Pausing and sentence stress in children with developmental dysarthria

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Dysarthria in children with cerebral palsy (CP) frequently affects all levels of the speech production process including prosody. Research on typically-developing children has shown that they can make prosodic adjustments to mark sentence stress early on, with recent work pointing to pausing as another robust indicator to stress. Children with CP have also been found to manipulate prosodic cues to some extent to signal meaning. The aim of this study was to explore whether pausing might be an additional prosodic parameter that is available to children with dysarthria to signal sentence stress.

Eight children with dysarthria due to CP and eight matched typically-developing children completed a picture description task eliciting stress in different utterance positions. Data were annotated, and the frequency of pauses and duration of pauses occurring before each stressed and unstressed target word were measured.

Results show that the children with dysarthria - but not the typically-developing children - paused significantly more often before a stressed target word than before the unstressed counterpart. However, neither group employed pause duration. These findings suggest that frequency of pausing might be a meaningful prosodic cue that is available to children with dysarthria to mark sentence stress.