Chapter 12
Neuropsychological Assessment

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ABSTRACT

This chapter will cover the basic concepts of neuropsychological assessment. This chapter will cover the main issues involved while assessing the person with brain damage. The process of neuropsychological assessment, relevant history for the purpose of comprehensive reporting of findings and responding to the referral questions, better understating of the goals of assessment, selection of the assessment approaches, issues involved in administration of the tests, theories involved while interpreting the test findings, and reporting of findings of the assessment will help the reader to understand holistic view of the individual’s capacities.

CHAPTER OUTLINE

• Introduction
• History of neuropsychological assessment
• Types of neuropsychological assessment using in India
• Goals of Neuropsychological Assessment
• Approaches Neuropsychological assessment
• Neuropsychological Test Findings Interpretation
• Neuropsychological assessment process
• Conclusion

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INTRODUCTION

Neuropsychological assessment refers to the measurement of cognitive functions and processes with the aim to establish whether cognitive dysfunction or cognitive impairment is present in individuals, typically in patients with (suspected) brain disease, psychiatric disorder or information-processing complaints. Neuropsychological assessment is preferably performed by clinical neuropsychologists who have expertise in the study of the neural correlates of behavior and cognition (Kessels, 2016).

The neuropsychological evaluation involves an interview and the administration of tests. Neuropsychological tests (unlike bedside cognitive and behavioural neurologic screens) are standardized, meaning that they are given in the same manner to all patients and scored in a similar manner time after time. An individual’s scores on tests are interpreted by comparing their score to that of healthy individuals of a similar demographic background (i.e., of similar age, education, gender, and/or ethnic background) and to expected levels of functioning. In this way, a neuropsychologist can determine whether one’s performance on any given task represents a strength or weakness. Although individual scores are important, the neuropsychologist looks at all of the data from the evaluation to determine a pattern of cognitive strengths and weaknesses and, in turn, to understand more about how the brain is functioning.

Neuropsychological tests evaluate functioning in a number of areas including: intelligence, executive functions (such as thinking, planning, abstraction, set shifting, response inhibition, problem solving, and working memory), attention, memory, language, perception, sensory motor functions, motivation, mood state and emotion, quality of life, and personality changes. The areas addressed in an individual's evaluation are determined by the referral question (what the referring doctor and patient wants to know), patient’s complaints and symptoms, and observations made during interview and test administration.

The tests are typically pencil and paper type tests. Some tasks might be self-reports meaning that they are completed by the patient with assistance from a technician, but the majority of the tests require administration by a neuropsychologist or trained, skilled clinical psychologists.

SHORT HISTORY OF NEUropsychological ASSESSMENT

Neuropsychological processes are very much evident from a very early period in history, the first attempt to localize cognitive facilities in the ventricles is generally attributed to Herophilus around 300 B.C. (Mann, 1979). Huarte (1529-1588) first proposed a localizationist position involving both ventricles and brain tissue (Hunt, 1869), and a century later Willis (1620-1675) made the complete translation of
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