



**Neurology Residency  
Program**  
Department of Neurology &  
Neurosurgery

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## **Department of Neurology and Neurosurgery Clinical and Clinical Research Fellowship Application Form**

Type of Fellowship: **Cognitive / Behavioural Neurology Fellowship**

Name of the Fellowship Supervisors: Dr. Howard Chertkow, Dr. Lesley Fellows

### **Fellowship Information:**

- Number of fellowship positions requested: 1
- Name of hospitals involved in training: MNH, JGH, MGH (optional)
- Description of Fellowship: This is a one-year fellowship with the possibility of a one-year extension. The focus will be on clinical cognitive / behavioural neurology training with an exposure to clinical and/or basic science research depending upon the trainee's preference.
  - Under the supervision of the attending neurologists, the fellow will attend various memory and cognitive clinics approximately three days per week. The fellow will be responsible for evaluating and treating patients with dementia, with cognitive complaints such as memory loss, or with behavioural changes such as apathy.
  - The research component will be carried out in Dr Chertkow's or Dr. Fellows' laboratory, or in that of one of their colleagues with their co-supervision.
- Research activity and publications related to fellowship:  
(supervisors' CVs appended)
- Mission statement for fellowship:
  - To provide scientifically based, comprehensive and effective diagnosis and management for patients with cognitive and behavioural complaints.
  - To provide basic training in clinical or basic science research methodology required for furthering the understanding of human cognition and disorders thereof.
- Source of funding for fellowship: The Fellowship is conditional upon successfully securing peer-reviewed Fellowship award funding by or for the candidate. The supervisor/department may supplement these awards depending on specific circumstances.
- Duration of Fellowship: one year

## Names of the Teaching Faculty

- Howard Chertkow
  - Roles: Co-supervisor, Clinical and Research
  - Summary of clinical practice: Attending neurologist, Jewish General Hospital; Director, Bloomfield Centre for Research in Ageing, Lady Davis Research Institute; Director, Jewish General Hospital/McGill University Memory Clinic.
  - Major Strengths: Clinician-scientist trained in Cognitive Neurology and Neurolinguistics; Clinical and research interests in dementia, aphasia, and disorders of semantic memory.
- Lesley Fellows
  - Roles: Co-supervisor, Research and Clinical
  - Summary of clinical practice: Attending neurologist, Montreal Neurological Hospital; Research Scientist, Cognitive Neuroscience Group, Montreal Neurological Institute
  - Major Strengths: Clinician-Scientist with interests in cognitive neuroscience; Experience as Director of McGill MD-PhD program; Manages the McGill Cognitive Neuroscience Registry

## Academic Facilities

- Facilities for Clinical Activities:
  - The fellow will have access to the twice-weekly memory clinic at the Jewish General Hospital
  - (S)he will have access to Dr. Fellows' clinic one half-day per week at the Montreal Neurological Hospital
  - (S)he will have access to Dr. Chertkow's Cognitive Neurology clinic one half-day per week at the Jewish General Hospital
  - (S)he may also choose to attend allied clinics such as:
    - The Montreal Neurological Hospital neuropsychiatry clinic staffed by Dr. Ghislaine Savard and Dr. Theo Kolivakis;
    - The monthly Montreal General Hospital neuropsychiatric lupus clinic;
    - The Montreal General Hospital traumatic brain injury clinic;
    - The pain clinics at the Montreal Neurological Hospital and Montreal General Hospital;
    - etc.
  - The fellow will provide occasional consultation services to inpatients with cognitive complaints at the Montreal Neurological Hospital, and possibly at the Royal Victoria Hospital and Jewish General Hospital
- Research Activities:
  - Will be carried out and supervised in the labs of Dr. Fellows and Dr. Chertkow. However, the fellow will have access to research activities with other members of the Bloomfield Centre for Research in

Ageing and other members of the Cognitive Neurosciences Unit at the MNI. The specific research project (s) will be worked out in collaboration with the supervisor.

- Library access, materials relevant to fellowship training: Readily obtainable through McGill
- Multimedia learning materials available: Yes
- Availability of a skills lab if applicable: N/A

### **Fellow Duties and Responsibilities**

- Call responsibilities to cover service: fellows will not take call
- Will the fellow be supervising residents: No
- Are there fixed rotations at various institutions: No
- What are the outpatient clinic responsibilities: Evaluate patients (history and examination), establish a treatment plan along with other members of multidisciplinary team (neuropsychologist, CNS, OT, PT, speech therapist).
- What are the teaching responsibilities towards residents: The fellow will participate in informal teaching during clinics and in formal teaching of neurology and other McGill residents as called upon.
- Outline participation in academic activities involving the residents: The fellow will be available to provide occasional lectures to the neurology residents as called upon.
- Describe any support staff available to the fellow: N/A
- Proposed meetings to be attended by the fellow could include: Canadian Neurosciences Federation; Cognitive Neuroscience Society; American Academy of Neurology; Society for Neuroscience; Scientific Meeting of Canadian Association of Gerontology; Scientific Meeting of the Gerontological Society of America; etc.
- What is the research productivity/publications expected by the fellow: The goal is to present the research findings at an international or national conference, and to publish at least one paper based around the research component of the fellowship chosen by the fellow. Review papers will also be undertaken.

### **Curriculum**

- What is the intended caseload for the fellow: Clinic 3 days/week: 3 new patients, 4 follow-ups per clinic day. 1-2 consultations per week.
- What are the intended percentages of the varieties of cases: Dependent upon the specific clinics attended by the fellow
- What regular reading materials are to be provided: The fellow is expected to stay abreast of basic science and clinical developments in his/her field by reading leading high-impact journals (Neurology,

Lancet Neurology, Brain, Cognitive and Behavioral Neurology, etc...). The fellows are also expected to read cognitive neuroscience, behavioural neurology, and neuropsychiatry textbooks.

- Outline the weekly conference schedule: Tuesday: JGH service rounds; Thursday: MNI service rounds; Friday: Neurology Grand Rounds (am); lab meetings for research supervisors
- What role will the fellow play in attending, organizing, and presenting rounds/conferences: There has been a long-standing plan to develop a monthly or eventually weekly McGill cognitive neuroscience rounds which would include resident teaching. The fellow will aid in organizing this.
- Evaluation and feedback: fellows will be evaluated at regular (i.e., quarterly) intervals on their performance at both the clinical and research levels. Satisfactory performance will be required to continue the second year for the fellowship, if so chosen by the fellow.
  - Clinical evaluations and feedback will be provided by the attending physicians involved both informally during the clinic and formally at 3 month intervals. Formal evaluations include one-on-one verbal sessions and written evaluations based upon standardized CanMEDS criteria adapted to the fellowship-specific goals and objectives.
  - Research evaluations and feedback will be provided by the research supervisor(s) in the form of 1 hour one-on-one sessions at least once per month at which time the fellow will present his/her research progress and results, as well as discuss problems and future directions.



**Department of Neurology and Neurosurgery  
Cognitive / Behavioural Neurology Fellowship (General and Specific Objectives)**

**1. Medical Expert/Clinical Decision-Maker**

***General Requirements***

- Demonstrate diagnostic and therapeutic skills for ethical and effective patient care.
- Access and apply relevant information to clinical practice.
- Demonstrate effective consultation services with respect to patient care, education and legal opinions.

***Specific Requirements***

Provide scientifically based, comprehensive and effective diagnosis and management for patients with dementia and other neurological disorders affecting behaviour and cognition. **Refer to the Appendix for specific clinical, technical, and knowledge requirements relevant to the medical expert role.**

**2. Communicator**

***General Requirements***

- Establish therapeutic relationships with patients/families.
- Obtain and synthesize relevant history from patients/families/communities.
- Listen effectively.
- Discuss appropriate information with patients/families, the health care team, and community organizations.

***Specific Requirements***

Communicate effectively with patients, their families and medical colleagues (particularly referring physicians), and other health care professionals in both the inpatient and outpatient settings. The resident will:

- Communicate effectively and regularly with patients and their families.
- Be considerate and compassionate in communicating with patients and families, willingly provide accurate information appropriate to the clinical situation, with a reasonable attempt at prognosis.
- Learn to write concise reports of the clinical findings with conclusions and recommendations comprehensible to the non-specialist.
- Communicate effectively and appropriately with psychologists, nurses, occupational therapists, social workers and other paramedical personnel.
- When ordering investigative procedures, ensure there has been adequate communication about the patient with the person who will actually be doing and/or reporting the diagnostic study.

### **3. Collaborator**

#### ***General Requirements***

- Consult effectively with other physicians and health care professionals.
- Contribute effectively to other interdisciplinary team activities.

#### ***Specific Requirements***

Be an effective teacher of other physicians (including medical students and house officers), other health care personnel, and patients. The resident will:

- Provide instruction to medical students and more junior physicians at a level appropriate to their clinical education and professional competence.
- Willingly share knowledge with others with whom they are associated, thus ensuring the most effective delivery of health care to patients.

### **4. Manager**

#### ***General Requirements***

- Utilize resources effectively to balance patient care, learning needs, and outside activities.
- Allocate finite health care resources wisely.
- Work effectively and efficiently in a health care organization.

- Utilize information technology to optimize patient care, life-long learning and other activities.

### ***Specific Requirements***

Be proficient in professional skills related to the diagnosis and treatment of dementia and other cognitive disorders.

Demonstrate the following professional skills in time management:

- Recognize that effective use of time depends upon punctuality.
- Recognize that effective use of time requires planning.
- Develop speed as well as accuracy in clinical skills.
- Reserve time for reading and keeping current with the neurological literature.
- Establish routines for carrying out regular activities and adhere to them.

Maintain complete and accurate medical records:

- Record and maintain a complete and accurate medical record for every patient seen; this record will include the patient's history and the findings on physical examination (including the neurological examination), a differential diagnosis, a provisional diagnosis, Effectively coordinate the work of the health care team.
- Indicate, by the treatment plan, that for the optimal treatment of many patients with neurological disorder, a team approach is necessary -- members of the team may include nurses, rehabilitation personnel (physiotherapists, occupational therapists, speech therapists, etc.), psychologists, social workers, etc.
- Identify where an important role(s) can be played by disease focused lay groups with regard to helping the patient and/or family and to facilitate its happening.

Learn to utilize limited medical resources judiciously:

- The resident will demonstrate when to obtain neuroimaging and other laboratory testing in patients with cognitive disorders, and when not to. The resident will demonstrate who to minimize the use of costly tests without undermining the ability to obtain a precise diagnosis.
- The resident will remain up-to-date with the most current evidence determining the efficacy of treatments in cognitive disorders, so as to recommend treatments that are both clinically- and cost-effective.

## **5. Health Advocate**

### ***General Requirements***

Identify the important determinants of health affecting patients.

Contribute effectively to improved health of patients and communities.

Recognize and respond to those issues where advocacy is appropriate.

### ***Specific Requirements***

Learn about community resources and related patient support groups; provide assistance to access programs (e.g. home care, occupational and physiotherapy, drug plans, application for nursing homes etc) and participate in their activities.

Educate, be able to generate and access information (e.g. printed material, video tapes web sites) and be available as a resource person to counsel patients effectively on neurological disorders.

Counsel patients on the importance of taking responsibility for their own well-being and recognize the important determinants predisposing to worsening of neurological status

Understand the role of national and international bodies (e.g. Alzheimer Society) in the promotion of neurological health, and the prevention, detection, and treatment of disorders of behaviour and cognition.

Advocate for a partnership with family physicians and other primary health care workers in the diagnosis and treatment of cognitive disorders in the community

## **6. Scholar**

### ***General Requirements***

Develop, implement and monitor a personal continuing education strategy.

Critically appraise sources of medical information.

Facilitate learning of patients, house staff/students and other health professionals.

Contribute to development of new knowledge.

### ***Specific Requirements***

Be able to critically assess the neurological literature as it relates to patient diagnosis, investigation and treatment:

- Develop criteria for evaluating neurological literature.
- Critically assess the neurological literature using these criteria.
- Be familiar with the design of experimental and observational studies, especially randomized controlled trials.
- Be able to calculate absolute risk reductions, relative risk reductions and numbers needed to treat or harm.



Be able to participate in clinical or basic science studies as a member of a research team:

- Be able to describe principles of good research.
- Use the above principles, and be able to judge whether a research project is properly designed.
- Be prepared to present research findings to peers at local, national or international conferences.

## **7. Professional**

### ***General Requirements***

Deliver highest quality care with integrity, honesty and compassion.

Exhibit appropriate personal and interpersonal professional behaviours with patients/families, peer residents and other health care professionals.

Practice medicine ethically consistent with obligations of a physician.

### ***Specific Requirements***

Demonstrate personal and professional attitudes consistent with a consulting physician role:

- Periodically review his/her own personal and professional performance against national standards set for the specialty.
- Be willing to include the patient in discussions concerning appropriate diagnostic and management procedures.
- Show appropriate respect for the opinions of fellow consultants and referring physicians in the management of patient problems and be willing to provide means whereby differences of opinion can be discussed and resolved.

Be willing and able to appraise accurately his/her own professional performances and show that he/she recognizes his/her own limitations with regard to skill and knowledge by appropriately consulting other physicians and paramedical personnel when caring for the patient.

Be willing and able to keep his/her practice current through reading and other modes of continuing medical education and develop a habit of maintaining current his/her clinical skill and knowledge base through continuing medical education.

## **Appendix**

### **Content of areas to be covered during the Cognitive / Behavioural Neurology Fellowship**

**Adapted from:** Core Curriculum for the Behavioral Neurology & Neuropsychiatry of the United Council of Neurological Subspecialties (<http://www.ucns.org/globals/axon/assets/3636.pdf>) (accessed September 2008)

The core curriculum for Cognitive / Behavioural Neurology is composed of four primary content areas:

#### **I. Structural and Functional Neuroanatomy**

**A.** The Fellow in Cognitive / Behavioural Neurology will develop expertise in:

1. The structural and functional organization of: the cerebral cortex and its major divisions; white matter tracts; limbic and paralimbic structures; anatomic and functional basal ganglia; diencephalon; the mesencephalon, metencephalon, and myelencephalon; and the cerebrovascular and ventricular systems.
2. The structural and functional organization of cortico-cortical and cortical-subcortical circuits.
3. Structural and functional cerebral hemispheric specialization, particularly as regards localization and lateralization of cognitive, emotional, behavioural, and sensorimotor functions.
4. Neuroanatomy, metabolism, and functional significance of the major neurotransmitter systems, local circuit and modulatory neurotransmitters, neuropeptides, neurohormones, and other endogenous neuroactive substances in the central nervous system.

**B.** The Fellow in Cognitive/ Behavioural Neurology will develop expertise in the structural and functional bases of cognition, emotion, and behaviour, including:

1. Cognition
  - a. Arousal
  - b. Perception
  - c. Attention
  - d. Language
  - e. Memory
  - f. Praxis
  - g. Recognition
  - h. Visuospatial function
  - i. Executive function
2. Emotion
  - a. Mood
  - b. Affect
  - c. Prosody (affective communication)
3. Behaviour
  - a. Motivation
  - b. Comportment
  - c. Personality

## II. Cognitive Neurological Assessment

The Fellow in Cognitive/ Behavioural Neurology will be provided with education and experience in the areas of clinical assessment listed below. **Note that area C is an exception to this and is most appropriately regarded as area in which acquisition of knowledge, and not necessarily performance skills, is an appropriate goal of fellowship training.**

### A. Neurological Examination

1. Elemental neurological function
  - a. Cranial nerves
  - b. Motor
  - c. Sensory
  - d. Coordination
  - e. Gait
  - f. Reflexes, including primitive reflexes (“frontal release signs”)
2. Neurological “soft-signs”.
3. The use of neurological examination rating scales and the interpretation of such data.

### B. Mental Status Examination

1. General Assessment
  - a. Appearance and behaviour
  - b. Speech
  - c. Thought process
  - d. Thought content
  - e. Emotion
  - f. Comportment
  - g. Personality
2. Cognitive Examination
  - a. Arousal
  - b. Attention
  - c. Language
  - d. Memory
  - e. Praxis
  - f. Recognition
  - g. Visuospatial function
  - h. Executive function
3. Adjusting mental status examination content and process in a manner sensitive to the patient's abilities or impairments in order to facilitate useful description of findings in patients who are unable to cooperate with any or all parts of a formal cognitive examination.
4. Interpreting mental status examination findings with respect to structural and functional neuroanatomic correlates.
5. Developing differential diagnosis based on mental status examination findings and their integration with findings from the neurological examination.

6. Indications for, administration of, and interpretation of standardized neuropsychiatric rating scales that supplement the neuropsychiatric history and mental status examination.

### C. Neuropsychological Assessment

1. The content, sensitivity, and specificity of neuropsychological testing, including:
  - a. Fixed assessment batteries.
  - b. Flexible batteries.
  - d. Projective testing.
  - a. Personality assessment tools.
2. The influence of age, education, cultural background, fatigue, drugs, sensory impairment, and primary psychiatric illnesses on test performance.
3. The role of and indications for neuropsychological testing in the evaluation and treatment planning related to neurobehavioural and neuropsychiatric disorders.
4. The relationship between neuropsychological test results and bedside or office-based screening mental status examinations.
5. The anatomic and disease correlates of neuropsychological test abnormalities.

### D. Neuroimaging

1. Principles and applications of structural and functional imaging of the brain, including the generally accepted clinical indications for such studies.
2. Correlation between neuroimaging findings and clinical examination (neurological and/or mental status) findings in persons with neurobehavioural syndromes.

\* **Note:** The types of available neuroimaging methods and also their generally accepted clinical indications are likely change over time. This element of the Core Curriculum may require revision as such changes occur.

### E. Electrophysiologic Testing

1. Principles and applications of electrophysiologic recordings of the central nervous system.
2. Correlation between electrophysiologic findings and clinical examination (neurological and/or mental status) findings in persons with neurobehavioural or neuropsychiatric syndromes.

\* **Note:** The types of electrophysiology testing methods available as well as their generally accepted clinical indications are likely to change over time. This element of the Core Curriculum may require revision as such changes occur.

### F. Laboratory Studies

1. Indications for serum and urine studies relevant to the evaluation of patients with neuropsychiatric and neurobehavioural conditions.
2. Indications for and interpretation of results from cerebrospinal fluid examination relevant to the evaluation of patients with neuropsychiatric and neurobehavioural conditions.

## G. Integration and Presentation of Findings

1. Integration of collateral historical information into the clinical assessment.
2. Development of a neurobehavioural and neuropsychiatric differential diagnosis.
3. Formulation of a neurobehavioural or neuropsychiatric diagnosis based on findings from the clinical assessment.
4. Development of treatment plan for the neurobehavioural or neuropsychiatric condition.
5. Presentation, both verbally and in writing, of clinical impressions and recommendations derived from the comprehensive clinic assessment to:
  - a. The patient and his or her family
  - b. Other health care professionals
  - c. Officers of the court
  - d. d. Other private or public agencies providing services to the patient.

## III. Treatments

The Fellow in Cognitive/ Behavioural Neurology will demonstrate knowledge about and clinical competency in the prescription and/or monitoring of somatic therapies, psychosocial interventions, crisis intervention, and basic neurorehabilitation, as specified below:

### A. Somatic Therapies

1. Therapeutic uses, benefits, side effects, and risks associated with psychotropic and neuropharmacologic agents commonly used in the care of patients with cognitive disorders.
2. Drug-drug interactions related to these and other medications commonly used in the care of patients with cognitive disorders.
3. **(Optional)** Knowledge of the indications and contraindications for the use of electroconvulsive therapy and neurosurgical procedures (i.e., ablative procedures, deep brain stimulators, vagus nerve stimulators, etc.) and other somatic therapies (e.g., transcranial magnet stimulation) in the treatment of patients with neurobehavioural and neuropsychiatric disorders.

### B. Psychosocial Interventions

1. Knowledge of and indications for psychosocial interventions used in the care of patients with neurobehavioural and neuropsychiatric disorders, including:
  - a. Supportive therapy, family therapy, other psychotherapeutic interventions relevant to the care of persons with neuropsychiatric and neurobehavioural disorders
  - b. Patient and family education
  - c. Environmental interventions

d. Behavioural management strategies

e. Use of and referral to community resources

2. Fellows should demonstrate the ability to work in a “split therapy” model when needed; this refers to a model of treatment in which the fellow is providing medical management and another clinician is providing specific psychosocial interventions (eg, psychotherapy, behavioural management, etc.).

#### **IV. Neurobehavioural Syndromes**

Fellows in Cognitive / Behavioural Neurology are expected to develop in-depth knowledge regarding the neuropsychiatric and neurobehavioural consequences of many neurological and psychiatric conditions. All fellows are expected to bring to subspecialty training the level of knowledge and clinical competence required by the RCPSC (or equivalent) for completion of and board-eligibility in Neurology.

**Given the limited duration of training in Cognitive/ Behavioural Neurology, some fellows may have little or no direct experience evaluating and caring for patients with some of these problems during the period of fellowship training.** The elements of the Core Curriculum described in sections I-III (above) are designed to ensure that Fellows develop the knowledge base and clinical skills required to understand, evaluate, and treat patients with neurobehavioural problems through mastery of the principles of Behavioural Neurology. In the service of preparing Fellows to provide care for persons with neurobehavioural problems arising in the context of the broad range of conditions in which such problems develop, Fellows are expected to both complement and supplement “bedside-learning” through guided self-directed learning activities and/or didactic experiences. Guided self-directed learning activities may include reading relevant textbooks, peer-reviewed articles, or other materials recommended by training program faculty. Didactic experiences may include seminars or other course work provided by the training program itself or by other programs either within or affiliated with the institution in which the fellowship training occurs. Additionally, Fellows should be encouraged to attend local or national conferences relevant to this aspect of training in Behavioural Neurology.

Through these means, it is expected that the fellow will develop an advanced level of knowledge regarding the neurobehavioural aspects, epidemiology, neurogenetics, putative neurological substrates, and typical neuropathological features of most of the conditions listed below, where such are known. Many conditions listed below will be emphasized over others and the fellow may only gain cursory exposure to some of the neuropsychiatric syndromes listed in section C.

A. Focal Cognitive/Behavioural Syndromes, including disorders of:

1. Arousal (e.g., coma, persistent vegetative state, minimally conscious state, etc.)
2. Perception (e.g., illusions, hallucinations, sensory impairments)
3. Attention (e.g., delirium, confusion, neglect/visuospatial disturbances)
4. Language (e.g., the aphasias)
5. Memory (e.g., the amnesias)
6. Praxis (e.g., the apraxias)
7. Recognition (e.g., the agnosias)

8. Executive function (e.g., dysexecutive syndrome)
9. Comportment and social behaviour (e.g., disinhibition, *witzelsucht*, paroxysmal irritability and aggression [or “organic aggressive syndrome”], Klüver-Bucy syndrome, etc.; see also impulse-control disorders, below)
10. Motivation (e.g., apathy, abulia, akinetic mutism)
11. Dementing Disorders

## B. Cognitive, Emotional, and Behavioural Manifestations of Neurological Disorders

1. Age-related cognitive impairment
2. Neurodegenerative disorders (e.g., Alzheimer’s disease, frontotemporal dementia, diffuse Lewy body disease, Parkinson’s disease, Huntington’s disease, etc.)
3. Cortical, subcortical, white matter, and mixed dementias
4. Stroke and other cerebrovascular diseases (e.g., transient ischemic attack [TIA], reversible ischemic neurologic impairment [RIND], vascular dementias, intracranial hemorrhage, aneurysms, hypoxic-ischemic encephalopathy)
5. Amnestic disorders (e.g., alcohol amnestic disorder [or Korsakoff’s psychosis], transient global amnesia, posttraumatic amnesia, psychogenic amnesia)
6. Epilepsy (e.g., primary and/or secondary generalized and/or partial seizures, Geschwind interictal personality syndrome, non-epileptic seizures)
7. Multiple sclerosis
8. Traumatic brain injury
9. Hydrocephalus (including normal pressure hydrocephalus)
10. Primary and secondary brain tumors
11. Central nervous system infections (e.g., HIV, neurosyphilis, Lyme disease, herpes encephalitis, prion encephalopathies)
12. Neuroendocrine disorders (e.g., hypo- and hyperthyroidism, diabetes mellitus, etc.)
13. Toxic exposures/ingestions
14. Metabolic disorders, including solid organ failure and transplantation and inborn errors of metabolism (e.g., adrenoleukodystrophy, phenylketonuria, etc.)
15. Movement disorders (e.g., Parkinson’s disease, Huntington’s disease, Wilson’s disease, acute and tardive movement disorders, psychogenic [conversion] movement disorders)

16. Headache (e.g., tension-type, migraines, cluster, etc.)
17. Acute and chronic pain
18. Collagen-vascular diseases, including systemic lupus erythematosus

### C. Neuropsychiatric Syndromes

1. Attention-deficit and disruptive behaviour disorders
2. Learning, communication, and motor skill disorders
3. Dyslexia
4. Developmental disabilities, including mental retardation
5. Autism and pervasive developmental disorder
9. Substance abuse and dependence
10. Disorders of mood (e.g., major depressive disorder, bipolar disorder, etc.)
11. Disorders of affect (e.g., pathological laughing and crying, affective lability, essential crying, euphoria, placidity, etc.)
12. Anxiety disorders (e.g., panic disorder, post-traumatic stress disorder, generalized anxiety disorder, obsessive-compulsive disorder)
13. Psychotic disorders (e.g., schizophrenia, schizoaffective disorder, delusional disorders)
14. Personality disorders and personality change due to neurological/medical conditions
15. Impulse control disorders (e.g., intermittent explosive disorder, aggression/rage due to neurological/medical conditions, hypersexuality, self-injurious behaviour, etc.)
16. Somatoform disorders (e.g., somatization, conversion disorder, etc.)
17. Factitious disorders
18. Malingering
19. Sexual disorders
20. Sleep disorders
21. Tic disorders, including Gilles de la Tourette's syndrome