

EVALUATION AND MANAGEMENT OF ANXIETY IN CHILDREN

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Disclosures + Off-label Medication Use

- ▶ I have **no** financial interests or conflicts of interest to disclose.
- ▶ This presentation **includes** discussion of off-label uses of medication, which are clearly identified as such.

Anxiety in Children

- ▶ Overview
- ▶ Epidemiology
- ▶ Comorbidity
- ▶ Diagnosis
- ▶ Treatment

Anxiety: Overview

- ▶ Common (and commonly missed!) in children
- ▶ Often with inhibited temperament
 - ▶ Withdrawal from novelty, Slow to warm up, Close to attachment figure, Limited eye contact
- ▶ Internalizing disorders
 - ▶ Overcontrolled, Overinhibited
- ▶ Usually not causing problems for anyone else
 - ▶ Vs. ADHD, Disruptive Behavior Disorders

Anxiety: Overview

DSM-5 Anxiety Disorders

- ▶ Separation Anxiety disorder
- ▶ Selective Mutism
- ▶ Generalized Anxiety disorder
- ▶ Social Phobia
- ▶ Specific Phobias
- ▶ Panic disorder
- ▶ Agoraphobia

Related Issues

- ▶ School Refusal
 - ▶ Anxiety may be underlying cause
- ▶ Obsessive-Compulsive disorders (OCD)
- ▶ Traumatic and Stress-Related disorders (PTSD)

Anxiety: Core Features

- ▶ **Behavior:**
 - Avoidance
- ▶ **Thought:**
 - Anticipation of Threat
- ▶ **Emotion:**
 - Anxiety
- ▶ **Physical Symptoms:**
 - ↑ Arousal

Anxiety: Core Features

- ▶ **Behavior: Avoidance**
 - ▶ Hesitancy, Uncertainty, Withdrawal, Rituals
- ▶ **Thought: Anticipation of Threat**
 - ▶ Worry, Rumination, Negative Thoughts, Anxious Anticipation
- ▶ **Emotion: Anxiety, Fear, Distress, Shyness**
- ▶ **Physical Sxs: Headache, Stomachache, N/V, Muscle Tension, Difficulty Sleeping**

Epidemiology of Anxiety in Youth

Overall	~5% point prevalence in West
Prevalence By Disorder	Specific phobias > GAD/Separation Anxiety/Social Phobia > OCD/PTSD (much less common)

Epidemiology of Anxiety in Youth

- ▶ Age of Onset (average)
 - ▶ Specific Phobias: 6-7y
 - ▶ Separation Anxiety disorder: 7-8y
 - ▶ Social Anxiety disorder: Preteen/Early Adolescence
 - ▶ GAD: Mid-adolescence
 - ▶ Panic/Agoraphobia: Early Adulthood

Epidemiology

- ▶ Course
 - ▶ Persistent
 - ▶ At risk for additional comorbid anxiety, mood, externalizing (in youth)
 - ▶ Increased risk of anxiety, mood, substance use disorders, suicide (in adulthood)
- ▶ Heritability
 - ▶ ~40% genetic


Epidemiology of Anxiety Disorders in Youth

Female > Male
~2:1

Seeking treatment
F = M


Anxiety is Frequently Comorbid

Comorbid dx	• Up to 90%!
Other Anxiety d/o's	• Up to 75%
Mood d/o's	• 10-30%
Externalizing d/o's (e.g. ADHD)	• Up to ¼ of young children
Substance Abuse	• Alcohol abuse




Anxiety: Risk Factors

- ▶ Parent/Family related:
 - ▶ **parental anxiety, overprotective parents, insecure attachment, severe parental discord/divorce, family violence, parental illness, birth of sibling (separation anxiety)**
- ▶ Abuse
- ▶ Bullying/teasing
- ▶ Life stressors (violence/crime exposure)



Anxiety: Risk Factors

- Inhibition (temperament)
- Depression
- Fear of failure
- Low achievement in school/sports



Screening: GAD-7

- ▶ Free, Short, Bill as 96127
- ▶ Scoring:
 - ▶ >5 = mild anxiety sx
 - ▶ >10 = moderate anxiety
 - ▶ >15 = severe anxiety
 - ▶ ≥10 suggestive of GAD
- ▶ Validated with teens
 - ▶ Sensitivity: 89%
 - ▶ Specificity: 82%

Spitzer RL, et al. Arch Intern Med. 2006;166(10):1036-1041. Spitzer RL, Williams JB, et al. Arch Intern Med. 2007;167(5):327-332.

Medical Workup

- ▶ Differential includes:
 - ▶ GI Problems
 - ▶ Constipation, GERD, IBS, other
 - ▶ Hyperthyroidism (Graves' disease - uncommon in children)
- ▶ Consider Thyroid-Stimulating Hormone level screening
- ▶ Consider Urine Drug Screen in adolescents
- ▶ Avoid over-investigating somatic sx

Diagnosis: More Detailed Questionnaires

- ▶ Free
- ▶ Parent/Child Versions
- ▶ Subscales for specific concerns (separation, school, social, GAD)
 - ▶ Spence Children's Anxiety Scale (SCAS)
 - ▶ Screen for Child Anxiety Related Disorders (SCARED)
 - ▶ Multidimensional Anxiety Scale for Children (MASC 2)
 - ▶ Preschool Anxiety Scale Revised (PASR)




Anxiety Treatment

- ▶ Psychoeducation
- ▶ Behavioral Interventions
- ▶ School Adjustments
- ▶ Therapy
- ▶ Medication

- ▶ Cognitive-Behavioral Therapy (CBT)
- ▶ Addresses thoughts, behaviors and feelings
- ▶ Exposure and response prevention
- ▶ Many therapists trained in this approach
- ▶ Manualized treatments available

- ▶ Parent-Child Interactional Therapy (PCIT)
- ▶ Working with parents of young children
- ▶ Address child sx's by shaping parent/child interactions
- ▶ Good results reported with range of problems including anxiety
- ▶ Not always available

Medications for ► Anxiety



Therapy +/- Meds

Ideally, medication is combined with behavioral interventions

Medication Considerations

- **Medications for Anxiety in Children are Mostly Off-Label**
 - FDA approval only for OCD, depression in youth
 - Many approved for adult anxiety and depression
- There is good evidence for efficacy of some SSRIs for other anxiety disorders in children
- Recommend monitoring closely (weekly/biweekly initially)
- **Boxed warning for suicidality applies to all antidepressant medications used in young people**
- Monitor response using an appropriate rating scale
- Switch to another SSRI if no improvement

First-line Medications: SSRIs

Table P2.2 US Food and Drug Administration approved SSRIs for children and adolescents

SSRI	Indication	Patient's age
Citalopram	Depression	>6y
Escitalopram	Depression	6-17
Fluoxetine	OCD	8-17
Paroxetine	OCD	8-17
Sertraline	OCD	6-17

Table P2.3 "Second-line medications" for anxiety disorders in children and adolescents

Medication	Possible indication	Comments
SNRIs (e.g., venlafaxine, desvenlafaxine)	► Refractory to SSRIs and CBT	► No compelling evidence of effectiveness in anxiety disorders ► More side effects than SSRIs
TCAs (e.g., imipramine, nortriptyline)	► Refractory to SSRIs and CBT	► More side effects than SSRIs ► Requires routine and periodic ECG monitoring ► Potentially lethal in overdose
Monoamine oxidase inhibitors (e.g., phenelzamine, tranylcypromine)	► Short-term treatment of acute anxiety (used off-label)	► Interacts with many medications ► Risk of hypertensive reaction in children
Bupropion	► Refractory to SSRIs and CBT	► Effectiveness not demonstrated in children
Progesterone	► Interim evidence response	► Should not be used for prophylaxis or long-term treatment agents
Glucocorticoids	► Interim evidence response ► Considered off-label for acute stress reactions	► More side effects than SSRIs ► Potentially lethal in overdose ► Requires laboratory and clinical monitoring ► Requires monitoring for adverse effects
Anticholinergics	► Tricyclics	► Can provide symptomatic relief of anxiety
Marijuana	► Tricyclics	► Potential long-term side effects

None of these medications are FDA approved for the treatment of anxiety disorders in children.

Separation Anxiety Disorder

- Peak onset between 7 - 9y
- Most common anxiety d/o of childhood
- 3-5% prevalence
- Decreases w/age
- ~2/3 resolve by adolescence
- Sub-threshold separation anxiety is common (one study estimated ~50% in US 8-year olds w/ SAD sx's)
- **Developmentally normal separation anxiety**
 - decreases after age 2y
 - increases again at age 4-5y
- Cultural factors: autonomy level
- Common cause of school refusal
 - Japanese concepts:
 - *Tokakyohi* and *futoko* (school refusal)
 - *Hikikomori* (excessive internet, social phobia)

Separation Anxiety Disorder

- ▶ Excessive distress or fear before or during separation from attachment figures
 - ▶ **FEARS or WORRIES**
 - ▶ About something happening to parent or child
 - ▶ **AVOIDANCE** or attempts to prevent separation
 - ▶ **BEHAVIORS or SOMATIC SXS**
 - ▶ Crying, Clinging, Calling, Complaining
 - ▶ HA, Stomachache, N/V, Dizziness, Sleep problems, Muscle aches

Separation Anxiety: DSM-5 Criteria

- ▶ Persistent, recurrent and excessive anxiety in a child lasting > one month, with 3 of 8:
 - ▶ Distress w/separation
 - ▶ Worry about losing/harm to attachment figures
 - ▶ Worry about getting lost/kidnapped
 - ▶ School/work refusal
 - ▶ Anxiety alone or away from caregivers
 - ▶ Anxiety sleeping away from caregivers
 - ▶ Nightmares about separation
 - ▶ Physical complaints

Separation Anxiety: Common Triggers

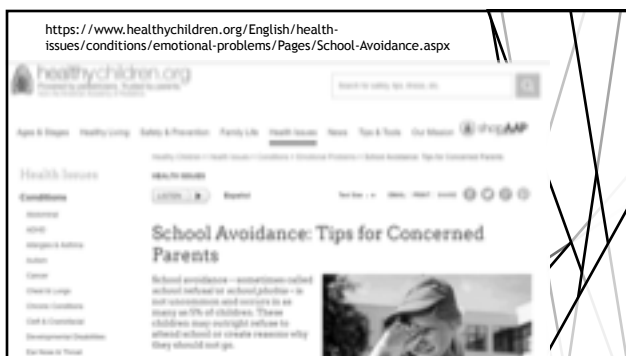


- ▶ Day care/school
- ▶ Bus to school
- ▶ Bedtime
- ▶ Babysitter
- ▶ Camp
- ▶ Moving
- ▶ Sleepovers
- ▶ Parents divorce
- ▶ Bullying
- ▶ Illness

Behavior Interventions for Separation Anxiety

- ▶ Listen empathically
- ▶ Model calm
- ▶ Teach relaxation
- ▶ Plan transitions
- ▶ List strategies
- ▶ Remind of past success
- ▶ Encourage activities without parent
- ▶ Reframe somatic symptoms
- ▶ Praise effort
- ▶ Discourage avoidance
- ▶ **Return to school ASAP!**
- ▶ Frequent meetings
- ▶ Supervised daily arrival
- ▶ Attachment figure allowed at school (initially)
- ▶ Slowly increase time at school
- ▶ Identify safe place


<https://www.healthychildren.org/English/health-issues/conditions/emotional-problems/Pages/School-Avoidance.aspx>



Generalized Anxiety Disorder (GAD)

- ▶ A tendency to worry about a wide range of negative possibilities, that something bad will happen
 - ▶ Repeated and extensive worry about several areas such as family, finances, friendships, schoolwork, sports performance, self and family health, and minor, daily issues.
 - ▶ Tendency to repeatedly seek reassurance from parents or others about fears.
 - ▶ Avoidance of novelty, negative news, uncertain situations, and making mistakes.
 - ▶ Physical symptoms, sleeplessness and irritability when worried.

Report RAS Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In: Boylston, M. (Ed.) Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In: Boylston, M. (Ed.) Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In: Boylston, M. (Ed.) Anxiety disorders in children and adolescents: Nature, development, treatment and prevention.



Social Phobia

- Fear and avoidance of social interactions or social performance due to a belief that others will negatively evaluate the child
- Avoidance of a range of social activities or situations including, speaking or performing in front of others, meeting new children, talking to authority figures such as teachers, being the center of attention, and fears of dating
- Worries about negative evaluation from others including that others will think they are unattractive, stupid, unpleasant, overly confident, or odd
- A limited number of friends and difficulty making new friends
- High levels of self-consciousness or self-focused attention

Specific Phobias

- Fear and avoidance in response to a range of specific cues, situations, or objects. Belief that the object or situation will lead to personal harm.
- Common fears in children include
 - Animals (e.g. dogs or birds), Insects or spiders
 - The dark
 - Loud noises, especially storms
 - Clowns, masks, or unusual-looking people
 - Blood, illness, injections

Figure 9B. Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health.

References

- Alvarenga PG, Mastrorosa RS, Rosário MC. Obsessive compulsive disorder in children and adolescents. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescents
- Bul E, Olwey B, Palitz S, Olliac B, Goutaudier N, Raynaud JP, Kounou KB & Stoddard FJ Jr. Acute and chronic reactions to trauma in children and adolescents. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions 2014
- Bridge JA, Iyengar S, Salary CB et al (2007). Clinical response and risk for reported suicidal ideation and suicide attempts in pediatric antidepressant treatment: a metaanalysis of randomized controlled trials. *Journal of the American Medical Association*, 297:1683-1696
- Figueroa A, Soutullo C, Ono Y, Saito K. Separation anxiety. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions 2012
- Healthy Children. School avoidance: Tips for Concerned Parents. <https://www.healthychildren.org/English/health-issues/conditions/emotional-problems/Pages/School-workplace.aspx>. Accessed September 2018.
- Kroenke K, Spitzer RL, Williams JB, et al; Ann Intern Med. 2007 Mar 6;146(5):317-25.
- Oerbeck B, Manassis K, Overgaard KR, Kristensen H. Selective mutism. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions 2016
- Rapee RM. Anxiety disorders in children and adolescents: Nature, development, treatment and prevention. In Rey JM (ed), IACAPAP e-Textbook of Child and Adolescent Mental Health. Geneva: International Association for Child and Adolescent Psychiatry and Allied Professions 2018
- Spitzer RL, et al. Arch Intern Med. 2006;166:1092-1097