

Effects of Dance Movement Therapy (DMT) on cognition and balance in Parkinson's Disease with emphasis on improvisational dance.

Researchers: Dr Ian Gold, Maura Fisher pht, Joanabbey Sack, MA BC-DMT RDT, Naila Kuhlman, PhD, Tania Lazuk PhD, R-DMT

Abstract. This study examined the effects of group-delivered improvisational Dance movement therapy classes on balance and cognition in people with Parkinson's Disease. *Methods:* Ten Community dwelling adults (mean age 66 years old) with middle stage Parkinson's disease completed a 10-week dance movement therapy series, that consisted of one 1.5-hour session per week, with an emphasis on improvisational dance. Pre- and post-intervention motor and cognitive assessment was completed. Pretesting was carried out approximately 2 weeks before the intervention and post-testing was completed approximately one week following the intervention. The balance and gait evaluation consisted of the Balance Evaluation Systems Test (BESTest)¹ Two cognitive tests were employed: the Montreal Cognitive Assessment (MoCA²), and the Scales for Outcomes in Parkinson's disease-Cognition (SCOPA-Cog³). We also administered the Test of Upper Limb Apraxia (TULIA⁴), for the assessment of gesture production and the Reading the Mind in the Eyes task (RMET⁵) All scores were analyzed using SPSS 24.0 (Chicago, IL, USA), and mapped using GraphPad Prism 6.0 (LaJolla, CA, USA). Due to the small sample size, pre- and post-intervention comparisons were made using Wilcoxon matched-pairs signed rank test. Statistical significance was determined at $p \leq 0.05$. *Results:* Findings included a significant increase in the total score on the BEST as well as significant increase in the total score on the SCOPA test following the dance intervention ($t = 2.575$, $p = 0.0299$, pre-test = $56.7 \pm 3.73\%$ vs. post-test = $62.2 \pm 4.43\%$).

Conclusions: Dance movement therapy with an emphasis on improvisational dance resulted in functional gains in balance and cognition for people with Parkinson's disease and merits further exploration.

Presenters: Joanabbey Sack, Tania Lazuk, Maura Fisher, Zuzana Sevcikova

Joanabbey Sack BC DMT RDT has extensive additional training in Laban Movement Analysis, Theatre Arts and Music. Currently P-T faculty in the Creative Arts Therapies Graduate at Concordia University and staff DMT at Concordia's Centre for the Arts in Human Development (since 1996). In 2007 co-founded/ 'parkinsonenmouvement' and continues research on dance and dance therapy with Parkinson's.

Maura Fisher, Pt is a physiotherapist working at the Royal Victoria and Montreal Neurological Hospitals with an all-consuming passion for the treatment of neurological conditions. She is certified in LSVT BIG, a neuroplasticity-based rehabilitation approach for people with Parkinson's.

Tetiana Lazuk, PhD, R-DMT is at present Scholar in Residence / Dance Movement Therapy at Concordia University. She worked as psychiatrist and psychotherapist in the Ukraine for more than 10 years prior to coming to Canada. She has a PhD in Psychiatry and has completed her training in Dance/Movement Therapy.

Zuzana Sevcikova, MA, BC-DMT, RDT holds an MA in Drama Therapy and is a DMT Alternate Route graduate. Zuzana works with students and teachers in elementary schools, leads

specialized dance classes for people with Parkinson's disease at Parkinson en Mouvement in Montreal, and is one of the founding members of the Dance Movement Therapy Association in Canada.