SEAMEO CENTRES POLICY RESEARCH NETWORK (CPRN) SUMMIT 2025

Building Bridges to a Sustainable Future: Inclusive Collaboration and Innovation in Education, Science, and Culture

DEVELOPMENT, VALIDATION AND EVALUATION OF AN ONLINE VIDEO MODULE TO EDUCATE MALAYSIA PARENTS FOR HEARING AID MANAGEMENT

JAMILAH BINTI KADIR
Director of SEAMEO SEN

HOSTED BY
SEAMEO VOCTECH
Regional Centre, Brunei Darussalam

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Background & Problem Statement

- Inconsistent hearing aid use affects language development
- Parents often receive brief, overwhelming orientation – traditional training
- Parents struggle with technical jargon & retention
- Studies show multimedia enhances learning and retention – engaging education methods
- Multimedia learning can help

Challenges in Hearing Aid Use

- Low confidence, technical issues and inconsistent daily use
- Parents often overestimate device usage
- Early intervention is critical for child development

Research Objective

- To create and validate a user-friendly online video module on hearing aid management for parents
- To assess the user-friendly online video module on hearing aid management for parents

Theoretical Framework

- Based on Vygotsky's Scaffolding Theory - Step-by-step supports learning
- Use Technology Acceptance Model (TAM) – ease of use + usefulness
- Promotes skill-building & adoption

About the Project

Phase 1

- Development & Validation
- Created a user-friendly HAM module with expert and parent input

Phase 2

- Effectiveness Evaluation
- Tested the HAM module with 53 parents for 2 months

HAM Module Overview

- Target audience - Parents of children (<12 years old) with hearing aids
- Platform – YouTube with 6 topics (Malay language with English subtitles)
- Features – Visuals, subtitles, simplified language, guided instruction, animation
- Sample – 53 parents participated in evaluation phase

Topic 1: Hearing Aid Introduction & Management Module
Topic 2: About Hearing Aids
Topic 3: A Guide for Hearing Aid Use
Topic 4: A Guide to Hearing Aid Care
Topic 5: The Don’ts of Hearing Aids
Topic 6: A Guide for Troubleshooting Hearing Aids

Phase 1: Validation Results of the HAM Module

- Audiologists (n=7) rated content for accuracy and completeness with CVI scores 0.86-1.00 (Suitability Assessment of Materials -SAM)
- Parents (n=7) scored 100% agreement on understandability & actionability (Patient Education Materials Assessment Tool for Audiovisual Materials-PEMAT-A/V)
- Both experts and parents found the HAM module to be clear and effective tool for learning about HAM

Phase 2: HAM Effectiveness Evaluation

Study Design & Participants

- Design: Quasi-experimental (no randomization)
- Participants: 53 parents
- Timeline: Pre-test, 1-month, 2-month follow-ups
- Tool: Repeated-measure ANOVA

Phase 2: HAM Effectiveness Evaluation (continued)

Key Outcomes

- Significant gains after 2 months:
- Perception ($p < 0.001$)
- Confidence ($p = 0.017$)
- Monitoring Frequency ($p = 0.007$)
- Improvement: Parental perception, confidence in HAM
- Knowledge: Slight increase, not statistically significant

*significant ($p < 0.05$)

Demographic Insights

- Education ($p < 0.05$) & income ($p = 0.042$) influenced knowledge gain
- Higher hearing aid usage by children improved all outcomes
- Age & hearing aid experience showed no significant effect

Conclusion

- Education HAM video module is effective, accessible & well-received
- Improves parental self-efficacy & hearing aid monitoring
- Supports consistent use & developmental progress
- Culturally tailored & accessible digital resource

Recommendations

1. Integration and Standardization: Integrate the HAM module into standard care protocols for families of children with hearing impairments.
2. Tailoring for Diverse Learners: Develop tailored versions of the HAM module for different educational levels and prior experiences.
3. Expanding Accessibility: Translate the module into additional languages spoken in Malaysia.
4. Continuous Improvement: Establish a feedback mechanism for continuous refinement of the module based on user experiences and emerging best practices.
5. Future Applications: Adapt the module for other populations, such as adult hearing aid users or caregivers of elderly individuals with hearing impairments.

THANK YOU