Assessing the impact of noise on speech perception for deaf children who use hearing aids – Heather Card

Purpose: To inform decision-making about radio aid candidacy for hearing aid users by investigating whether difficulty of understanding speech in noise and the benefit to be gained from a radio aid are related to level of hearing loss.
Method: Speech perception testing using BKB sentence lists was carried out in quiet and in noise for a group of 20 children with hearing losses ranging from mild to severe. For radio aid users, an assessment of benefit of the radio aid when listening in noise was also carried out. In addition, participants gave responses to the LIFE-UK-IHP questionnaire, describing degree of difficulty of listening and understanding in different situations at school.
Results: Listening in noise levels typical of active classrooms proved difficult for all participants. No relationship was found between degree of hearing loss and difficulty of understanding speech in noise; some children with mild losses experienced more difficulty than other children with more severe loss. The benefit of a radio aid in helping to mitigate the effects of background noise was demonstrated. It was found that children with mild hearing loss can benefit as much from a personal radio aid as children with a more severe loss.
Conclusions: Despite the small sample size, the results have important clinical significance regarding the listening needs of children with mild hearing loss and can be used to help inform decision-making about how best to support these children.