

# How Is Neuropsychological Assessment Different From Cognitive Testing?

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With an extensive educational, clinical, and research training background in brain-behavior relationships, neuropsychologists are uniquely qualified in the conceptualization and assessment of cognitive problems in persons with brain disorders. From this perspective, all cognitive abilities arise from neurocognitive functions and thus would appear to fall within the expertise of the neuropsychologist. However, most clinical cognitive testing is performed by professions other than neuropsychologists or even by psychologists in general. More cognitive assessments are performed by physicians, educators, and rehabilitation therapists than by neuropsychologists. Cognitive assessment for educational recommendations is a major contribution of psychologists to schools. But since these professionals use some of the same tests as do neuropsychologists, is it accurate for evaluations by these other professionals to be represented as neuropsychological assessment? What differentiates neuropsychological assessment from the cognitive testing conducted by these other professions?

The distinction between neuropsychological assessment performed by a clinical neuropsychologist and brief cognitive assessment as performed by physicians is formally recognized in the current revision of the Diagnostic and Statistical Manual of Mental Disorders. DSM-5 states that determination of cognitive impairment, as needed for the diagnoses of Mild and Major Neurocognitive Disorder, should be “preferably documented by standardized neuropsychological testing”. According to DSM-5, a key advantage of neuropsychological assessment over other forms of cognitive testing is to provide “quantitative assessment of all relevant domains”, a feature that is particularly useful for diagnosis and for detecting change.

Another area in which this distinction has been clearly made is in guidelines for management of sports concussion. A recent consensus statement (4th International Conference on Concussion in Sport, Zurich, November 2012; McCrory et al., 2013) states, “It is recognized, however, that abbreviated testing paradigms are designed for rapid concussion screening ... and are not meant to replace comprehensive neuropsychological testing which should ideally be performed by trained neuropsychologists that are sensitive to subtle deficits that may exist beyond the acute episode; nor should they be used as a stand-alone tool for the ongoing management of sports concussions”.

The distinction between neuropsychological assessment and cognitive evaluations by psychologists in other specialties is also clearly made in the documentation on user qualifications that accompany many neuropsychological tests. For example, the manual for the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) states that while other professionals “may engage in some initial interpretation of performance on RBANS, the test results should ultimately be interpreted only by individuals with appropriate professional training in neuropsychological assessment for diagnostic purposes” (Randolph, 2012, p. 9). Furthermore, the manual for Advanced Clinical Solutions for WAIS-IV and WMS-IV states that, “When ACS is to be used for a neuropsychological assessment, the examiner should have appropriate training in neuropsychology and neuropsychological assessment” (Pearson, p. 8). These test qualifications make clear that administering neuropsychological tests is not equivalent to neuropsychological assessment. Specialized interpretation competencies are necessarily part of practicing neuropsychology.

These interpretation competencies are clearly outlined in the description of the clinical neuropsychology specialty published by the American Psychological Association Commission for the Recognition of Specialties and Proficiencies in Professional Psychology (CRSPPP). The CRSPPP description (<http://www.apa.org/ed/graduate/specialize/neuro.aspx>) states that core competencies in clinical neuropsychology include not only the use of specialized neuropsychological assessment techniques, but also “the ability to integrate neuropsychological test findings with neurologic and other medical data, psychosocial and other behavioral data, and knowledge in the neurosciences,” as well as “an appreciation of social, cultural and ethical issues.”

For comparison, the CRSPPP description of the geropsychology specialty (<http://www.apa.org/ed/graduate/specialize/gero.aspx>) states that core competencies include “cognitive and functional performance testing, integration of interdisciplinary assessments (e.g., medical, neuropsychological, social service).” This description implies that cognitive testing, while listed as a competency of this specialty, is distinct from neuropsychological assessment.

Recognition of clinical neuropsychology as a professional psychology specialty, rather than as a proficiency, indicates that the specialty’s core competencies should be practiced by psychologists who have undergone the education and training required of that specialty. The large and expanding knowledge base required of clinical neuropsychologists explains the need for specialized postdoctoral training for two years, as outlined by the Houston conference guidelines. Relevant areas of knowledge include (but are not limited to) neuropsychological assessment, psychometrics, diagnostic statistics, neuroanatomy and neurophysiology, brain-behavior relationships, and brain imaging.

The distinction between neuropsychological assessment and cognitive testing is commonly accepted and is consistent with the CRSPPP description. It follows that training of psychologists in other specialties, which may include exposure to neuropsychology, is not adequate preparation for practicing neuropsychological assessment. Yet this does not mean that practitioners in other psychological specialties should amend cognitive assessment from their scope of practice. Practitioners in other specialties can continue to describe their assessments as cognitive assessment or cognitive evaluation (among many possible labels) while maintaining the existing scope of specialty practice. Cognitive assessment is one of the tools that may be shared among psychological specialties but it is not equivalent to neuropsychological assessment.

## REFERENCES:

American Psychiatric Association. (2013). Diagnostic and statistical manual for mental disorders, fifth revision. Washington, DC: American Psychiatric Publishing

Houston conference on specialty education and training in clinical neuropsychology. (1997). [http://www.div40.org/pub/Houston\\_conference.pdf](http://www.div40.org/pub/Houston_conference.pdf)

McCrory, P., Meeuwisse, W.H., Aubry, M. ... (2013). Consensus statement on concussion in sport: The 4th International Conference on Concussion in Sport, Zurich, November 2012. *Journal of Sports Medicine*, 23, 89-117. <http://bjsm.bmj.com/content/47/5/250.full>

Advanced Clinical Solutions for WAIS-IV and WMS-IV, Administration and scoring manual. (2009). San Antonio: NCS Pearson.

Randolph, C. (2012). Repeatable Battery for the Assessment of Neuropsychological Status Update (p. 9). Bloomington, MN: NCS Pearson – PsychCorp