UNIT 2: Problems, disorders and populations

MODULE: Neuropsychology

Module co-ordinator: Fergus Gracey

2017-2018

(2015 cohort)
Unit: 2. Problems, disorders and populations

Module: Neuropsychology

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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 3

1. 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)
   - Practice linking formulation with neurobehavioural interventions (case examples)

2. 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
3. **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**

4. **Introduction to the Neuropsychology module (30 mins)**

5. **Neuropsychological clinical interviewing (half day)**

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

6. **Formulation skills in neuropsychology (half day)**

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)

7. **Classic cases in neuropsychology: an introduction to neuroanatomy (half day)**

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

8. **Test selection, administration and interpretation (half day)**

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)
9. **Report writing & feedback in neuropsychology (half-day)**  
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

10. **Paediatric Neuropsychology (half day)**  
- 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)

11. **Neuropsychological assessment of dementia (half 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

12. **Stroke (half day)**  
Objectives:  
- Understand the nature of different types of stroke

13. **Assessment of cognitive impairment in people with mental health and neurological conditions (half day)**  
- 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)

14. **Biological basis of epilepsy (1 ½ hrs) these 2 sessions**  
- Biological basis of epilepsy  
- Assessment and interventions

15. **Psychological aspects of epilepsy (1 ½ hrs)**  
- Psychological aspects of epilepsy  
- Assessment and interventions
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.

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 colleagues
https://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/comoetencies)


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*


*Accessible guidance to interventions with photocopiable resources - for use with families and service users covering domains of cognitive functioning, participation, family and psychological issues.*


*Very thorough coverage of a wide range of applications including psychotherapeutic interventions, domains of cognitive functioning and disorders.*

**Evidence base for cognitive rehabilitation:**

- **Adults**
  - INCOG – International guidelines on rehabilitation of different types of cognitive impairment following TBI


**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)


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. Be able to assure the quality of their practice
13. Understand the key concepts of the knowledge base relevant to their profession
14. Be able to draw on appropriate knowledge and skills to inform practice
**BPS (2015) competencies covered in the teaching on this Module:**

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<thead>
<tr>
<th>1. Generalizable meta-competencies</th>
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<tbody>
<tr>
<td>1. Drawing on psychological knowledge of developmental, social and neuropsychological processes across the lifespan to facilitate adaptability and change in individuals, groups, families, organisations and communities.</td>
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<tr>
<td>2. Deciding, using a broad evidence and knowledge base, how to assess, formulate and intervene psychologically, from a range of possible models and modes of intervention with clients, carers and service systems.</td>
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<td>3. Generalising and synthesising prior knowledge and experience in order to apply them critically and creatively in different settings and novel situations.</td>
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<td>4. Being familiar with theoretical frameworks, the evidence base and practice guidance frameworks such as NICE and SIGN, and having the capacity to critically utilise these in complex clinical decision making without being formulaic in application</td>
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<tr>
<td>5. Complementing evidence based practice with an ethos of practice based evidence where processes, outcomes, progress and needs are critically and reflectively evaluated</td>
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<td>7. Making informed judgements on complex issues in specialist fields, often in the absence of complete information.</td>
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<tr>
<td>8. Ability to communicate psychologically-informed ideas and conclusions to, and to work effectively with, other stakeholders, (specialist and non-specialist), in order to influence practice, facilitate problem solving and decision making.</td>
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<th>2. Psychological Assessment</th>
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<td>1. Developing and maintaining effective working alliances with service users, carer, colleagues and other relevant stakeholders.</td>
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</table>
2. Ability to choose, use and interpret a broad range of assessment methods appropriate:
   - to the client and service delivery system in which the assessment takes place: and
   - to the type of intervention which is likely to be required

3. Assessment procedures in which competence is demonstrated will include
   • performance based psychometric measures (e.g. of cognition and development);
   • self and other informant reported psychometrics (e.g. of symptoms, thoughts, feelings, beliefs, behaviours);
   • systematic interviewing procedures;
   • other structured methods of assessment (e.g. observation, or gathering information from others);
   • assessment of social context and organisations.

5. Conducting appropriate risk assessment and using this to guide practice.

3. Psychological formulation

1. Using assessment to develop formulations which are informed by theory and evidence about relevant individual, systemic, cultural and biological factors

2. Constructing formulations of presentations which may be informed by, but which are not premised on, formal diagnostic classification systems; developing formulation in an emergent transdiagnostic context.

3. Constructing formulations utilising theoretical frameworks with an integrative, multi-model, perspective as appropriate and adapted to circumstance and context.

4. Developing a formulation through a shared understanding of its personal meaning with the client(s) and / or team in a way which helps the client better understand their experience.

5. Capacity to develop a formulation collaboratively with service users, carers, teams and services and being respectful of the client or team’s feedback about what is accurate and helpful.

6. Making justifiable choices about the format and complexity of the formulation that is presented or utilised as appropriate to a given situation.
7. Ensuring that formulations are expressed in accessible language, culturally sensitive, and non-discriminatory in terms of, for example, age, gender, disability and sexuality.

8. Using formulations to guide appropriate interventions if appropriate.
9. Reflecting on and revising formulations in the light of on-going feedback and intervention.

### 4. Psychological Intervention
7. Having an awareness of the impact of psychopharmacological and other multidisciplinary interventions.

### 5. Evaluation
2. Devising innovative evaluative procedures where appropriate.
4. Appreciating outcomes frameworks in wider use within national healthcare systems, the evidence base and theories of outcomes monitoring (e.g. as related to dimensions of accessibility, acceptability, clinical effectiveness and efficacy) and creating synergy with personal evaluative strategies.

### 7. Personal and professional skills and values
1. Understanding of ethical issues and applying these in complex clinical contexts, ensuring that informed consent underpins all contact with clients and research participants.
2. Appreciating the inherent power imbalance between practitioners and clients and how abuse of this can be minimised.

### 8. Communication and teaching
1. Communicating effectively clinical and non-clinical information from a psychological perspective in a style appropriate to a variety of different audiences (for example, to professional colleagues, and to users and their carers).
4. Understanding of the supervision process for both supervisee and supervisor roles.

### 9. Organisational and systemic influence and leadership
1. Awareness of the legislative and national planning contexts for service delivery and clinical practice