The Effect of Rate Reduction on Marking Prosodic Contrasts in Dysarthria: Pilot Results

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Traditional dysarthria interventions focus on improving speech sound articulation through rate reduction. While reduced rate has been noted to improve speech intelligibility, less is known regarding how it impacts the prosodic features of speech, including fundamental frequency (F0), intensity, and duration. The present study will include 12 speakers with dysarthria (DYS) and 12 healthy controls (HC). Here we report on pilot results from 1 DYS participant and 1 HC. Participants engaged in a naturalistic game task where they produced utterances as questions and with contrastive stress. Speakers produced tokens at both their habitual rate and at a slow rate. Preliminary results on these two initial participants suggest that rate reduction adversely impacts the amount of prosodic variation in the speech signal. Data collection and analysis for additional subjects are underway. This line of work has implications for the design of effective assessments and interventions for speakers with dysarthria.