

Sensitivity and Specificity of the MMSE for Identifying Dementia in the Oldest-Old: The 90+ Study.

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ABSTRACT

Objectives: To evaluate the sensitivity and specificity of the Mini-Mental State Exam (MMSE) in identifying dementia among the oldest-old when stratified by age and education. *Design:* Cross-sectional. *Setting:* Research clinic and in-home visits. *Participants:* Population-based sample of adults aged 90 or older (n=435) who are enrolled in the 90+ Study, a longitudinal, population-based study. *Measurements:* Neurological examination to determine dementia diagnosis, MMSE, and demographic data. *Results:* ROC analyses indicated that the MMSE had high diagnostic accuracy for identifying dementia in 90+ year olds across different age and education groups (AUC values ranged from .82 to .98). A range of possible cutoff values and corresponding sensitivity and specificity are provided for the following age groups: 90-93 year olds, 94-96 year olds, and 97+ year olds. Age groups were subdivided by educational attainment (\leq High school, vocational school or some college, college degree or higher). In 90-93 year olds with a college degree or higher, the suggested cutoff is MMSE ≤ 25 (sensitivity=.82, specificity=.80). In 94-96 year olds with a college degree or higher, the suggested cutoff is MMSE ≤ 24 (sensitivity=.85, specificity=.80). The 97+ year olds with an education of \leq High school had the lowest suggested cutoff of MMSE ≤ 22 (sensitivity=.80, specificity=.76). *Conclusions:* Overall, the MMSE had good sensitivity and specificity across all age and educational groups. Optimal cutoff points were lowered in the older age groups and lower education groups, primarily to preserve specificity. This screening instrument is appropriate for use with the oldest-old.