

Cognitive Testing: Bedside Screening Tools and Formal Neuropsychological Assessment - A Comprehensive Academic Review

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Abstract

Cognitive testing constitutes an indispensable component of contemporary clinical neuroscience, psychiatry, geriatrics, and primary care, providing the empirical foundation upon which diagnoses of mild and major neurocognitive disorder are established, staged, and monitored. This review provides a comprehensive, evidence-based examination of the two principal tiers of cognitive assessment employed in clinical practice: brief bedside cognitive screening instruments, exemplified by the Mini-Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA), and formal neuropsychological testing conducted by licensed neuropsychologists. Drawing on diagnostic accuracy meta-analyses, clinical practice guidelines, and recent advances in digital and biomarker-based assessment, the review synthesizes evidence published predominantly between 2020 and 2026 alongside foundational diagnostic frameworks. Diagnostic criteria tables, comparative accuracy tables, and a stepwise clinical algorithm are presented to orient clinicians toward evidence-based test selection. The review further addresses performance validity assessment, differential diagnosis across dementia subtypes, cultural and educational bias in screening instruments, and emerging digital and blood-based biomarker technologies that

are reshaping the diagnostic pathway. The review concludes that bedside screening and formal neuropsychological testing occupy complementary, non-substitutable positions within a stepped, biologically informed model of cognitive evaluation, and that clinicians must select instruments deliberately according to clinical context, patient characteristics, and diagnostic yield.

Keywords: cognitive testing, screening tools, neuropsychological assessment