The Angst of Anxiety in Children and Adolescents

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Facts about Anxiety

• Anxiety disorders are among the most common mental, emotional, and behavioral problems to occur

• About 13 of every 100 children and adolescents ages 9 to 17 experience some kind of anxiety disorder

• Girls are affected more than boys.

• About 50% of children and adolescents with anxiety disorders have a 2nd anxiety disorder or other mental/behavioral disorder

• Anxiety disorders may coexist with physical health conditions as well
Savannah

- Savannah was an 8-year-old third grade student who presented emergently after running away from the school 3 times in the last 3 days. She just started therapy. “I don’t like" school” She could not specify the reason.
- Ice cream social was fine.
- Recent sadness and "little" nervousness.
- She had friends; previously enjoyed school
- Her mother noticed recent tearfulness, and Marie described low mood with initial insomnia, decreased appetite, impaired concentration.
Sweet Savanna

- Mother noted difficulties in July, coming home from a visit with grandparents early. Mother returned to work and she was to stay with her father.
- When school started, attendance became progressively more difficult & required coercion. She even pushed out a window screen at school. She could not tell her mother what was bothering her. She appeared to threaten physical altercation.
- No previous psychiatric history, though perhaps some problem with separation. No medical problems.
- Parents separated 3 years ago and divorced one year ago.
Is Anxiety Normal?

• Yes, “anxiety is a normal emotion throughout development and plays both a protective and adaptive role”  
  – Infants
  – Toddlers
  – Pre-school kids
  – School-aged kids
  – Adolescents
Brief Definition

• Anxiety is a general feeling of apprehension or worry and is a normal reaction to stressful situations

• **Red flags** should go up when the feelings become excessive, thoughts become irrational and everyday functioning is debilitated

• Anxiety disorders are characterized by excessive feelings of panic, fear, or irrational discomfort in everyday situations
Production of fear and anxiety

- Using brain imaging and neurochemical techniques several parts of the brain have been identified as key in the production of fear and anxiety
- Two main components involved are the amygdala and the hippocampus
  - **Amygdala**- Emotional memories are stored here and alerts brain that a threat is present
  - **Hippocampus**- Encodes specific threatening events into the memory
Etiology/Developmental Perspective

- Genetics
- Temperament - Behavioral inhibition
  - Amygdala
- Conditioning
  - Glutamate/GABA
  - Serotonin
How Anxiety is Manifested

• Students may feel a **sense of dread**
• Have fears of impending doom
• Experience a sense of suffocation
• Anticipation of unarticulated catastrophe
• Loss of control over their breath, swallowing, speech, and coordination
• Somatic Complaints
• Aggression
Types of Anxiety Disorders

- Separation Anxiety Disorder
- Specific Phobia
- Social Phobia
- Panic Disorder (w/ & w/o Agoraphobia)
- Generalized Anxiety Disorder
- Posttraumatic Stress Disorder
- Obsessive-Compulsive Disorder

Prevalence

- 2-5%
- 2-3%
- 1-15%
- 0.6-5% (teens)
- 3-5%
- 1-6%
Epidemiology - Onset

- Separation Anxiety Disorder
  - Most often prepubertal
- Social Phobia
  - 11-12yo
- Specific Phobia
  - 7-13yo
- Social Anxiety
- 13 yr
- Panic Disorder
  - Adolescents?
- Generalized Anxiety Disorder
  - >7yo
- Posttraumatic Stress Disorder
  - With trauma… possible at any age?
Treatment?

• **THERAPY**
  – Cognitive-behavioral therapy
  – Exposure and response prevention
  – Relaxation techniques
  – Mindfulness

• **MEDICATION**
  – Anti-depressants, primarily SSRI’s
  – Augmentation
    • Buspirone, BZD, atypical antipsychotics, TCA’s?
    • Hydroxyzine
What type of anxiety???

• Sally is brought to the clinic by her parents, who are worried about her poor attendance in school. Sally has had some difficulty leaving her parents for the past several years, but her concerns have grown increasingly more intense. She reports having fears that if she goes to school, her parents will abandon her or something very bad might happen to them. She sometimes has dreams that they have died, and she wakes up in a panic. Sally has come to the clinic several times in the past few months complaining of headaches and stomachaches, requesting that she be sent home.
Separation Anxiety Disorder F93.0

Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:

1. Recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated

2. Persistent and excessive worry about losing, or about possible harm befalling, major attachment figures

3. Persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (e.g., getting lost or being kidnapped)

4. Persistent reluctance or refusal to go to school or elsewhere because of fear of separation
(5) Persistently and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings

(6) Persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home

(7) Repeated nightmares involving the theme of separation

(8) Repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachment figures occurs or is anticipated
Manifestations

• Withdrawal socially, sad, decreased concentration
• Fears of animal, monsters muggers, travel
• Anger aggression VH
• ENVIRONMENTAL factor
  – after life stress
  – INCREASED risk of suicide
Selective Mutism F94.0

- Consistent failure to speak in specific social situations in which there is expectation for speaking
- Interferes with edu/occupational achievement
- At least 1 mo
- Temperamental factors, inhibition, parental history, social isolation, receptive language difficulties
What type of anxiety???

• Philip was referred to the SBHC by his mother, because she has become increasingly concerned by his fears of going outside. Upon interview, Philip reveals that after being attacked by a neighborhood dog a few years ago, he has developed a fear of dogs. His fear is getting worse, and he is beginning to limit his outdoor activities. He reports getting nervous even when seeing dogs on television, even though he knows they cannot hurt him.
Specific Phobias F40.2xx

- Marked and persistent fear of a specific object or situation with exposure causing an immediate anxiety response that is excessive or unreasonable
- Actively avoided or endured with intense fear, anxiety
- In children, anxiety may be expressed as crying, tantrums, freezing, or clinging.
- Causes significant interference in life, or significant distress.
- Under 18 years of age – symptoms must be $\geq 6$ months
Specific Phobias

- Animal phobias most common childhood phobia.
- Also frequently afraid of the dark and imaginary creatures.
- In older children and adolescents, fears are more focused on health, social and school problems.
What type of anxiety??

• In school I was always afraid of being called on, even when I knew the answers. When I got a job, I hated to meet with my boss. I couldn't eat lunch with my co-workers. I worried about being stared at or judged, and worried that I would make a fool of myself. My heart would pound and I would start to sweat when I thought about meetings. The feelings got worse as the time of the event got closer. Sometimes I couldn't sleep or eat for days before a staff meeting."
Social Anxiety Disorder
(Social Phobia) F40.10

- Marked fear/anxiety about social situation(s) in which subject to possible scrutiny
- Fear of embarrassment, humiliation or show of anxiety
- Social situations almost always elicit anxiety, such that avoided or endured
- Out of proportion, persistent, causing distress, impairment
What type of anxiety???

- Sally is brought to the SBHC by her parents, who are worried about her poor attendance in school. Sally has had some difficulty leaving her parents for the past several years, but her concerns have grown increasingly more intense. She reports having fears that if she goes to school, her parents will abandon her or something very bad might happen to them. She sometimes has dreams that they have died, and she wakes up in a panic. Sally has come to the SBHC several times in the past few months complaining of headaches and stomachaches, requesting that she be sent home.
Panic Disorder - F41.0

I. Recurrent unexpected Panic Attacks

Criteria for Panic Attack: A discrete period of intense fear or discomfort, in which four (or more) of the following symptoms developed abruptly and reached a peak within 10 minutes:

1. Palpitations, pounding heart, or accelerated heart rate
2. Sweating
3. Trembling or shaking
4. Sensations of shortness of breath or smothering
5. Feeling of choking
6. Chest pain or discomfort
7. Nausea or abdominal distress
8. Feeling dizzy, unsteady, lightheaded, or faint
9. Derealization (feelings of unreality) or depersonalization (being detached from oneself)
10. Fear of losing control or going crazy
11. Fear of dying
12. Paresthesias (numbness or tingling sensations)
13. Chills or hot flushes
Panic Disorder - Diagnostic Criteria

II. At least one of the attacks has been followed by 1 month (or more) of one (or more) of the following:

(1) Persistent concern about having additional attacks
(2) Worry about the implications of the attack or its consequences (e.g., losing control, having a heart attack, "going crazy")
(3) A significant change in behavior related to the attacks
Agoraphobia

• Marked F/A about 2 or more:
  – Use of public transport
  – Being in open spaces (parking lots, markets..)
  – Being in enclosed spaces (shops, theatres..)
  – Standing in line or being in crowd
  – Being outside home alone
• Fears/avoids situations for concern of escape
• Situation ALWAYS provokes F/A
• Persistent, avoided, out of proportion, causing distress, impairment
James walks into the SBHC for an appointment. He reports having great difficulty concentrating in his classes because of his increased worrying. He cannot pinpoint his worries; Rather, he reports being nervous about many things in his life, including his relationships with peers, his grades, and even his performance in basketball. His worries are beginning to impact his sleep, and he is finding himself becoming more irritable than usual.
Generalized Anxiety Disorder (DSM-V)

- Excessive anxiety and worry occurring more days than not for ≥ 6 months
- Cannot control worry
- ≥ 3 of the following:
  - Difficulty concentrating or mind going blank
  - Restlessness
  - Irritability
  - Insomnia
- worry not confined to another diagnosis
e.g., major depression, panic, OCD, anorexia nervosa, somatization disorder, PTSD
Generalized Anxiety Disorder

- Excessive anxiety and worry for at least 6 months, more days than not
- Worry about performance at school, sports, etc.

DSM IV criteria less stringent for children (Need only one criteria instead of three of six):

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 (difficulty falling or staying asleep, or restless unsatisfying sleep)
Obsessive Compulsive Disorder

- Presence of Obsessions (thoughts) and/or Compulsions (behaviors)
- Although adults may have insight, kids may not
- Interferes with life or causes distress
- One third to one half of all adult patients report onset in childhood or adolescence
Post-traumatic Stress Disorder (PTSD)

The person has been exposed to a traumatic event in which both of the following were present:

• (1) The person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others; violent or accidental death

• (2) The person's response involved intense fear, helplessness, or horror. (Note: In children, this may be expressed instead by disorganized or agitated behavior.)
Persistent Re-experiencing of event (1+)

(1) Recurrent and intrusive **distressing recollections** of the event, including images, thoughts, or perceptions. (Note: In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.)

(2) Recurrent **distressing dreams** of the event. (Note: In children, there may be frightening dreams without recognizable content.)

(3) Acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). (Note: In young children, trauma-specific reenactment may occur.)

(4) Intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event

(5) Marked physiological reactions to cues resembling or symbolizing trauma
Avoidance

(1) Efforts to avoid thoughts, feelings, or conversations associated with the trauma

(2) Efforts to avoid activities, places, or people that arouse recollections of the trauma
Numbing

Negative alterations in cognitions and mood

• Inability to recall an important aspect of the trauma

• Persistent distorted cognitions about cause or consequences of event leading to feelings of blame

• Persistent negative emotional state

• Markedly diminished interest or participation in significant activities

• Feeling of detachment or estrangement from others

• Persistent inability to experience positive emotions (e.g., unable to have loving feelings, happiness, satisfaction)

• Sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)
Increased Arousal (2+)

1. Difficulty falling or staying asleep
2. Irritability or outbursts of anger
3. Difficulty concentrating
4. Hypervigilance
5. Exaggerated startle response
6. Reckless or self-destructive behavior
Posttraumatic Stress Disorder (PTSD)

• At least one month duration.

• Causes clinically significant distress or impairment in social, occupational, or other important areas of functioning

• Note: Many students with PTSD meet criteria for another Axis I Disorder (e.g., major depression, Panic Disorder) – both should be diagnosed
Unspecified Anxiety Disorder

• Disorders with anxiety symptoms that cause distress or impairment BUT do not meet criteria for any specific Anxiety Disorder

• Clinician does NOT specify the reason the criteria are not met
The Spence Children’s Anxiety Scale (SCAS)

- 38 anxiety items
- Parent and Child versions available
Anxiety: Practice Components

- Exposure
- Modeling
- Cognitive/Coping
- Relaxation

*Everything you wanted to know about phobias* *but were afraid to ask!
What is Exposure?

• Techniques or exercises that involve direct or imagined experience with a target stimulus, whether performed gradually or suddenly, and with or without the therapist’s elaboration or intensification of the meaning of the stimulus.
What is Modeling?

- Demonstration of a desired behavior by a therapist, confederates, peers, or other actors to promote the imitation and subsequent performance of that behavior by the identified youth
What is Cognitive/Coping?

- Any techniques designed to alter interpretations of events through examination of the child’s reported thoughts, typically through the generation and rehearsal of alternative counter-statements.

- This can sometimes be accompanied by exercises designed to comparatively test the validity of the original thoughts and the alternative thoughts through the gathering or review of relevant information.
What is Relaxation?

• Techniques or exercises designed to induce physiological calming, including muscle relaxation, breathing exercises, meditation, and similar activities.

• Guided imagery exclusively for the purpose of physical relaxation is considered relaxation.
Pharmacotherapy: LOW AND SLOW

• SSRI: acute increase may increase anxiety; chronic increase decreases anxiety
• Increased GABA decreases anxiety
• Children and adolescents often have paradoxical response to BZD’s
• Hydroxyzine may be helpful on prn basis
## Treatment Algorithm

Select SSRI. Titrate up every 2–4 weeks until symptoms respond, until side effects preclude further dose increases, or when reach max dose. If ineffective or intolerable, use alternate SSRI for second trial. If still no response, or familial preference, consider buspirone or mirtazapine, alone or as augmentation.

### After 2 failed SSRI trials
- Reassess or consult,
- Consider clomipramine for OCD; VFX for non-OCD.

### If still no response
- Consider buspirone or mirtazapine, alone or as augmentation.

### If still no response, or familial preference
- Consider buspirone or mirtazapine, alone or as augmentation.

### 5-HTa PA
- 75–1125 mg (Rx every night or twice a day)
- 15–60 mg (Rx 3 times a day)

### Tetracyclic
- Venlafaxine XR (VFX)
- 7.5–30 mg (Rx every night)
- 0.25–3 mg (Rx every day 3 times a day)

### Benzodiazepines
- Clonazepam
- Lorazepam
- 0.5–6 mg (Rx every day 4 times a day)
- 0.25–3 mg (Rx every day 3 times a day)

### Class
- SSRI
- Tricyclic
- SNRI
- 5-HTa PA
- Tetracyclic
- Benzodiazepine

### Medication
- Sertraline
- Fluoxetine
- Fluvoxamine
- Citalopram
- Paroxetine
- Clomipramine
- Venlafaxine XR (VFX)
- Buspirone
- Mirtazapine
- Clonazepam
- Lorazepam

### Starting dose
- Sertraline: 12.5–25 mg
- Fluoxetine: 5–10 mg
- Fluvoxamine: 12.5–25 mg
- Citalopram: 5–10 mg
- Paroxetine: 25 mg
- Clomipramine: 5–10 mg
- Venlafaxine XR (VFX): 37.5 mg

### Total therapeutic dose range
- Sertraline: 10–60 mg
- Fluoxetine: 10–60 mg
- Clomipramine: 75–225 mg
- Venlafaxine XR (VFX): 15–60 mg

### Common side effect profile
- Nausea, sedation, headache
- Activation, nausea, insomnia
- Hyperactivity, abdominal discomfort
- Somnolence, insomnia, diaphoresis
- Sedation, nausea, dry mouth
- Dry mouth, constipation, diaphoresis
- Nausea, sedation, dizziness
- Sedation, disinhibition, headache
- Hunger, sedation, dizziness
- Sedation, confusion

### Special warning/monitoring
- Suicidality, activation (restlessness, impulsivity), serotonin syndrome; develop safety plan and means to assess early side effects, which may resolve in 1–2 wk; avoid abrupt discontinuation with paroxetine, sertraline, fluvoxamine, and citalopram.
- HTN, rebound HTN, lethal in OD; level ≤400
- HTN, tachycardia, suicidality
- Safe with benzodiazepines
- Weight gain
- Disinhibition, tolerance, seizure from discontinuation

### Specific indications
- GAD
- Social phobia; few interactions
- Social phobia; nondepresed
- OCD; EKG, BP monitoring to minimize overdose risk
- GAD; nondepresseed
- Appetite stimulation, insomnia; few interactions
- Short-term relief of acute anxiety; longer acting
- Short-term relief of acute anxiety; shorter acting; liver impaired

### FDA approval
- For OCD; ≥6
- For OCD; ≥7
- For OCD; ≥8
- For adults
- For adults
- For adults
- For adults
<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Fluox</th>
<th>FLuVox</th>
<th>SERTRALINE</th>
<th>Escitalopram</th>
<th>Cymbalta</th>
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<tr>
<td>OCD</td>
<td>&gt;7 10mg for 2 wk, then 20 &gt; 12 20-60mg</td>
<td>25mg, incr by 25mg q 4-6 d; &gt;50mg: BID</td>
<td>6-12: 25mg/d 12-17: 50mg/d May incr weekly MAX 200mg</td>
<td>7-12 10-60mg start 2.5-10mg &gt;13 yr: 10-20mg start</td>
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<tr>
<td>GAD</td>
<td></td>
<td>8-17 50-200mg start @ 25</td>
<td>7-17 10-40mg, start 5-10 incr Q 2-4 wk</td>
<td>SSRI first line 7-17: 30mg</td>
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<tr>
<td>Social anx</td>
<td></td>
<td></td>
<td>10-17 : 5mg/day Max 20mg</td>
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<tr>
<td>PTSD</td>
<td>7-17 yr. 10-20 mg</td>
<td>50mg BID</td>
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<tr>
<td>Autism</td>
<td></td>
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<td>Start 2.5mg</td>
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Resources

• For providers:
  – AnxietyDisorders, http://www.schoolmentalhealth.org
  – http://www.aacap.org
  – Coping Cat

• For the rest of us:
  – http://www.amazon.com/gp/product/0804139806/ref=pd_lpo_sbs_dp_ss_1?pf_rd_p=1944687442&pf_rd_s=lpo-top-stripe-1&pf_rd_t=201&pf_rd_i=1452657033&pf_rd_m=ATVPDKIKX0DER&pf_rd_r=0M72G69994CEFNPA3MQ3
  – https://www.anxietybc.com/
American Psychiatric Association: DSM-5

https://online.epocrates.com
