



Development and Content Validation of a Patient-Derived Repository of Representative Hearing-Functioning Situations in Kannada Aligned with the Brief ICF Core Set for Hearing Loss

Thejaswini Madan¹ · Saransh Jain²

¹ Department of Audiology · ² Department of POCD · All India Institute of Speech and Hearing, Mysuru, India

Presented by: Thejaswini Madan | Poster 63

01. BACKGROUND & AIM

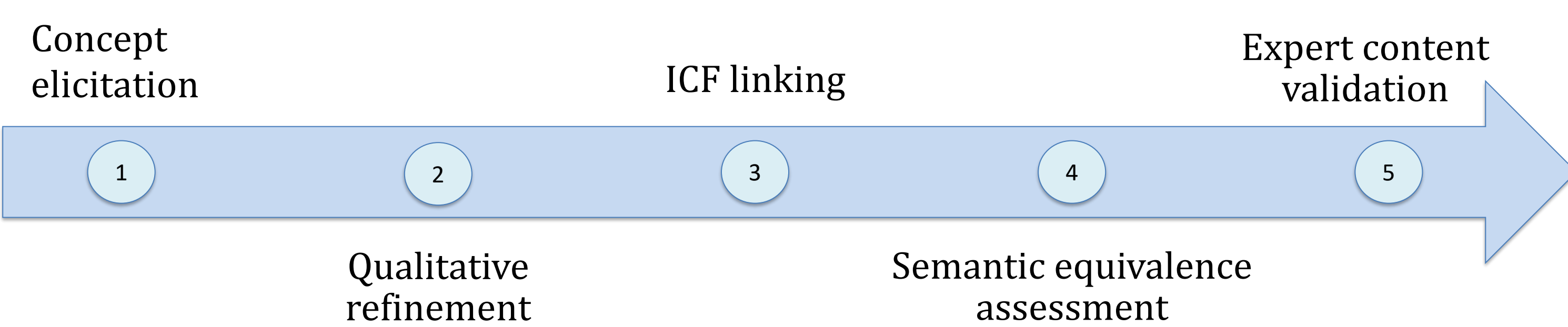
Hearing loss affects communication, participation, relationships, psychosocial well-being and quality of life. Conventional audiological measures describe auditory impairment but do not fully capture everyday functioning.

The Brief ICF Core Set for Hearing Loss provides 27 standardized categories representing key domains of hearing-related functioning.

To develop and establish the content validity of a repository of representative patient-derived hearing-functioning situations in Kannada aligned with the Brief ICF Core Set for Hearing Loss.

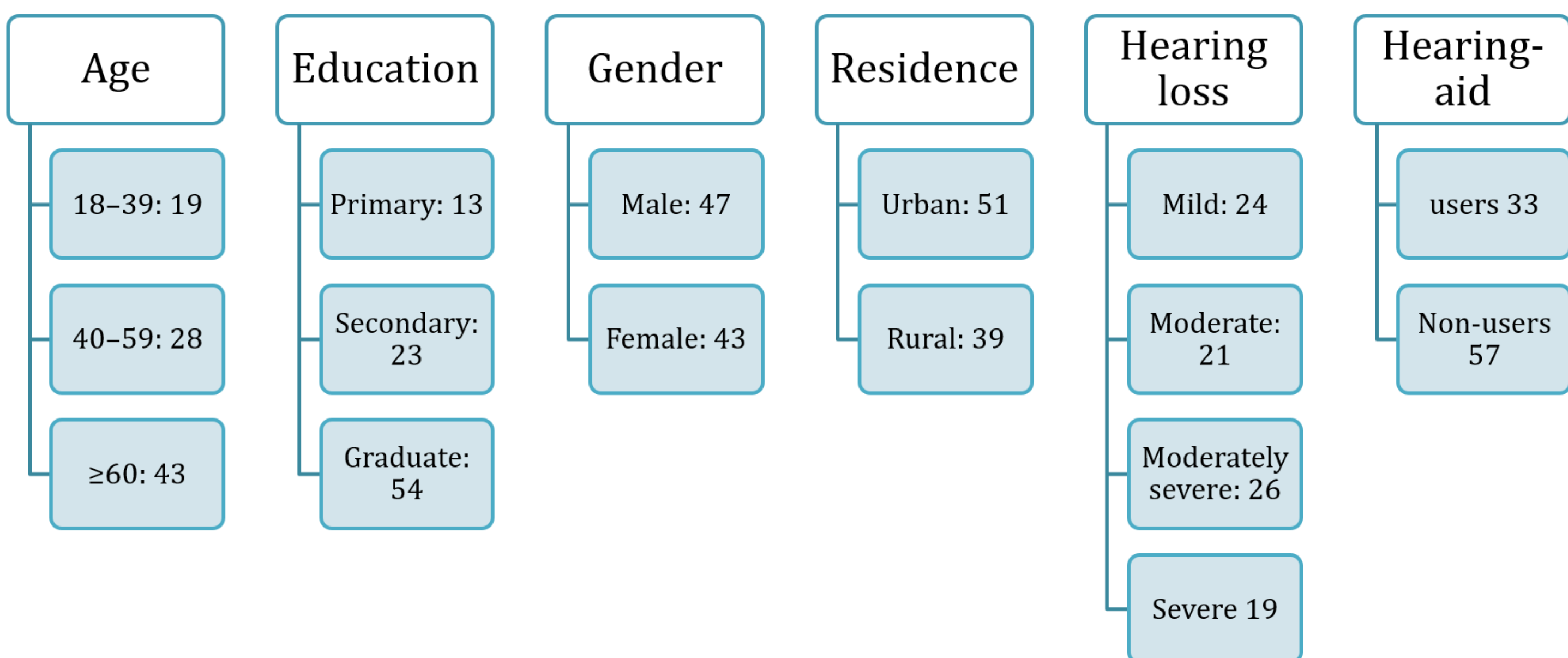
02. STUDY DESIGN & PARTICIPANTS

SEQUENTIAL EXPLORATORY MIXED-METHODS CONTENT DEVELOPMENT & VALIDATION STUDY



CONCEPT ELICITATION: n = 90

Kannada-speaking adults with bilateral sensorineural hearing loss; stratified purposive sampling across age × education, with additional heterogeneity across gender, residence and occupation.



03. CONCEPT ELICITATION & ANALYSIS

INTERVIEWS

- Individual semi-structured interviews were conducted in Kannada across all 27 ICF categories.
- Open-ended prompts were followed by contextual probes to elicit concrete everyday experiences.

QUALITATIVE REDUCTION

Meaningful-unit segmentation → distilled functional concepts → thematic synthesis → consolidation of conceptually overlapping experiences.

04. DEVELOPMENT WORKFLOW



05. EXPERT CONTENT VALIDATION

11-EXPERT INTERDISCIPLINARY PANEL

4 Audiologists · 3 Speech-Language Pathologists · 1 Clinical Psychologist · 1 Special Educator · 2 Rehabilitation professionals with ICF expertise

Experts had postgraduate/doctoral qualifications, ≥5 years of relevant experience, Kannada proficiency, and relevant ICF / rehabilitation / PROM expertise.

EVALUATION DOMAINS

Semantic equivalence · Relevance · Clarity · ICF category alignment

All 135 situations were evaluated independently; 1,485 ratings were obtained for each quantitative evaluation dimension.

CONTENT VALIDITY RESULTS

Relevance: 3.64 ± 0.61 | Mean I-CVI = 0.96

Clarity: 3.93 ± 0.26

ICF Category Alignment / Core Set Match: 3.95 ± 0.24

Agreement Beyond Chance: S-CVI/Ave = 0.96 | Modified κ = 0.81–1.00 (mean κ^* = 0.96)

06. ICF COVERAGE & LINKING

ICF LINKING

Functional concepts were systematically linked using Cieza et al. linking rules.
A second trained coder independently linked 20% of representative situations.

REPRESENTATIVE SITUATIONS

First-person, contextually grounded statements were developed while preserving participant language, experiential meaning, cultural appropriateness and ICF specificity.

27 / 27 BRIEF ICF CORE SET CATEGORIES
Complete representation across Body Functions, Body Structures, Activities & Participation, and Environmental Factors.

ICF LINKING RELIABILITY

70.0% agreement | Cohen's κ = 0.689

07. RETENTION, INTERPRETATION & APPLICATION

100% RETAINED

All 135 situations met I-CVI ≥ 0.80 and were retained.

57 / 135 (42.2%) underwent minor wording refinement for readability, linguistic clarity or contextual precision; no substantive conceptual modifications or deletions were required.

WHAT THIS PROVIDES

A patient-derived, ICF-anchored and content-validated foundation for future culturally relevant hearing-functioning PROMs and rehabilitation assessment tools.

08. KEY RESULTS

135

FINAL REPRESENTATIVE SITUATIONS
5 per ICF category

80.6%

REDUCTION FROM RAW POOL
697 → 135

3.49 ± 0.50

SEMANTIC EQUIVALENCE
Mean score, 0–4

0.98

SEMANTIC I-CVI
Range 0.91–1.00

09. CONCLUSION · LIMITATIONS · FUTURE DEVELOPMENT

CONCLUSION

The study generated 135 patient-derived hearing-functioning situations spanning all 27 Brief ICF Core Set categories. The repository preserves contextual richness while maintaining conceptual consistency with the ICF.

LIMITATIONS

Content was derived from Kannada-speaking adults with sensorineural hearing loss. Further work is required in other languages, populations and hearing-loss profiles, and psychometric properties have not yet been established.

NEXT STEP

Develop and validate a standardized PROM through item refinement, response-scale development, cognitive interviewing, pilot testing and comprehensive psychometric evaluation. Multilingual and digital applications are future possibilities.