



IMAGINE CONFERENCE JUNE 12, 2025

Anxiety in Youth with Autism Spectrum Disorder (ASD)

SYLVIA J. ACOSTA, PHD
SUNNY C. OLSEN, EDS, NCSP
EMILY POMICHTER, MA

Objectives

At the end of this training, participants should be able to:

- Identify key characteristics and rates of co-occurring Autism Spectrum Disorder (ASD) and anxiety disorders
- Recognize signs of anxiety in children with ASD
- Develop a toolbox for intervention strategies for individuals with ASD and anxiety

Outline

1. Objectives
2. Definitions and Purpose
3. Prevalence Rates and Updated Research
4. Assessment
5. Intervention

List of Acronyms/Language

Anxiety - general terms for clinical definitions

ASD - Autism Spectrum Disorder, used interchangeably with autism

DSM-5-TR - Diagnostic and Statistical Manual, Fifth Edition, Text Revision

CBT – Cognitive Behavioral Therapy

TD – Typically Developing/Child without ASD

ASD is a neurodevelopmental condition (DSM-5-TR)

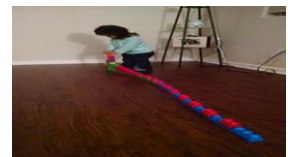
DEFICITS IN SOCIAL COMMUNICATION AND INTERACTION

1. Nonverbal communication
2. Social reciprocity
3. Relationships and Play



PRESENCE OF RESTRICTED REPETITIVE PATTERNS OF BEHAVIORS, INTERESTS OR ACTIVITIES

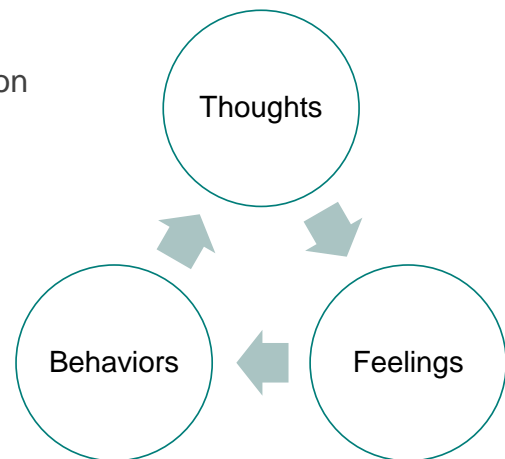
1. Repetitive movements, language and/or behavior
2. Insistence on sameness/routines
3. Restricted interests
4. Sensory



What is anxiety?

An automatic response (fight or flight)

Anxiety is a typical and adaptive emotion



What is typical vs. clinical anxiety?

TYPICAL ANXIETY

Reaction to stressor (e.g., feeling nervous about starting middle school)

Being nervous (e.g., for a test)

Resolves quickly

ANXIETY DISORDER

Severity: Constant worry, distress

Response is disproportionate to the typical response

Duration: Lasts ~ 6 months

Impairment: Interferes with daily life

Rational vs “Irrational” fears

Avoidance

Anxiety in typically developing(TD) children

Anxiety has increased in prevalence

- increase in anxiety from 11% to ~19%

The US Preventive Services Task Force recommends the following:

- screening for anxiety in children and adolescents aged 8-18 years

Mental health concerns can co-occur with ASD

One of the first studies to examine psychiatric conditions in children with ASD found:

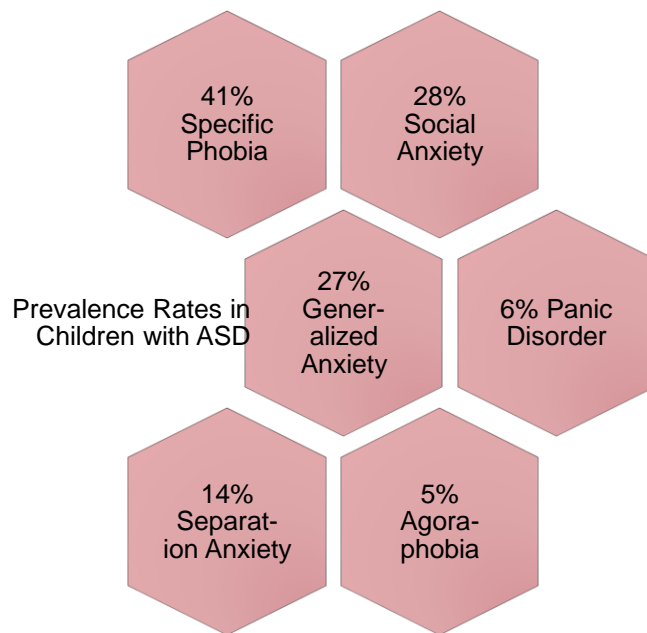
70% of 10-14 year old children with ASD had at least 1 co-occurring psychiatric disorder

41% of children with ASD had 2 or more psychiatric disorders

(Simonoff, et al., 2008)

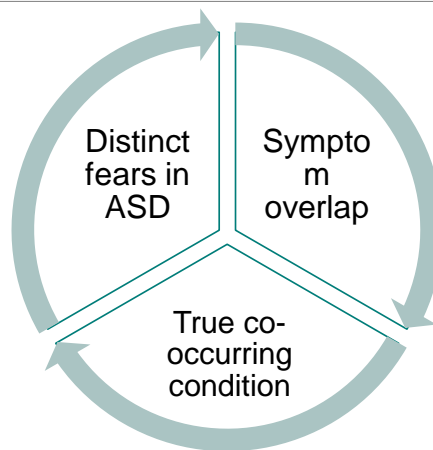
Prevalence of Anxiety

>10% of all children
1 in 3 children with
ASD (or more)



National Survey of Children's Health, 2022 and Thiele-Swift & Dorstyn, 2023

Why such differences in prevalence?



Is it Anxiety, ASD or both?

Social	Repetitive Behaviors
<ul style="list-style-type: none">• Social skill deficit vs social fears• Avoidance of eye contact• Limited back and forth vs social inhibition• Few relationships vs. social avoidance	<ul style="list-style-type: none">• Sensory overload vs fears• Insistence on sameness vs. obsessions/compulsions• Repetitive movements vs. anxious behaviors• Repetitive use of objects vs checking• Resistance to change vs. excessive worry

Barriers to assessing anxiety in ASD

Symptom overlap

Communication/language difficulties

Unclear presentation

Measures developed for TD children

Diagnostic assessment for anxiety in children with ASD

Multi-method:

- Interviews (ADIS, unstructured interview)
- Rating Scales
- Behavioral Observation/Functional Behavior Analysis

Multi-Informant

- Child
- Parent
- Teachers

What to Ask About

- What annoys, bothers, frustrates them?
- Do they feel a lot of pressure?
- How often are they having stomachaches, headaches, feel tightness in their chest?
- Are there things they can't stop thinking about?



My Symptoms of Anxiety

When feeling anxious, you experience some physical symptoms which can be unpleasant and unsettling. It's important to remember that these are **NORMAL** body reactions to a threat. Anxious that you may experience it when you're at school. What symptoms do you notice in your body when you're feeling anxious?



Remember! Different symptoms of anxiety might be different but they are **NORMAL** body reactions.

Presentation of Anxiety in Children with ASD

Common Fears:

- Changes in Routine
- Social rejection/Social discomfort and fearfulness
- Loud noises
- Unusual phobias
- Fears related to restricted interests
- Obsessions and compulsive behaviors
 - Sometimes to reduce distress or prevent negative events from occurring
 - Sometimes associated with negative affect for unclear reason

Typical and Atypical Symptoms

Kerns et al., 2014

Structured Screening Measures

- **Anxiety Scale for Children – ASD**
- Spence Children's Anxiety Scale
- Revised Children's Anxiety and Depression Scale
- Screen for Child Anxiety Related Emotional Disorders

Rodgers et al., 2016; Wigham & McConachie, 2014

Risk Factors

- Higher IQ & adaptive skills
- Parental Anxiety
- Increased social awareness and motivation
- Bullying
- Sensory Processing difficulty
- “Masking”
- Higher levels of restrictive/repetitive behavior
- Unpredictable environment
- Intolerance to change

Dellapiazza et al., 2022; van Steensel & Heeman, 2017

Protective Factors

- Social support
- Trusted adults
- Coping strategies
- Acceptance of identities by community
- Sense of belonging
- Physical activity

Costley et al, 2021; Greenspan et al., 2023

Intervention

General interventions

Address the basics

- Assess skill level and increase emotional language
- Improve sleep
- Incorporate exercise
- Identify positive social relationships
- Address co-occurring medical concerns
- Treat co-occurring conditions

Strategies: Social Communication

Use literal language
(no idioms, metaphors, slang,
analogies)

Use concise, specific language
and be explicit

Use visual supports



*Keep skill levels and co-occurring conditions in mind.

For example, use tactile as “visual” supports for children with visual impairments or blindness.

Strategies:

Restricted and Repetitive Behaviors



A photo by Sandra Gabriel | Unsplash

Incorporate child interests

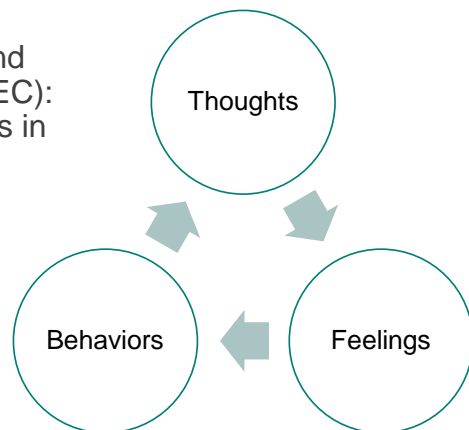
Use motivators/rewards

Have routines

Include sensory calming strategies

Cognitive Behavior Therapy (CBT)

- ✓ Endorsed by Medical Professionals and the Council for Exceptional Children (CEC): Standards for Evidence-Based Practices in Special Education (2014)
- ✓ Systematic reviews show CBT has moderate efficacy in reducing anxiety symptoms for ASD youth who do not have intellectual disabilities.



National Institute for Health and Care Excellence (2013) CBT Guidance

1. Emotion recognition training
2. Use of written and visual information and structured worksheets
3. Concrete and structured approach
4. Simplified cognitive activities (e.g., multiple choice worksheets)
5. Parent or caregiver involvement
6. Incorporate frequent breaks to increase attention
7. Include youth's special interest(s)

Modified CBT Interventions

- ✓ Fearing Your Fears (FYF)
- ✓ DINO Strategies for Anxiety and Uncertainty Reduction (DINOSAUR)
- ✓ Behavior Interventions for Anxiety in Children with Autism (BIACA)

Please note this is not an all-inclusive list

Facing Your Fears

Modified CBT in Clinic




Facing Your Fears (Reaven, et al., 2012)

- Group treatment for children and adolescents (8-14 years) with ASD and Anxiety
- Utilizes visual supports and modified language
- Numerous interactive activities
- Use of multimedia materials and presentations
- Parent involvement / support
- Uses graded exposure

Video



Take small steps to Face My Fear



6. _____
5. _____
4. _____
3. _____
2. _____
1. _____

Advice from my FRIENDS

- Take deep breaths
- Watch a movie
- Play a video game
- Talk to mom or dad
- Watch TV
- Exercise-jumping jacks or trampoline
- Relax on the couch
- Talk to/call a friend
- Think of favorite _____
- Count to 10
- Play with pets

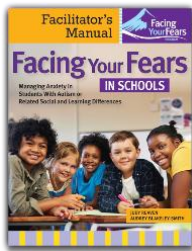
Plan to get GREEN

1. _____
2. _____
3. _____
4. _____
5. _____

GOOD JOB!! YOU DID IT!!!

- 10
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1

Modified CBT in Schools



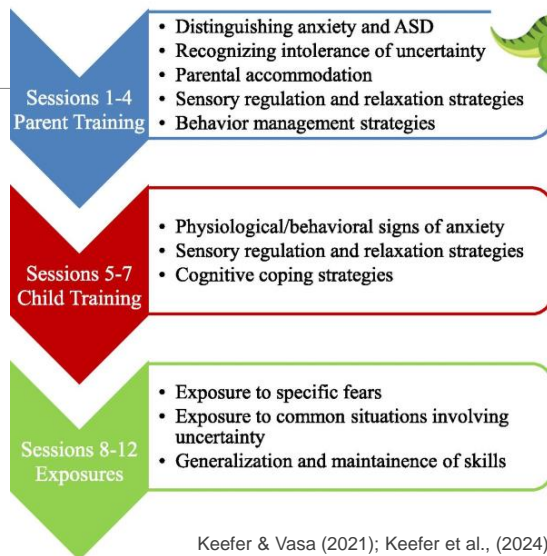
Facing Your Fears (Kester & Lucyshyn, 2019)

- Group school intervention for children and adolescents (8-14 years) with ASD and Anxiety
- 40-minute weekly sessions or several 20-minute sessions
- 2-5 students in group
- Parent and school provider involvement (counselor or school psychologist, special education teacher, or other educator)

DINOSAUR

DINOSAUR

- DINO Strategies for Anxiety and intolerance of Uncertainty Reduction pilot study (Keefer et al., 2024)
- 14-week telehealth group in 90 minute sessions
- 4 to 6-year-old children with ASD
- Targets IU and parental accommodation



Keefer & Vasa (2021); Keefer et al., (2024)

BIACA

BIACA

Behavioral Interventions for Anxiety in Children with Autism

- Children 7-14 with ASD
- 16 weeks, 90-minute sessions
- Parent involvement – building exposure
- Modules target social skills, adaptive skills, and stereotyped behaviors

Scarpa et al., (2013)

UCLA PEERS

UCLA PEERS

- Group-based social skills program for teens and young adults
- 16 weekly 90-minute Zoom sessions
- Social coaches with didactic lessons and role-play online
- Parent involvement
- Available to participate worldwide!

PEERS Curriculum for School-Based Professionals
(Laugeson, 2014)

LEARN MORE





- Limited child and adolescent studies
- Selective Serotonin Reuptake Inhibitors (SSRIs) most commonly prescribed for ASD with anxiety
- Inconsistent SSRI benefits to improve aggression and other ASD core symptoms
- **Medication is most effective with intervention**
- Consider co-occurring conditions, family values, and collaboration with providers and schools

Manter et al., 2025; Aishworiya et al., 2022

Key Take Aways

- Individuals with ASD might show signs of anxiety, such as worrying, nervousness, avoiding situations, irritability, or repeating certain behaviors more often.
- ASD and anxiety can look similar and be hard to tease out. Know how ASD and anxiety present for each person. There are commonalities, but there is no one-size-fits-all.
- Similar intervention strategies can be used at home and school for individuals with ASD and anxiety. Much of the evidence-based research is grounded in CBT techniques.

References

Aishworiya, R., Valica, T., Hagerman, R. and Resptrepo, B. An update on psychopharmacological treatment of autism spectrum disorder. *Neurotherapeutics* 19, 1 (2022). <https://doi.org/10.1007/s13311-022-01183-1>

Anixt, J. S., Ehrhardt, J., & Duncan, A. (2024). Evidence-Based Interventions in Autism. *Pediatric clinics of North America*, 71(2), 199–221. <https://doi.org/10.1016/j.pcl.2024.01.001>

Bougeard, C., Picarel-Blanchot, F., Schmid, R., Campbell, R., & Buitelaar, J. (2021). Prevalence of autism spectrum disorder and co-morbidities in children and adolescents: a systematic literature review. *Frontiers in psychiatry*, 12, 744709.

References

Cervin, M., Storch, E. A., Kendall, P. C., Herrington, J. D., Small, B. J., Wood, J. J., & Kerns, C. M. (2023). Effects of cognitive-behavioral therapy on core aspects of anxiety in anxious youth with autism. *Research in Autism Spectrum Disorders*, 107, Article 102221.

Child and Adolescent Health Measurement Initiative. (2021-2022). *National Survey of Children's Health*. Data Resource Center for Child and Adolescent Health supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB). Retrieved August 8, 2024 from <https://nschdata.org/browse/survey?s=2&y=51&r=1&#home>

Costley, D., Emerson, A., Ropar, D., & Sheppard, E. (2021). The anxiety caused by secondary schools for autistic adolescents: In their own words. *Education Sciences*, 11(11), 726.

References

Dellapiazza, F., Michelon, C., Picot, M. C., & Baghdadli, A. (2022). Early risk factors for anxiety disorders in children with autism spectrum disorders: results from the ELENA Cohort. *Scientific Reports*, 12(1), 10914.

Factor, R. S., Moody, C. T., Sung, K. Y., & Laugeson, E. A. (2022). Improving Social Anxiety and Social Responsiveness in Autism Spectrum Disorder through PEERS®. *Evidence-Based Practice in Child and Adolescent Mental Health*, 7(1), 142–159.
<https://doi.org/10.1080/23794925.2021.2013138>

Greenspan, S. B., Carr, S., Woodman, A. C., Cannava, A., & Li, Y. (2023). Identified protective factors to support psychological well-being among gender diverse autistic youth. *Journal of LGBT Youth*, 20(2), 407-440.

References

Keefer, A., Vasa, R.A. (2021). DINOSAUR: an integrated cognitive-behavioral treatment for anxiety in young children with ASD. *J Neurodevelopmental Disord* 13, 46 <https://doi.org/10.1186/s11689-021-09396-9>

Keefer, A., Perrin, J., Singh, V., Holingue, C., Winchell, S., & Vasa, R. A. (2024). A pilot, single-arm feasibility study of an integrated cognitive-behavioral treatment for anxiety in young autistic children. *Journal of pediatric psychology*, 49(2), 131–141. <https://doi.org/10.1093/jpepsy/jsad093>

Kerns, C.M., Kendall, P.C. (2013). The presentation and classification of anxiety in Autism Spectrum Disorder. *Clinical Psychology Science and Practice*, 19 (4), 323-347.

References

Kerns, C. M., Kendall, P. C., Berry, L., Souders, M. C., Franklin, M. E., Schultz, R. T., Miller, J. & Herrington, J. (2014). Traditional and atypical presentations of anxiety in youth with Autism Spectrum Disorder. *Journal of autism and developmental disorders*, 44, 2851-2861.

Laugeson, E. A., & Ellingsen, R. (2014). Social skills training for adolescents and adults with autism spectrum disorder. In F. R. Volkmar, B. Reichow, & J. C. McPartland (Eds.), *Adolescents and adults with autism spectrum disorders* (pp. 61–85). Springer Science + Business Media. https://doi.org/10.1007/978-1-4939-0506-5_4

Maenner, M. J. (2023). Prevalence and characteristics of autism spectrum disorder among children aged 8 years—autism and developmental disabilities monitoring network, 11 sites, United States, 2020. *MMWR. Surveillance Summaries*. 72.

References

Manter, M.A., Birtwell, K.B., Bath, J., Friedman, N.D.B., Keary, C. J., Neumyer, A.M., Palumbo, M.L., Thom, R.P., Stonestreet, E., Brooks, H., Dakin, K., Hooker, J.M., McDougle, C.J. Pharmacological treatment in autism: a proposal for guidelines on common co-occurring psychiatric symptoms. *BMC Med* **23**, 11 (2025). <https://doi.org/10.1186/s12916-024-03814-0>

Rodgers, J., Wigham, S., McConachie, H., Freeston, M., Honey, E. and Parr, J.R. (2016), Development of the anxiety scale for children with autism spectrum disorder (ASC-ASD). *Autism Research*, 9: 1205-1215. <https://doi.org/10.1002/aur.1603>

Scarpa, A., Williams White, S., & Attwood, T. (Eds.). (2013). *CBT for children and adolescents with high-functioning autism spectrum disorders*. The Guilford Press. (pp. 79-92)

References

Simonoff, E., Pickles, A., Charman, T., Changer, S., Loucas, T., & Baird, G. (2008). Psychiatric disorders in children with autism spectrum disorders: Prevalence, comorbidity and associated factors in a population-derived sample. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47, 921-929. doi:10.1097/CHI.0b013e318179964f

Thiele-Swift, H. N., & Dorstyn, D. S. (2024). Anxiety prevalence in Youth with Autism: A systematic review and Meta-analysis of Methodological and Sample moderators. *Review Journal of Autism and Developmental Disorders*, 1-14.

van Steensel, F. J., & Heeman, E. J. (2017). Anxiety levels in children with autism spectrum disorder: A meta-analysis. *Journal of child and family studies*, 26(7), 1753-1767.

References

Viswanathan M, Wallace IF, Cook Middleton J, et al. Screening for anxiety in children and adolescents: evidence report and systematic review for the US Preventive Services Task Force. *JAMA*. Published October 11, 2022.

Wigham, S., Rodgers, J., South, M., McConachie, H.R., & Freeston, M.H. (2015). The interplay between sensory processing abnormalities, intolerance of uncertainty, anxiety and restricted and repetitive behaviours in Autism Spectrum Disorder. *Journal of Autism and Developmental Disorders*, 45, 943–952.