



# Outpatient Physical Therapy for an Older Adult with Parkinson Disease and Potential Psychogenic Parkinsonism Characteristics



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## BACKGROUND & PURPOSE

Parkinson disease (PD) is a common, complex progressive neurodegenerative condition with motor and non-motor symptoms that lead to an overall decline in function, safety, and independence.<sup>1,2</sup> Biopsychosocial factors must be considered when implementing a plan of care for individuals with PD due to higher rates of depression and anxiety disorders compared to age-matched peers.<sup>3,4</sup> The possibility of psychogenic symptoms, including sudden onset of symptoms, non-progressive manifestations of symptoms, and inconsistent movements that disappear with distraction techniques, must be investigated when objective measurement data do not coincide with patient report.<sup>5-7</sup> The purpose of this case report is to describe outpatient physical therapy (PT) for an older adult diagnosed with PD, depression, and an anxiety disorder while considering biopsychosocial and psychogenic factors.

## CASE DESCRIPTION

The patient was a 66-year-old female diagnosed with PD, depression, and an anxiety disorder. The patient's chief complaints were lateral leaning while in sitting and midline low back pain with sit-to-stand transitions. Examination indicated decreased rectus abdominis and bilateral hip extensor strength. The Four Step Square Test (FSST), Activities Balance Confidence scale (ABC scale), and 10-meter walk test revealed deficits in dynamic balance, balance confidence, and gait speed that categorized the patient as a high fall risk. See Table 1. Discrepancies between objective measurement data and patient report suggestive of psychogenic symptoms included a non-progressive manifestation of symptoms, give-way weakness, controlled falls, intention tremors, inconsistent coordination patterns, and an immediate improvement in symptoms when distracted throughout PT.

## INTERVENTIONS

Physical therapy sessions focused on static and dynamic sitting balance and lower extremity and core strengthening activities.<sup>1,2,8,9</sup> These interventions were progressed to standing static and dynamic balance exercises and incorporated functional activities relevant to the patient's daily requirements (e.g., folding laundry, washing dishes, opening cabinets).<sup>1,2,8,9</sup> To address the patient's biopsychosocial and potential psychogenic parkinsonism symptoms, the physical therapist utilized the biopsychosocial model of health via individualized treatment, strong verbal and non-verbal communication, and high-quality patient education.<sup>3-7</sup>

## OUTCOMES

After 4 PT sessions, the patient demonstrated improvements in core strength, sitting balance, and standing dynamic balance. Improvements in the patient's FSST score, ABC scale, and gait speed indicated positive changes in function.<sup>10-12</sup> Although these improvements in dynamic balance, ambulation confidence in the community, and gait speed were not large enough to be considered clinically significant, the patient expressed increased confidence in safely ambulating in the community with her trekking poles. The use of trekking poles has been documented as an assistive device capable of improving independence and safety in individuals with PD.<sup>1</sup>

Table 1

Outcome Measure	Pre-Intervention	Post-Intervention	MCD
FSST	17 sec	12.8 sec	4.6 sec
ABC Scale	41.875%	45%	11-13%
Gait Speed	0.67 m/s	0.78 m/s	0.18 m/s

## DISCUSSION

This case report demonstrates how the consideration of biopsychosocial factors alongside individualized PT may positively impact the function and social participation of individuals with PD, depression, an anxiety disorder, and potential psychogenic parkinsonism characteristics. The physical therapist made a strong commitment to listen to, acknowledge, and validate patient questions and concerns throughout physical therapy to solidify a trusting relationship with the patient. Combined with strong verbal and non-verbal communication and high-quality patient education, the physical therapist addressed the biopsychosocial factors that likely resulted in a positive PT experience for the patient.

## REFERENCES

- Keus S, Munneke M, Graziano M, et al. European physiotherapy guideline for Parkinson's disease. *The Netherlands: KNGF/ParkinsonNet*. 2014.
- Tomlinson CL, Patel S, Meeke C, et al. Physiotherapy intervention in Parkinson's disease: systematic review and meta-analysis. *BMJ*. 2012;345.
- Daluiso-King G, Hebron C. Is the biopsychosocial model in musculoskeletal physiotherapy adequate? An evolutionary concept analysis. *Physiother Theory Pract*. 2020;1-17.
- Gallagher DA, Schrag A. Psychosis, apathy, depression and anxiety in Parkinson's disease. *Neurobiol Dis*. 2012;46(3):581-589.
- Hallett M. Psychogenic parkinsonism. *J Neurol Sci*. 2011;310(1-2):163-165.
- Jankovic J. Diagnosis and treatment of psychogenic parkinsonism. *J Neurol Neurosurg Psychiatry*. 2011;82(12):1300-1303.
- Anderson KE, Gruber-Baldini AL, Vaughan CG, et al. Impact of psychogenic movement disorders versus Parkinson's on disability, quality of life, and psychopathology. *Mov Disord*. 2007;22(15):2204-2209.
- Mak MK, Wong-Yu IS, Shen X, Chung CL. Long-term effects of exercise and physical therapy in people with Parkinson disease. *Nat Rev Neurol*. 2017;13(11):689-703.
- Li Z, Wang T, Liu H, Jiang Y, Wang Z, Zhuang J. Dual-task training on gait, motor symptoms, and balance in patients with Parkinson's disease: a systematic review and meta-analysis. *Clin Rehabil*. 2020;34(11):1355-1367.
- McKee KE, Hackney ME. The four square step test in individuals with parkinson's disease: association with executive function and comparison with older adults. *NeuroRehabilitation*. 2014;35(2):279-289.
- Cole MH, Rippey J, Naughton GA, Silburn PA. Use of a short-form balance confidence scale to predict future recurrent falls in people with Parkinson disease. *Arch Phys Med Rehabil*. 2016;97(1):152-156.
- Hass CJ, Bishop M, Moscovich M, et al. Defining the clinically meaningful difference in gait speed in persons with Parkinson disease. *J Neurol Phys Ther*. 2014;38(4):233-238.