CHILD AND ADOLESCENT PSYCHIATRY

- A comprehensive evaluation of a child includes interviews with the:
    - Parents
    - Child
    - Family
    - School counsellors, teachers etc. (gathering of information regarding child's current school)

CHILD DEVELOPMENT:

- Development results from the interplay of maturation of the CNS, neuromuscular apparatus, endocrine system and various environmental influences
- Environmental influences include:
    - Parents and teachers, who can either facilitate or hinder a child's attainment of development potential
    - This potential is specific to each person's given genetic predisposition to:
        - Intellectual level
        - Mental disorders
        - Temperament
        - Personality traits
- Development is continuous and lifelong:
    - Most rapid in early life
- Whereas neurogenesis is virtually complete at birth, the arborisation of axons and dendrites continues for many years
- For comprehensive overview of various theories of childhood development, see pp 306-313 of Kaplan and Sadock Handbook.

LEARNING DISORDERS:

- Diagnosed when reading, writing and mathematical skills are significantly lower than expected
- FOUR (4) diagnostic categories of learning disorders:
- 1. READING DISORDER:
    - Formally known as ***dyslexia***
    - Characterised by impaired ability to recognise words, poor comprehension and slow and inaccurate reading
    - **Diagnosis:**
        - Reading ability is significantly below that expected of a child of the same age, education and measured intelligence
        - Younger children tend to feel shame and humiliation
        - Older children tend to be angry and depressed and exhibit low self-esteem
    - **Epidemiology:**
        - 4% of school-age children
        - Occurs in 35-40% of first degree relatives

- **Differential diagnosis:**
  - Mental retardation.
    - Other skills, as well as reading, are impaired in these children
  - ADHD:
    - Reading improves with medication
    - Linguistic difficulties are not consistent
  - Hearing and visual impairments:
    - Should be ruled out with screening tests
- **Course and prognosis:**
  - Most school age children do not need remediation beyond early high school
- **Treatment:**
  - **Remediation:**
    - Begins with teaching the child to make accurate associations between letters and sounds
  - **Psychotherapy:**
    - To treat coexistent emotional and behavioural problems
    - Parental counselling may be helpful
  - **Pharmacotherapy:**
    - Used only for an associated psychiatric disorder

- 2. MATHEMATICS DISORDER:
  - Child has difficulty learning and remembering numerals, remembering and applying basic facts about numbers and is slow and inaccurate in computation
  - **Diagnosis:**
    - Mathematical ability is significantly below what is expected when considering the child's age, education and measured intelligence
  - **Epidemiology and aetiology:**
    - 1% of school-age children
    - Possible right hemisphere deficit
  - **Differential diagnosis:**
    - Mental retardation:
      - Arithmetic difficulties are accompanied by generalised impairment in overall intellectual functioning
    - ADHD or conduct disorder:
      - Should not be overlooked during diagnosis
  - **Course and diagnosis:**
    - Usually identified by 8 years of age
    - Child usually experiences continuing academic difficulties, shame, poor self-concept, frustration and depression
  - **Treatment:**
    - **Remediation:**
      - Effective teaching of mathematical concepts along with continuous practice
    - **Psychoeducation:**

- Provides positive feedback for good performance in social areas

- 3. DISORDERS OF WRITTEN EXPRESSION:
  - Characterised by frequent grammatical and punctuation errors and poor spelling and handwriting skills
    - The child underperforms in composing written text
    - Poor spelling, poor handwriting, poor punctuation and poor organization of written stories
  - **Treatment:**
    - **Remediation:**
      - Treatment includes continuous practice of spelling and sentence writing
    - **Psychotherapy**
      - Individual, group or family therapy
- 4. LEARNING DISORDER NOT OTHERWISE SPECIFIED

<u>PERVASIVE DEVELOPMENTAL DISORDERS:</u>

- A group of disorders in understanding and expressing language
- These disorders affect multiple areas of development, are manifested early in life and cause persistent dysfunction
- There are five disorders listed according to DSM-IV criteria
- 1.AUTISTIC DISORDER:
  - Characterised by qualitative deficits in reciprocal social interaction and communication skills and restricted patterns of behaviour
  - **Diagnosis (DSM-IV):**
    - A total of six (or more) items from (a), (b) or (c), with at least two from (a) and one each from (b) and (c):
      - (a): Qualitative impairment in social interaction, as manifested by at least two of the following:
        - Marked impairment in the **use of multiple nonverbal behaviours** such as:
          - Eye-to-eye contact
          - Facial expression
          - Body postures
          - Gestures to regulate social interaction
        - Failure to develop peer relationships appropriate to developmental level
        - A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people.
        - Lack of social or emotional reciprocity
      - (b): Qualitative **impairments in communication** as manifested by at least one of the following:
        - Delay in, or total lack of, the development of spoken language (not accompanied by an attempt to

compensate through alternative modes of communication)
        - If speech adequate, marked impairment in the ability to initiate or sustain a conversation with others
        - Stereotyped and repetitive use of language
        - Lack of varied, spontaneous make-believe play appropriate for developmental level
    - (c**): Restricted repetitive and stereotyped patterns of behaviour**, interests and activities, as manifested by at least one of the following:
        - Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
        - Apparently inflexible adherence to specific, non-functional routines or rituals
        - Stereotyped and repetitive motor mannerisms
        - Persistent preoccupation with parts of objects
- Delays or abnormal functioning in at least one of the following areas, with onset prior to **3 years of age**:
    - Social interaction
    - Language as used in social communication
    - Symbolic at imaginative play
- The disturbance is not better accounted for by Rett's disorder or childhood disintegrative disorder

- **Epidemiology:**
    - Occurs in 0.05% of children
    - Four to five times more common in males:
        - Females with the disorder are more likely to have more severe mental retardation
    - Onset before age of 3 years
- **Aetiology:**
    - Higher concordance rate in MZ twins than DZ
    - At least 2-4% siblings are affected
    - Biological factors are implicated due to high rates of seizure disorder and mental retardation
    - Immunologic incompatibility and prenatal and perinatal insults might be contributory factors
    - MRI studies have demonstrated increased brain volume in occipital, parietal and temporal lobes
    - Psychosocial and family stressors are associated with exacerbation of symptoms
- **Differential diagnosis:**
    - **Schizophrenia with childhood onset:**
        - Is rare in children under age 5
        - Accompanied by hallucinations and delusions

        - **Mental retardation with behavioural symptoms**
        - **Acquired aphasia with convulsion:**
            - Child is normal for several years before losing both receptive and expressive language
            - Most have seizures and generalised EEG abnormalities
        - **Congenital deafness or severe hearing impairment:**
            - Infants have normal babbling that usually tapers off and may stop from 6 months to 1 year of age
        - **Psychosocial deprivation:**
            - Children improve rapidly when placed in a favourable and enriched psychosocial environment
    - **Course and prognosis:**
        - Autistic disorder is a lifelong disorder with a guarded prognosis
    - **Treatment:**
        - **Remediation:**
            - Structured classroom training in combination with behavioural methods is the most effective treatment method
        - **Psychotherapy:**
            - Parents are often distraught and need support and counselling
        - **Pharmacotherapy:**
            - The administration of antipsychotic medications reduces the risk of aggressive or self-injurious behaviour
- 2. RETT'S DISORDER:
    - Severe developmental **deterioration following a normal developmental period of at least 6 months**
    - **Diagnosis:**
        - Neurodegenerative disease that shows characteristic features after a period of at least 6 months of normal function and growth
        - Signs include:
            - Microcephaly
            - Lack of purposeful hand movements
            - Stereotypic motions
            - Poor receptive and expressive communication
            - Apraxic gait
            - Poor coordination
    - **Epidemiology:**
        - Prevalence is 6-7 per 100,000 of females
    - **Aetiology:**
        - Progression is consistent with a metabolic disorder
        - Complete concordance in MZ twins
    - **Differential diagnosis:**
        - **Autistic disorder:**
            - Does not demonstrate deterioration of developmental milestones, head circumference and overall growth
    - **Course and prognosis:**

        - Course is progressive
        - Patients who live into adulthood remain at a cognitive level equivalent to that in the first year of life
    - **Treatment:**
        - Aimed at symptomatic intervention
        - Physiotherapy is beneficial for the muscular dysfunction
        - Anticonvulsant therapy for control of seizures
        - Behavioural therapy and medications are helpful in countering the self-injurious behaviour and to regulate breathing disorganisation
- 3. CHILDHOOD DISINTEGRATIVE DISORDER:
    - Disintegration of intellectual, social and language function after at least 2 years of normal development
    - **Diagnosis:**
        - Normal development for at least two years
        - Followed by abnormalities in:
            - Reciprocal social interaction
            - Communication skills
            - Stereotyped behaviour
        - Core features include impaired ability in:
            - Language
            - Social behaviour
            - Adaptive behaviour
            - Bowel or bladder control
            - Play
            - Motor skills
    - **Epidemiology:**
        - Occurs in 0.005% of children
        - Four to eight times more common in males
    - **Aetiology:**
        - Unknown
        - May be associated with other neurological conditions:
            - Seizure disorders
            - Tuberous sclerosis
            - Various metabolic disorders
    - **Differential diagnosis:**
        - Autistic disorder:
            - Patient does not demonstrate deterioration of developmental milestones
        - Rett's disorder:
            - Onset occurs later in life
    - **Course and prognosis:**
        - Course is variable, with a plateau reached in most cases
        - Most patients are left with some moderate mental retardation
    - **Treatment:**
        - Similar approach to autistic disorder

- 4. ASPERGER'S DISORDER:
    - Patient shows impairment in social interaction and restricted repetitive patterns of behaviour
    - There **are no significant delays in language, cognitive development, or age-appropriate self-help skills.**
    - **Diagnosis:**
        - Features include at least two of the following:
            - Markedly abnormal nonverbal communicative gestures
            - Failure to develop peer relationships
            - The lack of social or emotional reciprocity
            - An impaired ability to express pleasure in other people's happiness
            - Restricted interests and patterns of behaviour are always present
    - **Aetiology:**
        - Unknown
        - Family studies show a possible link to autistic disorder
            - Supports the presence of genetic, metabolic, infectious and perinatal contributing factors
    - **Differential diagnosis:**
        - Language delay is a core feature of autistic disorder
    - **Course and prognosis:**
        - Course and prognosis are variable
        - Good prognosis relies on normal IQ and high-level social skills
    - **Treatment:**
        - Depends upon patient's level of adaptive functioning
        - Similar techniques (antipsychotic medication) used with autistic disorder for patients with severe social impairment
- 5. PERVASIVE DISORDER NOT OTHERWISE SPECIFIED

<u>ATTENTION-DEFICIT DISORDERS:</u>

- **Persistent and marked inattention and/or hyperactive and impulsive behaviour**
- ATTENTION-DEFICIT/HYPERACTIVITY DISORDER:
    - Persistent pattern of inattention and/or hyperactivity and impulsive behaviour that is more severe than expected of children of similar age and level of development.
    - Must be present in at least two settings
    - Must interfere with the appropriate social, academic and extracurricular functioning
    - **Diagnosis:**
        - Principle signs are based on history of child's developmental patterns and direct observation in situations requiring attention
        - Typical signs include:
            - Talking excessively

- Persevering
- Fidgeting
- Frequent interruptions
- Impatience
- Difficulty organising and finishing tasks
- Distractibility
- Forgetfulness

- **Epidemiology:**
  - More common in males than females
  - 3-7% prevalence rate
- **Aetiology:**
  - Possible causes include perinatal trauma and genetic and psychosocial factors
  - Evidence of dysfunction of noradrenergic and dopaminergic neurotransmitter systems
  - Frontal lobe hypoperfusion and lower frontal lobe metabolic rates have been noted
- **Differential diagnosis:**
  - Bipolar I disorder:
    - There is more variability in symptomatology
  - Mania:
    - Irritability may be more common than euphoria
  - Learning disorders:
    - Inability to do writing, maths etc, is not due to inattention
  - Depressive disorder:
    - Distinguished by hypoactivity and withdrawal
  - Anxiety disorder:
    - May be manifested by overactivity and easy distractibility
- **Course and prognosis:**
  - Most patients undergo partial remission
  - Inattention is frequently the last symptom to remit
  - Patients are vulnerable to antisocial behaviour, substance use disorders and mood disorders
  - Learning disorders often continue throughout life
- **Treatment:**
  - **Psychotherapy:**
    - Multimodality treatment is recommended for both child and family
  - **Pharmacotherapy:**
    - CNS stimulants have been shown to have significant efficacy and excellent safety records
      - Methylphenidate (Ritalin)
      - Dextroamphetamine
      - Amphetamine salt combinations
    - Second line agents include the antidepressant agents:
      - Bupropion

- Venlafaxine
- Alpha-adrenergic agents (clonidine)

DISRUPTIVE BEHAVIOUR DISORDERS:

- Includes two persistent constellations of disruptive symptoms categorised as **oppositional defiant disorder** and **conduct disorder.**
  - Both result in impaired social or academic function in a child
- 1. OPPOSITIONAL DEFIANT DISORDER:
  - Enduring pattern of negative, hostile behaviour in the absence of serious violation of societal norms or values
  - **Diagnosis (DSM-IV):**
    - Four or more of the following are present:
      - Often loses temper
      - Often argues with adults
      - Often actively defies or refuses to comply with adults' requests or rules
      - Often deliberately annoys people
      - Often blames others for his or her mistakes or misbehaviour
      - Is often touchy or easily annoyed by others
      - Is often angry and resentful
      - Is often spiteful or vindictive
    - Criteria ARE NOT met for conduct disorder
  - **Aetiology:**
    - Possible result of unresolved conflicts
    - May be a reinforced, learned behaviour
  - **Differential diagnosis:**
    - Developmental stage oppositional disorder
    - Adjustment disorder:
      - Oppositional defiant behaviour occurs temporarily in response to stress
    - Conduct disorder:
      - The basic rights of others are violated
  - **Course and prognosis:**
    - Course depends on severity of symptoms in the child and the ability of the child to develop more adaptive responses to authority
  - **Treatment:**
    - **Psychotherapy:**
      - Primary treatment is family intervention utilising both direct training of parents in child management skills and careful assessment of family interactions
    - **Pharamacotherapy:**
      - For comorbid disorders (anxiety or depression)
- 2. CONDUCT DISORDER:
  - Characterised by aggression and violation of the rights of others

- **Diagnosis:**
  - **Aggression to people and animals:**
    - Often bullies, threatens or intimidates others
    - Often initiates physical fights
    - Has used a weapon that can cause serious harm to others
    - Has been physically cruel to people
    - Has been physically cruel to animals
    - Has stolen while confronting victim
    - Has forced someone into sexual activity
  - **Destruction of property:**
    - Has deliberately engaged in fire setting with the intention of causing serious damage
    - Has deliberately destroyed others' property
  - **Deceitfulness or theft:**
    - Has broken into someone else's house, building or car
    - Often lies to obtain goods or favours or to avoid obligations
    - Has stolen items of nontrivial value without confronting a victim
  - **Serious violation of rules:**
    - Often stays out at night despite parental prohibitions, beginning before the age of 13
    - Has run away from home overnight at least twice while living in parental or surrogate home
    - Is often truant from school
  - **If the individual is older than 18, it is important that the criteria for antisocial personality disorder are not met.**
- **Aetiology:**
  - Multifactorial
  - Maladaptive aggressive behaviours are associated with family instability, physical and sexual victimisation, socio-economic factors and negligent conditions
  - Often coexists with ADHD, learning disorders or communication disorders
- **Differential diagnosis:**
  - Oppositional defiant disorder:
    - Hostility and negativism fall short of seriously violating the rights of others
  - Mood disorders:
    - Often present in those children who exhibit irritability and aggressive behaviour
    - Major depressive disorder and bipolar I disorder must be ruled out
  - ADHD:
    - Impulsive and aggressive behaviours are not as severe
- **Course and prognosis:**

        - Severe cases are most vulnerable to comorbid disorders later in life:
            - Substance use disorders
            - Mood disorders
        - Good prognosis is predicted in mild cases in the absence of coexistent psychopathology and normal intellectual functioning
    - **Treatment:**
        - **Psychotherapy:**
            - Individual or family therapy
        - **Pharmacotherapy:**
            - Antipsychotics (haloperidol, risperidone or olanzapine) help control severe aggressive and assaultive behaviour