Montreal Cognitive Assessment (MoCA): Normative Data for a South African Sample

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Abstract

Valid, brief, and easily administered cognitive screening and diagnostic tests, such as the Montreal Cognitive Assessment (MoCA), can be of significant benefit in resource limited settings such as South Africa. This study aimed to explore the influence of demographic variables (age, years of education and gender) on total MoCA score, calculate the psychometric properties (internal consistency and discriminant validity) of the MoCA, and provide normative data for a well-defined sample of South African adults (≥21 years) who are English second- or third-language speakers and who attained public education. All participants completed the English MoCA version 8.1. Secondary data from 70 patients with human immunodeficiency virus (HIV) and comorbid psychiatric disorder, 13 patients with HIV and comorbid neurocognitive disorder (NCD), and 89 unaffected controls were compared. Total MoCA scores were significantly correlated with years of education ($p<0.001$) and age ($p=0.007$), but not gender. Cronbach's alpha was 0.64 revealing moderate internal consistency of the MoCA in this study. According to regression, belonging to psychiatric or NCD groups, respectively, was significantly predicted by age and years of education, rather than total MoCA scores, indicating poor discriminant validity of the MoCA. Although the MoCA showed suboptimal psychometric properties in this study, the preliminary norms presented may offer useful guidelines for healthcare practitioners to determine whether a patient's cognitive performance on the MoCA is in accordance with other non-English first language speaking South Africans with the same age and education, or whether the patient requires further evaluation.

Keywords: assessment; human immunodeficiency virus; Montreal Cognitive Assessment; neurocognitive disorder; psychiatric disorder; psychometrics; screening