

Predictors for performance in HINT: Objective and subjective outcome measures

Victoria Stenbäck^{*#} 1,2 , Erik Marsja 1,2 , Henrik Danielsson 1,2, Jerker Rönnerberg 1,2

(1) Disability Research Division, Linköping, Sweden.

(2) Department of Behavioural Sciences and Learning, Linköping University, Sweden

Every day individuals engage in communication in sound environments filled with background noise and/or competing talkers. In the lab, objective tests of speech recognition (such as the Swedish hearing-in-noise-test (HINT)) are typically used, but the individual's subjective view is also important to take into account, because if objective and subjective measures do not relate, perhaps the interpretations of such findings do not generalise very well to everyday situations/difficulties.

Using data from the n200-study (Rönnerberg et al. 2016) we aimed to investigate the relationship between objective (the Swedish HINT), and subjective (Speech, Spatial and Qualities of Hearing Questionnaire (SSQ)) measures of listening under adverse conditions. The Swedish HINT was masked with a speech-shaped noise and the SSQ was administrated as a pen-and-paper test. Two groups; adults with age-appropriate normal hearing (M age= 61.63, SD=8.3), and an age matched group with hearing loss using hearing aids (M age= 60.76, SD=8.8) participated in the study. Regression analysis showed that 25% of the variance alone in the HINT was predicted by the speech subscale in the SSQ. The spatial and quality subscales did not significantly predict performance in the HINT. When adding pure tone average(4) to the model, approximately 40% of the variance in HINT performance was explained. The results from the present study may help identify differences and common links between a clinically used, objective measure, and a subjective measure of speech recognition, to further our understanding of how such findings can be generalised to everyday functioning.

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References: Rönnerberg, J., Lunner, T [...] & Stenfelt, S. (2016). Hearing impairment, cognition and speech understanding: exploratory factor analyses of a comprehensive test battery for a group of hearing aid users, the n200 study. *Int J Audiol*, DOI: 10.1080/14992027.2016.1219775.

Victoria.stenback@liu.se

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