

Outcomes of Group Dance and Movement Training in Persons with MS

Alexis Skolaris, BA¹, Andrea Bischof-Bockbrader, PTA², Susan M Linder, PT, DPT, PhD¹, Douglas A Wajda, PhD³, Joan Meggitt, Director of Education & Community Engagement⁴, David Shimotakahara, Founding Artistic Director⁴ and Francois Bethoux, MD⁵, (1)Department of Physical Medicine and Rehabilitation, Cleveland Clinic, Cleveland, OH, (2)Physical Medicine and Rehabilitation, Cleveland Clinic Foundation, Cleveland, OH, (3)Health Sciences and Human Performance, Cleveland State University, Cleveland, OH, (4)GroundWorks Dance Theater, Cleveland, OH, (5)Mellen Center for MS Treatment and Research, Cleveland Clinic, Cleveland, OH

Background: Persons with Multiple Sclerosis (PwMS) encounter continuous challenges to daily living from deficits in mobility, strength, and posture, all of which can contribute to a decreased sense of well-being. Evidence supports exercise and increased movement as a plausible adjunct therapy in reducing MS related symptomatology and improving ones sense of self.

Objectives: To assess the feasibility, acceptability, safety, and outcomes of a community group dance program in PwMS.

Design: Mixed methods cohort study.

Participants: Community-dwelling PwMS with gait disturbance, walking without assistive device.

Methods: Participants completed fourteen 1-hr sessions, twice a week for 7 weeks. Each session involved one-on-one interaction with a trained professional dancer and included a warm-up, interactive dance session, and cool down. The Neuro-QoL short forms for Positive Affect and Well-Being (PA-WB), Upper Extremity (UE) and Lower Extremity (LE) Function were collected prior to and after intervention. Qualitative data were collected after each dance session through guided, open-ended feedback, in which participants were provided with prompts allowing for self-reflection.

Results: Six PwMS completed the study, with an average Patient Determined Disease Steps score of 3.0. Session compliance was 88.1% with no serious adverse events. There were no statistically significant changes on the Neuro-QoL short forms (average scores at baseline and end of treatment: PA-WB 38.2 - 40.8, UE 38.0 - 38.2, LE 32.5 - 31.5). Qualitative analysis identified 4 main themes, coinciding with the overall purpose of the study: feasibility, acceptability, safety, and initial efficacy. Acceptability and feasibility were captured with participant feedback including “I love how we help each other, and our movement flows from each other – great spreading of ideas” and “My movement was delayed and stiff BUT it still flowed with my quartet.” Efficacy and safety were conveyed with the following quotes: “I want to keep moving – seeing that my body can move in these ways again – I had withdrawn – almost like putting on armor to compensate what I thought I could no longer do, but I can do these things” and “[xx’s partner] takes a lot of risks – I admire that she doesn’t hesitate to stand and do a lot of her movements – while I prefer to take the safe route and sit a lot.” Responses expressed acceptance and enjoyment in interacting with individuals who have something in common, but all have a unique story to tell.

Conclusions: Overall, the community group dance program was deemed feasible, safe, and well-accepted. Group dance is a viable option bringing PwMS together and providing a supportive, collaborative, and safe environment to explore therapeutic movement.