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Letter to the Editor

Conversion of MoCA to MMSE scores

A method was recently developed to convert Montreal Cognitive Assessment (MoCA) scores to equivalent Mini-Mental State Examination (MMSE) scores [1]. The method was derived from an elderly, primarily Caucasian sample composed of persons with Alzheimer's disease (AD), mild cognitive impairment (MCI), and healthy older controls using the equipercentile equating procedure. We were able to validate this algorithm in a racially diverse sample.

We administered to 185 participants from the UT Southwestern Dallas Heart/Brain Aging Study the MoCA and MMSE as part of a larger assessment battery. Our sample included 78 healthy controls, 92 MCI subjects, 15 AD patients, and 9 other dementias. MoCA scores (unadjusted for education) were transformed into equivalent MMSE scores based on the conversion table by Roalf et al. [1]. The intraclass correlation (ICC) between equivalent MMSE scores and MMSE scores was examined.

Equivalent MMSE scores derived from the MoCA were highly similar to actual MMSE scores. Equivalent MMSE scores and actual MMSE scores had an ICC coefficient of 0.85 ($P < .001$). The ICC coefficient remained high among homogeneous gender and ethnic groups (all $P < .001$) and was highest for females. We concluded that the conversion by Roalf et al. is a valid method to transform MoCA scores to equivalent MMSE scores in this racially diverse sample, which is useful for allowing continuity and comparability of cognitive data in longitudinal studies of MCI or dementia.

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Reference

[1] Roalf DR, Moberg PJ, Xie SX, Wolk DA, Moelter ST, Arnold SE. Comparative accuracies of two common screening instruments of Alzheimer's disease, mild cognitive impairment and health aging. Alzheimer's & Dementia 2013;9:529–37.

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