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Neuropsychology: The lesser known specialisation

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A neuropsychologist's specialisation lies in their understanding of brain-behaviour relationships

Ask any student pursuing psychology how people respond to their career choice, and something along the lines of "Are you analysing me now?" would be a commonly heard rhetoric. There are however multiple specialisations within the realm of psychology, many of which have nothing to do with therapy, psychoanalysis or the stereotype of someone on a couch revealing their deepest, darkest secrets to a professional.

Welcome to the world of neuropsychology. As the name suggests, neuropsychology is to do with our brains. Of course all psychology is to do with the brain in some way, shape or form. Neuropsychology in particular though pertains to cognitive and psychological functioning in individuals with an insult to the brain, be it acquired or developmental in nature.

How does this differ from the more commonly known specialisation of Clinical Psychology? While the Clinical Psychologist primarily deals with mental illness and helping individuals cope with these disorders, the neuropsychologist is more interested in cognitive dysfunction and helping people deal with the aftermath of the same. They also play an important role in assisting individuals to manage these difficulties - either by working on improving their skills in the area, or by helping them develop alternative strategies to achieve the same goal in the absence of said skills. Not surprisingly then, while the Clinical Psychologist works more closely with a psychiatrist, a Neuropsychologist works more closely with neurologists.

The neuropsychologist's tool kit

A neuropsychologist's specialisation lies in their understanding of brain-behaviour relationships. Unlike brain scans which use sophisticated dyes and markers to indicate functionality of the different brain regions, the neuropsychologist makes inferences about cerebral functioning based on an individual's performance on a number of paper-pencil or orally administered tasks. In other words, neuropsychological investigations are all non-invasive. An individual's performance on these paper-pencil tasks is then compared to performance of other people of the same age, and where possible, the same gender and educational background. These data serve as a reference point for the clinician to then determine whether performance of the person in question is truly deficient, or simply reflective of other demographic variables (e.g. illiteracy or

limited access to formal education). The clinician can then form an impression about a) which areas of the person's cognition may be deficient b) whether specific neuroanatomical substrates may be contributing to these difficulties or alternatively c) what might any observed cognitive difficulties be attributed to (e.g. mood disorders, unfamiliarity with testing material etc).

In many ways then, neuropsychology is like trying to understand the functional engineering of the brain. Are all the cogs and wheels doing what they are meant to be? If not, what in particular seems to be disrupting the process, why might this be occurring and lastly what can be done to help ensure that the system works as efficiently as is possible.

What does a neuropsychologist do?

Just as a mechanic works to ascertain the cause of an engine's malfunction, and then strives to repair the same, the types of questions asked of a neuropsychologist can also be broadly divided into 2 main categories. There are assessment or diagnosis oriented questions, where the task is to clarify what the primary issue at hand is. Are we dealing with an early stage of Alzheimer's disease or is this person experiencing late-life depression which is contributing to their memory difficulties? Given their current level of cognitive functioning, would this person be a good candidate for surgical control of their epilepsy? Does this individual have the cognitive capacity to change their will?

The second set of questions fall in the realm of rehabilitation, where the clinician's task is to aid the individual maximize their overall potential, improve their independence and enhance their quality of life. Scenarios in this domain may include developing a plan for an individual with a traumatic brain injury to improve their social skills, to help an individual who has experienced a stroke understand the extent of their cognitive issues, or even to guide people in the workplace regarding the needs of the individual with cognitive difficulties. Rehabilitation begins with goal setting and clinicians work in conjunction with the individual (and their family) to develop a way of achieving their goals. The rehabilitation process typically involves a combination of psychoeducation, compensatory strategies, cognitive training and behaviour management programs.

Is it for me?

If you are excited by the brain, enjoy working with individuals of varying backgrounds, and like problem solving, then neuropsychology is definitely a choice to consider. It is a mentally stimulating but immensely rewarding line of work to engage in and new graduates of psychology should consider this as a viable area of specialization in their post-graduate studies.

Dr Deepa Bapat, Adjunct Faculty, FLAME University