

Anxiety and Autism: Diagnosis and Treatment

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Yale SCHOOL OF MEDICINE

Child Study Center



Program for Anxiety Disorders

- Conduct cutting edge research (etiology, maintenance, prevention, treatment)
- Provide evidence based clinical services
- Train next generation of mental health professionals
- Disseminate knowledge

Overview

- Anxiety in typically developing children
- Anxiety in Autism Spectrum Disorder (ASD)
- Traditional and ambiguous anxiety symptoms in ASD
- CBT strongest evidence based treatment for anxiety in children
- CBT with adaptations to reduce anxiety in children with ASD
- Attention bias modification training –translational treatment with exciting potential for anxiety, and anxiety in ASD

Impairing disorders

Family

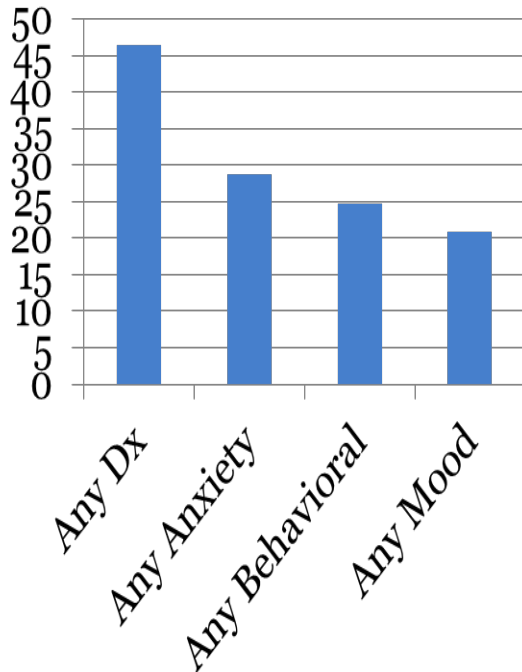
Peers

Academics

Personal and physical distress

Silent sufferers

Silent majority



Lifetime
Prevalence
28.8%

75% Onset
before age 21

Median onset
age 11

DSM-5 Anxiety Disorders

- Specific Phobia
- Selective Mutism
- Separation Anxiety Disorder
- Social Anxiety Disorder
- Generalized Anxiety Disorder
- Panic Disorder
- Panic Attack
- Agoraphobia

Anxiety: 5 'A's

- **A**ttention
- **A**voidance
- **A**rousal
- **A**nticipation
- **A**ttitudes

Anxiety in autism recognized by Kanner (1943)

- Case 1, Donald: “we brought him to a playground slide...when other children were sliding on it... he would not get on it...he seemed horrorstruck”
- Case 5, Barbara: “very timid, fearful of various and changing things, wind, large animals, running water, gas burners, and many other things.”
- Case 8, Alfred: “...a good deal of ‘worrying.’ He frets when the bread is put in the oven to be made into toast, and is afraid it will get burned and be hurt...He is upset because the moon does not always appear in the sky at night...”
- Case 10, John: “marked obsessiveness...daily routine must be adhered to rigidly; any slightest change calls forth bursts of panic”

Anxiety prevalence rates in ASD

- Across studies: 11% – 84%
- Varies across anxiety disorders (social phobia: 8 – 29%; specific phobia: 6 – 63%)
- Meta-analyses: ~ 40% prevalence overall

Anxiety in ASD – traditional and ambiguous symptoms

Traditional anxiety symptoms

Social, separation, generalized, specific phobia

Ambiguous anxiety symptoms

ASD or Distinct Syndrome?

Separation Anxiety Disorder

- Excessive fear of separation from caregiver
- Fears of never seeing caregiver again
- Difficulties sleeping alone, avoids being alone, physical symptoms

Ambiguous symptoms

- Increased dependence on caregiver
- Rigidity
- Unusual attachment to objects (dish, brush, pebble),

Social Phobia

- Excessive fear of social evaluation, embarrassment, and humiliation
- Social avoidance
- Social difficulties
- Specific (public speaking) or generalized

Ambiguous symptoms

- Not knowing how to behave in social situations
- Not knowing what to expect in social situations

Complications in ASD

- Motivation or desire for social experiences?
- Bullying/peer rejection?
- Opportunities for social experiences?
- Experience social evaluative fears? (theory of mind)

Specific Phobia

Common specific phobias:
small animals, heights, shots,
loud sounds, storms

Ambiguous symptoms

idiosyncratic fears (men with
beards, water going down the
drain, graffiti, specific songs)

Complications in ASD

- More extreme and unusual reactions
- Heightened sensitivity to stimuli

Generalized Anxiety Disorder

Excessive and uncontrollable worry
(performance, perfectionism, health of self,
health of others, illness, world events, novelty)

Ambiguous symptoms

Extreme negative reactions to change and
novelty

Anxiety Disorders Interview Schedule/Autism Spectrum

Good to excellent inter-rater reliability

- ADIS/ASA provide consistent measurement of traditional and ambiguous anxiety presentations in children with ASD across different raters at 3 sites.

Convergent and discriminant validity

- Traditional anxiety symptoms correlate with other measures of traditional anxiety
- Ambiguous anxiety symptoms correlate with other measures of ASD symptoms
- Neither correlate with attention or aggression difficulties

*Kerns et al., 2017, JCCAP

Cognitive behavior therapy

- Evidence for reducing anxiety symptoms and disorders (pre to post treatment and 1 year follow-up)
- Consistently found using multiple informants and multiple methods of assessment

Modified CBT for ASD

- Enhanced parent involvement
- Multi-sensory/interactive learning
- Strong behavioral component - exposure
- Strong use of child's special interests
- Group format
- Expanded/Modular programs to address anxiety *and* related difficulties in ASD
- Research shows helpful for those youth with ASD with average to above average IQ

Multi-sensory interactive learning

- Games
- Craft projects
- Worksheets and visuals
- Breaks as needed
- Rewards
- Choice
- Special interests

ASD-Specific Modules

- Social skills modules
- Self-care module
- Comorbid disruptive behaviors module

Attention retraining

- Anxious children and adolescents show significantly greater attention capture to threatening stimuli than to neutral stimuli (measured by behavior – dot probe; eye movement; brain)
- Attention-capture to threat is associated with fronto-amygdala dysfunction.
- Implicit learning procedures that modify attention-capture to threat decreases anxiety. These procedures also modify fronto-amygdala dysfunction.
- Attention retraining is a new, exciting, and promising translational treatment to help anxious children and adolescents.

Summary

- Anxiety – prevalent and interfering
- Anxiety - prevalent in ASD though rates vary across studies
- Traditional and ambiguous anxiety symptoms appear in ASD
- Possible to disentangle traditional and ambiguous anxiety symptoms with careful questioning
- CBT strongest evidence based treatment for anxiety in children
- CBT with adaptation is used to reduce anxiety in children with ASD
- Attention bias modification training –translational treatment with exciting potential for anx and anx-ASD