

Parkinson's Disease

Current Awareness

Bulletin

August 2016

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Title: Comparison of Self-report and Performance-Based Balance Measures for Predicting Recurrent Falls in People With Parkinson Disease: Cohort Study.

Citation: Physical therapy, Jul 2016, vol. 96, no. 7, p. 1074-1084, 1538-6724 (July 2016)

Author(s): Almeida, Lorena R S, Valenca, Guilherme T, Negreiros, Nádja N, Pinto, Elen B, Oliveira-Filho, Jamarly

Abstract: Balance confidence and fear of falling are factors associated with recurrent falls in people with Parkinson disease (PD). However, the accuracy for predicting falls on the basis of self-report measures has not been widely investigated. The study objectives were: (1) to compare the accuracy of the Activities-specific Balance Confidence Scale (ABC) and the Falls Efficacy Scale-International (FES-I) with that of the Berg Balance Scale (BBS), Dynamic Gait Index (DGI), Functional Reach Test (FRT), and Timed "Up & Go" Test (TUG) for predicting recurrent falls in people with PD and (2) to explore the ability of combinations of up to 3 tests to predict recurrent falls. This was a prospective cohort study involving 225 people with PD. Participants were assessed with the ABC, FES-I, BBS, FRT, TUG, and DGI. Participants who reported 2 or more falls in the 12-month follow-up period were classified as recurrent fallers. Areas under the receiver operating characteristic curves were determined, and the Akaike information criterion was used to select the best predictive model. Eighty-four participants (37.3%) were classified as recurrent fallers. Areas under the receiver operating characteristic curves for the ABC, FES-I, TUG, FRT, DGI, and BBS were 0.73, 0.74, 0.72, 0.74, 0.76, and 0.79, respectively. Two-test models provided additional discriminating ability compared with individual measures and had Akaike information criterion values similar to those of 3-test models, particularly the combination of the BBS with the FES-I. The lack of an external validation sample was a limitation of this study. The ABC and FES-I demonstrated moderate accuracy in predicting recurrent falls and a predictive ability similar to that of performance-based balance measures, especially the FRT and the TUG. Two-test models showed performance similar to that of 3-test models, suggesting that a combination of 2 measures may improve the ability to predict recurrent falls in people with PD. Specifically, the combination of the BBS with the FES-I may be considered. © 2016 American Physical Therapy Association.

Full Text:

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Available from *Highwire Press* in [Physical Therapy](#)

Available from *ProQuest* in [Physical Therapy](#)

Title: Treatment of Fatigue in Parkinson Disease.

Citation: JAMA, Jun 2016, vol. 315, no. 21, p. 2340-2341, 1538-3598 (June 7, 2016)

Author(s): Elbers, Roy G, Berendse, Henk W, Kwakkel, Gert

Abstract: Which pharmacological and nonpharmacological interventions are associated with improvement in general, physical, or mental fatigue and minimal adverse effects in patients with Parkinson disease (PD)? Rasagiline, modafinil, and doxepin are associated with improvement in fatigue and are not associated with increased risk of adverse effects in patients with PD. However, the quality of evidence is limited and does not provide a clear basis for treatment decisions.

Title: Effect of health Baduanjin Qigong for mild to moderate Parkinson's disease.

Citation: Geriatrics & gerontology international, Aug 2016, vol. 16, no. 8, p. 911-919, 1447-0594 (August 2016)

Author(s): Xiao, Chun-Mei, Zhuang, Yong-Chang

Abstract: The present study investigated the effectiveness of Baduanjin Qigong on symptoms related to gait, functional mobility and sleep in Parkinson disease (PD) patients. A total of 100 patients (age 67.53 ± 8.56 years, range 55-80 years) with mild to moderate PD were randomly assigned to two groups. Participants in the Baduanjin Qigong group (BQG) received a Baduanjin Qigong program, consisting of four 45-min sessions each week and daily walking 30 min for 6 months. Participants in the control group were carried out daily walking for 30 min. Pre- and post-intervention testing was carried out to assess sleep quality, fatigue, functional mobility and gait performance in these participants. After the 6-month Baduanjin Qigong intervention, the BQG showed sleep quality improvements in the Unified Parkinson's Disease Rating Scale score ($P = 0.049$), Parkinson's Disease Sleep Scale-2 (PDSS-2) total score ($P = 0.039$), Motor Symptoms at Night (PDSS-2) score ($P = 0.039$), PD Symptoms at Night (PDSS-2) score ($P = 0.029$), Disturbed Sleep (PDSS-2) score ($P = 0.037$). The BQG showing functional mobility capacity greater improvements in the Berg Balance Scale ($P = 0.041$) and 6-minute walk test ($P = 0.042$), and greater decrease in the Timed Up & Go (s; $P = 0.046$). The BQG showing gait function increased in the gait speed (m/s; $P = 0.011$). However, this was not the case for the control group, which remained at the same level as pretest performance. BQG improved the gait performance, functional mobility and sleep quality in older adults with PD at the 6-month follow up. It is as an alternative home exercise program for older adults in rehabilitation for PD. *Geriatr Gerontol Int* 2016; 16: 911-919. © 2015 Japan Geriatrics Society.

Title: Continuation of full time employment as an inhibiting factor in Parkinson's disease symptoms.

Citation: Work, 2016, vol./is. 54/3(569-575), 10519815

Author(s): Cholewa, Joanna, Gorzkowska, Agnieszka, Kunicki, Marcin, Stanula, Arkadiusz, Cholewa, Jaroslaw

Abstract: BACKGROUND: Parkinson's disease (PD) is a neurodegenerative disease. Due to a constantly growing incidence rate and lowering age of PD patients it is becoming a more serious social problem. OBJECTIVE: The aim of this study was to determine the effectiveness of physiotherapy procedure of patients with PD depending on their working status. METHODS: The research was carried out on 89 people with diagnosed PD of IInd stage according to the Hoehn and Yahr classification. They were divided into two groups: working professionally and non-working. The Unified Parkinson's Disease Rating Scale (UPDRS) was used to estimate patients' clinical status while the PDQ-39 (Parkinson's Disease Questionnaire) scale evaluated quality of life. Patients took part in rehabilitation activities twice a week for a period of 20 weeks. In both groups an improvement in physical activity and a quality of life were achieved. RESULTS: Better effects were observed in the group of working patients. Statistically significant differences were notice in part II UPDRS ($p = 0.001$), part I, II and III total of UPDRS ($p = 0,001$) and in the PDQ-39 test ($p = 0.003$). CONCLUSIONS: Employment and participation in properly planned physiotherapy help reduce the symptoms and improve the quality of life in people with Parkinson's disease.

Title: Reliability and validity assessment of an apathy scale for home-care patients with Parkinson's disease: a structural equation modeling analysis.

Citation: Journal of physical therapy science, Jun 2016, vol. 28, no. 6, p. 1724-1727, 0915-5287 (June 2016)

Author(s): Morita, Hiroaki, Kannari, Kazuya

Abstract: [Purpose] Based on the Starkstein Apathy Scale, an apathy scale was developed for home-care patients with Parkinson's disease using structural equation modeling (SEM), with which the data compatibility of extraction factors can be verified. [Subjects and Methods] The participants

were 122 home-care patients with Parkinson's disease (mean age: 70.9 ± 7.8 years) who were member of the Aomori branch or Tohoku/Hokkaido block of the Japan Parkinson's Disease Association. A questionnaire survey (anonymous, self-administered) was carried out by distributing and collecting questionnaires by mail or a collective survey at a workshop. Construct validity was evaluated by confirmatory factor analysis using SEM. Internal consistency was investigated using Cronbach's alpha coefficient. Criterion-related validity was assessed by correlation analysis with the total score of the Beck Depression Inventory. [Results] Concerning construct validity, 11 of the 14 question items of the original scale were extracted. Cronbach's α of this scale was 0.939. For criterion-related validity, Spearman's rank correlation coefficient was 0.831. [Conclusion] The construct validity, internal consistency, and criterion-related validity of the 11-item apathy scale were confirmed. The 11-item apathy scale can serve as a useful tool for the efficient and effective assessment of rehabilitation, establishment of rehabilitation goals and programs for patients with Parkinson's disease.

Full Text:

Available from *National Library of Medicine* in [Journal of Physical Therapy Science](#)

Title: Effect of simultaneous application of postural techniques and expiratory muscle strength training on the enhancement of the swallowing function of patients with dysphagia caused by parkinson's disease.

Citation: Journal of physical therapy science, Jun 2016, vol. 28, no. 6, p. 1840-1843, 0915-5287 (June 2016)

Author(s): Byeon, Haewon

Abstract: [Purpose] This study aimed to investigate the effect of simultaneous application of postural techniques and expiratory muscle strength training on the enhancement of the swallowing function of patients with dysphagia caused by Parkinson's disease. [Subjects and Methods] The subjects of this study were 18 patients who received simultaneous application of postural techniques and expiratory muscle strength training and 15 patients who received expiratory muscle strength training only. Postural techniques were conducted in the order of chin tucking, head rotation, head tilting, bending head back, and lying down, while expiratory muscle strength training was conducted at a resistance level of about 70% of the maximal expiratory pressure. Swallowing recovery was assessed by using the Functional Dysphagia Scale based on videofluoroscopic studies. [Results] The mean value obtained in the videofluoroscopic studies for both groups decreased after the treatment. In the postural techniques plus expiratory muscle strength training group, the decrease was significantly greater than that in the expiratory muscle strength training-only group. [Conclusion] The results imply that simultaneous performance of postural techniques and expiratory muscle strength training is more effective than expiratory muscle strength training alone when applied in the swallowing rehabilitation for patients with dysphagia caused by Parkinson's disease.

Full Text:

Available from *National Library of Medicine* in [Journal of Physical Therapy Science](#)

Title: Measures used for the evaluation of balance in individuals with Parkinson's disease: a systematic review.

Citation: Journal of physical therapy science, Jun 2016, vol. 28, no. 6, p. 1936-1942, 0915-5287 (June 2016)

Author(s): Lopes, Jamile Benite Palma, Lameira de Melo, Gileno Edu, Lazzari, Roberta Delasta, Santos, Cibele Almeida, Franco de Moura, Renata Calhes, Dumont, Arislander Jonathan Lopes,

Braun, Luiz Alfredo Ferreira, Duarte, Natalia Almeida Carvalho, Pareira, Rodolfo Borges, Miziara, Isabela Marques, Oliveira, Claudia Santos

Abstract: [Purpose] The present literature review was conducted on the use of different measures for the evaluation of balance in patients with Parkinson's disease. [Materials and Methods] The PubMed, Bireme, SciELO, Lilacs, and PEDro electronic databases were searched for relevant studies. [Results] The searches initially led to the retrieval of 3,623 articles, 540 of which were potentially eligible after limiting the search to clinical trials published in the last five years. A total of 264 duplicates were removed, and 276 articles were excluded based on their titles and abstracts. The full texts of 84 articles were analyzed, and only those with a PEDro score higher than four points (n=25) were included in the review. [Conclusion] Different methods, such as scales, tests, and equipment, are used for the evaluation of balance in patients with Parkinson's disease. More than one measure has been employed in most studies, and there is no consensus on a single precise measure for the evaluation of balance in this population.

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Title: Regular exercise and related factors in patients with Parkinson's disease: Applying zero-inflated negative binomial modeling of exercise count data.

Citation: Applied nursing research : ANR, May 2016, vol. 30, p. 164-169, 1532-8201 (May 2016)

Author(s): Lee, JuHee, Park, Chang Gi, Choi, Moonki

Abstract: This study was conducted to identify risk factors that influence regular exercise among patients with Parkinson's disease in Korea. Parkinson's disease is prevalent in the elderly, and may lead to a sedentary lifestyle. Exercise can enhance physical and psychological health. However, patients with Parkinson's disease are less likely to exercise than are other populations due to physical disability. A secondary data analysis and cross-sectional descriptive study were conducted. A convenience sample of 106 patients with Parkinson's disease was recruited at an outpatient neurology clinic of a tertiary hospital in Korea. Demographic characteristics, disease-related characteristics (including disease duration and motor symptoms), self-efficacy for exercise, balance, and exercise level were investigated. Negative binomial regression and zero-inflated negative binomial regression for exercise count data were utilized to determine factors involved in exercise. The mean age of participants was 65.85±8.77years, and the mean duration of Parkinson's disease was 7.23±6.02years. Most participants indicated that they engaged in regular exercise (80.19%). Approximately half of participants exercised at least 5days per week for 30min, as recommended (51.9%). Motor symptoms were a significant predictor of exercise in the count model, and self-efficacy for exercise was a significant predictor of exercise in the zero model. Severity of motor symptoms was related to frequency of exercise. Self-efficacy contributed to the probability of exercise. Symptom management and improvement of self-efficacy for exercise are important to encourage regular exercise in patients with Parkinson's disease. Copyright © 2015 Elsevier Inc. All rights reserved.

Title: Electroencephalographic prodromal markers of dementia across conscious states in Parkinson's disease.

Citation: Brain : a journal of neurology, Apr 2016, vol. 139, p. 1189-1199, 1460-2156 (April 2016)

Author(s): Latreille, Véronique, Carrier, Julie, Gaudet-Fex, Benjamin, Rodrigues-Brazète, Jessica, Panisset, Michel, Chouinard, Sylvain, Postuma, Ronald B, Gagnon, Jean-François

Abstract: In Parkinson's disease, electroencephalographic abnormalities during wakefulness and non-rapid eye movement sleep (spindles) were found to be predictive biomarkers of dementia. Because rapid eye movement sleep is regulated by the cholinergic system, which shows early degeneration in Parkinson's disease with cognitive impairment, anomalies during this sleep stage might mirror dementia development. In this prospective study, we examined baseline electroencephalographic absolute spectral power across three states of consciousness (non-rapid eye movement sleep, rapid eye movement sleep, and wakefulness) in 68 non-demented patients with Parkinson's disease and 44 healthy controls. All participants underwent baseline polysomnographic recordings and a comprehensive neuropsychological assessment. Power spectral analyses were performed on standard frequency bands. Dominant occipital frequency during wakefulness and ratios of slow-to-fast frequencies during rapid eye movement sleep and wakefulness were also computed. At follow-up (an average 4.5 years after baseline), 18 patients with Parkinson's disease had developed dementia and 50 patients remained dementia-free. In rapid eye movement sleep, patients with Parkinson's disease who later developed dementia showed, at baseline, higher absolute power in delta and theta bands and a higher slowing ratio, especially in temporal, parietal, and occipital regions, compared to patients who remained dementia-free and controls. In non-rapid eye movement sleep, lower baseline sigma power in parietal cortical regions also predicted development of dementia. During wakefulness, patients with Parkinson's disease who later developed dementia showed lower dominant occipital frequency as well as higher delta and slowing ratio compared to patients who remained dementia-free and controls. At baseline, higher slowing ratios in temporo-occipital regions during rapid eye movement sleep were associated with poor performance on visuospatial tests in patients with Parkinson's disease. Using receiver operating characteristic curves, we found that best predictors of dementia in Parkinson's disease were rapid eye movement sleep slowing ratios in posterior regions, wakefulness slowing ratios in temporal areas, and lower dominant occipital frequency. These results suggest that electroencephalographic slowing during sleep is a new promising predictive biomarker for Parkinson's disease dementia, perhaps as a marker of cholinergic denervation. © The Author (2016). Published by Oxford University Press on behalf of the Guarantors of Brain. All rights reserved. For Permissions, please email: journals.permissions@oup.com.

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Title: A Fall in the Workplace Leads to a Diagnosis of Parkinson's Disease.

Citation: Workplace Health & Safety, 2016, vol./is. 64/8(348-349), 21650799

Author(s): Lurati, Ann Regina

Sources Used

The following databases are searched on a regular basis in the development of this bulletin: Amed, British Nursing Index, Cinahl, Medline

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