

**VA**

U.S. Department of Veterans Affairs

Veterans Health Administration  
Parkinson's Disease Research,  
Education & Clinical Centers**NATIONAL VA PARKINSON'S DISEASE****C O N S O R T I U M***Education · Collaboration · Advocacy*

# THE TRANSMITTER

*January 2023*

## Article Reviews

*Prepared by: Debra Lindsey, ACNP-BC & Jessica Lehosit DO ~ Southeast/Richmond PADRECC*

### **Effect of music-based movement therapy on the freezing of gait in patients with Parkinson's disease: A randomized controlled trial**

Progression of freezing of gait (FOG), a common pathological gait in Parkinson's disease (PD), has been shown to be an important risk factor for falls, loss of independent living ability, and reduced quality of life. However, previous evidence indicated poor efficacy of medicine and surgery in treating FOG in patients with PD. Music-based movement therapy (MMT), which entails listening to music while exercising, has been proposed as a treatment to improve patients' motor function, emotions, and physiological activity. In this study, the authors primary outcome was focused on a change of FOG in patients with PD utilizing MMT. This was a prospective, evaluator-blinded, randomized controlled study. A total of 81 participants were randomly divided into music-based movement therapy group (MMT,  $n = 27$ ), exercise therapy group (ET,  $n = 27$ ), and control group ( $n = 27$ ). Participants in the MMT group were treated with MMT five times (1 h at a time) every week for 4 weeks. Subjects in the ET group were intervened in the same way as the MMT group, but without music. Routine rehabilitation treatment was performed on participants in all groups. The primary outcome was the change of FOG in patients with PD. Secondary evaluation indicators included FOG-Questionnaire (FOG-Q) and the comprehensive motor function. After 4 weeks of intervention, the double support time, the cadence, the max flexion of knee in stance, the max hip extension, the flexion moment of knee in stance, the comprehensive motor function (UPDRS Part III gait-related items total score, arising from chair, freezing of gait, postural stability, posture, MDS-UPDRS Part II gait-related items total score, getting out of bed/a car/deep chair, walking and balance, freezing), and the FOG-Q in the MMT group were lower than that in the control group and ET group ( $p < 0.05$ ). The gait velocity, the max ankle dorsiflexion in stance, ankle range of motion (ROM) during push-off, ankle ROM over gait cycle, the knee ROM over gait cycle, and the max extensor moment in stance (ankle, knee) in the MMT group were higher than that in the control group and ET group ( $p < 0.05$ ). However, no significant difference was reported between the control group and ET group ( $p > 0.05$ ). The stride length and hip ROM over gait cycle in the MMT group were higher than that in the control group ( $p < 0.05$ ), and the max knee extension in stance in the MMT group was lower than that in the control group ( $p < 0.05$ ). Nevertheless, there was no significant difference between the ET group and MMT group ( $p > 0.05$ ) or control group ( $p > 0.05$ ). These results supported that MMT improved gait disorders in PD patients with FOG, thereby improving their comprehensive motor function.

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### **Exploratory evaluation of baseline cognition as a predictor of perceived benefit in a study of behavioral therapy for urinary incontinence in Parkinson disease**

Studies have shown that behavior-based pelvic floor muscle exercise therapy is an effective treatment for overactive bladder in Parkinson's disease (PD) patients. This study was to assess if cognitive function was a predictor of rehabilitation outcomes. This was a planned exploratory analysis. Participants who scored  $\geq 18$  on the Montreal Cognitive Assessment (MoCA) were randomized in a clinical trial to behavioral treatment. They were classified by Perceived improvement (Benefit vs No Benefit) as reported on a validated Satisfaction and Benefit Questionnaire. General cognition (MoCA), motor procedural learning (Serial reaction time task), verbal memory (Buschke delayed recall), spatial memory (Nonverbal/Spatial selective reminding test) and working memory (Wisconsin card sorting task) were compared between the two groups using Wilcoxon rank-sum test. Of the 26 participants randomized to behavioral treatment (70% male, mean age  $71 \pm 6.1$  years), 22 participants (85%) reported Benefit and four reported No Benefit. General cognition, motor procedural learning, verbal memory, spatial memory, and working memory did not differ between these groups. While the difference between the time to complete the final practiced series and the random series of the Serial Reaction Time Task (SRTT) was statistically similar between the groups, the Benefit group performed the random sequence more quickly ( $567.0 \pm 136.5$  ms) compared to the No Benefit group ( $959.4 \pm 443.0$  ms;  $p = 0.03$ ) and trended toward faster performance in the final practiced series. Overall, this study perceived that cognitive function was not associated with behavioral treatment for overactive bladder other than faster completion of the SRTT. This is noteworthy because many behavior-based therapy studies exclude participants with mild cognitive impairment. Additional studies may evaluate if domain-specific cognitive function, particularly the assessment of implicit memory, could lead to individualized behavioral therapy recommendations.

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### **Undetected ophthalmological disorders in Parkinson's Disease.**

Ophthalmological disorders are common and frequently disabling for people with Parkinson's disease (PD). However, details on the prevalence, severity and impact of ophthalmological disorders thus far lacking. This study aimed to identify PD patients with undetected ophthalmological disorders in a large cross-sectional, observational study. A screening questionnaire to detect ophthalmological symptoms (Visual impairment in PD questionnaire; VIPD-Q) was given to 848 patients. This study reported on a subgroup of 102 patients who received complete ophthalmological assessment aimed at identifying clinically relevant ophthalmological diseases, which were classified as either vision-threatening or not. Impact on daily life functioning was measured using the visual functioning-25 questionnaire (VFQ-25) and fall frequency. 92% of the patients had one or more clinically relevant ophthalmological disorders. 77% of the patients had a potentially vision-threatening disease and 34% had a potentially treatable ophthalmological disease which impacted on quality of life. The most prevalent ophthalmological disorders were dry eyes (86%), ocular misalignment (50%) and convergence insufficiency (41%). This study found a weak but significant association between clinically relevant ophthalmological diseases and both fall frequency ( $R^2 = 0.15$ ,  $p = 0.037$ ) and VFQ-25 score ( $R^2 = 0.15$ ,  $p = 0.02$ ). The VIPD-Q could

not correctly identify patients with relevant ophthalmological disorders. In this study sample, many participants manifested previously undetected ophthalmological diseases, most of which threatened vision, impacted on daily life functioning and were amenable to treatment. Screening for these ophthalmological disorders using a questionnaire asking about symptoms seems insufficient. Instead, episodic ophthalmological assessments should be considered for PD patients, aiming to identify vision-threatening yet treatable diseases.

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## **Committee Activities**

### **Clinical Care Committee**

- **Rotation of Committee Chair:** Leadership for the clinical care committee rotates amongst the PADRECCs. The Southeast/Richmond PADRECC leads the committee for January/February. The committee meets via conference call the first Tuesday of the month at 12pm (EST)
- **Standardize and Optimize Clinical Care:** The committee continues to discuss treatment strategies, new medications and other procedures, and other clinical issues to improve patient care and outcomes across the national PADRECCs service area. It also serves to provide clinical support to the consortium network by focusing on procedures and measures to standardize clinical care across the PADRECC network.
- Recent agenda items have included:
  1. Future planning to enhance clinical service provision at PADRECCs : Suggestions and Strategies
  2. Discussion of DBS management and surgical programs at the PADRECCs

### **Education Committee**

- **PADRECC/EES Movement Disorder Series-Webinars:** knowledge-based webinars to provide VHA healthcare professionals with current practice standards and emerging trends in the treatment of Parkinson's disease and other movement disorders. CEs are typically provided for the live webinars. Check out the following link for a list of past webinars and if you are interested in receiving a recording of a past webinar please email [Gretchen.glenn@va.gov](mailto:Gretchen.glenn@va.gov) and list the date/topic of interest: [https://www.parkinsons.va.gov/Consortium/Presentations/Audio\\_Conference/MDS.asp](https://www.parkinsons.va.gov/Consortium/Presentations/Audio_Conference/MDS.asp)
  - **REGISTER NOW- Movement Disorders Series Part III-Webinar–Autonomic Dysfunction in Parkinson's Disease**- February 9<sup>th</sup>, 2023- 9am-1pm PST / 12pm-4pm EST
  - **Registration Now Open - Philadelphia VA PADRECC/MIRECC Symposium/Webinar: Lifestyle Interventions to Promote Brain Health in Neuropsychiatric Disorders**- March 22, 2023 - 8am - 12pm PST / 11am - 3pm EST

- **VHA/PADRECC & The Parkinson’s Foundation Partnership:** Goal of the partnership is to improve the care and quality of life for Veterans living with PD through collaborative education, research and services. This committee spearheads many of the projects for this partnership. Please check out the Transmitter email for current partnership offerings/activities
- **National Website Maintenance:** The committee performs periodic maintenance checks of the National Website to ensure information is current and up-to-date.
- **PADRECC Transmitter:** This committee continues to assemble and distribute this *e*-newsletter every other month.
- **Resources available on the National Website:**
  - **Patient Education Brochures-** <https://www.parkinsons.va.gov/patients.asp>
    - Exercise and Physical Activity
    - Fall Prevention
    - Motor Symptoms
    - Non-Motor Symptoms
    - Agent Orange and Toxic Exposures and PD
  - **PADRECC Support/Education Groups:** The PADRECCs are now holding virtual groups open to Veterans and care partners interested in attending. Please check out the National Website for listing of dates/times and contact person to register for the groups and please share with your patients/care partners: <https://www.parkinsons.va.gov/patients.asp>
  - **My Parkinson’s Story-**<https://www.parkinsons.va.gov/patients.asp>  
A series of short videos prepared by the VA PADRECCs addressing various aspects of Parkinson’s disease.
  - **Suggested Education Essentials for Veterans with PD**
    - **Digital version:** <https://www.parkinsons.va.gov/patients.asp>
    - **Printer friendly version:**



Suggested Education  
Essentials