

Effects of Masking on Vowel Space Area in Childhood Apraxia of Speech
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The underlying basis of Childhood Apraxia of Speech (CAS) remains unknown. One possibility is that features of CAS result from a feedforward-control deficit that causes increased reliance on feedback (Terband & Maassen, 2010). Iuzzini, Green, and Hogan (2013) tested the effects of auditory feedback on voice onset time (VOT) in children with CAS and typical development (TD). Results showed no difference between groups for VOTs in unmasked speech; however, when auditory feedback was attenuated, the CAS group produced shorter VOTs whereas the TD group did not, providing evidence that children with CAS rely on feedback to produce age-appropriate VOTs. The current research tests the effect of speech masking on vowel production in school-aged children with CAS, speech sound disorder, and TD. Participants completed a pseudoword repetition task that sampled corner vowels; stimuli were produced in masked and unmasked conditions. Results revealed that children with CAS performed similar to peers in the unmasked condition; however, in the masked condition, children with CAS evidenced smaller vowel space area relative to other groups. Taken together, these findings suggest that school-aged children with CAS rely on auditory feedback to help normalize speech production, indicating a lack of speech production automaticity for this population.