


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 1/4 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

GAD-7

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all	Several days	More than half the days	Nearly every day
1. Feeling nervous, anxious or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it is hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3

Total Score: _____ Add Columns: _____

If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all	Somewhat difficult	Very difficult	Extremely difficult
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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;166:1092-1097; Kroenke K, Spitzer RL, Williams JB, et al; Ann Intern Med. 2007 Mar 6;146(5):317-25.

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

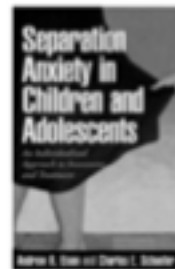
- ▶ Free
- ▶ Parent/Child Versions
- ▶ Subscales for specific concerns (separation, school, social, GAD)
 - ▶ Spence Children's Anxiety Scale (SCAS)
 - ▶ Screen for Child Anxiety Related Disorders (SCARED)
 - ▶ Multidimensional Anxiety Scale for Children (MASC 2)
 - ▶ Preschool Anxiety Scale Revised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

Anxiety Treatment

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

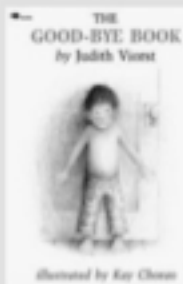
Psychoeducation: Bibliotherapy

► Books for parents



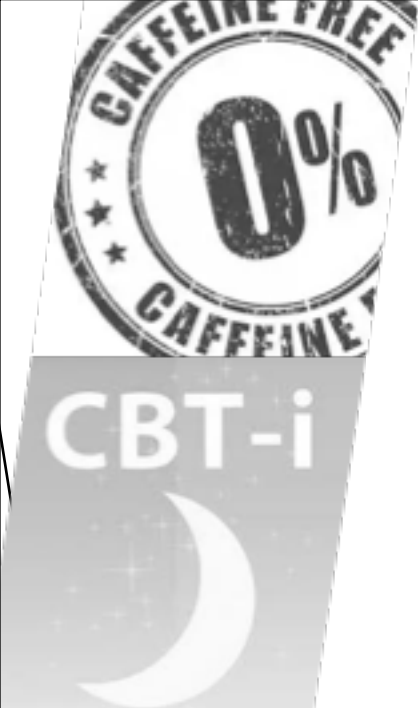
Interventions at home

A parent may read a specialized book with the anxious child, while reassuring that it is fine for the child to feel that way and that nothing will happen. There are many books for this purpose, such as "The good-bye book" by Judith Viorst; "The Kissing Hand" by Audrey Penn; "Even if I Spill My Milk" by Anna Grossnickle Hines; "Benjamin Comes Back" by Amy Brandt; "When Mama comes home" by Eileen Spinelli; "The invisible string" by Patrice Karst.



When symptoms of separation anxiety result in the child rejecting school, a parent can share books that specifically discuss this such as: "I don't Want to Go to School" by Nancy Pardo.





Behavioral Interventions for Anxiety

- ▶ Ensuring adequate sleep
 - ▶ Sleep Hygiene, CBT for insomnia (CBT-i), Melatonin, Magnesium, other sleep aides
- ▶ Balanced Diet
 - ▶ Avoiding Caffeine
- ▶ Address self-medication and herbal supplement use
 - ▶ Alcohol, Marijuana
 - ▶ Kava*, St John's Wort
 - ▶ Valerian, Passionflower, Chamomile, Lavender, Lemon Balm
- ▶ Mindfulness and Meditation
- ▶ Exercise

Therapeutic Interventions

- ▶ **Skill-Building:**
 - ▶ Psychoeducation
 - ▶ Relaxation
 - ▶ Exposure
 - ▶ Contingency management
 - ▶ Parent training
 - ▶ Cognitive restructuring
 - ▶ Social skills and assertiveness training

Treatment: Skills-Based Programs

Table F.1.2 Sessions and components of the Cool Kids program.

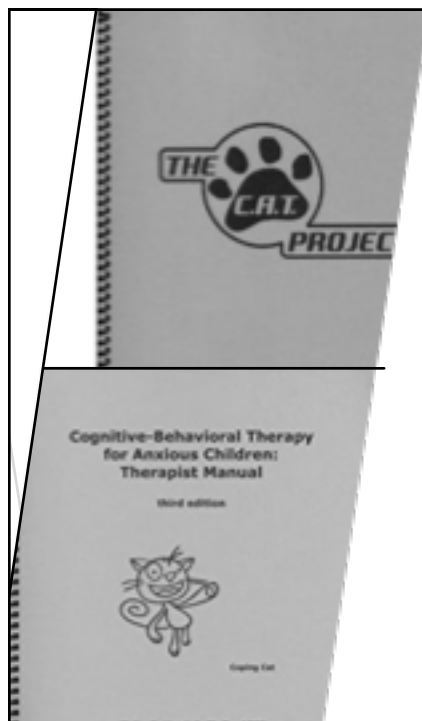
Session	Coverage - Child	Coverage - Parents
1	Psychoeducation	Psychoeducation and treatment rationale
2	Cognitive restructuring	Cognitive restructuring for both parent and child
3	Cognitive restructuring practice	Cognitive restructuring practice Child management skills
4	In vivo exposure and development of hierarchies	In vivo exposure and development of hierarchies
5	Dealing with difficulties in exposure	Dealing with difficulties in exposure
6	Practice exposure and cognitive restructuring	Practice exposure, cognitive restructuring and child management
7	Introduce assertiveness and social skills	Ways to increase assertiveness and social skills
8	Teasing and bullying	Teasing and bullying
9	Practice and review	Practice and review
10	Practice, review and relapse prevention	Practice, review and relapse prevention



Therapeutic Interventions: CBT

- ▶ 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

Bridge et al (2007) JAMA

First-line Medications: SSRIs

Table F.2.2 US Food and Drug Administration approved SSRIs for children and adolescents

SSRI	Indication	Patient's age
Escitalopram	Depression	12-17
Fluoxetine	Depression	8-17
Fluoxetine	OCD	7-17
Fluvoxamine	OCD	8-17
Sertraline	OCD	6-17

Table F.2.4 Second line medications* for anxiety disorders in children and adolescents

Medication	Possible indication	Comments
SNRIs: (e.g., venlafaxine, duloxetine)	• Refractory to SSRIs and CBT	• No compelling evidence of effectiveness in anxiety disorders • More side effects than SSRIs
TCAs: (e.g., imipramine, clomipramine)	• Refractory to SSRIs and CBT	• More side effects than SSRIs • Requires baseline and periodic ECG monitoring • Potentially lethal in overdose
Benzodiazepines: (e.g., clonazepam, clorazepate)	• Short term treatment of acute anxiety (rapid solution needed)	• Potential abuse and dependence • Risk of paradoxical reaction in children
Buspirone	• Refractory to SSRIs and CBT	• Effectiveness not demonstrated in children
Propranolol	• Intense autonomic response	• Should not be used by asthmatics or with antihypertensive agents
Clonidine	• Intense autonomic response • Comorbid PTSD or acute stress reactions	• More side effects than SSRIs • Potentially lethal in overdose • Requires baseline and periodic ECG and blood pressure monitoring
Antihistamines	• Insomnia	• Can provoke somnolence, increased appetite
Melatonin	• Insomnia	• Unknown 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 8year olds w/ SAD sxS)
- ▶ **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:
 - ▶ *Tokokyohi* 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 | ▶ Praise effort |
| ▶ Model calm | ▶ Discourage avoidance |
| ▶ Teach relaxation | ▶ Return to school ASAP! |
| ▶ Plan transitions | ▶ Frequent meetings |
| ▶ List strategies | ▶ Supervised daily arrival |
| ▶ Remind of past success | ▶ Attachment figure allowed at school (initially) |
| ▶ Encourage activities without parent | ▶ Slowly increase time at school |
| ▶ Reframe somatic symptoms | ▶ Identify safe place |

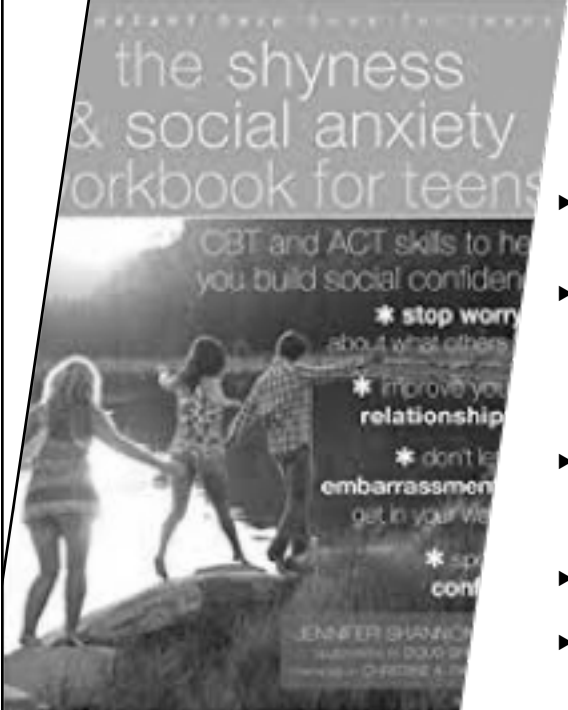
<https://www.healthychildren.org/English/health-issues/conditions/emotional-problems/Pages/School-Avoidance.aspx>



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.

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



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

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.

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

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.

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