

Executive functioning neuropsychological testing of veterans diagnosed with mild traumatic brain injury

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This research was designed to determine whether veterans with mild Traumatic Brain Injury (mTBI) show neuropsychological deficits. Veterans discharged between 2007 and 2012, ages of 18 and 50 were recruited from community colleges and Veterans Affairs clinics. Independent groups, mTBI (n = 57) and control (n = 57) were screened to exclude history of brain injury, neurological condition, learning disabilities, diagnosed Attention Deficit Hyperactivity Disorder, and substance abuse. Groups were administered: Rey-Osterrieth Complex Figure (5 measures), Letter and Category Fluency, Trails A and B, Christiansen H-abbreviated, neuropsychological screen, Wechsler Memory Scale subtests Logical Memory I and II, the Street Completion Test, and the Beck Depression Inventory-II (BDI-II), Combat Exposure Scale (CES), Word Memory Test (WMT), and the Self-Awareness of Deficits Interview for the mTBI group. Demographic data gathered: age, ethnicity, marital status, medications, and education. The mTBI group performed significantly worse on all of the executive and non-executive measurements with the exception of Category Fluency ($p = .077$), after controlling for age, BDI-II, WMT, and CES. Post hoc analyses rendered the Rey Immediate and Rey Copy Time non-significant. The BDI results were $t_{56} = 3.182$, $p = .002$, and the CES results were $t_{56} = 4.366$, $p < .001$. The mTBI group scored more in the poor effort direction (sign test, $p = .016$), but only subtest Multiple Choice was significant ($t_{56} = 5.838$, $p < .001$). The mTBI group had good awareness of their deficits as compared with normative data. Potential implications of executive deficits in mTBI rehabilitation and daily functioning are discussed.

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