

Background

- Persons with Parkinson Disease (PD) are physically inactive even when compared with sedentary healthy adults.¹
- Low outcome expectation, poor exercise self-efficacy, lack of time available to exercise, and fear of falling are perceived barriers for persons with PD.^{2,3}
- Participation in exercise and physical activity improves function and reduces disability in persons with PD.^{4,5}
- Exercise can be effective at improving physical function, quality of life, strength, balance and walking.⁵

Aim/Objective

- To retrospectively evaluate the effectiveness of a community wellness program for persons with PD.

Methods

Study Population & Design

- 276 subjects with Parkinson Disease who participated in a six week community wellness program
- Pre-test – Post-test Design

Recommended Guidelines for Inclusion in Program

Participants were able to:

- Comprehend and follow directions and maintain attention for 1.5 hours.
- Arrive at the location of the class independently or with assistance from a caregiver.
- Get up and down from the floor or mat with no assistance.
- Submit a completed "Patient Registration Form" including medical history and contact information.
- Submit a "Physician Approval Form" signed by participants' primary care physician, nurse practitioner or neurologist.

Outcomes, Intervention and Analysis

Outcome Measures and Satisfaction Survey

Demographic data was gathered at baseline (e.g. age, sex, years since diagnosis, and Hoehn & Yahr [H&Y] stage).

Functional status and quality of life were assessed pre and post intervention:

- Parkinson Disease Questionnaire 39 (PDQ39) used to measure quality of life of participants.
- Functional Gait Assessment (FGA) used to assess postural control and balance during ambulation.
- Six Minute Walk Test (6MWT) used to measure the walking distance covered over 6 minutes.

Satisfaction Survey was given after completion of the program to evaluate participant satisfaction, self reported progress, and recommendations for future programs.

Intervention

- Healthcare professionals from hospitals and outpatient centers attended a 2.5 day seminar at Boston University and were trained in evidence-based rehabilitation approaches in PD, general medical and pharmacological management of PD, and implementation of a Community Wellness Program for persons with PD.
- The healthcare professionals from 9 sites implemented 38 total Community Wellness Programs in their local communities across the New England area.
- Community Wellness Program manuals consisting of an evidence-based exercise program were distributed to all Community Wellness Program leaders and participants with PD.
- The exercise program consisted of strengthening, balance exercises, stretching, functional training and gait training.
- Programs were administered in a group format and offered 2 times per week for 1.5-hours over a 6-week duration.
- Data was collected over four years (2010 to 2014) from Community Wellness Programs.

Statistical Analysis

- Data was analyzed retrospectively using SPSS Version 20.0.
- Two tailed paired T-tests were conducted to analyze the difference between pre and post outcome measurements.



Results

- 276 participants, 11 dropped out due to medical reasons or lack of transportation
- Data was analyzed for all available data recorded from each program

Table 1: Participant Characteristics

| | Mean (Range) |
|--------------------------|--------------|
| Age (N=176) | 73.5 (49-90) |
| H&Y (N=149) | 2.1 (1-3) |
| Disease Duration (N=167) | 4.5 (25-20) |

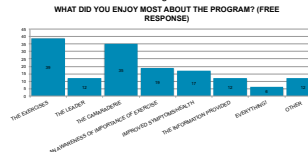
Table 2: Outcome Measures Data and Results

| | Mean Improvement (SD) | P Value |
|---|-----------------------|---------|
| FGA (N= 242) | 3.5 points (1.2) | <0.001 |
| Six Minute Walk Test (N= 259) | 51 m (29.3) | <0.001 |
| Parkinson Disease Questionnaire 39 | | |
| Total (N= 256) | 3% | 0.003 |
| Mobility Category | 3% | 0.004 |
| ADL Category | 3% | 0.032 |
| Emotional Category | 3% | 0.004 |
| Stigma Category | 1% | 0.554 |
| Social Category | 0% | 0.787 |
| Cognition Category | 3% | 0.003 |
| Communication Category | 3% | 0.028 |
| Body Discomfort Category | 2% | 0.010 |

Results



Figure 3: WHAT DID YOU ENJOY MOST ABOUT THE PROGRAM? (FREE RESPONSE)



- A majority of the participants reported that the program met expectations (86%) and found the exercises beneficial (94%).
- Participants reported that the camaraderie was a very enjoyable aspect of the class. Several commented that this became a great support system for them.
- Upon completion of the course, many participants felt knowledgeable about the importance of exercise and management of disease symptoms with PD.

Conclusion/Discussion

- A Train-the-trainer model was successful in facilitating health care professionals to administer evidence-based Community Wellness Programs for people with PD in numerous sites across New England.
- Evidence-based community-based wellness programs administered by a trained health care professional can be effective in improving quality of life and physical function in persons with a chronic condition such as Parkinson Disease.
- Participants with PD found the Community Wellness Programs effective and enjoyable.

Study Limitations

- Variations in implementation of the program across sites may have occurred.
- A record of the number of sessions attended by participants was not recorded; therefore adherence rates could not be analyzed.
- Lack of complete data sites across sites may have influenced our findings.
- Follow-up effects were not measured.

Future Research

- Evaluation of effects of sustained participation in Community Wellness Programs over the long-term.

References

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