Psychiatry 5th year

Chapter 10: Psychiatric Disorders in Children

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Psychiatric Examination of a Child

Sources of Information

- Try to gather information from multiple sources; to obtain as accurate a clinical picture as possible.
- **Primary caregivers**
- **Teachers**
- **Pediatricians**
- **Child welfare system**

Methods of Gathering Information

- Goal is to determine the child's developmental stage and tailor and interview appropriately.
- **Play therapy**: Utilizes the child's *symbolic play, storytelling,* or drawing as a forum for expression of emotions and experiences.
- **Classroom observation:** A window into the child's functioning in school
- **Formal neuropsychological testing**: Quantitatively assesses a child's strengths and weaknesses by examination of cognitive profile: intelligence quotient (IQ); language and visual-motor skills; memory, attention, and organizational abilities.
- **Kaufman Assessment Battery for Children (K-ABC):** Intelligence test comparing intellectual capacity with acquired knowledge of patients between 2 and 12 years old
- **Wechsler Intelligence Scale for Children-Revised (WISC-R):** Assesses verbal, performance, and full-scale IQ of patients between 6 and 16 years old.

Safety assessment

- Always screen for safety (suicidal/homicidal ideation, psychotic thoughts, command auditory hallucinations) + self-injurious behavior as this may indicate an increased risk for suicidal behavior.
- In the US, suicide is the 3rd leading cause of death in children aging 10-14 years old, and the 2nd leading cause of death in individuals ages 15-24.

Intellectual Disability

- Previously known as **Mental Retardation** – Rosa's law, changed the name with the intention of decreasing stigmatization-.
- Characterized by impaired cognitive and adaptive/social functioning.
- Severity level and the degree of support required are currently based on adaptive functioning.
- Severity levels: **Mild**, **Moderate**, **Severe**, **Profound**.
- Previously assessed using a single IQ score, but it's no longer used solely as it doesn't adequately capture ID severity.
- **Epidemiology**:
  - Overall: 1%
  - Severe: 6/1000

Etiology

- **Multifactorial** including genetic, prenatal, perinatal, and postnatal conditions.
- 50% of cases are idiopathic
- **Genetic**: Down Syndrome, Fragile X Syndrome (M>F), Prader-Willi Syndrome, Phenylketonuria, Williams Syndrome, Angelman Syndrome.
- **Prenatal**: Infection and Toxins; Toxoplasmosis, Rubella, CMV, HSV.
- **Perinatal**: Anoxia, Prematurity, Birth Trauma, Meningitis, Hyperbilirubinemia.
- **Postnatal**: Hypothyroidism, Malnutrition, Toxin Exposure, Trauma.

TABLE 10-1. Causes of Intellectual Disability	
Cause	**Examples**
Genetic	■ **Down syndrome:** Trisomy 21 (1/700 live births) ■ **Fragile X syndrome:** Involves mutation of X chromosome, 2nd most common cause of intellectual disability, males >females ■ *Other causes:* Phenylketonuria, familial mental retardation, Prader–Willi syndrome, Williams syndrome, Angelman syndrome, tuberous sclerosis
Prenatal	Infection and toxins (**TORCH**): ■ **T**oxoplasmosis ■ **O**ther (syphilis, AIDS, alcohol/illicit drugs) ■ **R**ubella (German measles) ■ **C**ytomegalovirus (CMV) ■ **H**erpes simplex
Perinatal	Anoxia, prematurity, birth trauma, meningitis, hyperbilirubinemia
Postnatal	Hypothyroidism, malnutrition, toxin exposure, trauma

Diagnosis and DSM-5 Criteria

- **Deficits in intellectual functioning**, like reasoning, problem solving, planning, abstract thinking, judgment and learning.
- **Deficits in adaptive functioning**, like communication, social participation and independent living.
- Deficits affect multiple domains: conceptual, practical and social.
- Onset during the developmental period.
- Intellectual deficits are confirmed by clinical assessment and standardized intelligence testing.

- **Adaptive functioning deficits require ongoing support for activities of daily life.**

Severity levels: Mild, moderate, severe, and profound.

Global Developmental Delay

- Failure to meet expected developmental milestones in several areas of intellectual functioning.
- Diagnosis reserved for patients less than 5 years old when severity level cannot be reliably assessed via standardized testing.

Specific Learning Disorder (LD)

- Characterized by delayed cognitive development in a particular academic domain.
- Prevalence in school age children**: 5-15% (M>F)**
- **Etiology**:
  - **Environmental factors**: Prematurity, Very low birth weight, prenatal nicotine exposure.
  - **Genetic factors**: increased risk in first-degree relatives of affected individuals.
- Co-occurs with other neurodevelopmental disorders like ADHD, Communication disorders, Developmental coordination disorder, and Autistic Spectrum disorder (ASD).
- Comorbid with other mental disorders, including Anxiety, Depressive and Bipolar disorders.

Diagnosis and DSM-5 Criteria

- **Significantly impaired academic skills which are below expectation for chronological age and interfere with academics, occupation, or activities of daily living**
- Begins during school but may become more impairing as demands increase.
- Affected areas: **Reading**, **Writing**, **Arithmetic**.
- Not better accounted for by intellectual disabilities, visual/auditory deficits, language barriers, or subpar education

Treatment

Systematic, individualized education tailored to child's specific needs.

Behavioral techniques may be used to improve learning skills.

Communication Disorders

- Include **impaired speech, language, or social communication that are below expectation for chronological age**, begin in the early developmental period, and lead to academic or adaptive issues.
- **Language disorder**: difficulty acquiring and using language due to expressive and/or receptive impairment.
- **Speech sound disorder** (AKA Phonological disorder): difficulty producing articulate, intelligible speech.
- **Childhood-onset fluency disorder**: dysfluency and speech motor production issues.
- **Social communication disorder**: challenges with the social use of the verbal and non-verbal communication (if restricted/repetitive behaviors, activities or interests are also present, consider diagnosis of ASD)

Treatment

- Speech and Language therapy
- Family counseling
- Tailor educational supports to meet the individual’s needs.

A 10-year-old girl is referred for psychiatric evaluation because of academic and behavioral issues over the last year. The student has an above average IQ and seems to comprehend class material. Her teachers share concerns that she makes careless mistakes on homework and rushes through tests, leading to lower than predicted grades. She also blurts out answers without waiting for her turn. During the interview, she has difficulty staying focused and asks the examiner to repeat the question several times. Her mother complains that she does not clean her room or complete assigned chores.

What is the most likely diagnosis?

The patient has classic symptoms of attention deficit/hyperactivity disorder (ADHD) occurring in two different settings (home and school).

What treatment is indicated?

If the child does not have any contraindications, stimulant medications are usually the first-line treatment for ADHD.

Attention Deficit/Hyperactivity Disorder (ADHD)

- **Persistent inattention, hyperactivity, and impulsivity inconsistent with the patient's developmental stage**.
- 3 subcategories:
  - **Predominantly inattentive type**.
  - **Predominantly hyperactive/impulsive type**.
  - **Combined type**.
- **Prevalence**: 5% of Children and 2.5% of Adults.
- M>F; 2:1
- Females present more often with inattentive symptoms.
- **Etiology**:
  - **Genetic**: Increased rate in first-degree relatives.
  - **Environmental**: Low birth weight, Smoking during pregnancy, childhood abuse/neglect, neurotoxin/alcohol exposure.
- Stable through adolescence.
- May continue to have symptoms as adults (inattentive>hyperactive).

Diagnosis and DSM-5 Criteria

- 2 symptom domains: **Inattentiveness and Hyperactivity/Impulsiveness**.
- **Inattentive symptoms**:
  - Doesn't pay attention to details, Difficulty sustaining attention, Doesn't appear to listen, Struggles to follow instructions, Unorganized, Avoids or dislikes tasks requiring high cognitive demands, Misplaces or loses objects frequently, Easily distracted, Forgetful in Daily activities.
- **Hyperactivity/Impulsivity symptoms**:
  - Fidgets with hands/feet or squirms in chair, Difficulty remaining seated, Runs about or climbs excessively in childhood, Difficulty engaging in activities quietly, Acts as driven by a motor, Talks excessively, Blurts out answers before questions have been completed, Difficulty waiting or taking turns, Interrupts or intrudes upon others.

- **Should have ≥ 6 inattentive symptoms and/or ≥ 6 hyperactivity/impulsivity symptoms**.
- **Symptoms > 6 months and present in ≥ 2 different settings** (home, school, work).
- Symptoms interfere with or reduce quality of social/ academic/ occupational functioning.
- Onset prior to age 12 but can be diagnosed retrospectively in adulthood.
- Symptoms not due to another medical condition.

Treatment

Multimodal treatment plan; medications are the most effective for decreasing core symptoms but should be used in conjunction with educational and behavioral interventions.

Pharmacological Treatments:

- **First-line**: Stimulants; like methylphenidate, dextroam, phetamines.
- **Second-line**: Norepinephrine reuptake inhibitor; Atomoxetine.
- **Alpha-2 agonists** can be used instead of or as adjunctive therapy to stimulants.

Nonpharmacological treatment:

- Behavior modification techniques and social skills training.
- Educational interventions.
- Parental psychoeducation.

Autism Spectrum Disorder (ASD)

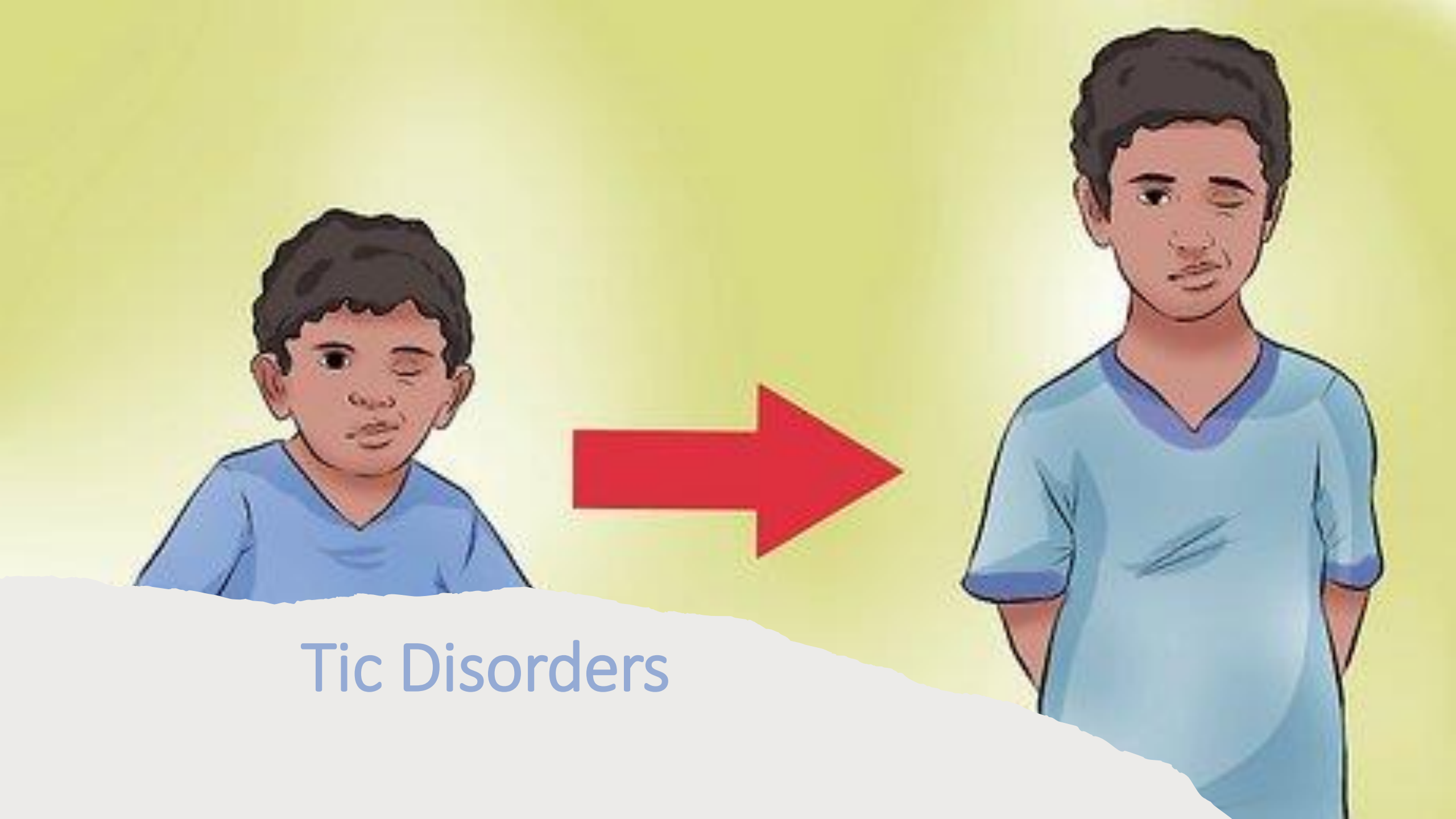
- <u>Impairments in social communication/ interaction and restrictive, repetitive behaviors/ interests</u>.
- Recent increase in prevalence to 1%, related to expansion of diagnostic classification and/or increased awareness/ recognition.
- M>F; 4:1
- Symptoms typically recognized between 12-24 months old but varies based on severity.
- **Etiology**: multifactorial
  - Prenatal neurological insults (infections, drugs), Advanced paternal age, Low birth weight, Genetic mutations (50%), Fragile X syndrome (m/c known single gene cause), Down syndrome, Rett syndrome, Tuberous sclerosis, High comorbidity with ID, Association with epilepsy.

Diagnosis and DSM-5 Criteria

- **Problems with social interaction and communication**:
  - Impaired social/emotional reciprocity (inability to hold conversations), Deficits in nonverbal communication skills (decreased eye contact), Interpersonal/relational challenges (lack of interest in peers).
- **Restricted, repetitive patterns of behavior, interests or activities**:
  - Intense, peculiar interests (preoccupation with unusual objects), Inflexible adherence to rituals (rigid thought patterns), Stereotyped, repetitive motor mannerisms (hand flapping), Hyperreactivity/Hyporeactivity to sensory input (hypersensitive to particular textures).
- **Abnormalities in functioning begin in the early developmental period**.
- Not better accounted for by ID or global developmental delay
- Causes significant social or occupational impairment.

Prognosis and Treatment

- **Chronic condition, with variable prognosis**.
- The 2 most important predictors of adult outcome: 1- **Level of intellectual functioning**. 2- **Language impairment**.
- No cure for Autism, but various treatments are used to help manage symptoms and improve basic skills:
  - **Early intervention**.
  - **Remedial education**
  - **Behavioral therapy**
  - **Psychoeducation**
  - **Low-dose atypical antipsychotics may help reduce disruptive behavior, aggression and irritability**.



Tic Disorders

- **Tics**: sudden, rapid, repetitive stereotyped movements or vocalizations
- Experienced as involuntary however patients can learn to temporarily suppress tics.
- Prior to the tic, patients may experience somatic sensation with subsequent tension release after the tic.
- Aggravated by **Anxiety**, **Excitement**, and **Fatigue**.

Examples of vocal tics:

Coprolalia—Utterance of obscene, taboo words as a bark or grunt.
Echolalia—Repeating others' words.

Tourette's Syndrome

- **The most severe tic disorder**.
- Multiple motor tics and at least one vocal tic lasting for at least 1 year.
- Vocal tics may appear many years following motor tics and they may wax and wane in frequency.
- **The most common motor tics involve the face and the head** (eye blinking and throat clearing).
- **Transient Tic behaviors**: common in children.
- **Tourette's disorder**: 3/1000 school-age children.
- Boys > Girls

Etiology and Prognosis

- **Genetic Factors**: >55% concordance rate in monozygotic twins.
- **Prenatal/Perinatal Factors**: Older paternal age, Obstetrical complications, Maternal smoking, Low birth weight.
- **Psychological Factors**: Symptom exacerbation with stressful life events.
- Onset: 4-6 years, peaking at 10-12 years.
- Symptoms tend to decrease in adolescence and significantly diminish in adulthood.
- High comorbidity with **OCD**, **ADHD**, **LD**, **ASD**.

Diagnosis and DSM-5 Criteria

- Multiple motor and at least 1 vocal tics present for more than 1 year since onset of first tic.
- Onset prior to age of 18.
- Not caused by substance (Cocaine) or another medical condition (Huntington Disease).

Treatment

- **Psychoeducation**
- **Behavioral interventions**: Habit reversal therapy.
- **Medications**: Only when tics become severely impairing or also treating comorbidities.
- **Alpha-2 agonists**: Guanfacine (first choice) **& clonidine**
- In severe cases, treat with **Atypical or Typical antipsychotics**.

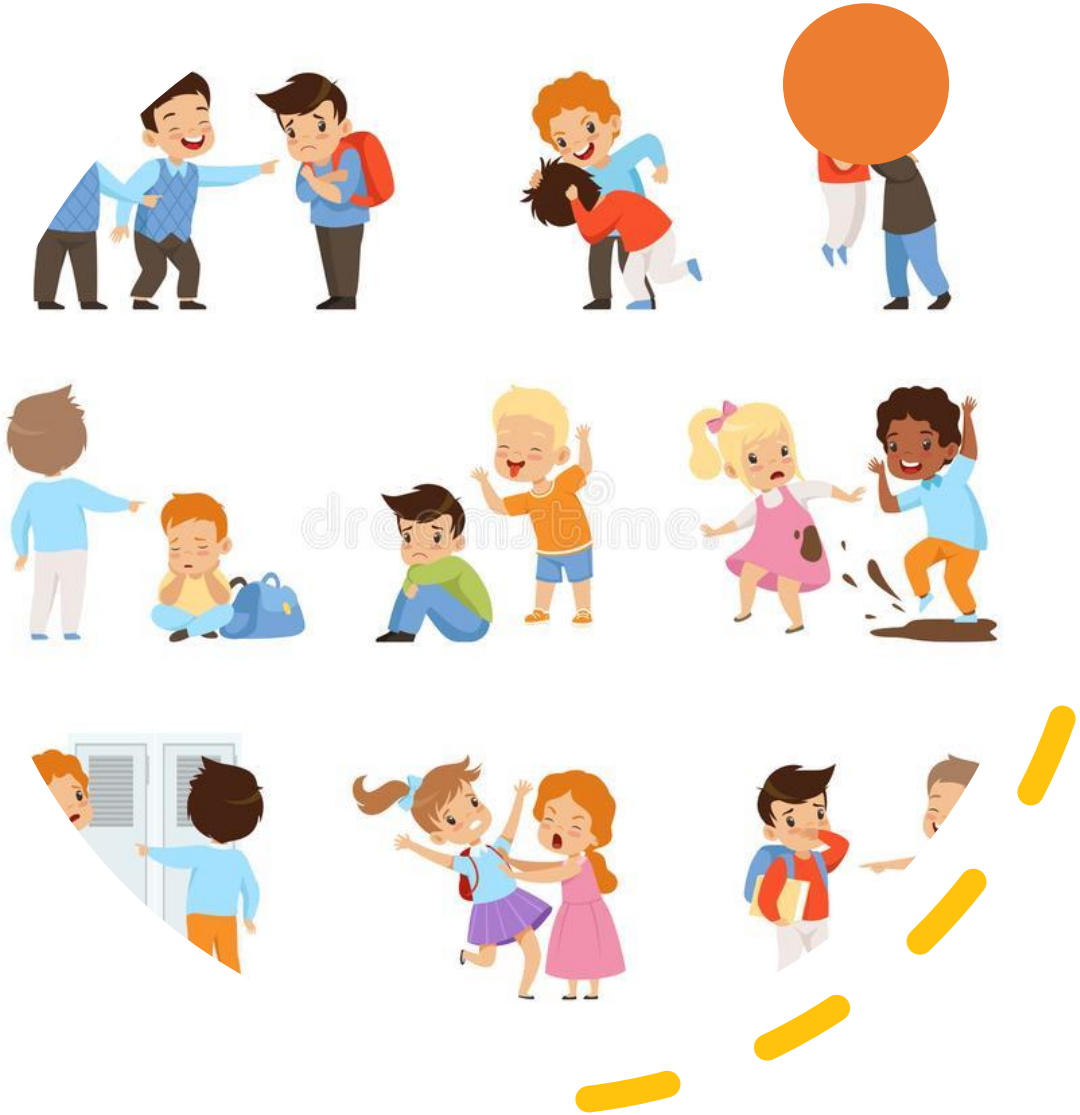
Other tic disorders include:

Persistent (chronic) motor or vocal tic disorder: Single or multiple motor or vocal tics (but not both) that have never met criteria for Tourette's.

Provisional tic disorder: Single or multiple motor and/or vocal tics less than 1 year that have never met criteria for Tourette's.

Disruptive and Conduct Disorders

- Involve problematic interactions or inflicting harm on others.
- Disruptive behaviors may appear within the scope of normal development however they become pathologic when the frequency, pervasiveness and severity impair functioning of the individual or others.



Oppositional Defiant Disorder (ODD)

- **<u>Maladaptive pattern of irritability/anger, defiance, or vindictiveness, which cause dysfunction or distress in the patient or those affected</u>**.
- **Prevalence**: ~3%
- Onset usually during preschool years.
- Increased incidence of comorbid substance use and ADHD.
- **Often ODD precedes CD, most don't develop CD**.

Diagnosis and DSM-5 Criteria

- **≥ 4 symptoms presenting for ≥ 6 months** (with ≥ 1 individual who is not a sibling):
  - **Anger/Irritable mood**: Loses tamper frequently; often angry and resentful.
  - **Argumentative/ Defiant behavior**: Breaks rules, Blames others, Argues with authority figures, Deliberately aggravates others.
  - **Vindictiveness**: Spiteful/Vindictive ≥ 2 times in the past 6 months.
- Behaviors are associated with distress in the individual or others.

Treatment

- **Behavior modification**: conflict management training and improving problem-solving skills.
- **Parent management training**
- **Medications**; to treat comorbid conditions such as ADHD.

Conduct Disorders

- **<u>The most serious distributive behavior, which violates the rights of other humans and animals.</u>**
- They inflict cruelty and harm through physical and sexual violence.
- They lack remorse for committing crimes or lack empathy for their victims.
- **Prevalence**: 9%
- M>F
- High incidence of comorbid ADHD and ODD.
- Associated with **Antisocial personality disorder**.

Diagnosis and DSM-5 Criteria

- Recurrently violating the rights of others or societal norms.
- **≥ 3 of the following behaviors over the last year and ≥ 1 occurring within the past 6 months**:
  - **Aggression to people and animals** (Bullies, Threatens).
  - **Destruction of property** (Fire setting).
  - **Deceitfulness or theft** (Burglary, Lying to obtain goods/favors).
  - **Serious violation of rules** (Runs away from home, Stays out late at night).

Treatment

- Multimodal treatment approach with behavior modification, family and community involvement.
- Medications can be used to target comorbid symptoms and aggression (SSRIs, Propranolol, Mood Stabilizers, Antipsychotic).

■ **PMT can help parents with limit setting and enforcing consistent rules.**

Elimination Disorders

- **Developmentally inappropriate elimination of Urine or Feces**.
- Typically, involuntary but may be intentional.
- Could be **Primary** or **Secondary**
  - **Primary**: Never established continence.
  - **Secondary**: Continence achieved for a period and then lost.
- Prevalence of Enuresis decreases with age (5-10% of 5 years old, 3-5% of 10 years old, 1% of >15 years old).
- **Nocturnal Enuresis more common in boys**.
- **Diurnal Enuresis more common in girls**.
- Prevalence of Encopresis: 1% of 5-year-old; Boys > Girls
- **Etiology**:
  - **Genetic predisposition for nocturnal enuresis** (4 times higher risk if history of maternal urinary incontinence, 10 times higher risk if history of paternal urinary incontinence).
  - **Psychosocial stressors may contribute to 2ry incontinence**.
  - **Encopresis**: constipation/impaction with overflow incontinence.

Diagnosis and DSM-5 Criteria

Enuresis:

- Recurrent urination into clothes or bed-witting.
- **Twice weekly for ≥ 3 consecutive months or results in clinical distress or marked impairment**.
- ≥ 5 years old developmentally.
- Occur during Sleep (nocturnal), Waking hours (diurnal), or both.
- Not due to a substance (diuretics) or another medical condition (UTI, DM).

Encopresis:

- Recurrent defecation into inappropriate places.
- **At least Once monthly for ≥ 3 months**
- ≥ 4 years old developmentally.
- Not due to a substance (laxatives) or another medical condition (hypothyroidism, anal fissures)

Treatment

- Only treat if symptoms are distressing and impairing.
- **Psychoeducation** – the key for children and their caregivers.
- **Parent management treatment** (PMT) – for managing intentional elimination.
- **Enuresis Treatment**:
  - Limit fluid intake and caffeine at night.
  - Behavioral program with monitoring and reward system, Bladder training exercises, Urine alarm
  - Pharmacology: Desmopressin - ADH analogue- (first line), Imipramine (TCA)
- **Encopresis without constipation**:
  - Comprehensive behavioral program for appropriate elimination.**("bowel retraining")**
- **Encopresis due to constipation**:
  - Initial bowel cleaning followed by stool softeners, High fiber diet, Toileting routine in conjunction with behavioral program.

PANS/PANDAS

Pediatric acute-onset neuropsychiatric syndrome (**PANS** aka childhood acute neuropsychiatric symptoms or CANS) refers to a group of disorders characterized by the presence of **obsessive compulsive disorder** or **severely restricted food intake**. As suggested by the name, the onset is typically rapid, often described by parents as "appearing overnight." The presence of severe symptoms from two or more of the following categories are necessary to meet the diagnostic criteria:

- **Anxiety.**
- Emotional lability and/or depression.
- Irritability, aggression, and/or oppositional behaviors.
- Behavioral/developmental regression.
- Sudden deterioration in school performance.
- Motor or sensory abnormalities.
- Somatic symptoms and signs, including **sleep disturbances**, **enuresis**, or **urinary frequency**.

Pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) is a subtype of PANS. Diagnosis requires OCD and/or a tic disorder. The initial onset and/or periodic exacerbations are temporally associated with group A streptococcal infections. Motoric hyperactivity and/or adventitious movements are commonly present. While both PANS and

PANDAS have been topics of debate in regards to their etiologies, evaluation, and treatment, PANDAS is listed in the *DSM-5*, as an Obsessive Compulsive and Related Disorder due to Another Medical Condition.

Child Abuse

- It encompasses **Physical**, **Sexual**, **Emotional** abuse and **Neglect**.
- Toxic stress may result when children endure prolonged, severe trauma without the buffer of supportive caregivers.
- ~ 1 million cases of child maltreatment in the US.

Physical Abuse

- Any act that results in non-accidental injury and may be the result of severe corporal punishment committed by an individual responsible for the child.
- **Most common perpetrator is a first-degree male caregiver** (parent, guardian, mother's partner).

Sexual Abuse

- Any sexual act involving a child intended to provide sexual gratification to an individual responsible for the child.
- Sexual abuse is the most invasive form of abuse and results in detrimental lifetime effects on victim.
- Approximately 25% of girls and 9% of boys are exposed to sexual abuse.
- Children are most at risk of sexual abuse during preadolescence.

Psychological Abuse

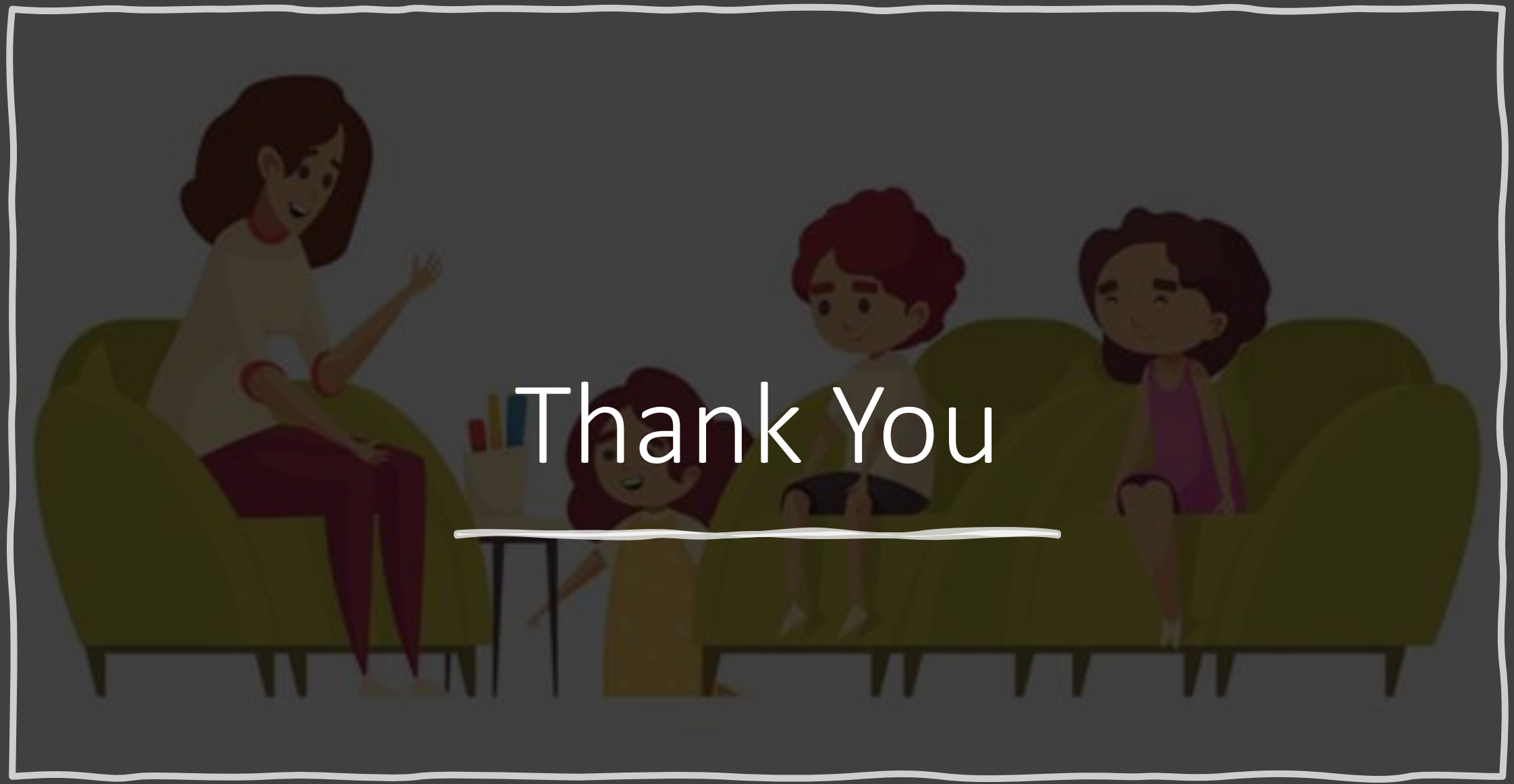
- Non-accidental verbal or symbolic acts that result in psychological damage.

Neglect

- Failure to provide a child with adequate food, shelter, supervision, medical care, education, and/or affection.
- Victims of neglect may exhibit poor hygiene, malnutrition, stunted growth, developmental delays, and failure to thrive.
- Neglect accounts for the majority of cases reported to child protection services.

Treatment and Sequelae

- Early intervention can potentially mitigate the negative sequelae and facilitate recovery.
- Increased risk of developing **Posttraumatic stress disorder**, **Anxiety disorders**, **Depressive disorders**, **Dissociative disorders**, **Self-destructive behaviors**, and **Substance use disorders**.
- Increased risk of continuing intergenerational abuse cycle with partners and children.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