On-line visual and kinematic feedback in a sound production treatment T. R. D. Fossett, M. R. McNeil, W. F. Katz, D. Garst, P. Doyle, N. Szuminsky, G. Carter

Research investigating the underlying mechanisms of apraxia of speech (AOS) identify deficits in speech motor movement parameters as the primary disturbance. Recent studies on AOS have manipulated visual feedback for speech motor movements. This single-subject, multiple-baseline, across behaviors treatment design examines the effects of on-line visual kinematic feedback on speech sound production in an adult participant with AOS. Speech production accuracy in single syllable words was based on both perceptual and movement accuracy. Movement feedback was provided by electromagnetic articulography. Results based on visual inspection of the data are interpreted as showing acquisition, response generalization and some maintenance of trained behaviors across a variety of movement targets. Experimental control is demonstrated by lack of substantive change in the baselines of targets not yet treated. Performance on long-term maintenance, effect size calculations and reliability data for sound production and visual inspection data will be obtained.