

Introduction

- Hearing loss is a debilitating condition that globally ranks among the top 5 causes of years lived with disability.¹
- Hearing aids (HA) are the only non-surgical intervention and has been shown to positively impact quality of life.²
- Modern hearing aids are now equipped with digital signal processing (DSP) for improved listening outcomes and include a variety of features such as multichannel compression, directional microphones, and noise reduction.³
- To address the wide array of hearing aid technology available, a questionnaire (Hearing Aid Feature Importance Evaluation - HAFIE) designed to facilitate pre-fitting hearing aid selection is proposed.

Purpose/Objectives

- The purpose of the focus group discussions was to receive feedback on a hearing aid questionnaire designed to facilitate pre-fitting hearing aid selection. Factors such as specific hearing aid features, wording, methods of scoring and administration were discussed.

Methods

- Focus groups consisting of 11 audiologists were conducted to ensure integrated knowledge translation (IKT),⁴ encouraging potential use of the questionnaire in clinics. All focus groups followed a guide and were presented with the same prompts.
- Focus groups were divided into 4 mini groups to accommodate for participants' schedules and ranged from 45 to 90 minutes in length.
- Focus groups are a form of qualitative research, used when group dynamics or collective views on a topic are needed.⁵ Facilitators' roles were to be neutral and objective, to keep the discussion focused and to create an environment in which everyone has a chance to participate.

Results

Question 1	What are your thoughts on pre-fitting questionnaires or questionnaires in general in practical clinical use? Do you use any?	<ul style="list-style-type: none"> • Most do not use/not aware of any • If they do use, the Cosi was common (conversation based, can use in remote appointments) • COVID and going paperless as negative influencers to not using questionnaires as much
Question 2	What do you think is reasonable in terms of maximum number of items and time spent for a clinical setting?	<ul style="list-style-type: none"> • 5-10 minutes maximum • Can incorporate into Telehealth appointments to decrease clinic time • Can allocate more time for questionnaire if it takes away some discussion afterwards (integrate questionnaire into HA discussion)
Question 3	Are there some types of patients or fittings for whom you can see yourself using this proposed questionnaire? Would it improve the success of these fittings?	<ul style="list-style-type: none"> • People with hearing aids that are outdated and reluctant to get a new HA • Patients whose partners have a role in choosing their HA. Their spouse can be a part of HA selection process and can help remind patient of problems they have (ie. Dexterity issues) • Justifies clinician's decisions and a good way to measure pre vs. post fitting
Question 4	What are your opinions on different administration methods, such as in an interview format or self-administered?	<ul style="list-style-type: none"> • Doing it before clinic appointment is not realistic because it is not certain that everyone who comes into clinic will have a hearing loss. Administering it before may seem like pressuring patient to get a HA. • Fill out after a hearing test and if results are positive, can complete while patient is waiting.
Question 5	What features / hearing aid technologies do you consider to be important in hearing aid selection and would be worth including in the questionnaire?	<ul style="list-style-type: none"> • Add own section for batteries • Reduce length of statements/ descriptions • Add questions about lifestyle • Eliminate questions that seem too obvious (those that everyone would score similarly in) • Add what type of phone the patient has



In the ear and behind the ear hearing aids as shown in the questionnaire.

Conclusions & Future Directions

- The clinicians agreed that the HAFIE questionnaire is comprehensive and would be a beneficial tool in the hearing aid selection process.
- The suggestions from the experts in the focus group discussions were extremely valuable and a significant effort was made to implement them. A pilot study will be conducted in the upcoming weeks, and the data collected will go towards making the questionnaire more effective and concise.

Contact Information

Selina Liao
University of Western Ontario
Email: sliao33@uwo.ca
Phone: (647) 918- 3350

References

1. Global Burden and Disease 2015 Disease and Injury Incidence and Prevalence Collaborators. (2016). Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, 388, 1545–1602.
2. Gatehouse, S. (2002). Electronic aids to hearing. *British Medical Bulletin*, 63(1), 147–156. <https://doi.org/10.1093/bmb/63.1.147>
3. Cox, R. M., Johnson, J. A., & Xu, J. (2014). Impact of Advanced Hearing Aid Technology on Speech Understanding for Older Listeners with Mild to Moderate, Adult-Onset, Sensorineural Hearing Loss. *Gerontology*, 60(6), 557–568. <https://doi.org/10.1159/000362547>
4. Kothari, A., & Wathen, C. N. (2017). Integrated knowledge translation: digging deeper, moving forward. *Journal of Epidemiology and Community Health*, 71(6), 619–623. <https://doi.org/10.1136/jech-2016-208490>
5. Then, K. L., Rankin, J., & Ali, E. (2014). Focus group research: what is it and how can it be used? *Canadian Journal of Cardiovascular Nursing*, 24(1), 16–22.

Acknowledgements

Funding was provided through the Western Undergraduate Summer Research (USRI) Award.