Factors associated with perceived walking difficulties in people with Parkinson’s disease

M. Kader, S. Ullén, S. Iwarsson, P. Odin, M. Nilsson (Lund, Sweden)

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Objective: To investigate factors that independently contribute to perceived walking difficulties in people with Parkinson’s disease (PD).

Background: Despite that walking difficulties are common in people with PD, there is limited knowledge regarding factors that independently contribute to their perceived walking difficulties in daily life.

Methods: The study included 243 persons (62% men) with PD; mean (min-max) age and PD duration were 70 (45-93) and 8 (1-43) years, respectively. A postal survey with self-administered questionnaires preceded a home visit which included observations, clinical tests and interviews. The dependent variable was perceived walking difficulties assessed with the self-administered generic Walk-12 (Walk-12G, scored 0-42; higher=worse). The independent variables included personal (e.g., age, general self-efficacy) and socio-environmental factors (e.g., social support, living situation) as well as disease-related factors including motor (e.g., freezing of gait (FOG), lower extremity functions) and non-motor symptoms (e.g., orthostatic hypotension, cognitive function). Each independent variable was examined with simple linear regression analyses, and variables with p-values <0.3 were then entered into a multivariable linear regression analysis model.

Results: The multivariable model identified eight (out of 15) significant independent variables, explaining 56.3% of the variance in perceived walking difficulties. The strongest contributing factor was FOG (25% of the variance), followed by general self-efficacy, fatigue, PD duration, lower extremity function, orthostatic hypotension, bradykinesia and postural instability.

Conclusions: Personal factors (i.e., general self-efficacy) as well as motor and non-motor symptoms (e.g. FOG, PD duration and fatigue) seem to be of importance when addressing perceived walking difficulties in people with PD. With such knowledge at hand, interventions addressing modifiable factors could be developed, ultimately enhancing walking ability in people with PD.

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