11-11:30 Early Sensitivity to Plural Morphology in Three-Year-Olds With and Without Hearing Loss: Evidence From Eye Tracking

Purpose: Children with hearing less (HL) experience reduced audibility of high-frequency sounds, such as /s/ and /z/, which carry important grammatical information in English, e.g., in cats. In this study, we examined whether children with HL process plural morphemes like their normal-hearing (NH) peers, using Generalised Additive Mixed Models (GAMMs) and posterior simulations.

Method: Three-year-olds with and without HL participated in an eye-tracking task with target known words (e.g., cat) and novel plurals: segmental (e.g., teps, tegz) and syllabic (e.g., tizzez).

Results: For children with HL, fixation curves to the target picture were reliably above chance only for familiar words and segmental singulars (e.g., tep, teg). Although novel plural trials were not identified above chance, they were not misidentified as singulars, suggesting an emerging understanding of grammatical morphemes. However, looking behaviour for children with HL differed from that of their NH peers, with brief windows of above-chance performance that occurred later and were less reliably predicted by the posterior models.

Conclusion: Our results, using a more sensitive analysis comparing looking curves to chance and across groups, suggest that 3-year-olds with HL have developed an of plural morphology despite poorer access to acoustic cues for high-frequency speech sounds.