

Comparison of In-person and Telephone Montreal Cognitive Assessment For Cognitive Profiling In Parkinson’s Disease.

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T-MoCA is a feasible and clinically meaningful option for remote cognitive screening in Parkinson's disease, demonstrating a moderate association with the in-person MoCA and meaningful associations with functional status.

INTRODUCTION

Cognitive impairment is a common non-motor manifestation of Parkinson’s disease (PD), ranging from mild cognitive impairment (PD-MCI) to Parkinson’s disease dementia. The Montreal Cognitive Assessment (MoCA) is widely used for cognitive screening; however, access to in-person evaluations may be limited in certain clinical and geographic contexts. The telephone version of the MoCA (T-MoCA) represents a potential alternative; however, evidence regarding its performance in PD populations in low- and middle-income countries remains limited

METHODS

All participants completed an in-person MoCA (score: 0-30), followed by a T-MoCA (score:0-22), administered at least two weeks and no more than three months after the in-person assessment.

Cognitive status was classified using established cut-off scores. For the in-person MoCA, scores of 18-21 defined PD-MCI and scores ≤17 defined dementia. For the T-MoCA, scores of 15-17 defined PD-MCI, and scores ≤14 defined dementia. Depressive symptoms were assessed using the Geriatric Depression Scale, and functional status using the Pfeffer Functional Activities Questionnaire.

All assessments were conducted during the ON medication state. The study was approved by the INCN Ethics Committee.

A total of 148 patients with PD were evaluated; 66.9% were men. Mean age at symptom onset was 53.6 ± 14.4 years, and mean age at evaluation was 59.8 ± 12.9 years.

RESULTS

Mean educational attainment was 11.9 ± 4.0 years. The mean in-person MoCA score: 22.2 ± 5.0, while the mean T-MoCA score:16.3 ± 3.4. Based on in-person MoCA performance, 57 patients were classified as cognitively unimpaired, 54 met criteria for PD-MCI, and 38 were classified as having dementia. T-MoCA scores showed a moderate positive correlation with in-person MoCA scores (r = 0.47, p < 0.001) and a significant negative correlation with functional status as measured by the Pfeffer questionnaire (r = −0.35, p < 0.001), indicating poorer cognitive performance with greater functional impairment. Figure 1. The mean GDS score was 5.5, consistent with mild depressive symptoms on average.

Figure 1.

RESULTS

The T-MoCA demonstrates a moderate association with in-person MoCA performance and meaningful relationships with functional status in patients with PD. These findings support the T-MoCA as a feasible tool for remote cognitive screening, particularly when access to face-to-face evaluation is limited.

CONCLUSIONS

REFERENCES

Litvan I, Goldman JG, Tröster AI, Schmand BA, Weintraub D, Petersen RC, Mollenhauer B, Adler CH, Marder K, Williams-Gray CH, Aarsland D, Kulisevsky J, Rodriguez-Oroz MC, Burn DJ, Barker RA, Emre M. Diagnostic criteria for mild cognitive impairment in Parkinson's disease: Movement Disorder Society Task Force guidelines. Mov Disord. 2012 Mar;27(3):349-56.

Dalrymple-Alford JC, MacAskill MR, Nakas CT, Livingston L, Graham C, Crucian GP, Melzer TR, Kirwan J, Keenan R, Wells S, Porter RJ, Watts R, Anderson TJ. The MoCA: well-suited screen for cognitive impairment in Parkinson disease. Neurology. 2010 Nov 9;75(19):1717-25.

Benge JF, Kiselica AM. Rapid communication: Preliminary validation of a telephone adapted Montreal Cognitive Assessment for the identification of mild cognitive impairment in Parkinson's disease. Clin Neuropsychol. 2021 Jan;35(1):133-147.

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