UNIT 2: Problems, disorders and populations

MODULE: Neuropsychology

Module co-ordinator: Paul Fisher and Fergus Gracey

2016-2017 (2014+15 Cohorts i.e. Years 2&3)
Aims and learning objectives of the module
This module aims to provide an introduction to neuropsychological approaches, neuropsychological assessment and formulation, different disorders affecting neurocognitive function, and neurocognitive interventions. The module is structured over the three years of training to ensure a developmental trajectory in terms of the competencies gained.

Learning objectives:
- Understanding the basis of clinical neuropsychology including neuroanatomy
- Skills in assessment where a question regarding neuropsychological functioning or diagnosis is present, including clinical interviewing and standardised test administration
- Ability to select tests and assessment approaches
- Skills in formulating neuropsychological issues and using frameworks such as the WHO-ICF to build formulation and measure outcomes
- Ability to use neuropsychological assessment to aid diagnosis
- Knowledge of neuropsychological aspects of common neurological problems (including epilepsy, stroke, dementia, brain injury)
- Knowledge of evidence-based interventions for addressing the cognitive and emotional consequences of common neuropsychological problems

Syllabus summary
By the end of the first year, trainees will be skilled in clinical interview (core competencies module), assessment, formulation, and will have an understanding of the role of neuropsychology in clinical psychology across the lifespan. By the end of the second year trainees will have an understanding of disorders typically affecting neurocognitive function. By the end of the third year, trainees will have an understanding of neurocognitive interventions and specialist neurorehabilitation approaches. The competencies gained are consistent with the guidelines indicated by Berger (2008) and also map onto specific aspects of the BPS Division of Neuropsychology (DoN) competency framework for the Qualification in Clinical Neuropsychology (DoN, May 2013).

YEAR 2 (2015 Cohort)
1. Neuropsychological assessment of dementia (1 day)
   Objectives:
   - Understand the nature of different types of dementia
   - Gain knowledge of the neurocognitive profiles and neuroanatomy of types of dementia
   - Practice application of learning through case examples of differential diagnoses

2. Stroke (half day)
   Objectives:
   - Understand the nature of different types of stroke
   - Understand the nature of post stroke depression
   - Gain knowledge of interventions and service structures for psychological support after stroke (case example, psychological impact of stroke, clinical psychology input, stepped care in stroke psychology)
3. **Assessment of cognitive impairment in people with mental health and neurological conditions (half day)**
   - Practical issues regarding physical space, assessment procedures, and impact of conditions on assessment processes and outcomes (across all settings including mental health)
   - The mental capacity act both with regard to consent to assessment and occasions when a neurocognitive assessment might contribute to the assessment of a mental capacity issue (signpost to specific teaching on MCA)
   - Discuss conditions where there is neurocognitive impairment and physical disability (e.g., stroke, and signpost to specific teaching on this)
   - Practice interpretation of neuropsychological assessments

4. **Biological basis of epilepsy (1½ hrs)**
   - Biological basis of epilepsy
   - Assessment and interventions

5. **Psychological aspects of epilepsy (1½ hrs)**
   - Psychological aspects of epilepsy
   - Assessment and interventions

**YEAR 3 (2014 Cohort)**

6. **Neurobehavioural rehabilitation in ABI (half day)**
   - Objectives
     - Gain knowledge of neurobehavioural assessment approaches (e.g., functional analysis of behaviour)
     - Practice formulation of neurobehavioural problems (case examples)

7. **Neurocognitive interventions: a lifespan approach (half day)**
   - Objectives – to gain knowledge of evidence based cognitive interventions covering:
     - Memory (link with ABI and dementia)
     - Executive function (Goal Management Training etc)
     - Attention (link to emotion)
     - Cognitive remediation in schizophrenia and eating disorders

8. **Integrated approaches to formulation and intervention in neuropsychological rehabilitation: a lifespan approach (half day)**
   - Objectives:
     - Have an understanding of holistic approaches in rehabilitation
     - Have an understanding of relational approaches in rehabilitation
     - Develop skills with integration of neurocognitive, emotional and social factors in formulation
     - Practice linking formulation to intervention to address neuropsychological needs (case examples) with individuals and systems

**YEAR 1**

9. **Introduction to the Neuropsychology module (30 mins) Paul Fisher / Fergus Gracey**
10. Neuropsychological clinical interviewing (half day) (Jill Winegardner)
This session provides an introduction to neuropsychological interview structure and techniques. Interviewing challenging clients will be covered and role play activities and small group work will be used.
Objectives:
- Improved confidence and skill in clinical interviewing in neuropsychology
- Awareness of factors impacting clinical interviewing
- Knowledge of key processes/tools to facilitate a good clinical interview
- Awareness of resources available for further learning and skill development
- Opportunity to practice interviewing skills

11. Formulation skills in neuropsychology (half day) (Rebecca Poz)
Objectives:
- Gain familiarity with application of the WHO – International Classification of Functioning, and the Biopsychosocial model
- Understand integrated psychological formulations (e.g., CBT, systemic, incorporating neurocognitive, emotion, and adjustment - signposting session to link with later specialist teaching)
- Practice formulation with case examples (adult/child)

12. Classic cases in neuropsychology: an introduction to neuroanatomy (half day) (Fergus Gracey)
Introduction to the history of neuropsychology, with a particular focus on classic case studies that demonstrate particular function/deficits related to brain regions

Objectives:
- Understand the historical basis of approaches used in clinical neuropsychology
- Revision of functional neuroanatomy
- Introduce apps and web resources for learning neuroanatomy

13. Test selection, administration and interpretation (half day) (Hilary Davison)
A practical session with case examples (adult/child)
Objectives:
- Ability to select and use specific neuropsychological assessments (D-KEFS; Hayling and Brixton; TEA; Rivermead Behavioural Memory Test; Perceptual assessments; and measures across the lifespan)
- Ability to interpret test results (including use of qualitative information/observation/questionnaires)
- Understand approaches for testing for effort

14. Report writing & feedback in neuropsychology(half-day) (Adrian Leddy)
Objectives:
- Understand rationale of report writing
- Be familiar with examples of report style (guided reading) including feedback of effort testing.
- Apply to specific case examples (adult/child)
- Gain skills in feeding back neuropsychology assessment results through role play

15. Paediatric Neuropsychology (half day) (Cassie Hunt)
Objectives:
- Assessment in different contexts (e.g., CAMHS, Paediatrics, Court Assessments)
Typical neurocognitive profiles associated with childhood disorders
Formulation (using a case example)
Working with context (e.g., family, school etc.)
Interventions (signposting to relevant literature)

Teaching sessions from other modules, which have significant content, related to NEUROPSYCHOLOGY

CORE:
- WISC and WAIS Assessment (Year 1: 2 days)
- Mental Capacity (Year 1: ½ day)
- Clinical Skills Workshop 1: Developing therapeutic interviewing skills (Year 1: ½ day)

CHILDREN, YOUNG PEOPLE AND FAMILIES:
- Taking a Developmental History (Year 1, 1 hour)

OLDER ADULTS:
- Personhood and other models for understanding Dementia (Year 2: ½ day)
- Diagnostic counselling for Dementia, perspectives from a professional and a carer (Year 2: ½ day)

LEARNING DISABILITIES:
- Assessment and Learning Disabilities (Year 2: ½ day)

Additional Learning Resources
- See list of useful websites and apps within reference list.
- PBL on case formulation where there is a neuropsychological or cognitive impairment

- Report writing – comparing strengths and weaknesses of reports

REFERENCES / READING LIST

Key references will also be provided for each lecture in the module.

Classic texts and case histories:


Links for human brain anatomy websites and apps

Cerebrii - iOS compatible app - 3D rotatable pictures of brain structures including grey matter, white matter, circulation – can search for terms, label and also has a quiz.
https://itunes.apple.com/gb/app/cerebrii/id309653027?mt=8

Brain areas (3D, rotatable) labeled with links to information about that brain region
http://www.healthline.com/human-body-maps/brain

Navigable brain atlas – good for identifying specific brain areas and understanding scans
Information about major areas of the brain and their function: 
http://biology.about.com/od/humananatomybiology/a/anatomybrain.htm
followed by a brain anatomy quiz! 
http://biology.about.com/od/gamesandquizzes/a/aa092107a.htm

e-learning course for clinical neurosciences – multiple modules on specific disorders and rehabilitation 
http://www.ebrainjnc.com/index.html

Online tool for training in the administration of the ACE III by John Evans and colleaguesHTTPS://WWW.FOM.GLA.AC.UK/ACEIIITRAINER/

An IPad version of the ACE III 
http://www.cnpsychology.co.uk/

Underpinning knowledge and skills – neuropsychological competencies (books that cover a range of learning objectives/competencies)

Chapters cover a range of issues in sections relating to assessment, intervention, patient groups, theory etc


Covers domains of cognitive functioning and interventions/rehabilitation, outcome measurement and TBI in childhood and older adults

Conceptual approaches adopted in clinical neuropsychology & their historical foundations


Practically helpful paper covering aspects of the ICF and its application in assessment and rehab in a systematic way


Clinical work – neuropsychological competencies
  ○ Assessment


- **Profiles of specific disorders**


- **Formulation and intervention / rehabilitation**

  Karnac – The Brain Injury Series:

Sets out a radical systemic and relational perspective on brain injury and rehabilitation, including case illustrations and descriptions of intervention approaches.

There are other books on rehabilitation in this Karnac series.


Description of holistic neuropsychological rehabilitation including theory, information on group interventions and individual case studies


Evidence base for cognitive rehabilitation:

- **Adults**


- **Children**


Professional Practice


World Health Organisation, International Classification of Functioning, Disability, and Health [http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf](http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf)


NSF for long term conditions

**HCPC (2015) standards of practice covered in this module**

1. Be able to practice safely and effectively within their scope of practice
2. Be able to practice within the legal and ethical boundaries of their profession
3. Be able to maintain fitness to practice
4. Be able to practise as an autonomous professional, exercising their own professional judgement
5. Be aware of the impact of culture, equality and diversity on practice
6. Understand the importance of and be able to maintain confidentiality
7. Be able to communicate effectively
8. Be able to work appropriately with others
9. Be able to maintain records appropriately
10. Be able to reflect on and review practice
11. Be able to assure the quality of their practice
12. Understand the key concepts of the knowledge base relevant to their profession
13. Be able to draw on appropriate knowledge and skills to inform practice