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Psychometric Properties of the 3MS and MMSE in the Oldest-Old: Sensitivity and Specificity: P06.073

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OBJECTIVE: To compare the sensitivity and specificity of the Modified Mini-Mental State Examination (3MS) and Mini-Mental State Examination (MMSE) in a sample of 90t years old. BACKGROUND: The 3MS and MMSE are common screening measures used in research and clinical settings. Psychometric investigations of these scales rarely include 90+ year olds. DESIGN/METHODS Participants are from the 90-t Study, a longitudinal study of aging and dementia. A clinical diagnosis of normal, codtive impairment not demented, or demented was assigned by a neuroexaminer based on DSM-IV criteria. The 438 participants who completed ail items on the 3MS and derived MMSE are included (5040 with college education or higher, mean age of 95). ROC analyses were conducted to compare: 1) normal versus cognitive impairment (CI); and 2) non-demented versus demented. RESULTS The 3MS had better overall accuracy than the MMSE in differentiating between normal and CI (3MS Area Under the Curve [AUC] = .93 vs. MMSE AUC = .90). The suggested cut-off point for CI on the 3MS is 589 (sens. = .85, spec. = .83). The overall accuracy of the 3MS and MMSE in differentiating between non-demented and demented was the same (AUC = .93). In identifying the normal versus CI groups, the 3MS had better specificity than the MMSE when holding sensitivity constant. In the non-demented versus demented comparison, the MMSE had better specificity than the 3MS. The suggested cut-off point for dementia on the MMSE is 524 (sens. = .85, spec. = .81). CONCLUSIONS/RELEVANCE Both the 3MS and MMSE had high sensitivity and specificity. The 3MS appears to be a slightly better screening measure than the MMSE for identifying CI in the oldest-old, and the MMSE may be slightly better than the 3MS at correctly ruling out those who do not have dementia.

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