

## **Multimodal verb input to children with and without hearing impairment**

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Embodied theories of language point to a direct link between language and action. When interacting with their infants, caregivers synchronise their actions with nouns and verbs. These patterns have not been examined developmentally and were mostly observed in the input to infants with normal hearing (NH). Impaired access to auditory speech, as in the case of infants with hearing impairments (HI), might lead caregivers to use multimodal cues to scaffold speech. Here we explore caregivers' multimodal verb input to their NH and HI infants at 14, 22, and 36 months of age. We used the Ambrose (2016) CHILDES corpus of longitudinal video-recorded play interactions of mothers with their NH and HI infants. Thus far, we have analysed data from 13 dyads from each group when infants were 14 months-old. For each verb, we examined whether it occurred with depictive and other cues, and we specified its agent as either caregiver- or infant-led. An ANOVA showed a significant main effect for type of multimodal behaviour ( $F(1, 24) = 33.841$ ;  $p < .001$ ;  $\eta^2 = .585$ ): depictive cues were used more frequently (Depictive:  $M = 70\%$ ,  $SD = 16\%$ ; Other:  $M = 30\%$ ,  $SD = 16\%$ ), and a significant main effect for agent ( $F(1, 24) = 4.982$ ,  $p < .035$ ;  $\eta^2 = .172$ ): caregiver-led multimodal behaviours ( $M = 59\%$ ,  $SD = 21\%$ ) were used significantly more than infant-led ( $M = 41\%$ ,  $SD = 21\%$ ) ( $p = .035$ ). We also found a significant Group\*Agent interaction effect ( $F(1, 24) = 4.673$ ;  $p < .041$ ;  $\eta^2 = .163$ ) driven by the HI Group. These results suggest that caregivers accompany their verbs with actions that depict the meaning of the verbs. Caregivers of HI infants used multimodal labelling more frequently when using verbs that referred to their own actions rather than their infants'. Once all data is coded, we will examine whether these patterns persist throughout development.