Relationship between fundamental frequency declination rates and perceptual judgments of dysarthric speech in individuals with cerebral palsy

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There has been a dearth of research examining sentence-level F0 characteristics of speech in cerebral palsy (CP), and how these acoustic measures relate to perceptual aspects of the dysarthria in CP. However, studies suggest that speakers with various forms of dysarthria are in many cases able to produce distinctive F0 patterns to distinguish declarative from interrogative sentence types (LeDorze, Ouellet, & Ryalls, 1994) or to make a particular word in a sentence prominent for the purposes of contrastive stress (Patel, 2002). Our previous work has suggested that sentence-level F0 contours for speakers with CP may look similar to those of healthy controls (Hustad, Weismer, & Schellinger, 2006). In the present study we examined declination rates in declarative sentences produced by 10 speakers with CP and 8 healthy controls. One goal was to determine if there were differences between speakers with CP and control speakers. In addition, we studied the relationships among declination rates, speech intelligibility, and listener ratings of prosody for the speakers with CP. Results will be elaborated.