

# Factors which influence help seeking, hearing aid uptake, use and satisfaction – what do we know?

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## Introduction

The uptake of hearing aids has remained at a low level over several decades despite the high prevalence of hearing impairment and big improvements in device technology. We decided to investigate possible factors that might have an influence on help seeking, hearing aid uptake, use and satisfaction by means of a systematic review of the literature.

## Method

The search of the literature was done in a number of steps. The scope of this review was restricted by applying certain criteria.

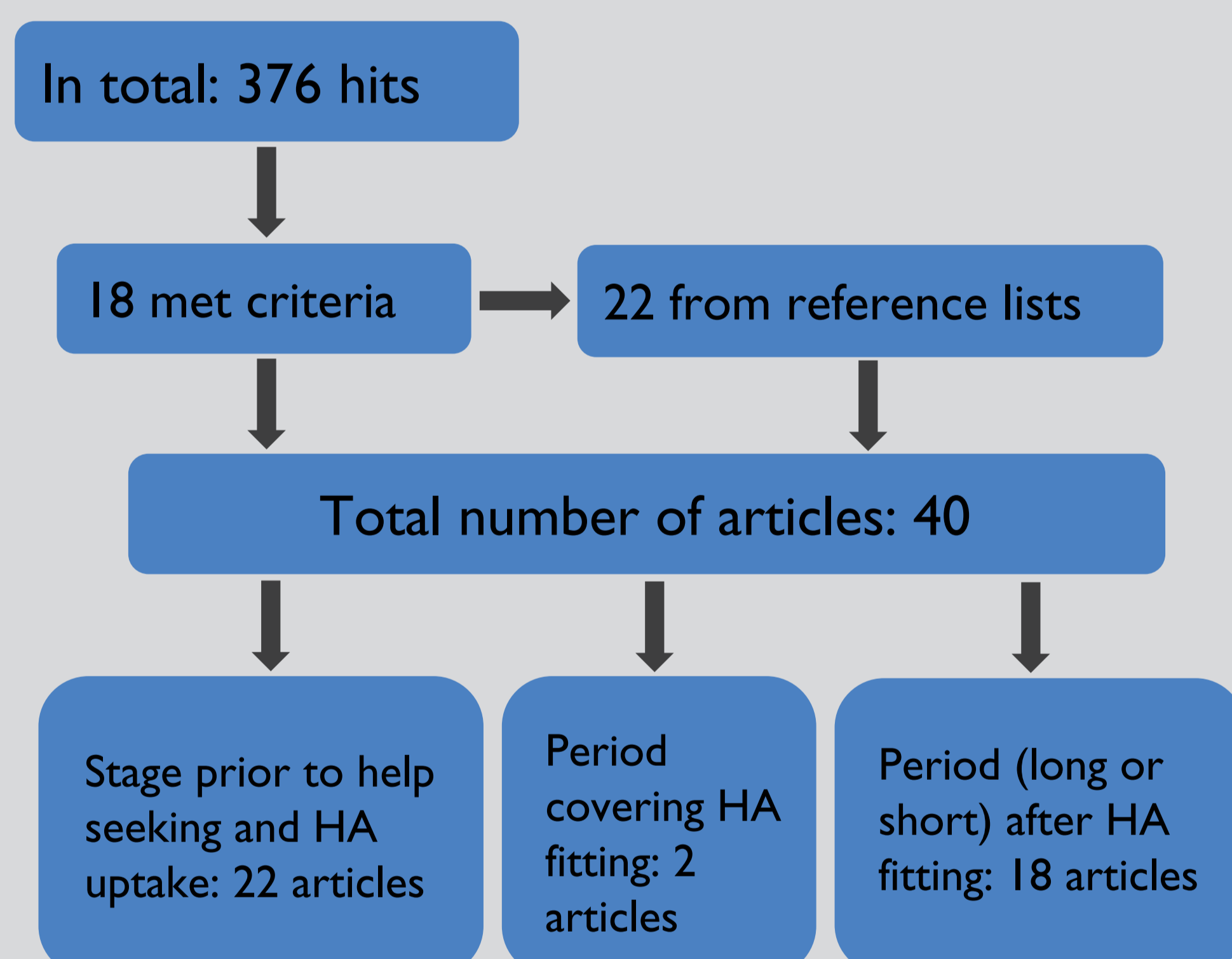
### Inclusion criteria

Adults  
Peer reviewed articles (1980 - 2009)  
Evidence based on empirical data  
Questionnaires were clearly described  
Statistical methods clearly described  
Types of studies (design) no restrictions  
Outcome focused on: Help seeking, hearing aid uptake, hearing aid use or hearing aid satisfaction

### Exclusion criteria

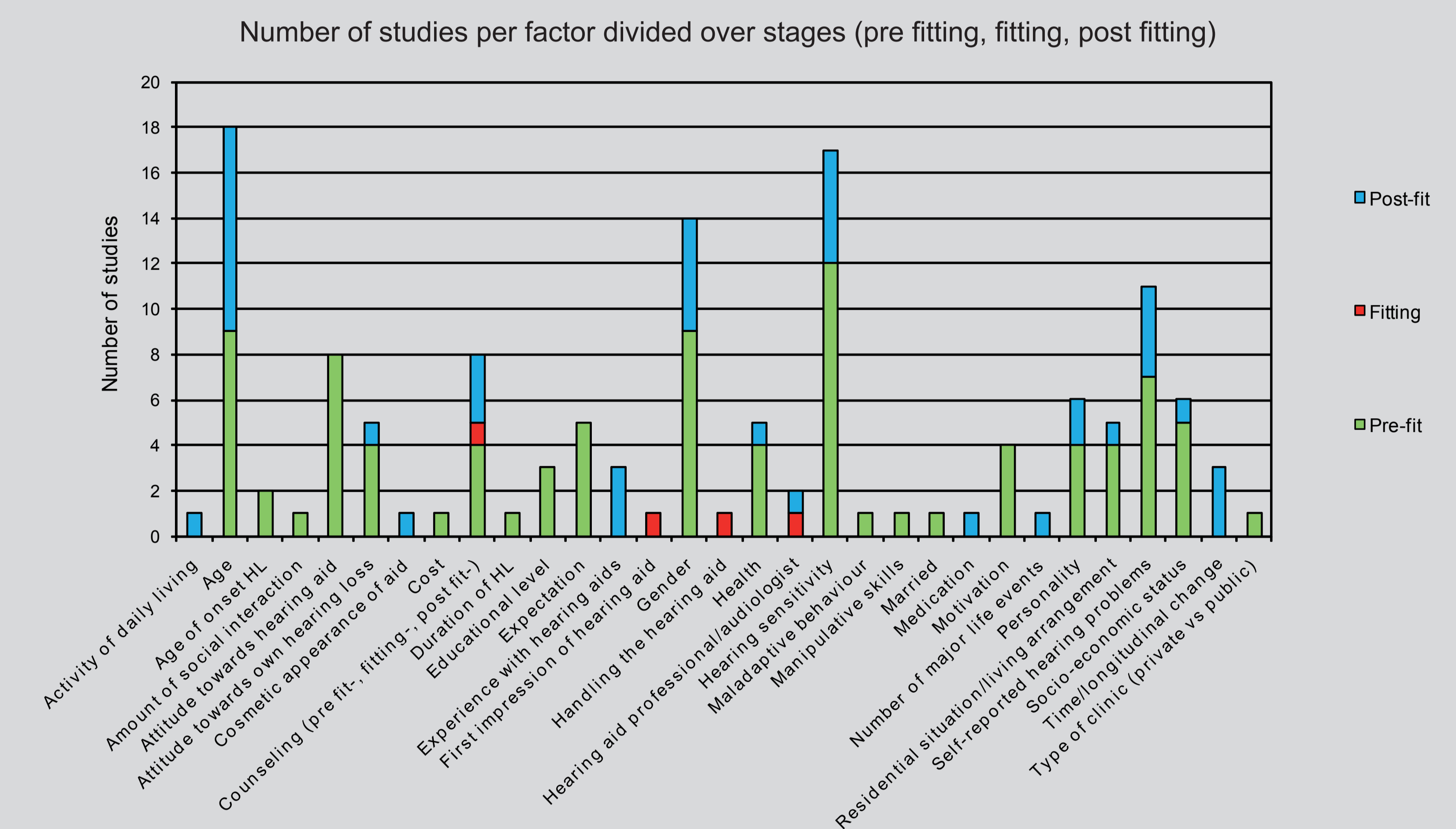
Children  
Outcome is "quality of life"  
Outcome is benefit (technological aspects of HA)

Searches for articles were done in computerised databases with journal articles: Embase, Cinahl and Pubmed and reference lists of articles found were checked.



## Results

40 articles met the inclusion criteria and were analysed in this review addressing the outcome variables of help seeking, hearing aid uptake, hearing aid use and hearing aid satisfaction. The articles were divided into three stages: Stage prior to hearing aid fitting (pre-fit), hearing aid fitting stage (fitting) and the stage following hearing aid fitting (post-fit).



To determine associations between factors and outcome variables, studies used either regression, correlation, ANOVA or ranking techniques. Results from diverse studies addressing the same factor/outcome pair were collated as follows:

- '+' a study found a positive association.
- '-' a study found a negative association.
- '0' a study found no factor/variable association

## Key result summaries

Self-reported hearing problems		
Outcome variable	Number of studies	Result
Help seeking	3	+++
Uptake	3	+++
Use	3	+++
Satisfaction	5	++++

Hearing sensitivity		
Outcome variable	Number of studies	Result
Help seeking	4	0+++
Uptake	3	+++
Use	8	000000++
Satisfaction	9	0000000++

Age		
Outcome variable	Number of studies	Result
Help seeking	3	000
Uptake	2	0+
Use	11	0000000000-
Satisfaction	12	0000000000--

Gender		
Outcome variable	Number of studies	Result
Help seeking	3	000
Uptake	2	00
Use	8	000000000
Satisfaction	7	000000+

## Is your study included?

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In-the-ear hearing aids: The use and benefit in the elderly hearing-impaired. *Scandinavian Audiology*, 17, 209-212. Hickson, L., Hamilton, L. & Orange, S. P. (1986). Factors associated with hearing aid use. *Australian Journal of Audiology*, 8, 37-41. Hickson, L., Timm, M. & Worral, L. (1999). Hearing aid fitting: outcomes for older adults. *The Australian Journal of Audiology*, 21, 9-21. Hofstorf-Dunn, H. & Halpern, J. (2001). Clinical application of the SSDL scale in private practice II: Predictive validity of fitting variables. *Journal of the American Academy of Audiology*, 12, 15-36. Humes, L. E., Wilson, D. L., Barlow, N. N., Garner, C. (2002). Longitudinal changes in hearing aid satisfaction and usage in the elderly in a period of one or two years after hearing aid delivery. *Ear and Hearing*, 23, 428-438. Humes, L. E., Wilson, D. L. & Humes, A. C. (2003). 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## Conclusions

Mixed results for the majority of factors investigated. Only three factors appeared to show consistent effects (or lack of effects) self-reported hearing problems, gender and age.

- Self-reported hearing problems appears to be universally influential in auditory rehabilitation, possibly more important than objective hearing sensitivity.
- Interestingly motivation (by others) seems to have a positive effect on help seeking, but there is no evident association between pre fitting motivation and later hearing aid use.
- The actual fitting process has only been sparsely addressed.
- The factors studied do not explain much of the variation in outcomes found; other factors need to be discovered.
- We know little about what influences help seeking, hearing aid uptake, hearing aid use and hearing aid satisfaction.

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