

Insomnia and Cognition: No Detectable Short-Term Effect in a Clinical Cohort

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Background

60 to 70% of people with cognitive impairment or dementia have sleep disturbances.¹ Sleep disturbance is highly prevalent among individuals with cognitive impairment and has been implicated as a potentially modifiable factor² in dementia progression.

However, longitudinal evidence from real-world clinical cohorts remains limited. We assessed whether baseline sleep disturbance was associated with accelerated cognitive decline in patients followed at a public memory clinic.

Methods

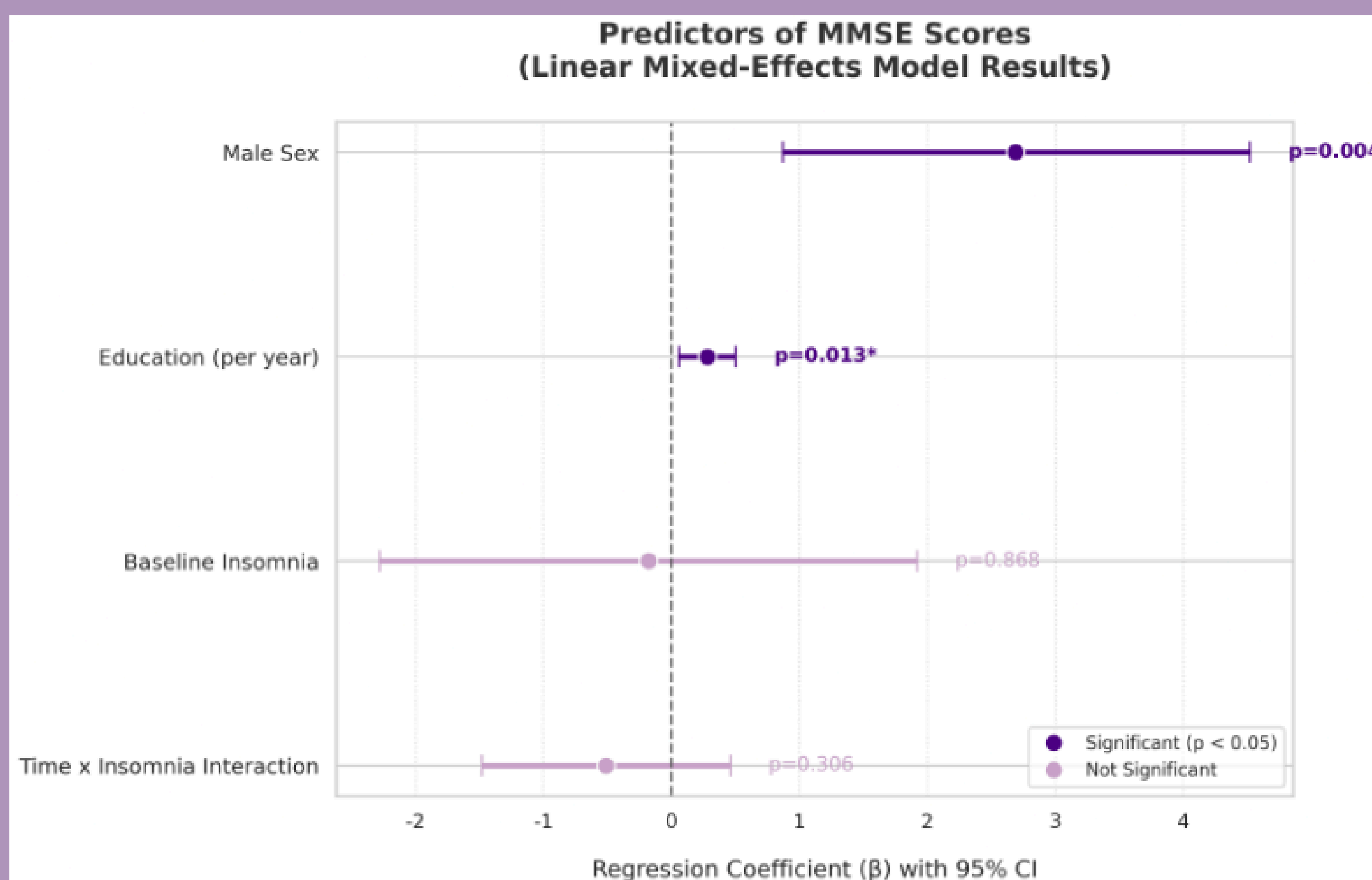
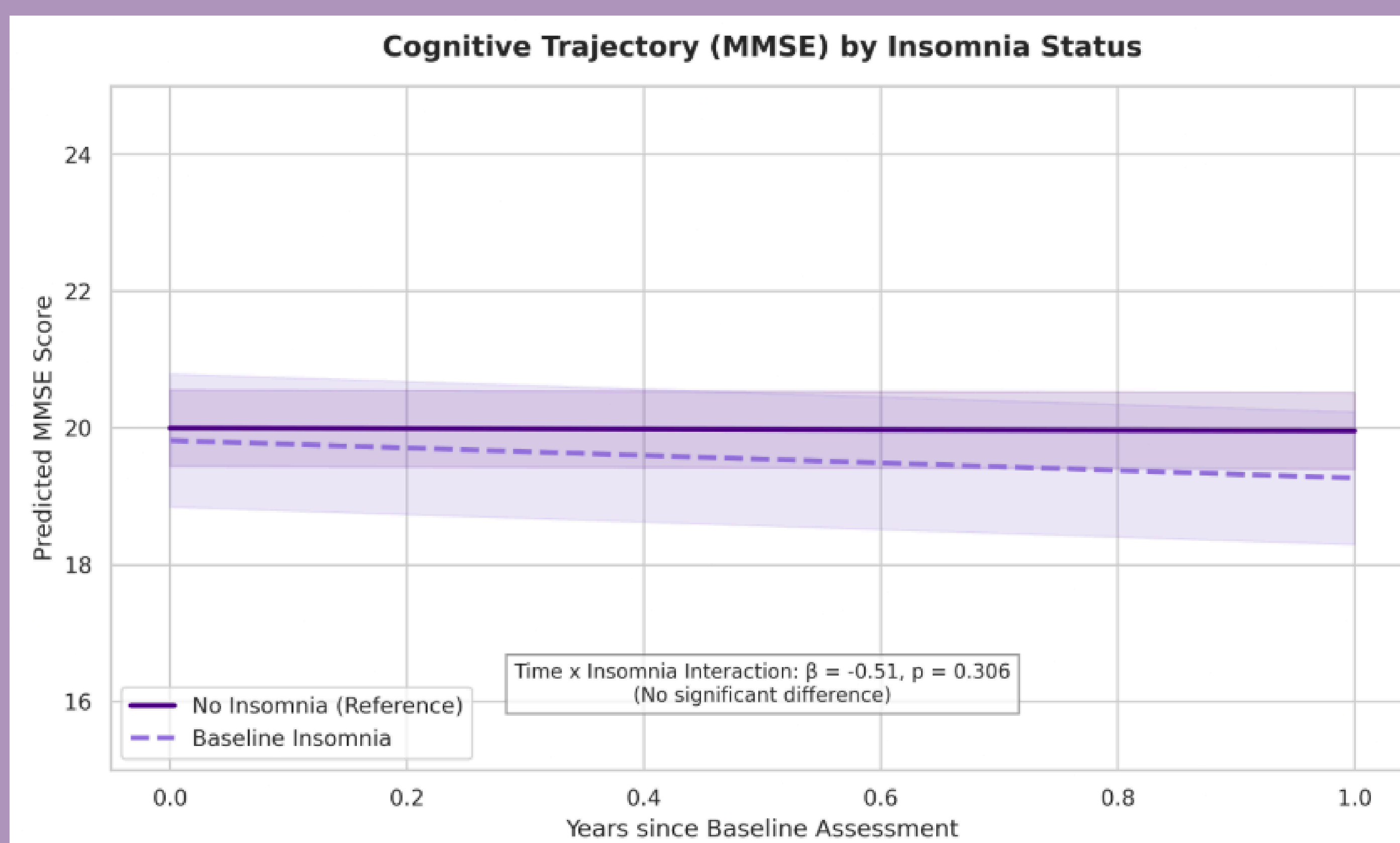
We conducted a longitudinal observational study of patients with dementia or cognitive syndromes evaluated at a public memory clinic in Brazil.

Global cognition was assessed using the Mini-Mental State Examination (MMSE), the most used screening instrument throughout decades³, with up to three assessments per patient. Sleep disturbance was defined as clinically documented insomnia or altered sleep at baseline and modeled as a binary exposure.

The primary outcome was longitudinal change in MMSE. Linear mixed-effects models estimated the interaction between sleep disturbance and time from baseline, adjusting for age, sex, educational attainment, and clinical diagnosis. Random intercepts accounted for within-subject correlation. Prespecified sensitivity analyses included random-slope models, restriction to patients with ≥ 2 MMSE assessments, minimum follow-up ≥ 1 year, and analyses restricted to Alzheimer's disease. Exploratory models evaluated effect modification by education, sex, and broad etiologic categories.

Results

A total of 170 patients contributed 283 MMSE assessments, with a median follow-up of 0.39 years.



Conclusions

In this real-world cohort, baseline sleep disturbance was not associated with detectable cognitive decline over short-term follow-up. However, the absence of an effect should be interpreted with caution, as MMSE may lack sensitivity to subtle progression and the cohort was relatively small.

Given prior evidence linking sleep to neurodegenerative mechanisms, the impact of sleep disturbance may be more pronounced in preclinical or conversion stages and warrants evaluation with more sensitive cognitive measures and larger samples.

References

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