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## Impact of fatigue on the caregiver's burden in Parkinson's disease

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*Introduction:* Fatigue, defined as a decreased level of energy and/or an exaggerated perception of effort during specific activities, is a frequent non-motor symptom of Parkinson's disease (PD) [1]. It is a key determinant of patient's disability, with detrimental effect on quality of life [2]. However, the impact of fatigue on caregiver's burden has not been evaluated so far.

Objective: To assess the impact of fatigue on caregiver's burden on a cohort of PD patients

*Methods:* We evaluated consecutive PD patients and their primary informal caregivers. Patients' fatigue was evaluated with validated scales for PD [3-4], with consistent cut-offs for defining the presence of significant fatigue, the Fatigue Severity Scale (FSS) and the Modified Fatigue Impact Scale (mFIS). The Zarit Burden Interview (ZBI) [5] was used to define the caregiver's burden. Analysis of covariance was used to evaluate differences in the ZBI score between caregivers of patients with and without fatigue, correcting for potential confounders: patients' and caregivers' age, disease duration, motor disability (MDS-UPDRS-III score). Correlations between ZBI, FSS, and mFIS scores were calculated by means of linear regression analysis, corrected for the same confounders.

*Results:* We enrolled 53 patients (males: 66.0%; age:  $70.53\pm8.36$  years; disease duration:  $11.11\pm7.44$  years) and their caregivers. More than 70% of patients reported significant fatigue. After correcting for potential confounders, caregivers of patients with fatigue reported 2-fold higher ZBI scores, both using FSS (p=0.013) and mFIS (p=0.002) to define significant fatigue. ZBI showed significant correlation with fatigue, in particular with total mFIS (Beta=0.712; p<0.001) and mFIS subdomains (Physical: Beta=0.568, Cognitive: Beta=0.645, Psychosocial: Beta=0.408; p<0.001).

*Conclusion:* Fatigue is a frequent yet overlooked symptom of PD. Our study demonstrated that fatigue, along with its detrimental effect on patient's quality of life, is an independent determinant of caregiver's distress. Exhaustive diagnostic and therapeutic approaches are needed to ameliorate both patients' and caregivers' well-being.

## **References:**

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