

Impaired Memory and Executive Function are Associated with Reduced Social Participation in People with Parkinson's Disease

Moon Young Kim, MSOT¹, Erin R. Foster, PhD, OTD, OTR/L²

¹Washington University School of Medicine in St. Louis, St. Louis, Missouri, United States; ²Washington University in St. Louis, Saint Louis, MO, USA

DOI: [10.5014/ajot.2024.78S2-PO22](https://doi.org/10.5014/ajot.2024.78S2-PO22)

Date presented: March 22, 24

Primary Author and Speaker: Moon Young Kim, moonyoungkim@wustl.edu

PURPOSE: To investigate the association between cognition and social participation in people with Parkinson's disease (PD). This information can guide targeted cognitive rehabilitation strategies.

DESIGN: Secondary analysis of cross-sectional data.

METHOD: Participants were 77 individuals with PD without dementia as defined by a score ≥ 21 on Montreal Cognitive Assessment (MoCA) (median (interquartile range) age = 67.5 (62.5-72.5) years; 40.3% female; disease duration = 6.0 (2.0-10.0) years). Social participation was measured by the Activity Card Sort Social Activities Percent Retained score, cognition by the MoCA, and demographics by self-report. Comparisons between participants with mild cognitive impairment (PD-MCI; MoCA < 26; 32.5% of sample) and normal cognition (PD-NC; MoCA ≥ 26) were conducted using independent t-tests. Pearson correlation and multiple regression analysis examined the relationships between cognitive domains and social participation.

RESULTS: The PD-MCI group had lower social participation than the PD-NC group ($p < .01$). Social participation correlated with MoCA total score and the memory and executive function domains ($r = .37$, $r = .32$, respectively, and $p < .01$), but not with visuospatial, language, and attention. The regression model with all five cognitive domains accounted for 23.4% of the variance in social participation, $F(5, 71) = 4.33$, $p < .01$. Memory and executive function were significant independent predictors of social participation ($\beta = .33$, both, $p < .05$).

CONCLUSION: Reduced cognition is associated with reduced social participation in non-demented people with PD. Specifically, memory and executive function were important predictors of social participation. This study emphasizes the need for cognitive rehabilitation strategies, particularly those that target memory and executive function, to enhance social participation in people with PD.

References

- Dalrymple-Alford, J. C., MacAskill, M. R., Nakas, C. T., Livingston, L., Graham, C., Crucian, G. P., . . . & Anderson, T. J. (2010). The MoCA: well-suited screen for cognitive impairment in Parkinson disease. *Neurology*, *75*(19), 1717-1722. <https://doi.org/10.1212/WNL.0b013e3181fc29c9>
- Lam, B., Middleton, L. E., Masellis, M., Stuss, D. T., Harry, R. D., Kiss, A., & Black, S. E. (2013). Criterion and convergent validity of the Montreal cognitive assessment with screening and standardized neuropsychological testing. *Journal of the American Geriatrics Society*, *61*(12), 2181-2185. <https://doi.org/10.1111/jgs.12541>