



Neuropsychological Assessment for Treatment Analysis

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Letter

Neuropsychological assessment was traditionally carried out to assess the extent of impairment to a particular skill and to attempt to determine the area of the brain which may have been damaged following brain injury or neurological illness [1]. With the advent of neuroimaging techniques, location of space occupying lesions can now be more accurately determined through this method, so the focus has now moved on to the assessment of cognition and behavior, including examining the effects of any brain injury or neuropathological process that a person may have experienced. A core part of neuropsychological assessment is the administration of neuropsychological tests for the formal assessment of cognitive function, though neuropsychological testing is more than the administration and scoring of tests and screening tools. It is essential that neuropsychological assessment also include an evaluation of the person's mental status. This is especially true in assessment of Alzheimer's disease and other forms of dementia [2]. Aspects of cognitive function that are evaluated usually include orientation, re-learning / memory, intelligence, language, visual, and executive function. However, clinical neuropsychological assessments go beyond this and also focus on a person's psychological, personal, interpersonal and other contextual situations. Evaluation can be done for a variety of reasons, including:

- A clinical assessment to understand an individual's cognitive and potential difficulty patterns and to support decision-making for use in a medical or rehabilitation setting.
- Scientific research to test hypotheses about the structure and function of cognition being tested, or to provide information that allows experimental tests to be viewed in the context of a broader cognitive profile.
- A forensic assessment intended to be used in court as evidence of a proceeding or criminal investigation. Three broad goals of neuropsychological assessment include diagnosis, to determine the nature of the underlying problem [3]. Secondly, to understand the nature of any brain injury or resulting cognitive problem (see neurocognitive deficit) and its impact on the individual, as a means of devising a rehabilitation program or offering advice as to an individual's ability to carry out certain tasks (for example, fitness to drive, or returning to work). And lastly, assessments may be undertaken to measure change in functioning over time, such as to determine the consequences of a surgical procedure or the impact of a rehabilitation program over time [4].

According to information gathered from assessment Tsatsanis and Volkmar believe that assessment can provide unique information about the type of disorder a patient has which allows the psychologist to come up with a treatment plan [5]. Neuropsychological assessment can clarify the nature of the disorder and determine the cognitive functioning associated with a disorder. This assessment also allows psychologists to understand the progression of the disorder in order to predict future problems and design successful treatment packages. Various assessments can also determine if a patient is at risk for a particular disorder. However, it is important to remember that assessing one patient at a time is not sufficient to continue treatment, as behavioral changes can occur frequently. Patients must be retested multiple times

to ensure that the current treatment is still the correct treatment. In neuropsychological studies, researchers discover different areas of the brain that are damaged based on the cognitive and behavioral aspects of the patient.

Benefits of assessment

The most beneficial factor of neuropsychological assessment is that it provides an accurate diagnosis of the disorder for the patient when it is unclear to the psychologist what exactly he/she has. This allows for accurate treatment later on in the process because treatment is driven by the exact symptoms of the disorder and how a specific patient may react to different treatments. The assessment allows the psychologist and patient to understand the severity of the deficit and to allow better decisionmaking by both parties. It is also helpful in understanding deteriorating diseases because the patient can be assessed multiple times to see how the disorder is progressing. One area where neuropsychological assessments can be beneficial is in forensic cases where the defendant's competency is being questioned due to possible brain injury or damage. If the neuroimaging test fails, the neuropsychological test can indicate brain damage. It is also possible to determine if a person is forging (forging) a disability in order to obtain less judgment.

Most neuropsychological tests can be completed within 6-12 hours. However, this time it does not include the role of a psychologist in interpreting data, scoring tests, creating formulas, and producing formal reports.

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