The Influence of a Group Dance Program on Social Engagement in Individuals with Parkinson's Disease

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**Introduction**
Clinical depressive disturbances occur in 40-50% of individuals with Parkinson’s disease (PD). Individuals with PD experience postural instability, gait dysfunction, and poor coordination as the disease progresses. As a result of these physical limitations, individuals with PD are more likely to be socially isolated in their community which can increase likelihood of experiencing depression. Dance for PD was investigated in a recent study and it was found to improve psychological symptoms, quality of life (QoL), and select cognitive skills. Depression and anxiety were significantly reduced when it came to psychological symptoms and activities of daily living. Emotional well-being and cognition also improved due to the improvement of QoL.

The purpose of this research project is to investigate the influence of a group dance program on non-motor symptoms such as social engagement and overall QoL in individuals with PD and potentially expand intervention options to support this population.

This research project was conducted in collaboration with UAB Arts in Medicine (AIM) and their partnership with The Dance Foundation.

**Methods**
- This research project utilized a mixed-methods methodology consisting of the World Health Organization Quality of Life: Brief Version (WHOQOL-BREF) assessment and an investigator-created survey, focused on social engagement.
- The WHOQOL-BREF was administered prior to beginning and after completing the six-week dance program.
- The investigator-created survey was administered at the completion of the program.
- Participants were recruited through UAB AIM’s Movement for Parkinson’s Group Dance Class. A total of three participants completed the research study (n=3).
- Participants were encouraged to attend 2 one-hour group dance classes per week for a total of six weeks.

**Results**

**Demographics of Participants**
- 3 females, M = 70.66 years
- 100% participants had a confirmed diagnosis of PD
- M = 8 years since receiving PD diagnosis

**Dance Class Attendance**
- P attended 8/12 dance sessions (66%);
- P2 attended 8/12 dance sessions (66%);
- P3 attended 6/12 dance sessions (50%)

**WHOQOL-BREF Scores**

| Table 1: WHOQOL-BREF Calculation Results |
|---|---|---|---|---|
| Overall | Domain 1 | Domain 2 | Domain 3 | Domain 4 |
| Pre-Test Scores | 78.316.2 | 10.361.1 | 12.263.1 | 11.152.8 | 10.563.3 |
| Post-Test Scores | 94.434.1 | 11.861.4 | 13.213.1 | 12.65.6 | 16.181.8 |
| p-Value | 0.2837 | 0.0279 | 0.5633 | 0.0916 | 0.1127 |

**Discussion**

**Quality of Life**
- The results of the WHOQOL-BREF assessment demonstrated that participating in a 6-week group dance program produced a statistically significant difference from pre-test to post-test scores in QoL, Domain 1, Physical Health. The facets incorporated within this domain include activities of daily living, dependence of medical substances and medical aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity.

- Although not significantly different, participant’s average Overall QoL scores increased indicating that a group dance program had a positive impact on QoL for individuals with PD.

**Social Engagement**
- Participants’ reported an increase in positive emotions (e.g., enjoyment, mood, motivation) and an increase in self-esteem which can lead to an increase in self-confidence to continue involvement in meaningful activities.

- An individual's confidence to approach social interactions and form new friendships is influenced by their personality and the opportunities presented to them. A group dance program can incorporate elements such as a dedicated socialization hour into the session.

- The expected increase in personal relationships and support systems due to participating in a group dance program was limited due to connections formed being confined to the dance program.

- Despite QoL improvements shown in Domain 1 (Physical Health), individuals with PD still harbor uncertainty about venturing into community settings alone.

- A group dance program targeted for individuals with PD has a positive impact on social involvement and helps combat feelings of social isolation and depression.

**Investigator-Created Social Engagement Survey**

**Figure 1: Frequency of Responses for Social Engagement Survey**

**Implications for OT Practice**
- Occupational therapy practitioners play a pivotal role in addressing the occupational performance and participation needs of individuals with PD. Occupational therapy practitioners should incorporate a group dance program into their clinical management for PD as it has been found to increase QoL, self-esteem, and reduce social isolation.

**Limitations**
- Small sample size (n=3)
- Gender-specific representation raised considerations about the generalizability of findings to the broader PD population
- Dance class attendance patterns

**Future Research Suggestions**
- Future research on dance for PD should strive to address these limitations. Additionally, future research should incorporate a designated socialization hour within the dance program to maximize the social benefits. In order to garner more in-depth responses from participants, future research should conduct in-person interviews.

**References**

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