Neuropsychiatric Inventory in Community-Dwelling Older Adults with Mild Cognitive Impairment and Dementia

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Abstract

Background: Behavioral and psychological symptoms (BPSD) can be a prodrome of dementia, and the Neuropsychiatric Inventory (NPI) is widely used for BPSD evaluation.

Objective: To compare the prevalence of BPSD according to cognitive status, and to determine NPI cutoffs that best discern individuals with mild cognitive impairment (MCI) and dementia from those without dementia.

Methods: We included 1,565 participants (mean age = 72.7±12.2 years, 48% male). BPSD and cognitive status were assessed with the NPI and the Clinical Dementia Rating (CDR). We used multivariable logistic regression models to investigate the association of BPSD with cognitive status. The area under the curve (AUC) was used to assess model discrimination, and to determine the best NPI cutoff for MCI and dementia.

Results: Participants were cognitively normal (CDR = 0; n = 1,062), MCI (CDR = 0.5; n = 145), or dementia (CDR≥1.0, n = 358). NPI symptoms were more frequent in dementia and MCI when compared to cognitively normal. Higher odds for delusions, hallucinations, disinhibition, and psychomotor alterations were found among participants with dementia and MCI than in those who were cognitively normal. The best NPI cutoff to discern participants with dementia from those cognitively normal was 11 (AUC = 0.755). Poor discrimination (AUC = 0.563) was found for the comparison of MCI and those cognitively normal.

Conclusions: We found an increase in BPSD frequencies across the continuum of cognitive impairment. BPSD severity and frequency in MCI was more similar to individuals cognitively normal than with dementia. NPI scores≥to 11 in individuals with no diagnosis of dementia can support the decision for further investigation of dementia.

Keywords: Behavioral and psychological symptoms; Neuropsychiatric Inventory; dementia; mild cognitive impairment.