



**ALLIED HEALTH
PRACTITIONERS
COUNCIL OF
ZIMBABWE**

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NEUROPSYCHOLOGY INTERNSHIP PROGRAM

Duration: One year

GENERAL OVERVIEW

Briefly, the functions of neuropsychologists include but is not limited to assessing, diagnosing, and intervening in the psychological disorders of people experiencing neuropathology or compromised functioning of the central nervous system.

Adult Neuropsychology Disorders

- Agnosias and other symbolic movement disorders
- Aphasias
- Apraxias
- Dementias
- Frontal lobe syndromes
- Memory disorders
- Psychiatric conditions
- Right Hemisphere Syndromes
- Strokes
- Seizure disorders
- Traumatic Brain Injury
- Central Nervous System Infections
- Demyelinating disorders
- Neoplastic Syndromes

Placements:

- St. Giles rehabilitation centre
- Parirenyatwa stroke unit
- Psychiatric units
- Geriatric units
- Specialized institutions for other neuropsychological disorders e.g. neurodevelopmental disorders and learning disabilities

Skills

- Interns should be able to articulate the basics of a neuropsychological test
- They should be able to administer, score and interpret at least one neuropsychological test for each condition listed above
- They should be able to write a neuropsychological report for various functions, e.g. Academic, forensic and clinical purposes.
- They should be able to make appropriate recommendations based on their objective and clinical findings.

TESTS

Interns should demonstrate ability to choose correct test, administer and interpret it. Areas of assessment and possible tests:

1. *Assessment of Orientation*

2. *Assessment of Memory Function* (Mesial Temporal Amnesia, Diencephalic Amnesia, Frontal "Amnesia",

e.g. Digit Span, 4 Hidden Objects Test (Rudimentary test), *Babcock Story* (*audio-verbal memory*), Rey Complex Figure .

3. *Assessment of Language Function* (*production, comprehension, repetition, naming*)

4. *Assessment of Right Hemisphere Syndrome*

- Spatial Cognition and Perception – (Rey Osterich Complex Figure / Taylor figure, Haecan's blocks, Cube Analysis, Block design)
- Neglect
 - Tactile
 - Auditory

- Anosognosia
 - Somatoparaphrenia – psychotic thoughts about the body
 - Misoplegia – hatred of paretic limb

5. Assessment of Frontal Function

Prefrontal Cortex divided into:

❖ *Deep White Matter:*

Tests (Deep white matter pathology):

- a. FAS Test (Generativity Test)
- b. Coding Test/Symbol Search (Processing Speed Test)

Tests: Check for **confabulation and intrusions** in memory tests as well as spontaneous speech. **STROOP** test used to assess function.

❖ *Orbital / Basal*

Tests:

- a. FAS Test (in particular rule-breaking); see section 5.1.
- b. Red/Green Test
- c. STROOP test

❖ *Dorsolateral*

Tests:

❖ *Pre-Motor:*

- a. Fist, Side, Palm Test
- b. Tapping Rhythm Test
- c. Repeated Pattern Drawing Test**

❖ *Pre-Frontal:*

- a. 18 Book Problem

6. Assessment of Agnosia

- First check Visual acuity-fingers
- Colours +shapes-token
- Can they Copy picture- e.g. Scene drawing
- Simultanagnosia e.g. describe Cookie Jar/Washing line picture

7. Assessment of Apraxia

- Oral apraxia – ask to use mouth apparatus e.g. puff cheeks

- Ideomotor L and R (Struggle to copy symbolic/meaningful gestures and can't pantomime (cutting bread, using hammer and nail, brushing teeth))
- Limb-kinetic (Struggle to copy nonmeaningful gestures using limbs)

8. Gerstman's syndrome

- Agraphia (apraxic agraphia)-ask to write on paper
- Acalculia
- L/R disorientation
- Finger agnosia

PAEDIATRIC NEUROPSYCHOLOGY PATHOLOGIES

- Epilepsy
- Central Nervous System Infections, especially HIV, Malaria and Meningitis. Others- Neurocysticercosis, cerebral malaria, Encephalitis
- Traumatic Brain Injury
- Autism Spectrum Disorders
- ADHD
- Developmental delay
- Tumors
- Vascular Pathologies e.g Moya Moya
- FAS

Use a psychometric approach versus the hypothetico-deductive approach used in adults, although scores should always be interpreted in context. Assessment usually take about 2hrs. A telephonic history can be conducted with the caregiver, to get Developmental and, Social history. Medical history can be obtained from the medical folder and Scholastic history can be obtained from the school teacher with the parents' permission. Reports should be very thorough, covering both history and assessment sections, and typically 6-7 pages long.

Tests

IQ Tests

- Wechsler Preschool and Primary Scale of Intelligence
- Wechsler Intelligence Scale for Children - Fifth UK Edition (WISC-V)
- Wechsler Abbreviated Scale of Intelligence - Second Edition (WASI-II)

Neurocognitive Tests

- Children's Memory Scale™ (CMS), Ages 3y -16y
- Test of Everyday Attention for Children, Second Edition (TEA-Ch2), Ages 5-8
- Wide Range Assessment of Memory and Learning, Second Edition (WRAML2)- Ages, 5 -90
- Delis-Kaplan Executive Function System (D-KEFS) – Ages 8-89

Research

Participate in journal club

Present a relevant topic at a local or international conference or meeting

Topic/Readings
Introduction to Neuropsychology, and Historical Views
Biological Basis of Behavior, Traumatic Brain Injury
Cortical Structure and Function Frontal, Temporal, Parietal, Occipital Lobes
Hemispheric Lateralization, Neglect, Attention, Consciousness
Language, Aphasias (Readings: Muriel D. Lezak)
Learning and Memory
Stroke, Dementias
Neuropsychological Testing, Forensic Aspects
Neurodevelopmental disorders
Other Neuropsychological Syndromes and Disorders