

Deviant coarticulation in children with childhood apraxia of speech (CAS)
does not include hyperarticulation

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In the speech of children with Childhood Apraxia of Speech (CWCAS) coarticulation has been found to be both stronger and more extended as well as the opposite, more segmental (or hyperarticulation) compared to children with typical development (CWTD). The present study investigates the hypothesis that these contradictory results are due to differences in phonological distinctiveness. CWCAS demonstrate weaker coarticulation in studies that also report a decreased differentiation of speech sounds compared to CWTD, and stronger and more extended coarticulation in studies that do not.

The dataset comprises previously collected repetitions of simple bisyllabic meaningless utterances of the type [dəCV] (C=/b,d/; V=/i,u/) in the context of the sentence /he...wɪ:r/ of 16 CWCAS (5,5-7,5 years-old) and 8 CWTD (5,0-7,3 years-old). Coarticulation is analyzed in F2 of [ə] and calculated as vowel context dependent ratio relative to size of the produced vowel contrast, for each consonant context separately.

Preliminary results show stronger coarticulation in CWCAS compared to CWTD in /d/-context, but not in /b/-context. While CWTD show a differentiation in coarticulation between consonant contexts, CWCAS do not. These results indicate that deviant coarticulation in CWCAS does not include hyperarticulation. The increased coarticulation in CWCAS compared to CWTD is limited to certain articulatory contexts.