DANCE AND CREATIVE MOVEMENT MAY IMPROVE QUALITY OF LIFE BUT NOT GAIT AND BALANCE IN INDIVIDUALS WITH PARKINSON’S DISEASE
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Purpose
To determine the effects of dance and creative movement on gait, balance, and quality of life in individuals with Parkinson’s disease.

Introduction
- Parkinson’s disease (PD) is a progressive neurodegenerative movement disorder affecting more than one million Americans.
- Exercise has proven effective in increasing gait speed, and improving balance and quality of life in individuals with PD.
- Previous studies examining the effects of tango and ballroom dancing showed significant improvements in balance, utilizing the Berg Balance Scale.
- This study used the Mark Morris Dance for PD program, created specifically for individuals with Parkinson’s disease, to determine the benefits of dance and creative movement over 12 weeks.

Methods
- Participants: 11 individuals diagnosed with Parkinson’s disease (age range: 65 to 88 years; 5 females, 6 males; Hoehn & Yahr scores range 1-3)
- Intervention: Dance classes held once a week for 12 weeks in addition to practice at home with the Mark Morris Dance for PD® At Home DVD twice a week for 45 minutes; spouses were encouraged to attend weekly class as well.
- Weekly dance class structure (75 min):
  - 20 min: seated movements focused on warming up the torso, shoulders, and legs as well as gentle stretches
  - 20 min: supported standing focused on balance and strengthening stabilizing muscles
  - 30 min: standing, partnered movement including swing, shag, and tango
  - 5 min: cool down
- Experimental Design: Data were collected within one week pre and post intervention
- Evaluations: Forward walking at self-selected pace, Postural sway using mCTSIB with participants standing on AMTI force plates to record center of pressure data, Mini-BESTest, and Falls Efficacy Scale, Apathy Scale and the PDQ-39
- Statistical Analysis: A paired-samples t-test; α = 0.05

Results
Average Number of Classes Attended: 10.8 out of 12
Average minutes spent with at-home DVD per week: 24.56

Discussion
- Lesser apathy following the intervention may be attributed to elements of the dance class, such as the music, movement, creativity, and social interaction.
- The decrease in the percent of time spent in double support phase after the intervention suggests that a dance and creative movement class once a week can have a minimal beneficial effect on gait. This may be attributed to factors participants noticed such as increased confidence with gait and improvements in coordination following the intervention.
- Limitations of this study:
  - Changes in medications during the study
  - Changes in other physical activities during the study
  - Variability of usage of the Mark Morris Dance for PD® At Home DVD for additional practice at home (range of 0-82 min/wk).
  - Small sample size (n=11)

Conclusion
An instructor-led dance class based on the Mark Morris Dance for PD® program given once per week for 12 weeks improves certain aspects of quality of life and has minimal effects on gait and balance in individuals with PD. More extensive research may determine the full benefits of dance for individuals with PD.

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References