Evidence-based treatments for Anxiety Disorders in Children and Youth

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Overview of Anxiety disorders

• Most common mental health disorder of childhood.

• Children with anxiety disorders can be shy, isolative, and somatic or they can be agitated, aggressive and unfocused.

• How does one identify anxiety disorders in children and what is the evidence base for treatment?

• This presentation will focus on Anxiety disorders, look for OCD and PTSD to be addressed in separate presentations.
DSM 5

• The DSM-5 organizes anxiety disorders by typical age of onset:
  – separation anxiety disorder,
  – selective mutism,
  – specific phobia,
  – social anxiety disorder (social phobia),
  – panic disorder,
  – generalized anxiety disorder,
  – substance/medication-induced anxiety disorder, anxiety disorder due to another medical condition, other specific anxiety disorder, and unspecific anxiety disorder (APA, 2013).
Fears and anxiety are a normal part of development. Toddlers often need to check the closets for imaginary creatures. School-age children fear injury or natural events – they may jump in bed with their parents during thunderstorms. And older children and teens worry about their academics, friends and health. These fears are a normal part of development (AACAP, 2007). Moreover, anxiety can be useful! For example, healthy anxiety can motivate children to study for tests and stay out of danger. It’s when these fears interfere with daily functioning over a period of time that a disorder develops.
Consequences of untreated childhood anxiety disorders are myriad

- Increased risk for educational underachievement, low-self esteem, poor problem-solving, and impaired social development (AACAP, 2007).

- Increased risk for adult anxiety disorders, depression and substance use (AACAP, 2007).
Clinical presentation

• Broad range in presentations that can include both internalizing and externalizing symptoms:
  
  • Internalizing symptoms include excessive worry and somatic or bodily complaints.
  
  • Externalizing symptoms can include irritability and oppositional behaviors. Children may go to great lengths to avoid the situation or object that triggers their anxiety. When pushed to do something that makes them anxious, they may become aggressive.
Psycho-pathologically relevant symptoms of fear and anxiety

<table>
<thead>
<tr>
<th>Normative Fears vs. Symptoms of Psychopathology by Developmental Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Psycho-pathologically relevant symptoms of fear and anxiety</strong></td>
</tr>
<tr>
<td>Sleep disturbances, nocturnal panic attacks, oppositional defiant</td>
</tr>
<tr>
<td>Crying, clinging, withdrawal, freezing, avoidance of salient stimuli, enuresis, sleep terrors</td>
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<tr>
<td>Infancy and toddlerhood</td>
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<td>0</td>
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</tbody>
</table>
Anxiety’s Potential Trajectories

Psychopathologically relevant symptoms of fear and anxiety

Normative fears

Progressive
Persistent
Waxing and Waning
Remitting

Infancy and toddlerhood
Childhood
School age
Adolescence
Prevalence Estimates for Anxiety Disorders Among US Adolescents (NCS-A)

<table>
<thead>
<tr>
<th>DSM-IV Disorder</th>
<th>Lifetime Prevalence by Sex %</th>
<th>Lifetime Prevalence by Age %</th>
<th>12-Month Prevalence %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female:</td>
<td>13-14y</td>
<td>15-16y</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>3.4</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Generalized Anxiety DO</td>
<td>3.0</td>
<td>1.0</td>
<td>2.8</td>
</tr>
<tr>
<td>Social phobia</td>
<td>11.2</td>
<td>7.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Specific phobia</td>
<td>22.1</td>
<td>21.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>2.6</td>
<td>1.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Separation Anxiety DO</td>
<td>9.0</td>
<td>7.8</td>
<td>8.0</td>
</tr>
<tr>
<td>Any Anxiety Disorder*</td>
<td>38.0</td>
<td>31.4</td>
<td>32.1</td>
</tr>
</tbody>
</table>
Prevalence

- CDC reports 3% of children ages 3-17 years old have a current diagnosis of an anxiety disorder (http://www.cdc.gov/childrensmentalhealth/data.html).
- Lifetime prevalence rates for having at least one anxiety disorder range from 6% to 20% (Costello et. al., 2004).
- All anxiety disorder subtypes were more frequent in females (Merikangas KR, et al., 2010).
- Few race/ethnic variations across anxiety disorders, with the exception of increased rates of anxiety disorders among non-Hispanic Black adolescents compared to non-Hispanic White adolescents (Merikangas KR, et al., 2010).
Additional Variables

• Earlier onset of puberty is associated with increased risk for reporting anxiety symptoms. This is true for both girls and boys, but is most strongly reported in girls (Carter R, Silverman WK, Jaccard J, 2011).

• 50% of adolescents with anxiety disorders in NCS-A had the onset of their disorder by age 6 years (Merikangas KR, et al., 2010).

• While children and adolescents with a diagnosis of anxiety disorder are more likely than peers to report anxiety disorders as adults, the stability of anxiety disorders over time is relatively low (Last CG, Perrin S, Hersen M, & Kazdin, AE 1996)
Genetics

• Twin studies suggest there is a strong genetic component to anxiety disorders (Eley, 2001 in AACAP PP 2007).

• “Children of parents with an anxiety disorder have a substantially increased risk to also develop an anxiety disorder” (Beesdo-Braum, K, Knappe, S, 2012)

• Risk is even higher when both parents suffer from an anxiety disorder and for children of parents with severe anxiety disorders (Beesdo-Braum, K, Knappe, S, 2012).
Environment

• Parents with anxiety disorders may model anxious approaches to their children

• Overprotective, controlling and critical parenting styles can interrupt normal development of autonomy and mastery and lead to anxiety disorders (AACAP, 2007)

• Parental unemployment is associated with anxiety disorders in children (Beesdo-Braum, K, Knappe, S, 2012).

• Protective factor: Coping skills (AACAP, 2007), which form the basis for many of the evidence-based psychosocial interventions.
Treatment starts with assessment

• AACAP recommends obtaining data from multiple informants, including the youth and adults (parents/teachers), because children may be more aware of internal distress than adults, but adults are often more aware of the functional impact of a child’s anxiety disorder (AACAP, 2007).

• Tools for assessment: Two commonly used, well-validated and publically available tools to screen for anxiety disorders are the Screen for Child Anxiety Related Disorders (SCARED) and the Spence Children’s Anxiety Scale (SCAS) (Holly, LE, Little, M, Pina, AA, Caterino, LC, 2015).
SCARED

Child version:  

Parent Version:  

SCARED is also available in numerous translations, including Arabic, Chinese, French, German, Italian, Thai, Spanish, and Tamil (Sri Lanka).  
http://www.pediatricbipolar.pitt.edu/content.asp?id=2333

There is also a five-item brief version
SCAS

• 38-item questionnaire rating the symptoms experience on a four-point scale that is available in 28 languages ([http://www.scaswebsite.com](http://www.scaswebsite.com)).

• Recent research “indicated that the SCAS is a fairly robust measure across ethnicity (i.e., Hispanic/Latino, NHW) and sex, with more variations for the latter” – girls were slightly less likely to report anxiety symptoms on some measures as compared to boys (Holly, LE, Little, M, Pina, AA, Caterino, LC, 2015).

• What sets SCAS scales specific to preschoolers: [http://www.scaswebsite.com](http://www.scaswebsite.com).
Differential Diagnosis

• Other psychiatric disorders:
  – ADHD (restlessness, inattention)
  – Psychotic disorders (restlessness, social withdrawal)
  – Autism Spectrum Disorders (social awkwardness and withdrawal, social skills deficits, communication deficits, adherence to routines, repetitive behaviors)
  – Learning disabilities (concerns about school performance)
  – Bipolar disorder (restlessness, irritability, insomnia)
  – Depression (poor concentration, difficulty sleeping, somatic complaints).
Medical Conditions and Substances that can cause Anxiety Symptoms

• Side effects of medications, including SSRIs, steroids, antipsychotics, antihistamines, diet pills, other cold medications.
• Medical disorders:
  – Hyperthyroidism
  – Migraine
  – Asthma
  – Seizure disorders
• Substances
  – Lead intoxication
  – Caffeine
Treatment choice

• Based on symptom severity, functional impairment and a child’s developmental capacity to access different therapeutic or coping tools.

• AACAP recommends a multimodal treatment approach for all levels of anxiety disorder.

• AACAP recommends mild anxieties be treated with psychotherapy:
  – Patient and parent education, support, and encouragement to resume normal activities gradually.
  – Family encouragement to maintain routines (Ramsawh H, Chavira DA, and Stein MB, 2010).

• Exposure-based CBT has the most evidence behind it (AACAP, 2007)
5 Components of CBT for childhood anxiety disorders

1. Psychoeducation
2. Somatic management skills training
3. Cognitive restructuring
4. Exposure methods
5. Relapse prevention

(Albano and Kendall, 2002)
Psychoeducation

• Teach the family about the disorder.

• Teach parents skills to manage anxiety symptoms so they can provide support to the child (or themselves) at home.

• Additional points: positive incentives to practice skills are okay, parents are seen as CBT coaches. (AACAP, 2007)

• Education about parental accommodation.
Somatic management skills training

• These skills address the autonomic arousal and related psychological responses children have to their feared stimuli.
• Relaxation training is used to teach children awareness and control over their physiological reactions.
• Tools include: diaphragmatic breathing, self-monitoring, progressive muscle relaxation, imagery. A narrative approach can help younger children remember how to use these tools. For example, tighten the muscles in your feet as if you were tip-toeing on rocks.
• Ultimately the goal is to help children be aware of and tolerate arousal resulting from anxiety.
Cognitive restructuring

• Challenge negative thoughts and expectations.

• Identify and correct negative self-talk – teach positive self-talk.
Exposure methods

• Gradual desensitization based on a fear hierarchy.
• Teach how to couple relaxation techniques with fear stimuli.
• One might start treating a specific phobia by reading a book about or drawing pictures of the feared stimuli.
Relapse prevention

• Homework is used to practice skills outside of therapy sessions

• Booster sessions are scheduled as needed.
Medications

• AACAP recommends consideration of adding medication treatment to psychotherapy in moderate to severely anxious children when:
  – Psychotherapy has produced only a partial response and there is the potential for improved outcomes with combination therapy.
  – There is a comorbid disorder that requires treatment with medication.

• Of note, the AACAP Anxiety practice parameter was written before the Child/Adolescent Anxiety Multimodal Study (CAMS) was published. CAMS provides strong evidence for the benefit of combination treatment for children with anxiety disorders (AACAP, 2007)
Anti-anxiety Medications

• Also used to treat depressive disorders.

• Pooled response rate for active treatment was 69% for non-OCD anxiety disorders (95%CI, 65% to 73%) and 39% (95% CI, 35% to 43%) for placebo (Bridge, JA, et al, 2007).

• Number Needed to Treat (the number of patients that need to be treated to see a response in at least one patient): 3 (95% CI, 2 to 5) (Bridge, JA, et al, 2007).
SSRIs/SSNRIs

• Fluoxetine, Fluvoxamine, Sertraline, and Paroxetine, and Venlafaxine ER outperformed placebo in studies of children and adolescents, although some of these studies were quite small (Peters, TE and Connolly, S, 2012).

• Adolescents responded better than children, but both groups showed significant and positive effects (Bridge, JA, et al, 2007).

• Side effects are possible:
  – SSRI-SSNRI related activation is a risk for anxious pediatric patients. Risk of activation is higher in younger patients and with more rapid dose increases (Strawn et al., 2015).
  – Unlike in adults, SSRIs/SSNRIs don’t statistically increase risk for GI symptoms (Strawn et al., 2015).
Child/Adolescent Anxiety Multimodal Study (CAMS)

- Established the standard of care.

- NIMH funded six-year, six-site randomized placebo-controlled trial that examined the relative efficacy of cognitive-behavior therapy, sertraline (Brand name Zoloft), and their combination against pill placebo for the treatment of separation anxiety disorder, generalized anxiety disorder and social phobia in 488 children and adolescents ages 7-17 years old.
CAMS Outcomes

- Percentage of those who measured very much or much improved on Clinician Global Impression-Improvement scale:
  - 80.7% for combination therapy (P<0.001)
  - 59.7% for cognitive behavioral therapy alone (P<0.001)
  - 54.9% for sertraline alone (P<0.001)
  - All therapies were superior to placebo (23.7%).
CBT, sertraline and their combination are all effective treatments for anxiety disorders in children and adolescents.

Combination treatment with sertraline and CBT was the most effective.

Placebo alone was not effective treatment (Walkup et al, 2008).
Black box warning about risk for suicide from anti-anxietetal meds

• FDA issued its warning based on 24 placebo-controlled trials (assessing more than 4,400 youth), which concluded that antidepressant medications double the risk for suicidal ideation and behavior (4% on SSRIs versus 2% on placebos-
NOTE, even those youth given placebos saw an increase in suicidal ideation) (US FDA, 2004).
Other considerations

• Ensuring these evidence based interventions are available in the service array and accessible

• Workforce development (training, coaching, supervision, certificate programs)

• Fiscal issues (e.g. incentives for implementing EBPs, $ for training and ongoing professional development) need attention in the system to ensure providers to whom youth may be referred are capable of implementing the most effective programs for depressive disorders... esp in light of the 10-15% prevalence rate in adolescents
Other considerations (cont’d)

• Ensuring that care coordinators / wrap facilitators are aware of the need to access relevant EBPs for depression (and other diagnostic categories) when planning with a youth/family/team, and know who provide such treatments

• Building capacity for peer to peer support in a system and service array so that there are other relevant supports readily available, esp. to adolescents who may be struggling with depression and other challenges
References


References (cont’d)