

A longitudinal study on the impact of non-motor symptoms on quality of life of patients with Parkinson's disease before and during the Covid-19 pandemic

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Introduction: The coronavirus disease 2019 (Covid-19) caused severe psychological consequences on people's mental health, representing a condition of increased vulnerability for the weakest sections of population, including elderly patients with Parkinson's disease (PD).

Objectives: This longitudinal study aimed at exploring the putative impact of the most frequent non-motor symptoms and their contribute to poor health related quality of life (HRQoL) of PD patients after the Covid-19 outbreak, in comparison with the pre-pandemic status.

Methods: Forty-three non-demented PD patients were enrolled. They underwent the first assessment between December 2018 and January 2020 (T0), before the Covid-19 outbreak. Then, between March and May 2021 (T1), they were contacted again and asked to complete the second assessment. The Montreal Cognitive Assessment assessing global functioning and several questionnaires assessing depression (by the Beck Depression Inventory-II, BDI-II), apathy (by the Dimensional Apathy Scale, DAS), anxiety (by the Parkinson Anxiety Scale, PAS), anhedonia (by the Temporal Experience of Pleasure Scale, TEPS) and health-related quality of life (by the Parkinson's Disease Quality of Life Questionnaire, PDQ-8) were administered.

Results: Results of the MANOVA showed that BDI-II, TEPS and PDQ-8 scores did not change between T0 and T1. At T1, PD patients scored lower on the emotional subscale of the DAS, $F = 7.66 (1, 40)$; $p = 0.007$, and on PAS total score, $F = 4.09 (1,40)$; $p = 0.047$.

Conclusions: In the present study no worsening of depression and anhedonia was found in PD patients. Contrariwise, an improvement of emotional apathy and anxious symptoms were reported. These evidences seem to suggest that restrictive measures such as self-isolation at home might lead to a reduction of apathy and anxiety in PD due to the increase in social support provided by PD patients families during Covid-19 restrictions. This evidence suggest the need of a consistent and persistent social support which might be represented by caregivers or/and social assistive robotics.