

Intensive voice treatment (LSVT) for children with spastic cerebral palsy.

C. Fox, C. Boliek, N.Namdaran, C. Nickerson, B. Gardner, C. Piccott, J. Hilstad, E. Archibald

Children with CP exhibit a constellation of motor difficulties including those associated with speech. These speech deficits have significant functional consequences including academic advancement, social and emotional development, eventual independent living, and work force participation. There are limited published outcome data on speech treatment approaches for children with CP. Recent advances in theories of motor development and behavioral gait and limb treatment provide a framework (consistent with motor learning theories) from which to test different speech treatment concepts (e.g., intensive treatment, high effort exercises, repeated practice trials, and sensory awareness training) in these children. These concepts are also known to drive activity-dependent neural plasticity. The purpose of this study was to determine if a voice treatment (LSVT), designed to facilitate motor execution (through intensive treatment, endurance and active practice) and motor learning (through sensory feedback, repeated practice trials and intensive training) can facilitate improved speech and voice functioning in children with CP. Eight children with CP participated in this study. Results revealed positive treatment outcomes across a variety of acoustic measures of speech and voice, and parents' perception of their child's speech and voice. These findings highlight potential key treatment concepts to consider in speech treatment for children with CP.