(S12) EFFECTS OF LSVT ON VOICE AND RESPIRATION IN INDIVIDUALS WITH MULTIPLE SCLEROSIS

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Background: The Lee Silverman Voice Treatment, commonly referred to as LSVT, is the first and only documented efficacious speech treatment that restores oral communication. With more than $5 million in NIH funding, LSVT was initially developed for the treatment of voice disorders in individuals with idiopathic Parkinson’s disease. Over the last decade, further support for the efficacy of LSVT for various neurologically based speech disorders, including those caused by multiple sclerosis (MS), has emerged. Centered on a very specific therapeutic target, LSVT acts as a “trigger” to increase effort and coordination across the speech production subsystems (respiratory, phonatory, and articulatory). This “trigger” provides a comprehensive motor organizing theme that affects multiple levels of the motor output processes. Objectives: The purpose of this study was to assess the impact of an intensive respiratory-phonatory treatment program (LSVT) on vocal and respiratory function in five individuals with relapsing-remitting MS (RRMS). Methods: Five individuals with RRMS, three women (mean age, 52 years) and two men (mean age, 45 years) with a history of MS ranging from 13 to 18 years participated in the study. During their initial speech evaluations, all five participants complained of vocal weakness, shortness of breath, and fatigue when communicating associated with their MS. These voice and respiratory symptoms were chronically present despite not experiencing an MS flare within 3 months prior to their participation. All five participants received 16 1-hour LSVT sessions over a 4-week period. Results: Improvement after treatment was observed in sound pressure level (SPL) both for speech tasks (conversation) and in duration of sustained vowel phonation (/a/). Individuals with MS treated with LSVT increased their voice SPL by an average of 7 dB. These observed changes were not only statistically significant but also audible to new communication partners. Significant improvement was also observed in all participants in forced vital lung capacity. Conclusions: These findings provide further support for the efficacy of LSVT in populations beyond idiopathic Parkinson’s disease and for the treatment of various neurologically based speech disorders such as those in MS.

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