

Familiarization Effects on Dysarthric Speech Perception:
Evidence of Enhanced Segmental Perception

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This research investigates familiarization effects on naïve listeners' transcription of speech produced by individuals with cerebral palsy-associated dysarthria. Although previous studies generally support the role that a listener's familiarity with speech can play in intelligibility enhancement for dysarthric speech, the magnitude of the familiarization effect varies across studies. Furthermore, a question remains largely unanswered concerning the underlying mechanism for familiarization effects. Unlike most previous studies that employed word or phrase transcriptions, the current study examines both word and consonant transcriptions in various familiarization paradigms: (1) audio-only familiarization, (2) audio + orthography familiarization, and (3) no explicit familiarization, but listeners participate in sequential experimental tasks. In addition, transcription words consist of (1) words that are lexically same as but acoustically different from familiarization words and (2) new words. Results reveal that familiarization improves both word intelligibility and consonant intelligibility. In addition, listeners who were exposed to both audio and orthography improved consonant perception more than other groups, especially for new words. Findings in this research support a listener's perceptual reorganization and provide empirical evidence for the effectiveness of familiarization paradigms as an intervention technique in the management of dysarthria.