discussed. Additionally, the need to develop disability candidacy should be considered.

Speech Recognition in Adults with a Severe Hearing Impairment

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Adults with a severe hearing impairment comprise between 11.0% and 13.5% of the hearing-impaired population. From the perspective of audiological rehabilitation, understanding their difficulties offers many challenges. To investigate this population, a detailed investigation of the speech recognition of adults with severe hearing loss \( (N = 34) \) was conducted at The University of Melbourne. For the purposes of this study severe hearing impairment was defined as an average loss in the better ear of between 61 and 100 dB HL. Each participant took part in a series of speech recognition tasks while wearing their currently fitted hearing aids. The assessments included closed-set tests of consonant recognition and vowel recognition, combined with open-set tests of consonant recognition and vowel recognition, combined with open-set tests of monosyllabic word recognition, sentence recognition and the Connected Speech Test version 2 (CSTv2). Tests at the sentence level were also conducted in background noise (four-talkers superimposed) to replicate environments more typical of everyday listening conditions. Investigation of the results indicated a wide variability in performance between the participants on each of the speech perception measures. There were, however, some general trends which could be observed. As expected vowels were generally well perceived compared with consonants. Monosyllabic word recognition scores for the participants could be predicted from the segmental tests with an allowance for lexical effects. Scores for sentences presented in quiet showed additional linguistic effects and a significant decrease \( (p < .05) \) in performance with the addition of background noise. Additionally, the CSTv2 provided further insights into speech perception processes through the addition of further facilitative context. Discussion will also take place regarding the processes involved in speech perception and whether this population, despite severe auditory handicap are able to utilise restricted auditory input for higher level lexical processes.

Encoding Strategies Used by Hearing Impaired Children

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This study investigates the encoding strategies used by HI children to store linguistic information in a short term memory task and examines whether these strategies are related to performance on a receptive language task and a perceptual integration task. The results indicate that not only are hearing impaired children poorer in their short term memory ability but are also relatively heterogeneous in the type of encoding strategies they employ for the retention of linguistic information. Research indicates that the way in which linguistic information is encoded is fundamental to higher-level language tasks. A task of language reception indicated that as the load on memory increases, the ability of hearing impaired children to retain and recall instructions decreases at a faster rate than their normal hearing peers. The present study also found that the ability of hearing impaired children to perceive and integrate auditory and visual speech signals was inferior to that of normal hearing.
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