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Basic and Translational Research

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# Examining the Experience of Hearing Loss-Related Disability through the Lens of the ICF

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## Background

For numerous individuals grappling with hearing loss (HL), the sources of frustration does not primarily emanate from intrinsic bodily factors but rather stem from the unwelcome reception they encounter within society[1]. The International Classification of Functioning, Disability and Health (ICF) model presents a comprehensive biopsychosocial model of health and disability that focuses on an individual in a given context [2].

Despite the ICF's importance in audiological rehabilitation, there remains an unexplored relationship between diagnostic findings and perceived challenges within the ICF framework. Understanding how demographic and diagnostic variables predict self-reported disability can inform tailored interventions and improve patient outcomes.

## Objectives

The multidimensional ICF framework was used to explore the relationship between demographic and diagnostic variables and self-reported disability in adults with HL.

## Method

- The ICF framework was used to develop a structured interview guide, available here:
- Using ordinal logistic models, the interview responses were measured against demographic and diagnostic variables: hearing aid usage (HA), degree of HL, gender, level of education, age and income bracket.
- 571 participants from India (n=94), South Africa (n=79), Sweden (n=219) and the US (n=179) were included.

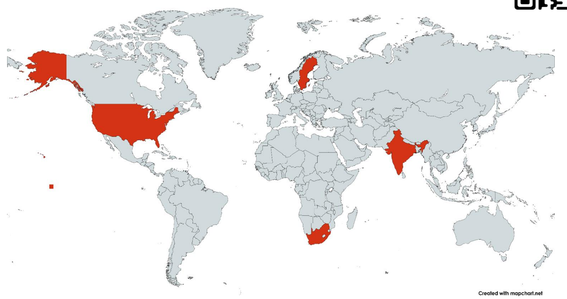


**Figure 1. Included participant regions**

## Results

- Participants had an average age of 66.6 years (13.9 SD, 18 - 100 range) with 51% being male.
- 79.1% of participants had completed high school or University with 69.7% being from a high income country.
- 74.6% of the participants were HA users with a moderate to severe HL.
- Five statistically significant predictors were identified; HA usage, degree of HL, level of education, age, and income bracket.
- Predictors were associated to the following ICF components; body functions (b126, b210, b230, b240), activity and participation (d310, d350) and environmental factors (e125, e250, e310, e355, e410, e460).

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| **Body Functions** | **Temperament and personality functions (b126)**<br>- HA usage<br>- Degree of HL<br>- Level of of education | **Seeing functions (b210)**<br>- Age | **Hearing functions (b230)**<br>- HA usage | **Sensations associated with hearing and vestibular functions (b240)**<br>- Income bracket of country<br>- Level of Education | | |
| **Activities and participation** | **Communicating with – receiving – spoken messages (d310)**<br>- Degree of HL | **Conversation (d350)**<br>- HA usage<br>- Income bracket of country<br>- Degree of HL | | | | |
| **Enviromental factors** | **Products and technology for communication (e125)**<br>- Level of Education | **Sound (e250)**<br>- Degree of HL | **Immediate family (e310)**<br>- Degree of HL<br>- HA usage | **Health professionals (e355)**<br>- Degree of HL | **Individual attitudes of immediate family members (e410)**<br>- Degree of HL<br>- Age | **Societal attitudes (e460)**<br>- Degree of HL |

**Figure 2. Significant (p<.05) predictors across ICF components. HL = Hearing loss, HA = Hearing aid**

## Conclusion

An individual's experience of their HL is significantly influenced by various factors beyond the severity of the loss itself. This underscores the ICF's utility in capturing the complex interplay of biopsychosocial factors on an individual. Identifying significant predictors could aid in tailoring interventions to improve health outcomes and quality of life for individuals with HL.

## References

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