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MILD COGNITIVE IMPAIRMENT, NEUROPSYCHIATRIC SYMPTOMS, AND INSTRUMENTAL ACTIVITIES OF DAILY LIVING FUNCTION

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ABSTRACT

Background: Recently, there has been an increased focus on research examining changes in instrumental activities of daily living (IADL) among individuals with mild cognitive impairment (MCI). The study sought to compare the amnestic and non-amnestic MCI subtypes on 1) presence of neuropsychiatric symptoms, 2) IADL function with respect to neuropsychiatric symptoms and 3) functional and cognitive annual change with respect to neuropsychiatric symptoms.

Methods: Two datasets were analyzed separately within the study. The first sample included 109 individuals s with MCI (81 amnestic subtype, 28 non-amnestic subtype) from the Boston University Alzheimer's Disease Center (BU ADC) (77±7 years; 54% female). The second sample included 3,873 persons with MCI (2936 amnestic subtype, 737 non-amnestic subtype) from the National Alzheimer's Coordinating Center (NACC) (74±11 years; 56% female). Neuropsychiatric symptoms were measured using the Neuropsychiatric Inventory Questionnaire (NPI-Q) and the Geriatric Depression Scale (GDS). IADLs were measured using the clinician-based Functional Assessment Questionnaire (FAQ) in both datasets, and the informant-based Lawton and Brody IADL subscale and informant-based Functional Capacities Activities of Daily Living (FC-ADL) in the BU ADC dataset.

Results: Two-sample t-tests demonstrated no between-group differences in mean neuropsychiatric symptoms for the amnestic and non-amnestic MCI subtypes on both datasets. In the BU ADC dataset, two-way ANOVAs approached significance toward more functional impairment in persons with neuropsychiatric symptoms in both MCI subtypes. Within the NACC dataset, the amnestic MCI subtype with neuropsychiatric symptoms reported the most functional impairment. Mixed effects models comparing functional and cognitive changes over time did not show significant differences in the BU ADC dataset. However, a mixed effects model did demonstrate an association between neuropsychiatric symptoms and a decline in FAQ measured function in the NACC dataset.

Conclusion: No difference emerged in neuropsychiatric symptoms based on amnestic versus non-amnestic MCI subtypes. However, consistent with previous literature, the study results suggest neuropsychiatric symptoms are associated with greater functional impairment among older adults with MCI.