

Anxiety Disorders in Children and Adolescents

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Anxiety disorders are the most frequent mental health problem seen in primary care and child psychiatry.

Issues Specific to Children and Adolescents

- **Diagnostic challenge** in children is determining normal, developmentally appropriate worries, fears and shyness from anxiety disorders.
- **Features** of pathological anxiety include **severity, persistence** and associated **dysfunction/impairment**.
- Developmental **patterns** of various anxieties.

Objectives

- The learner will be able to identify two changes in the DSM V (from DSM IV) for diagnosing anxiety disorders in children and adolescents.
- The learner will be able to identify two co-occurring disorders in children with anxiety disorders
- The learner will be able to identify one evidence based treatment (medication or therapy) for treating anxiety disorders in children and adolescents.

Agenda

- What is Anxiety and Fear?
- Why is it Important?
- Epidemiology
- Susceptibility Models
- Types of Anxiety Disorders Children and Adolescents
- Changes in DSM V
- Assessment
 - Recognize risk factors for & presenting signs & symptoms of anxiety disorders
- Treatment
 - Review evidence based behavioral & (some) pharmacologic management of anxiety in children and adolescents
- Resources

Anxiety and Fear

- **Fear**- negative emotional state triggered by the existence of a stimulus that has the **potential to cause immediate harm**
- **Anxiety**- emotional state where **threat is not immediately present but is anticipated**
- Both adaptive and essential for survival.

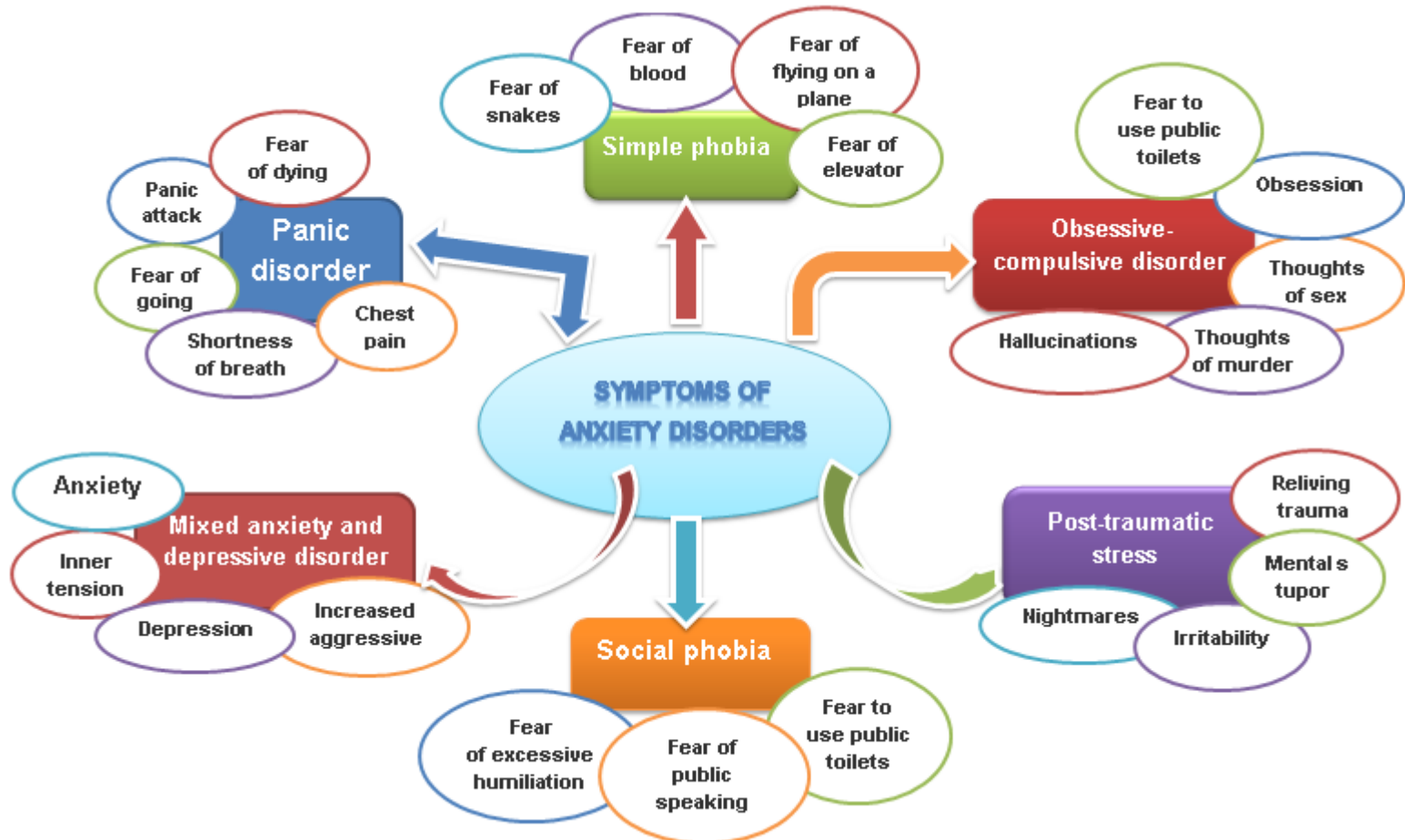
Fear Response

prepares the individual to deal with the danger

- Cognitive representations-thoughts
- Physical symptoms- stomachache, sob, dif swallowing
- Behavioral modifications –avoidance, behaviors, isolation

Anxiety Disorders

- “Collection of syndromes characterized by **dysfunctional fear** and/or anxiety affecting children and adolescents.” (Salum et al., 2013).



Physical Symptoms of Anxiety can be vague and numerous

- Fatigue, general muscle tension, memory loss and difficulty in concentrating, malaise, insomnia, dry mouth, or a poorly defined sense of “not being well.”
- Palpitations, tachycardia, syncope or pre-syncope, shortness of breath, and chest tightness or pain
- Diarrhea, nausea, and abdominal pain.
- Frequent urination and urinary urgency may be reported. Neurological symptoms may include trembling, dizziness, paresthesias, or numbness.

Why Important?

- Children with anxiety more likely to have difficulty with
friendships
family life
school
- Treatments for children with anxiety can help to prevent them from developing mental health problems or drug and alcohol misuse in later life.
- Often not recognized by parents as a medical problem, and don't receive care.
- Adults seen for anxiety had the origins in childhood adolescence

Epidemiology: Anxiety in Children and Adolescents

- Anxiety disorders are amongst **the most common** psychiatric disorders occurring of all children and adolescents
- Many children suffer from anxiety~
 - Occurs in 5% to 30% of all children and adolescents-
 - Occurs between 2.6% and 5.2% 12 and under with separation anxiety the most common disorder
- Equal prevalence among young boys and girls *until* adolescence; then 2:1 to 3:1 females to males

Increased risk for the development of substance abuse during adolescence and adulthood

- When anxiety disorders begin in childhood

Interferes with detection of the anxiety disorder

- When active substance use begins

Anxiety disorders –

the development of eating disorders in adolescent girls

- anorexia nervosa
- binge eating in children

Age Specific Worries

- Young children may have **undifferentiated worries and fears and multiple somatic complaints** - muscle tension, headache or stomachache - and sometimes angry outbursts.
- **May be misdiagnosed** as oppositional defiant disorder (ODD), **as the child tries to** avoid anxiety-provoking situations.
- School-age children - worries about **injury and natural events**, parents being hurt/separation anxiety
- Older children and adolescents - **worries and fears related to school performance, social competence and health issues.**
- Puberty- **Social anxiety disorder** typical

The Informant Matters

- Parents commonly under- and over-report child's mood and anxiety feelings (internalizing symptoms)
- Parents are typically good reporters of disruptive behaviors such as hyperactivity & aggression (externalizing symptoms)

Age range	Common fears
Infancy	Loud noises, being startled, strangers, large objects
Toddlers	Dark, separating from parents (can begin at 9 mo.), imaginary creatures, sleeping alone, doctors
*School-aged children	Injury, natural disasters or events (eg, storms)
Older children and adolescents	School performance, social competence, worries about their own and others health.

Features of Anxiety Disorders of Infancy & Early Childhood

<p>Separation anxiety disorder</p>	<ul style="list-style-type: none"> • Developmentally inappropriate and excessive anxiety regarding separation from home or parent. • Characterized by inconsolable or persistent crying when parent leaves, and unable to be soothed by others. • Children may be aggressive or self-injurious during the separation. • Anxiety and avoidance may occur in relation to going to childcare. • Young children may follow their parent from room to room and be reluctant to be alone. • Nightmares may occur but not have a specific theme. 	<p>Duration: at least 1 mo</p>
<p>Specific phobia</p>	<ul style="list-style-type: none"> • Excessive, unreasonable, and persistent fear to a specific object or situation (or anticipation of the object or situation) which results in an immediate response of panic, crying, tantrums, freezing, or clinging. • Causes child to avoid the situation and parents may facilitate this avoidance. Leads to impairment of child and family's functioning and/or child's development. 	<p>Duration: at least 4 mo</p>
<p>Social anxiety disorder</p>	<ul style="list-style-type: none"> • Marked and persistent fear of one or more social and performance situations where the child is exposed to unfamiliar people or scrutiny. Examples include play dates, family gatherings, birthday parties, or circle time. • Child reacts with panic, crying, tantrums, freezing, clinging, and withdrawing from the situation. Leads to impairment of child and family's functioning and/or child's development. 	<p>Duration: at least 4 mo</p>
<p>Generalized anxiety disorder</p>	<ul style="list-style-type: none"> • Child has excessive anxiety and worry most days, which is difficult to control. They may repeatedly ask for reassurance. • Occurs in 2 or more situations or relationships. • At least one physical symptom must be present: restless, fatigue, difficulty concentrating, irritable, muscle tension, and sleep difficulties. 	<p>Duration: at least 6 mo</p>
<p>Anxiety disorder NOS</p>	<ul style="list-style-type: none"> • Anxiety or phobic avoidance that causes distress that is impairing, but does not meet criteria for any specific anxiety disorder. • Infants may display agitation and irritability, uncontrollable crying, disturbances in sleeping and eating, separation distress, or social anxiety. 	<p>Duration for anxiety disorder NOS is not specified in the DC: 0-3R</p>

Child-Adolescent Anxiety Multimodal Study (CAMS children and adolescents with social phobia, GAD, or SAD).

- 78.6% of the sample had 2 or more of those disorders
- 35.9% met criteria for all 3 diagnoses simultaneously.
- CAMS study youth who met criteria for one or more anxiety disorders
 - 46% met criteria for other internalizing disorders
 - 11.9% for ADHD
 - 9.4% for ODD
 - 2.7% for tic disorders

Comorbidity

- Co-occurrence of Tourette's Disorder and OCD is common with a common set of genetic factors contribute to both disorder
- Limited evidence demonstrates a strong and significant association between substance use disorders and anxiety disorders
- 40% to 90% of adolescents with substance abuse disorders have comorbid psychiatric diagnoses, with anxiety disorders being a common co-occurrence

Comorbidity

- Clinicians- examine the **criteria of** each anxiety disorder **separately**
- **IF** patient **meets criteria for more than one**, **all** applicable should be diagnosed.

Comorbidity Early Childhood Anxiety

- Comorbid with depression, oppositional defiant disorder, attention deficit hyperactivity disorder or conduct disorder

Course of Disorder

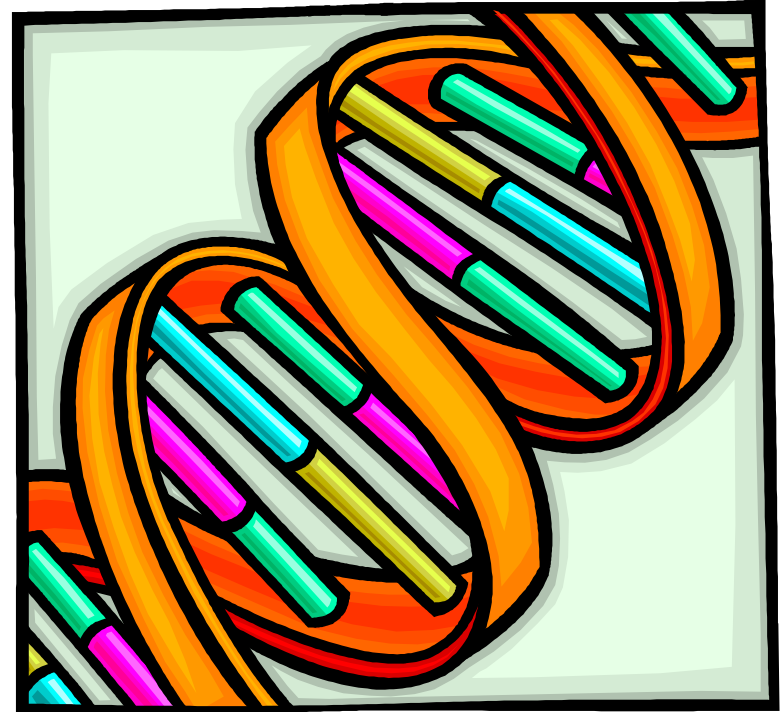
- Evidence supports a chronic and persistent course or a relapsing and remitting course when anxiety disorders are diagnosed in childhood and adolescence

Models of Susceptibility to Anxiety

- Genetic
- Cognitive-Behavioral
 - Physiological
 - Ecological

Genetic Heritability

- Is 36 to 65% including but not limited to obsessive-compulsive disorder (OCD), panic disorder (PD), and generalized anxiety disorder (GAD).
- Meta-analyses –anxiety disorders aggregate in families but also have strong environmental influences
- Predisposition to overarousal and hyper-reactivity to stimuli and are more inclined to develop anxiety disorders

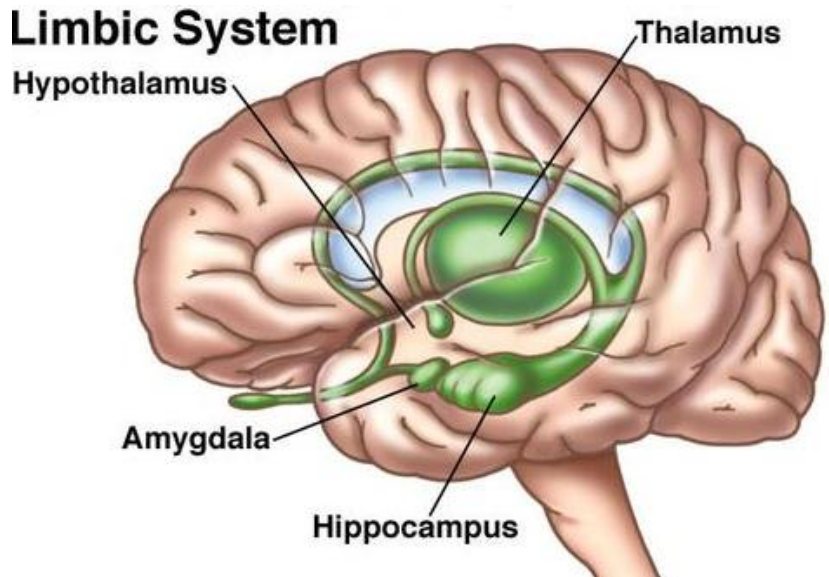


Cognitive-Behavioral

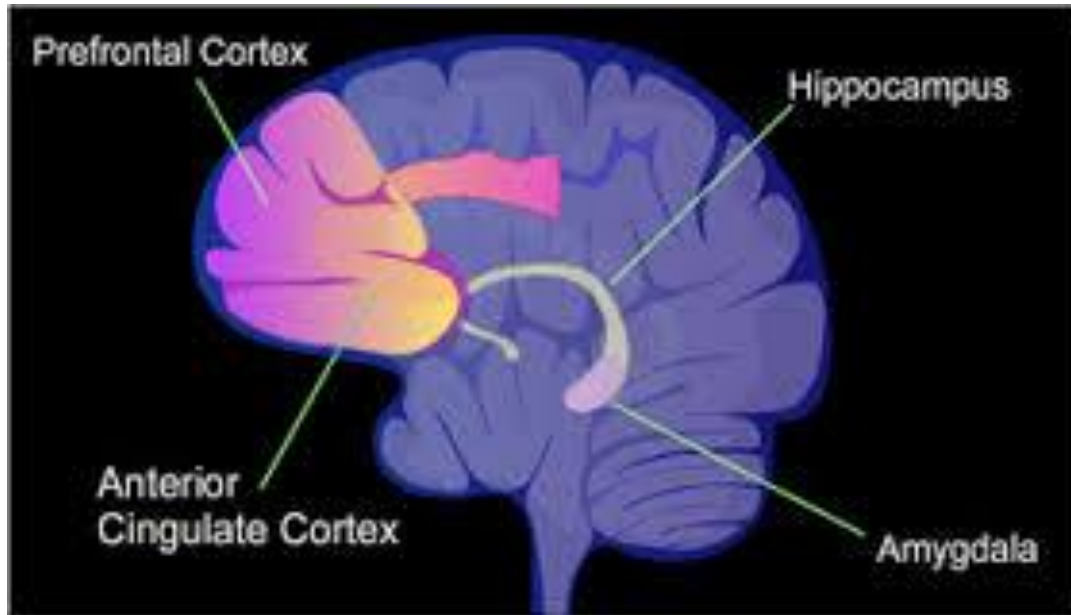
- Learned dysfunctional thoughts, feelings, and behaviors through their experiences before and during adolescence.
- Negative responses reinforced thru avoidance and escape
- Cognitive biases are developed such as paying attention to threat related stimuli and overestimating degree of personal risk in various situations.

Physiological

- Functional impairments in brain regions that modulate emotion and fear
- Amygdala- fear conditioning & responses
- -Responsive to stress-induced hormones and neurotransmitters which strengthen memories associated with fearful stimuli
- Hippocampus- contextual processing; memory



Physiological



- Prefrontal cortical regions - modulate fear & extinction of fear responses
- Neuroimaging studies of adolescents with elevated levels of anxiety consistent with anxiety disorders have a hypersensitivity of fear circuits and a lack of dampening of fear response by activation of cortical circuits

Ecological Model-Environmental factors

- Exposure to members of the child's family and to factors in the broader community
 - Postpartum maternal depression + anxiety = infant with long-term impaired physiological regulation of stress
 - Insecure parent–child attachment
 - Anxious and controlling parenting styles, and parental modeling of fearful behavior
 - Parental overprotection - development of child social phobia in a longitudinal prospective study
 - Parent–child arguments are associated with increased anxiety symptom levels in adolescents

Types of Anxiety Disorders in Children and Adolescents

- Separation Anxiety Disorder
- Panic Disorder with and without agoraphobia
- Social phobia
- Obsessive-compulsive Disorder
- Acute Stress Disorder
- PTSD
- Generalized anxiety disorders
- Anxiety Disorder NOS

Changes From DSM IV-TR to DSM 5

Anxiety Disorder Section

DSM IV-TR

ANXIETY DISORDER CHAPTER

- Obsessive-compulsive disorder
- Posttraumatic Stress Disorder
- Acute Stress Disorder

DSM 5

CREATES NEW CHAPTERS

- Obsessive-compulsive and related Disorders

MOVED TO

Trauma- and Stressor-related Disorders

Changes From DSM IV-TR to DSM 5

Anxiety Disorder Section

DSM IV-TR

ANXIETY DISORDER CHAPTER

- Panic Attacks and Agoraphobia *are linked*

DSM 5

- **UNLINKED** Panic Attacks and Agoraphobia have **OWN SEPARATE CRITERIA**

Changes in Criteria

Agoraphobia

Specific Phobia

Social Anxiety Disorder (Social Phobia)

- REMOVED requirement that individuals over the age 18 years recognize that their anxiety is excessive or unreasonable.
- Can overestimate danger in “phobic” situations
- Older individuals often misattribute “phobic” fears to aging
- The anxiety must be out of proportion to the actual danger or threat in the situation, after taking cultural contextual factors into account.
- 6-month duration is required for all ages in attempt to minimize over diagnosis of transient fears.

Panic Attack-

- DSM IV-TR Complicated DSM-IV terminology for
 - describing different types of panic attacks (i.e., situationally bound/cued, situationally predisposed, and unexpected/uncued) is
- Replaced with terms unexpected and expected panic attacks.
- Panic attacks **marker and prognostic factor for severity of diagnosis, course, and comorbidity across disorders**, that include but not limited to anxiety disorders.
- Therefore, panic attack can be listed as a specifier that is applicable to all DSM-5 disorders.

Case Studies

Jonathan

- 17 year old Caucasian male, senior, on football team, has a girlfriend of many years; pervasive sense of doom, as if in a dream at time, feels like he is going crazy, hospitalized a year ago as “did not want to live like this”
- Diagnosis?

Panic Disorder and Agoraphobia

- Unlinked in DSM-5
- DSM-IV diagnoses of panic disorder with agoraphobia, panic disorder without agoraphobia, and agoraphobia without history of panic disorder are replaced by
- Two diagnoses- 1. Panic Disorder and 2. Agoraphobia, with separate criteria.
- Co-occurrence of panic disorder and agoraphobia is now coded with two diagnoses.
- Recognized substantial number of individuals with agoraphobia do not experience panic symptoms.

Agoraphobia

- Diagnostic criteria derived from the DSM-IV
- In DSM 5- fears from two or more agoraphobia situations required to distinguish agoraphobia from specific phobias
- Criteria extended to be consistent with criteria sets for other anxiety disorders
 - Clinician judgment of fears being out of proportion to actual danger in the situation,
 - Typical duration of 6 months or more.

Specific Phobia

- Core features of specific phobia remain the same
- No longer requirement individuals over age 18 years must recognize that their fear and anxiety are excessive or unreasonable
- 6-month duration is required for all ages in attempt to minimize over diagnosis of transient fears.
- Although they are now referred to as specifiers, the different types of specific phobia have essentially remained unchanged

Ian

- 15 yr Korean male, dislikes going to school, being in crowded places, will not go into a store if many cars in the parking lot, takes about an hour to fall asleep, occasionally awakens with nightmare, nonrestful sleep. Likes his belongings in order, doors shut, clothes only worn once.
- Diagnosis?

Social Anxiety Disorder (Social Phobia)

- Core features of social anxiety disorder (social phobia) same.
- No longer requirement individuals over age 18 years must recognize that their fear and anxiety are excessive or unreasonable
- 6-month duration is required for all ages in attempt to minimize over diagnosis of transient fears.

Angela

- 8 yr old Caucasian female, irritable dislikes being away from her mother, tantrums that can escalate to biting and kicking when she anticipates they will be separated, does not want to go to school
- Diagnosis?
- Questions?
- Further eval?

Separation Anxiety Disorder

- **Was in** “Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence
- **NOW** wording of criteria modified to better represent expression of separation anxiety symptoms in adulthood.
- Attachment figures may include the children of adults with separation anxiety disorder, & avoidance behaviors may be in the workplace as well as school.
- Diagnostic criteria **no longer specify that age at onset must be before 18 years**, because a substantial number of adults report onset of separation anxiety after age 18.
- Duration “typically lasting for 6 months or more” added for adults to minimize over diagnosis

Separation Anxiety Disorder

- A. Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached
3 symptoms of list of 8 required:
 - • Distress with anticipated or actual separation.
 - - Worry about losing or harm befalling attachment figure.
 - - Worry that an event will cause separation.
 - - Persistent reluctance or refusal to go to school due to fear of separation.
- Duration 4wks>
- Must have onset before age 18.
Specified early onset if before age 6.

Generalized Anxiety Disorder ≥ 6 mo

- A. Excessive anxiety and worry occurring more days than not about a number or events or activities (such as work or school performance)
- B. The person finds it difficult to control the worry.
- C. The anxiety or worry are associated with ≥ 3 symptoms from this list: (1) restlessness or feeling keyed up or on edge; (2) being easily fatigued; (3) difficulty concentrating or mind going blank; (4). irritability; (5). muscle tension; (6). sleep disturbance.

Generalized Anxiety Disorder Differential

- ✓ Onset usually before age 20
- ✓ Hx of childhood fears & social inhibition
- ✓ Incidence increased in 1st degree relatives w/the dx
- ✓ Over 80% w/GAD also suffer major depression, dysthymia or social phobia
- ✓ Comorbid substance abuse, particularly ETOH and sedative/hypnotic abuse
- ✓ Rare c/o of SOB, palpitations and tachycardia
- ✓ Readily admit to worrying excessive over minor matters w/life-disrupting effects

Selective Mutism

- Was classified in “Disorders Usually First Diagnosed in Infancy, Childhood, or Adolescence
- Anxiety disorder as large number of children with selective mutism are anxious.

Ted

- 5 year old boy who is irritable, always “looking for a fight”, jumpy, feels the need to protect his mother, repeatedly plays a SWAT team attacking a house and he’s defending the house, hard time settling for sleep, nightmares
- Diagnosis?
- Questions?
- Further eval?

Acute Stress Disorder

A. After traumatic experience that person believes was life-threatening, and response involved intense fear, helplessness, or horror.

B. Person has three or more dissociative symptoms

- Sense of numbing or detachment
- Reduced awareness of surroundings
- Derealization
- Depersonalization
- Dissociative Amnesia (can't remember important aspect of event).

- C. Person persistently re-experiences event via recurrent images, thoughts, dreams, or flashbacks; or distressed with reminders of event.

D. Person avoids situations that may trigger memories of past event.

E. The person has anxiety or increased arousal, such as difficulty sleeping, exaggerated startle.

5 Nonverbal Signs of PTSD in Children

1. Sleep disturbances that are more than several days; actual dreams of the trauma may or may not appear
2. Clinging behavior, anxiety from separating, reluctance on going back to school
3. Phobias about distressing stimuli people, places, events which remind the child of the precipitating event
4. Conduct disturbances at home or school which are responses to anxiety & frustrations. Doubts about self worth & desire to withdraw

Sleep Related Problems

- SRPs common feature of anxiety disorders
- Obtain detailed information related to both sleep & anxiety in adolescents presenting with difficulties in either domain
- Sleep problems are early markers for nascent psychopathology, including anxiety disorders
- SRPs associated with impaired family functioning
- Sleep dysregulation, irritability, social withdrawal, poor concentration, negative attitude about self and future, decreased appetite a subgroup of 28% to 69% have anxiety or depression have both at the same time

Louise

16 year old African American female with history of washing hands until they are raw, wiping herself after urinating or a bowel movement until she is raw as she never feels “clean”, grooming the cat (picks out whitish hairs) until he scratches her. She has to arrange her room for hours sometimes at night until it is “just right” and then she’s able to go to bed, which often makes her late in the morning for school.

Diagnosis?

Questions?

Further eval?

Treatment?

Obsessive-Compulsive Disorder (OCD)

- 1/3 to 1/2 of adult cases start between 10-12 years old
- 4th most common neurobiological illness
- 1:40 adults & 1:200 children having lifetime occurrence
- Common obsessions: concern w/order, counting, fear of acting on aggressive impulses (30%); dirt, germs & contamination (35%)
- Compulsions: repetitive hand washing (75%), checking & rechecking, repetitive actions such as stepping only on the cracks in the sidewalk, concern with arranging.
- Effects pathways in brain using serotonin transmitter
- Relationship between OCD & tic disorders

The Pediatric OCD Treatment Study (POTS)

- Most **extensive study** of pediatric OCD
- **4 treatment arms** over a 12-week period:
 - 1) CBT-alone
 - **2) Sertraline-alone**
 - 3) CBT & Sertraline
 - 4) Placebo
- **All 3 treatment arms** were found to be **superior to placebo**
- **#1 Combined treatment** was superior to either CBT or sertraline alone.
- **Remission rates** were **53.6%** for the **combined group**
- **39%** in the **CBT-only group**
- **21%** in the **sertraline-only group**
- **4%** for **placebo**

. Pharmacological treatment of OCD in youth

- Regarding specific anxiety subtypes, pediatric OCD is the anxiety disorder that has the **strongest support for pharmacological intervention** achieving effectiveness
- Has been supported by RCTs of fluoxetine, fluvoxamine,¹sertraline, and paroxetine.
- ¹Evidence for citalopram is limited to open-label studies and comparison to fluoxetine without placebo.
- ¹Sertraline, fluoxetine, and fluvoxamine have been approved by the Food and Drug Administration (FDA) for the treatment of OCD in youth.

Anxiety Disorders-

Summary of Changes

- OCD has moved to own chapter “obsessive compulsive and related disorders”
- PTSD has moved to new chapter “trauma and stressor-related disorders”
- Anxiety disorders now have 6 month specifier (have to last at least 6 months)

Anxiety Disorders

Summary of Changes (cont'd)

- Panic attacks can be a specifier for all DSM-V disorders
- Panic disorder and agoraphobia are now unlinked
- Separation anxiety disorder can now arise in adulthood
- Social phobia is now called Social Anxiety Disorder
 - New “performance only” specifier

Anxiety Disorders

Summary of Changes (cont'd)

- Deletion of the requirement that individuals over age 18 years recognize that their anxiety is excessive or unreasonable.
 - People with these disorders often overestimate danger
 - Older people with these disorders often attribute their sx to aging
 - Fears now have to be out of proportion to the situation

Clinical Pearls

- Standardized rating tools are better than winging it
- Some tools double for screening and treatment monitoring
- Rating tools can be used as psychoeducational tools

Pediatric Symptom Checklist

- FREE (e.g. Bright Futures website)
- Parent and youth version, ages: 4-16
- Simple to score and interpret
- Helps identify those in need of further mental health evaluation and intervention
 - 2/3 with positive score will have moderate to serious mental health problem
 - 6-16 yrs: positive ≥ 28
 - 4-5 yrs: positive ≥ 24
- Helps to screen out those not in need
 - 95% accurate
- Does not provide a diagnosis

SCARED

- Screen for Child Anxiety Related Disorders
- FREE (e.g. schoolpsychiatry.org)
- Age 8+; parent and youth versions
- 5 minutes to fill out
- Scoring easy but needs a few minutes, interpretation fairly straightforward
 - Still need a comprehensive evaluation
- Five factors that suggest specific, mostly DSM anxiety disorders: GAD, Separation Anxiety, Social Anxiety, School Avoidance
- NB: PTSD and OCD are not screened

Assessment of Dangerousness

- Suicide
- Homicide
- Other risk-taking, e.g.
 - Running away
 - Drug use
 - Sexual risk-taking

Suicide - Partial Assessment

- ASK!!!!!!!!!!!!!!!!!!!!!!
- Thoughts
- Intentions
- Plans
- Means
 - GET RID OF FIREARMS and other weapons such as large knives, poisons, lengths of rope!
- Social supports
- Stressors
- Psychiatric symptoms
- Reasons to live
- Problem-solving capacity

Treatment

- Entails various combinations of interventions, including psychoeducation, cognitive therapy, behavioral shaping, school consultation, and pharmacotherapy
- initially recommends the use of psychoeducation for patients and family, focusing on the anxiety cycle and the process whereby avoidance contributes to greater fear reactivity. American Academy of Child and Adolescent Psychiatry
- Furthermore, psychotherapy is recommended, with the greatest evidence for CBT,
- For moderate to severe cases of anxiety, the intensity of treatments should be increased, ¹and consideration of a combination of medications and therapy is recommended.
- Medication may be considered sooner when participation in psychotherapy is not effective or feasible because of the degree of impairment.

Resources - Web-based

- www.brightfutures.org
- www.massgeneral.org/schoolpsychiatry/
- www.aacap.org
 - Facts for Families
 - NB: includes brief handout about what to expect from a child psychiatry evaluation
- http://www.schoolpsychology.net/p_01.html

Websites:

1. Anxiety Disorders Association of America, www.adaa.org
 2. Children's Center for OCD and Anxiety, www.worrywisekids.org
 3. Child Anxiety Network, www.childanxiety.net/Anxiety_Disorders.htm
 4. American Academy of Child and Adolescent Psychiatry, facts for families on anxiety, www.aacap.org/cs/root/facts_for_families?the_anxious_child
 5. US Department of Health, <http://mentalhealth.samhsa.gov/publications/allpubs/CA-0007/default.asp>
 6. <http://www.nimh.nih.gov/health/publications/anxiety-disorders-in-children-and-adolescents/index.shtml>
- Articles: James AC, James G, Cowdrey FA, Soler A, Choke A. Cognitive behavioural therapy for anxiety disorders in children and adolescents. *Cochrane Database of Systematic Reviews* 2013, Issue 6. Art.No.: CD004690. DOI: 10.1002/14651858.CD004690.pub3.

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- Salum, G. A., DeSousa, D. A., Conceicao do Rosario, M. et al. (2013). Pediatric anxiety disorders: from neuroscience to evidence-based clinical practice. *Revista Brasileira de Psiquiatria*, 35, S3-S21.