

Determinants of Exercise Behavior in Persons with Parkinson Disease

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Abstract:

Background

The clinically meaningful benefits of exercise in reducing disability in persons with Parkinson disease (PD) are becoming more evident. However, regular participation in exercise is necessary to optimize benefits. The factors associated with engaging in exercise have received little scientific scrutiny in this population.

Objective

The purpose of this study was to explore determinants of exercise behavior in a relatively large sample of ambulatory persons with Parkinson Disease using the ICF model as a guiding framework.

Design

This was a cross-sectional study

Methods

This study included 260 patients with Parkinson disease recruited from 4 institutions in the U.S. Subjects had a mean age of 67.7 (9.2) years and a mean modified Hoehn and Yahr score of 2.35 (0.69). Participants were designated as exercisers or non-exercisers based on responses to the Stages of Readiness to Exercise Questionnaire. Exercise status was validated using the Physical Activity Scale for the Elderly (PASE) and a StepWatch 3 Activity Monitor (SAM). Measures examined for their association with exercise behavior were categorized according to the ICF and included the Unified Parkinson Disease Rating Scale motor section III, the number of comorbidities, the geriatric depression scale, the 6-minute walk test, fall history, the Parkinson Disease Questionnaire mobility domain, social support, the self-efficacy of exercise scale and demographic and socioeconomic factors. Univariate and multivariate logistic regression analyses were conducted and odds ratios calculated.

Results

A total of 164 participants (63%) were designated as exercisers. Personal contextual factors were most associated with exercise behavior. Subjects with high self-efficacy were two times more likely to engage in regular exercise than those with low self-efficacy (adjusted OR = 2.34, 95% CI = 1.30-4.23). Participants who were college educated and older were also more likely to exercise. Disability level related to severity of impairments, activity limitations and participation restrictions were not significantly associated with exercise behavior.

Limitations

The cross-sectional nature of the study limits our ability to make causal inferences.

Conclusions

This study identified self-efficacy as the strongest determinant of exercise behavior in persons with PD. Level of disease severity did not modify the association between self-efficacy and exercise. These results suggest that physical therapists should include strategies to increase self-efficacy, related to confidence in ability to exercise, into their treatment sessions of patients with PD.

Key words: Disability, Exercise, Self-efficacy, Parkinson disease