

Abstract

Title: The influence of the dance movement therapy on psychomotor symptoms of Parkinson's disease patients

Objectives: The aim of this thesis is to evaluate the effects of dance movement therapy on postural instability and other motor and non-motor symptomatology of patients with Parkinson's disease. Changes are evaluated by using MDS-UPDRS and Computerized Dynamic Posturography (NeuroCom Smart EquiTest System). Another goal is to provide comprehensive information about dance movement therapy and other dance therapies promoted abroad and to highlight a possibility of their use as a non-pharmacological treatment of Parkinson's disease symptoms.

Methods: This pilot study involved eight late onset Parkinson's disease patients at an average age of $68,87 \pm 6,69$ years. Changes in their postural stability and motor and non-motor symptoms of Parkinson's disease were evaluated after the completion of two months of intensive dance movement therapy. Observed parameters were evaluated by using MDS-UPDRS and the Computerized Dynamic Posturography Smart EquiTest System created by the NeuroCom company, before and after the therapeutic programme. For effective assessment of the therapy, statistical methods (the Student's paired t-test and the Wilcoxon rank sum test) were used along with the rate of clinical significance of the intervention (Cohen's d).

Results: The results of the study indicate, that dance movement therapy could be effective for the treatment of Parkinson's disease motor symptoms and could also positively affect ability to use input from vestibular system to maintain balance. Significant changes were found for MDS-UPDRS ($p=0,017$), MDS-UPDRS - part III ($p=0,043$) and in protocol SOT - Sensory Analysis - VEST ($p=0,025$). Other parameters, detectable by Computerized Dynamic Posturography or MDS-UPDRS, were not affected.

Key words: Parkinson's disease, dance movement therapy, Computerized Dynamic Posturography