



Sound Check

CLINICAL BULLETIN #5



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Using the Revised Hearing Handicap Inventory Self-Report in the Clinic

Hearing-related psychosocial health is one of the meaningful outcomes endorsed by NASEM, the focus of the lead article in this issue of *Audiology Practices*. The self-report the NASEM committee recommends to measure this dimension of patient outcome is the Revised Hearing Handicap Inventory (RHHI). Only a few years ago, the HHIE and the HHIA were merged to form a new single scale (Cassarly, et al, 2020). The new scale was dubbed the Revised Hearing Handicap Inventory.

Here we discuss how to integrate this self-report inventory into clinical practice.

As the name suggests, a self-assessment inventory is completed by the patient and reflects their individual thoughts and beliefs regarding the given topic. Most self-assessment inventories could be used as an outcome measure, and some are specifically designed as such. For example, here we look at the Revised Hearing Handicap Inventory (RHHI; a scale replacing the HHIE and HHIA). This is a scale that measures the hearing-related psychosocial health that might be caused by a hearing loss – an outcome that the NASEM committee says should be assessed in the clinic.

Commonly, any self-report inventory is administered at the patient's first clinic visit, to assist in counseling, and help determine amplification needs. However, this scale also can be used as an outcome measure—given again to the patient after several weeks of hearing aid use, to determine if the use of hearing aids has a positive impact.



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In the clinic, the 10-item screening version is all you need, as this has been shown to have good reliability. Research has also shown the RHHI-S will give you results very similar to the HHIE-S, which tend to be very similar the HHIA-S (Cassarly, 2020). By the way, if you don't happen to have the RHHI-S handy, using the HHIE-S or the HHIA-S is still much better than not using anything to measure hearing-related psychosocial health factors at all.

Shown in Figure 1 on the following page are the RHHI-S findings for a patient who has essentially normal hearing through 1000 Hz bilaterally, sloping down to 50 dB at 3000-6000 Hz, with right and left earphone QuickSIN scores of 2-3 dB SNR Loss. We usually consider RHHI scores of >6 as suggestive of hearing problems, so a score of 12 places

him in the mild category, and coupled with the audiometric findings, suggests that he is a good candidate for hearing aids. If you do fit him with hearing aids, it also provides five areas to focus on when you use this same scale as an outcome measure. In basic terms, a score of 6 or higher on the RHHI would be an indication that hearing aids and other interventions should be considered – regardless of the degree of hearing loss. In fact, a recent study involving 581 adult participants indicated that the RHHI-S is similar to the pure-tone audiogram at predicting hearing aid use (Dillard, Matthews and Dubno 2024). In that study at 4-frequency (0.5, 1.0, 2.0 and 4.0 KHz) pure tone average of 32.5 dB HL or worse predicted hearing aid use the same as a score of 6 or higher on the RHHI.



In addition to using this assessment to help determine hearing aid candidacy, it is useful to administer this inventory following hearing aid use. It is then possible to determine if psychosocial improvements have occurred. The audiologist can focus on areas where pre-fitting problems were noted (see Figure 1). For example, the unaided score on the RHHI in Figure 1 is 12. When the RHHI is re-administered 1-2 months after the hearing aid fitting, you would expect a lower score which would be an indication of psychosocial improvement, and your work in the clinic using the RHHI would align with the recommendations of the NASEM committee.

Instructions: The purpose of this scale is to identify the problems your hearing loss may be causing you. Answer YES, SOMETIMES, or NO for each question. Do not skip a question if you avoid a situation because of your hearing problem. If you use a hearing aid, please answer the way you hear without the aid.

	YES (4)	SOME- TIMES (2)	NO (0)
1. Does a hearing problem cause you difficulty when listening to TV or radio?	—	X	—
2. Does a hearing problem cause you difficulty when attending a party?	X	—	—
3. Does a hearing problem cause you to feel frustrated when talking to members of your family?	—	—	X
4. Does a hearing problem cause you to feel left out when you are with a group of people?	—	—	X
5. Does a hearing problem cause you difficulty when visiting friends, relatives or neighbors?	—	X	—
6. Do you feel handicapped by a hearing problem?	—	—	X
7. Do you feel that any difficulty with your hearing limits or hampers your personal or social life?	—	X	—
8. Does a hearing problem cause you to feel uncomfortable when talking to friends?	—	—	X
9. Does a hearing problem cause you to avoid groups of people?	—	X	—
10. Does a hearing problem cause you to visit friends, relatives or neighbors less often than you would like?	—	—	X

Figure 1. The RHHI-S, completed for a sample patient with a score of 12.

References

- Cassarly, C., Matthews, L. J., Simpson, A. N., & Dubno, J. R. (2020). The revised Hearing Handicap Inventory and screening tool based on psychometric reevaluation of the Hearing Handicap Inventories for the Elderly and Adults. *Ear and Hearing*, 41(1), 95–105. <https://doi.org/10.1097/AUD.0000000000000741>
- Dillard, L. K., Matthews, L. J., & Dubno, J. R. (2023). The Revised Hearing Handicap Inventory and Pure-Tone Average Predict Hearing Aid Use Equally Well. *American journal of audiology*, 33(1), 1–10. Advance online publication. https://doi.org/10.1044/2023_AJA-23-00213 ■