

Abstract

The Modified Card Sorting Test as a Measure of Executive Dysfunction in Geriatric Depression

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Purpose: Executive dysfunction, the behavioral manifestation of striatofrontal impairment, occurs in a high proportion of elderly depressives and is associated with poor and unstable treatment response. The current study was conducted to assess the feasibility of using the Modified Card Sorting Test (MCST), a modification of the Wisconsin Card Sorting Test and a measure of executive functioning, specifically concept formation and perseveration, in depressed elderly patients. The hypothesis was that depressed elderly patients would perform significantly worse than elderly non-psychiatric volunteers on the MCST.

Method: The MCST was administered to 138 non-demented (MMSE \geq 24) subjects aged 60-92; 94 met DSM-IV criteria for unipolar major depression at the time of administration; 44 were non-psychiatric volunteers.

Results: In preliminary analyses, there were no significant differences between the depressed and the non-psychiatric volunteer groups in age, gender, and education. A logistic regression analysis revealed that the depressed group was significantly less likely to achieve six categories on the MCST after taking into account overall cognitive impairment (MMSE), age, and education (Wald $\chi^2 = 11.74$, $df=4$, $p=0.001$). Additionally, in two linear regression models, depressed patients had more perseverative errors ($F=6.76$, $df=1$, $p=0.010$) and, for subjects with errors, a higher percentage of perseverative errors ($F=5.23$, $df=1$, $p=0.024$) than non-psychiatric volunteers.

Conclusion: These results suggest that the MCST may be a useful measure of executive dysfunction, particularly perseveration, in depressed elderly patients. Future studies may examine the relationship of the MCST to treatment response in geriatric depression.