Depression Symptom Impact on Executive Functioning and Processing Speed in Middle Aged and Older Adults

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Objective: Although some research suggests depression affects executive functioning (EF) and processing speed (PS), few studies have considered which specific depression symptoms are influential or have accounted for the effects of white matter ischemia (WMI). The objective of this study was to determine which depression symptoms have the greatest impact on EF and PS in middle-aged and older adults after accounting for WMI. Method: Subjects were 85 patients (gender: 36.5% male; mean/SD: age = 54.41/7.99; education = 14.35/2.82) referred to a neurology/neuropsychology clinic for neuropsychological evaluation and had magnetic resonance imaging (MRI). Twenty-five had clinically significant elevation on the Personality Assessment Inventory (PAI) Depression scale (> 70T). Thirty-nine had WMI findings on MRI. Dependent variables for a series of hierarchical regression analyses included the PAI Depression – Cognitive, Affective, and Physiological subscales. Independent variables were measures of: EF - Digit Span Backwards and Matrix Reasoning of the Wechsler Adult Intelligence Scale – 3rd and 4th editions; Delis Kaplan Executive Functioning Scale and Trail Making Test Switching, FAS and Animal Naming; and Wechsler Memory Scale – 3rd edition Spatial Span Backwards; and PS - Trail Making Test Letter. WMI and current use of antidepressants were covariates. Results: After accounting for WMI and antidepressant use, no PAI depression subscales were significant predictors of EF and PS performance. Conclusion(s): Cognitive, affective, and physiological symptoms of depression as measured by the PAI were not associated with performance on measures of EF and PS after controlling for WMI and antidepressant use.