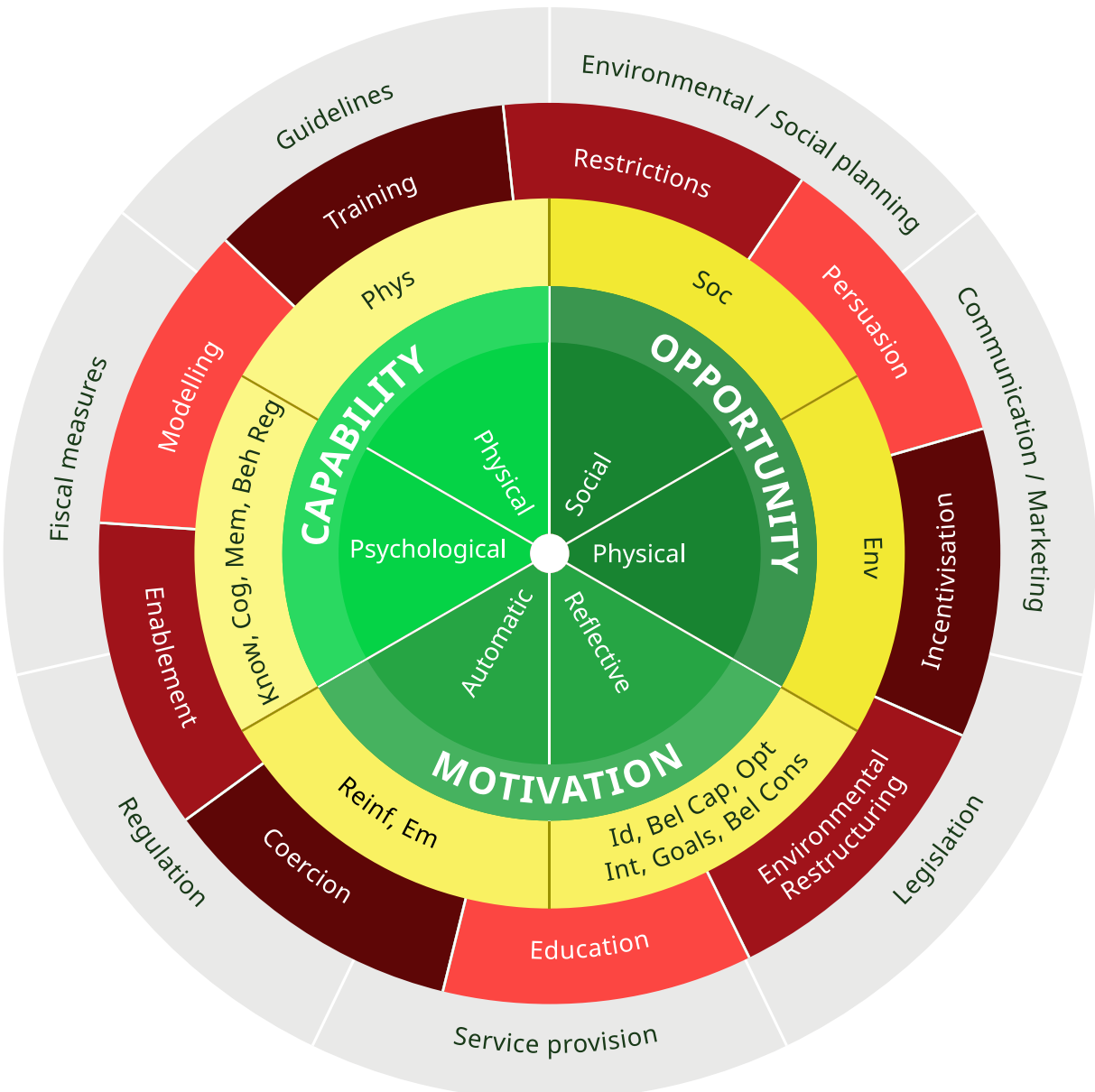
Sources of behaviour

TDF Domains

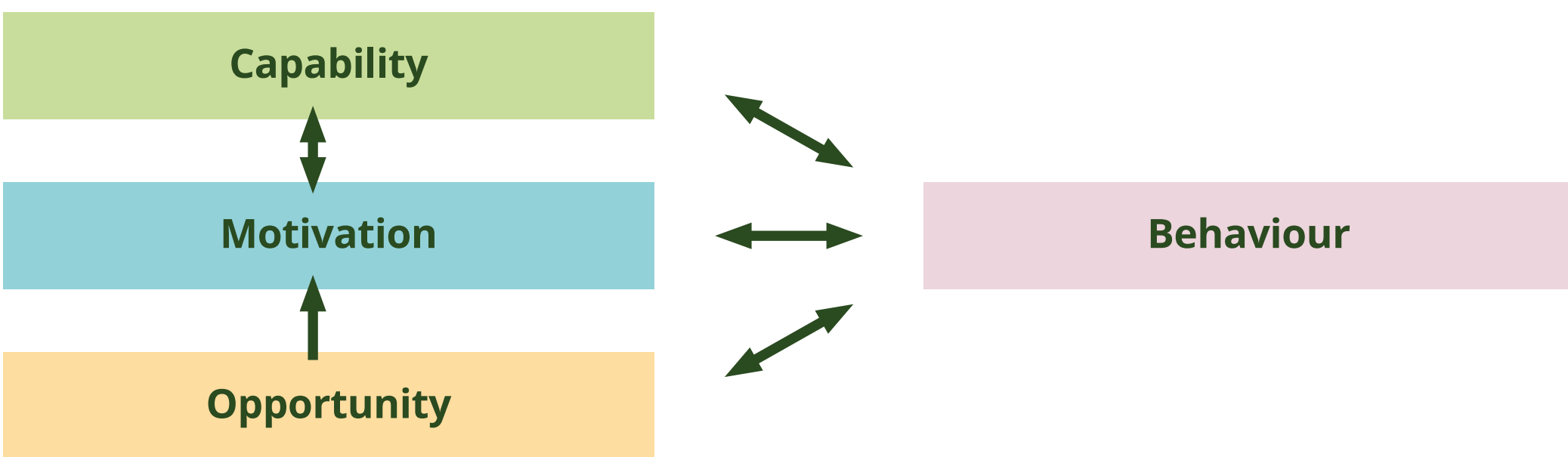
Intervention functions

Policy categories

Soc - Social Influences
Env - Environmental Context and Resources
Id - Social/Professional Role and Identity
Bel Cap - Beliefs about Capabilities
Opt - Optimism
Int - Intentions
Goals - Goals
Bel Cons - Beliefs and Consequences
Reinf - Reinforcement
Em - Emotion
Know - Knowledge
Cog - Cognitive and interpersonal skills
Mem - Memory, Attention and Decision Processes
Beh Reg - Behavioural Regulation
Phys - Physical skills



COM-B Model



Steps for Developing Interventions using the Behaviour Change Wheel

The PhD will draw on the steps outlined in the Behaviour Change Wheel.

Stage 1: Understand the behaviour

1. Define the problem in behavioural terms
2. Select target behaviour
3. Specify the target behaviour
4. Identify what needs to change

Stage 2: Identify intervention options

Identify:

5. Intervention functions
6. Policy categories

Stage 3: Identify content and implementation options

Identify:

7. Behaviour change techniques
8. Mode of delivery

RNID Supporting people who are deaf, have hearing loss or tinnitus

UCL
Centre for Behaviour Change

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