

Understanding the correlates of empowerment in a clinical population of adults with hearing loss

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Background

Empowerment is an important component of effective healthcare. It enables people to take an active role in managing their health, engage in share decision-making and make informed decisions, particularly for chronic conditions.

Patient empowerment is associated with: better health outcomes, better adherence to management, and higher levels of self-efficacy.

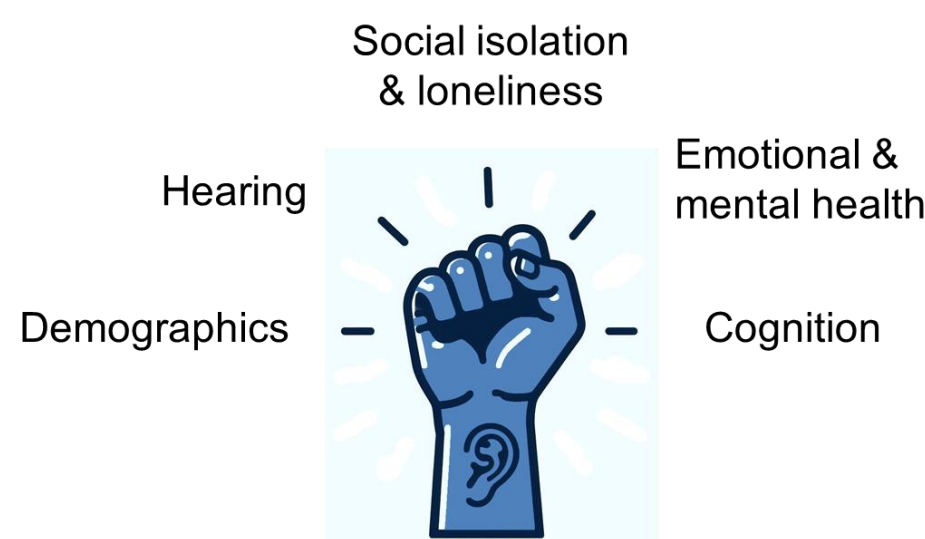
Empowered patients adopt healthy behaviours and are better able to navigate health care systems to manage their own health needs.

Empowerment is associated with digital tools for hearing self-management.

Aims

To identify:

1. how, and to what extent empowerment is related to demographics, hearing factors, social isolation and loneliness, emotional and mental health, cognition.
2. the impact of hearing aids on empowerment.



Hearing-specific empowerment



Empowerment along the hearing journey is:

“the process through which individuals with hearing-related challenges acquire and use knowledge, skills and strategies, and increase self-efficacy, participation, and the feeling of control of their hearing health care, hearing solutions and everyday lives”.

(Gotowiec et al, 2022)

Empowerment in Audiology Questionnaires

EmpAQ-5

- 5 items
- For clinical use
- One question from each domain
- All relevant to patient-centred care in clinical practice

EmpAQ-15

- 15 items
- For research or in-depth clinical use
- 2-4 questions from each domain
- Broad range of questions relevant to patient-centred care

Knowledge

1. I know how to get help if I have any problems with my hearing

Skills

2. I use tactics to help me communicate in challenging situations (e.g. move to a quieter location)

Participation

3. My hearing loss doesn't stop me from taking part in social activities

Control

4. I can control how I respond to the challenges I experience resulting from my hearing loss

Self-efficacy

5. I am confident about my ability to manage problems caused by my hearing loss

0=Strongly disagree; 1= Disagree; 2=Agree; 3= Agree. Not applicable

Developed using best practice principles & iterative participatory design. (Bennett et al. 2024)

Methods

- Prospective, exploratory, cross-sectional design via an online survey
- Participants: adults ≥ 60 years attending audiology clinics (n=4)
- Analysis: multiple regression analysis on imputed dataset using EmpAQ-15

- Three models:

- **Model 1:** Demographics plus hearing factors (e.g., hearing loss impact)
- **Model 2:** Demographics plus psychosocial and cognitive variables
- **Model 3:** As for model 2 but for hearing aid users only

Gender

Woman	303 (44%)
Man	390 (56%)

Age (years)

Mean (SD)	73.3 (6.8)
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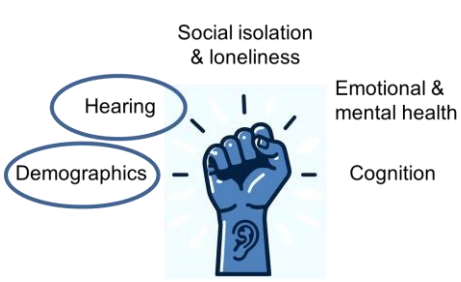
Hearing aid use

Regular user	427 (62%)
Low user	90 (13%)
Non user	176 (25%)

(Ferguson et al, in press)

1: Demographics and Hearing Factors

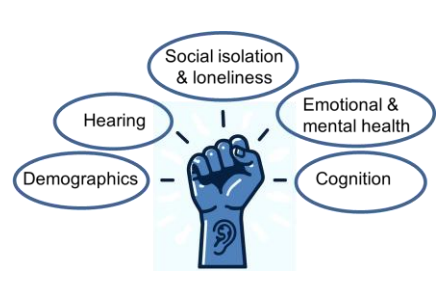
Significant	p	Not significant
Hearing loss impact (none > mod & sig)	***	Age
Hearing aid user (reg > low)	***	Education
Gender (F > M)	*	Employment
Living alone (no > yes)	*	Multimorbidities
		Tinnitus
		Mental health



* p < .05
** p < .01
*** p < .001

2: Social, emotional and cognition

Significant	p	Not significant
Social satisfaction ¹	***	Anxiety ¹
Social ability ¹	*	Depression ¹
Emotional ¹	**	Loneliness ³
Cognition ¹	**	Social network ⁴
Fatigue ²	*	HL impact & SSQ
Hearing aid user (reg vs > low)	***	Gender & living alone



¹ PROMIS
² VFS
³ UCLA
⁴ Lubben

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** p < .01
*** p < .001

3: Res. difficulties, social, emotional, cognition

Significant	p	Not significant
HA resid. difficulties	***	Social ability ¹
Social satisfaction ¹	***	Fatigue ²
Emotional ¹	**	Loneliness ³ & social network ⁴
Cognition ¹	*	Anxiety & depression ¹
SSQ spatial	*	HL impact & SSQ
		Gender / living alone



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² VFS
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* p < .05
** p < .01
*** p < .001

Summary and Conclusions

- Higher levels of empowerment
 - Regular hearing aid users
 - Greater social, emotional and cognitive function
- For hearing aid users, higher levels of empowerment
 - Fewer residual hearing difficulties
 - Greater spatial hearing
 - Greater social satisfaction, emotional and cognitive function
- No relationship with loneliness, social network and mental health
 - Empowerment reflects a range of important factors relevant to adults with hearing loss
 - Empowerment measured by EmpAQ provides a holistic measure to assess adults with hearing loss attending audiology clinics