

# Anxiety and Autism Spectrum Disorder



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# Learning Objectives

- Describe the presentation of co-occurring anxiety disorders in autistic individuals.
- Evaluate the research evidence base for anxiety-focused interventions for autistic individuals.
- Identify specific modifications to traditional CBT approaches for working with autistic individuals.

# Anxiety Defined:

- Anxiety: A mood state of mixed Negative emotion and neural Arousal that occurs when Anticipating a future threat. Has Adaptive (motivational) value.
- Anxiety Disorders: Unrealistic, Debilitating anxiety associated with personal distress and substantial impairment in social, academic, or family functioning.



# Significance of Anxiety in ASD

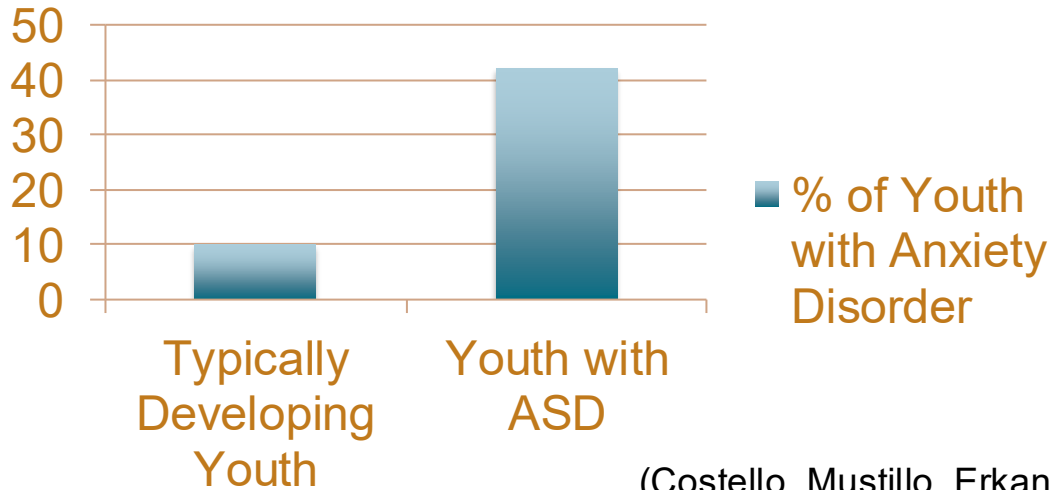
- One of the most common associated psychiatric concerns among autistic children and adults.
- Associated with a number of physical and psychosocial symptoms:
  - Negative effect on school performance, peer relationships, family functioning
  - Exacerbation of core ASD symptoms
  - More problem behavior
  - Gastrointestinal illness
  - Self-injurious behavior
  - Depressive symptoms





# Prevalence of Anxiety in Youth

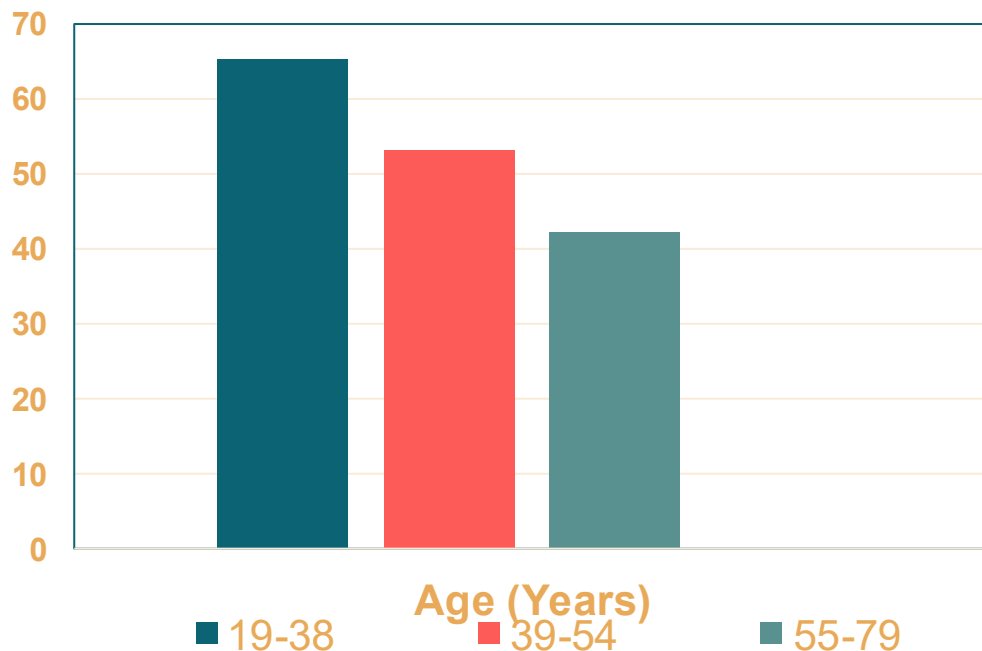
## % of Youth with Anxiety Disorder



(Costello, Mustillo, Erkanli, Keeler, & Angold, 2003; Simonoff et al., 2008)

# Prevalence of Anxiety in Autistic Adults

% of Adults with ASD and an Anxiety Disorder



Anxiety rates in overall ASD Sample in comparison to TD matched controls based on age and IQ:

ASD sample=54%  
TD sample=14%

Lever & Geurts (2016)



## What types of Anxiety?

- In autistic youth, heightened rates of:
  - Specific Phobia: 30%
  - OCD: 17%
  - Social Phobia: Up to 17%
  - Generalized Anxiety Disorder: 15%
  - Separation Anxiety Disorder: Up to 9%



# What types of Anxiety?

- In autistic adults, heightened rates of:
  - Social Phobia: Up to 29%
  - OCD: 24%
  - Generalized Anxiety Disorder: 18%
  - Panic/agoraphobia: 15%
  - Specific Phobia: 6%
  - Separation Anxiety Disorder: 3%



# Research on Ambiguous Anxiety Symptoms in ASD

- Atypical Specific Fears: 15%
  - For example, fear of toilets, vacuum cleaners, happy birthday song, bubbles, running water
- Atypical Social Fear: 8%
  - Social fearfulness without awareness of social judgment or negative social evaluation
- Fear of Change: 23%
- Special Interest Fear : 7%
- Fears around Sensory Sensitivities

# Why so Common in ASD?

- Brain mechanism/Genetics?
  - Role of the amygdala in both syndromes (Herrington et al., 2017)
  - Increased rate of mood disorders in parents of autistic children





## Why so Common in ASD?

- Executive Functioning Difficulties
  - Difficulties shifting one's attention
  - Difficulties with emotion regulation
- Alexithymia
  - Difficulty understanding one's own emotions
- Sensory Processing Differences
- Intolerance of Uncertainty
- High levels of Daily Stress
- Social Communication Difficulties

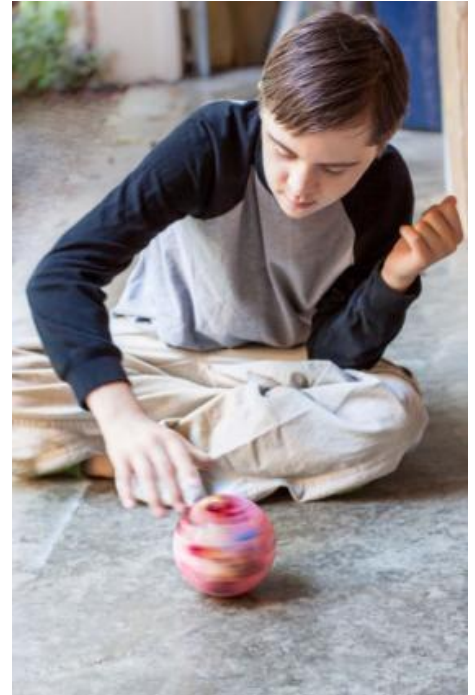
# Presentation of Anxiety

- Physiological manifestation
  - Increased arousal: “Fight or Flight” Response
- Behavioral manifestation
  - Avoidance, escape, reassurance, distraction
- Cognitive manifestation
  - Cognitive distortions (Catastrophizing, all or nothing thinking)
  - Worrying about perceived threats

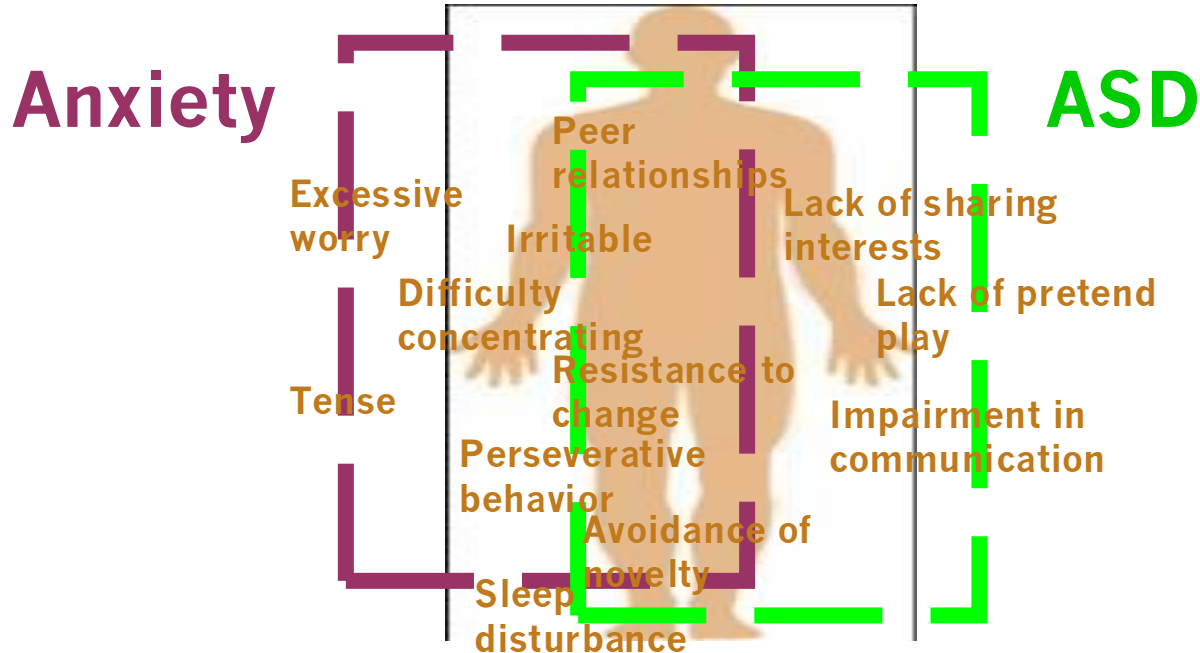


## What it may also look like in ASD

- Behavioral manifestation:
  - Increases in:
    - Sensory behaviors
    - Repetitive behaviors
    - Ritualistic behaviors
    - Socially inappropriate behaviors
    - Challenging behaviors
- Cognitive manifestation:
  - May be no clearly identifiable threat cognition



# Assessment of Anxiety in ASD



\*Slide courtesy of Dr. Lindsey Sterling



# Treatment for Anxiety in Autistic Youth

- CBT is the gold-standard behavioral treatment for typically developing youth with anxiety disorders
- Meta analysis (14 studies) suggests CBT demonstrates efficacy in reducing anxiety symptoms in verbal autistic youth
  - Verbally fluent youth with average or above intellectual abilities (IQ > 70)
  - Ages 7-17 years old
  - Weekly sessions for 6 to 32 weeks
  - Session duration: 60 to 120 minutes
  - Individual, Family, or Group-based treatment
- Meta analysis found statistically significant treatment effect for CBT for anxiety in autistic youth ( $g = \sim 0.7$ )



# Anxiety Programs for Autistic Youth

- Family-based:
  - BIACA Program developed at UCLA (Wood et al.)
- Individual-based:
  - Cool Kids Program (Chalfant et al.)
  - Coping Cat Program (Kendall et al.)
  - Exploring Feelings (Atwood)
- Group-based:
  - Facing Your Fears Program (Reaven et al.)
  - Multimodal Anxiety and Social Skills Intervention (White et al.)

# RCTs conducted at UCLA

THE JOURNAL OF  
CHILD PSYCHOLOGY AND PSYCHIATRY



Journal of Child Psychology and Psychiatry 50:3 (2009), pp 224–234

doi:10.1111/j.1469-7610.2008.01948.x

## Cognit childi

School Mental Health (2013) 5:25–37  
DOI 10.1007/s12310-012-9090-0

ORIGINAL PAPER

Jeffrey

## Intensive Cogniti in School-aged Cl with Treatment-a



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect

Behavior Therapy 46 (2015) 7–19

Behavior  
Therapy

[www.elsevier.com/locate/ftb](http://www.elsevier.com/locate/ftb)

**Background:** Chil that cause signific (CBT) program for treatment compon children with ASD (old) were randoml waitlist). Therapis mentation, parent dition conducted symptom checklis 78.5% of the CB treatment respons performed the wai self-reports. Treat employed in this s autism spectrum high-functioning i disorders, anxiety

Cori Fujii · Patricia Renno  
C. Enjey Lin · Kelly Decker  
Jeffrey J. Wood

Published online: 29 September 20  
© Springer Science+Business Med

**Abstract** Children with i (ASDs) frequently present wi der that can cause significant ticularly at school. An ir behavioral treatment (CBT) address anxiety, self-regulat school and in the community placed on increasing general: positive social behavior by in the treatment process. Chil randomly assigned to an im (IT) that included 32 sessions treatment-as-usual (TAU) c sessions emphasized behav

## Cognitive Behavioral Therapy for Early Adolescents With Autism Spectrum Disorders and Clinical Anxiety: A Randomized, Controlled Trial

J Child Fam Stud  
DOI 10.1007/s10826-016-0372-2

ORIGINAL PAPER

## The Treatment of Anxiety in Autism Spectrum Disorder (TAASD) Study: Rationale, Design and Methods

Connor M. Kerns<sup>1,6</sup> · Jeffrey J. Wood<sup>3</sup> · Philip C. Kendall<sup>2</sup> · Patricia Renno<sup>3</sup> · Erika A. Crawford<sup>2</sup> · Rogelio J. Mercado<sup>2</sup> · Cori Fujii<sup>3</sup> · Amanda Collier<sup>4</sup> · Alexandra Hoff<sup>2</sup> · Elana R. Kagan<sup>2</sup> · Brent J. Small<sup>4</sup> · Adam B. Lewin<sup>4</sup> · Eric A. Storch<sup>4,5</sup>





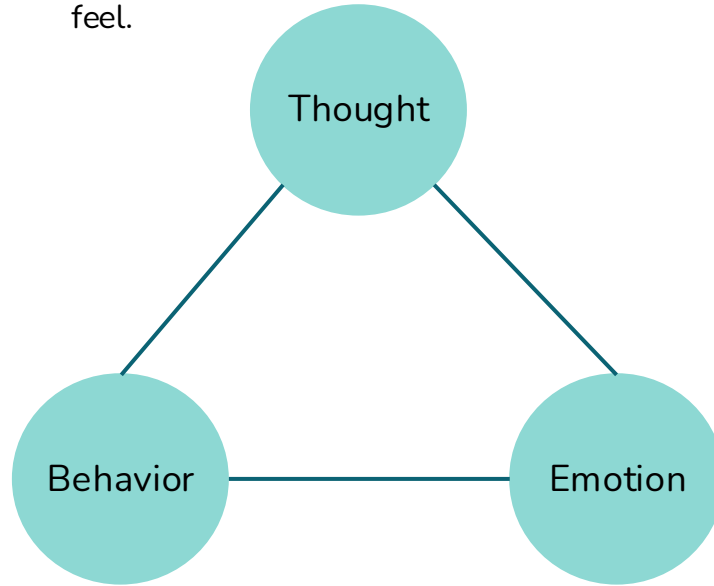
## **Research on CBT in ASD has Shown....**

- Reduction in anxiety levels
- Reduction in depressive symptoms
- Improvements in social responsiveness
- Increased social engagement with peers
- Increases in independent daily living skills
- Increases in flexibility
- Increases in emotion regulation skills



# Cognitive Behavioral Therapy Framework

What we *think* affects how we act and feel.

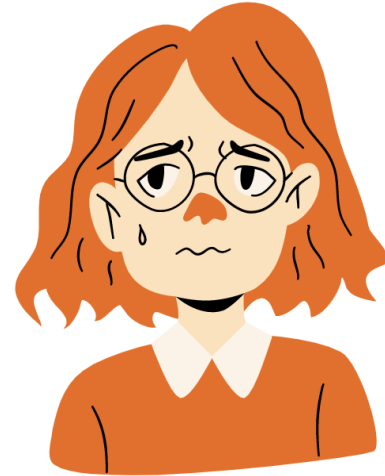


What we *do* affects how we think and feel.

What we *feel* affects how we act and think.

# Phase One: Psychoeducation

- What is Anxiety?
  - Brain-based, activation of the amygdala, fight/flight response
  - Learn Bodily cues of anxiety
  - Learn Facial expressions
  - Parents learn common patterns of child anxiety





## Phase Two: Skills Training

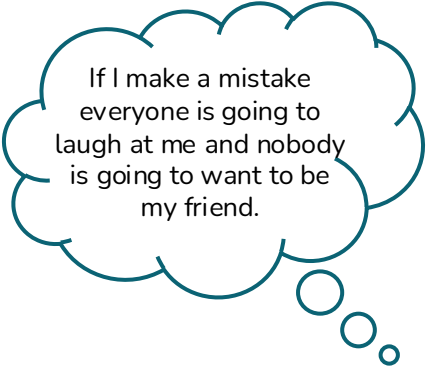
- Build Coping Skills
  - Relaxation
  - Identifying irrational/maladaptive thoughts
  - Cognitive Restructuring: worries are challenged and thoughts are restructured
  - Positive “self-talk”



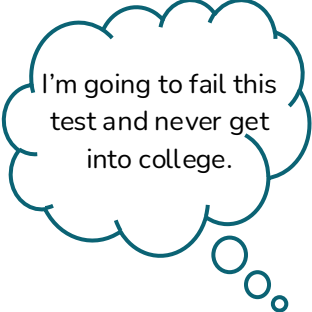


# Identifying Negative Thoughts

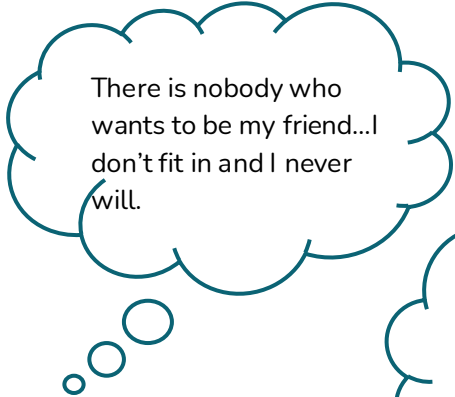
- Learning to identify negative thoughts and cognitions that we have about different situations.
- What “bad things” we think are going to happen.



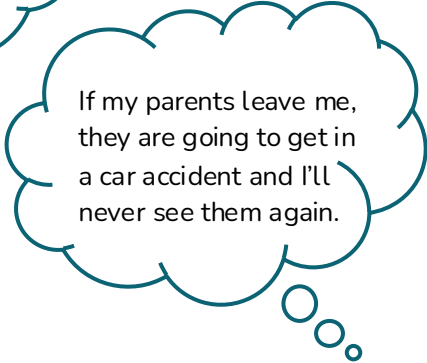
If I make a mistake everyone is going to laugh at me and nobody is going to want to be my friend.



I'm going to fail this test and never get into college.



There is nobody who wants to be my friend...I don't fit in and I never will.

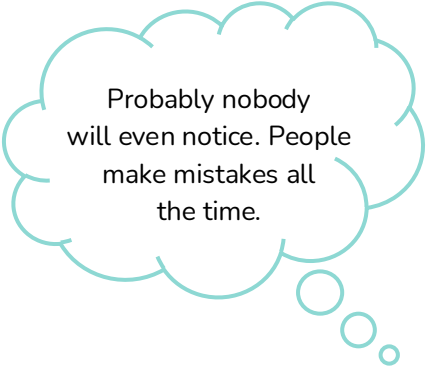


If my parents leave me, they are going to get in a car accident and I'll never see them again.

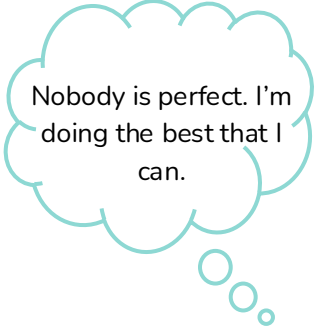


# Identifying Calm Thoughts

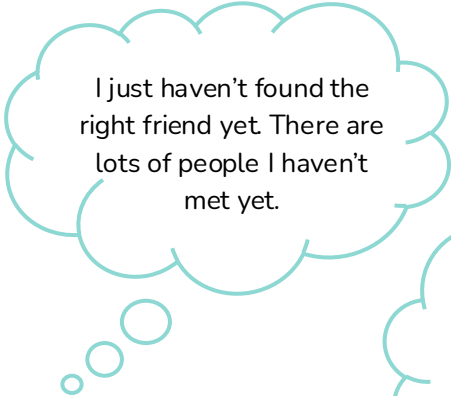
- Challenging “irrational thoughts” with more “helpful calm thoughts”
  - Ex.: What’s the likelihood of it happening?
  - Ex.: If it does happen, how bad is it really going to be?



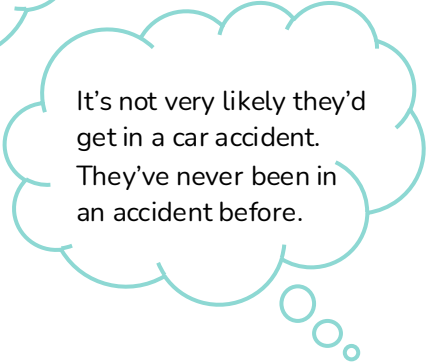
Probably nobody will even notice. People make mistakes all the time.



Nobody is perfect. I'm doing the best that I can.



I just haven't found the right friend yet. There are lots of people I haven't met yet.

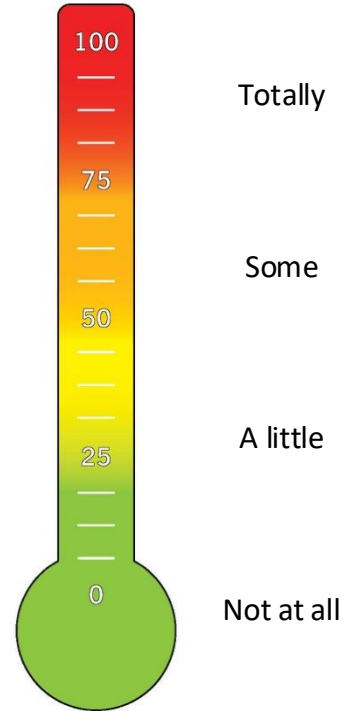


It's not very likely they'd get in a car accident. They've never been in an accident before.

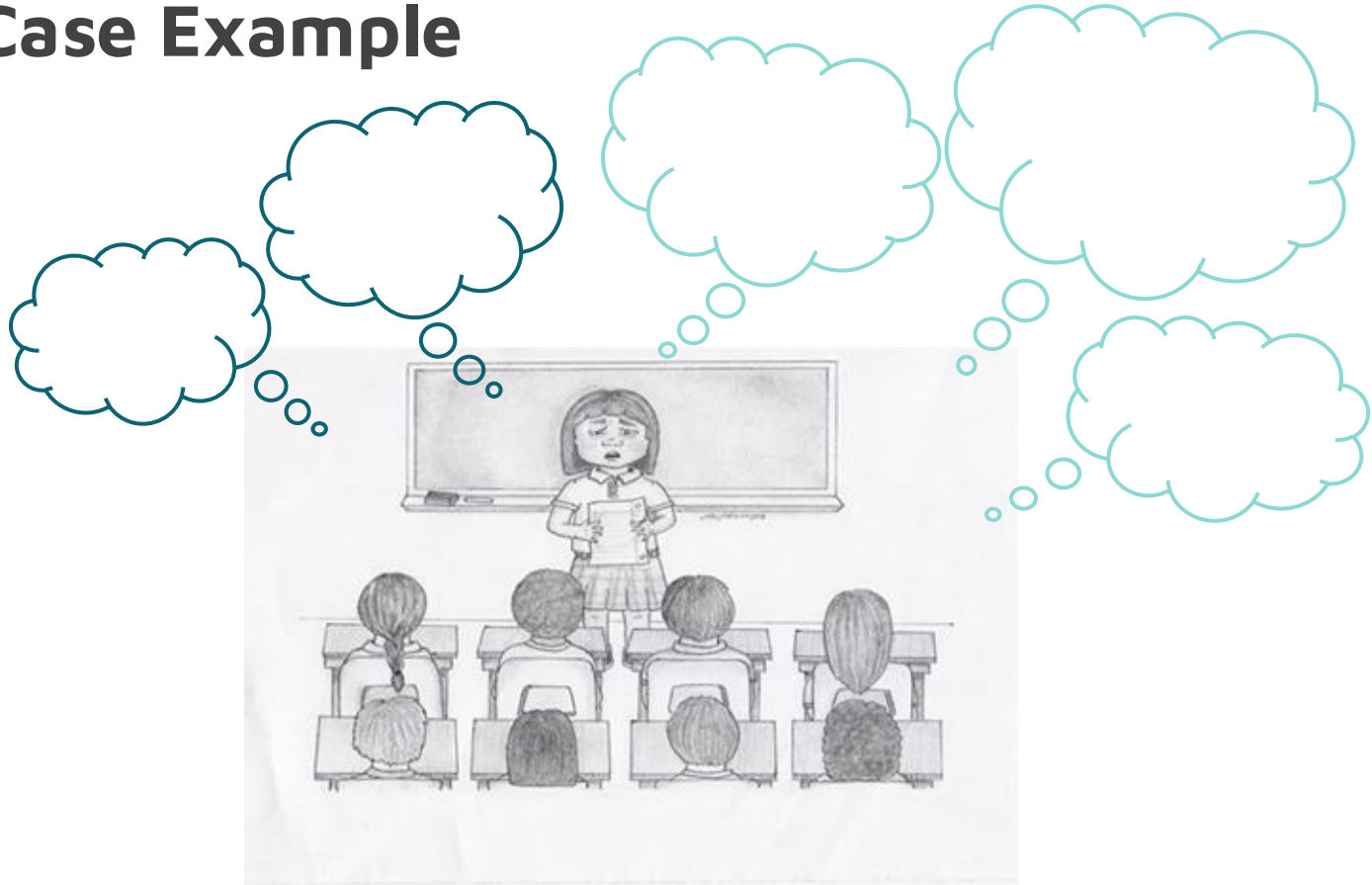


## Phase Three: Skills Practice

- Hierarchy of fears with “fear ratings”
- Break feared situations into “baby steps”
- Children gradually attempt increasingly “challenging” feared situations to develop confidence and mastery.
- Practice in session and throughout the week
- “What did we teach our brain today?”
- Positive Reinforcement for hard work!



# Case Example





# **Rationale for Modified CBT for autistic youth**

- Generalizability of skills outside of therapy session is difficult
- Unique stressors that cause anxiety need therapy that addresses those factors
- Autistic youth may benefit from more parent involvement



# Modifications for ASD: Psychoeducation on ASD

- Strengths-based approach
- Self-acceptance and self-advocacy skills
- What does autism mean to you?





# Modifications for ASD: Large Scale Reward System

- Necessary!!
- Idea: Compensation for hard work
- Verbal Praise
- Must be motivating to the child
  - Not socks :)



## Rewards & Privileges Menu

### Daily rewards & privileges

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Medium rewards & privileges

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Long term rewards & privileges

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

# Modifications for ASD: Visual Aides

- Lots of cartoons and visual prompts!



# Modifications for ASD: Use of Special Interests



# Modifications for ASD: Include Social Communication Goals



# Modifications for ASD: Independence and Self-Help Skills Focus



# Important Ingredients: Homework



## Celeste's UCLA Chart



	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1. Follow directions by the 2 <sup>nd</sup> time I'm asked.							
2. Read a paragraph to my family members while standing up. Choose something different to read each day.							
3. When out in the community, be the "Family Ambassador" by greeting people, asking questions and/or ordering for the family.							

15 POINTS = \_\_\_\_\_

# Specialized Parenting Techniques

- Model staying calm and using coping skills
- Accept and label the emotion
- Give your child time to cool down and work through the anxiety on his/her own
- Provide choices
- Reward



# Mantras

- I can do it!
- I'm just learning how to do this
- I'm okay, It's okay
- I can keep trying
- With practice it gets easier
- Everybody waits
- Video games!!





# Limitations to the Evidence-Base

- Research conducted in the clinic setting
  - Lots of supervision/eyes on the case
  - Highly invested families
  - Need to be tested in schools and the community
  
- Research limited to youth with ASD and IQ > 70
  - RCTs so far have excluded children who are minimally verbal and have IQs < 70.
  - Some research has started modifying CBT for use with minimally verbal youth with ASD and IQ < 70



# Treatment of Anxiety in Autistic Adults

- Very limited research on treatments for anxiety in autistic adults
  - Psychosocial treatment studies:
    - Mindfulness-based approaches
    - CBT approaches
  - Pharmacological treatment study
  - Combined psychosocial and pharmacological study
- **\*\*few RCTs, small sample sizes, inconclusive**



# CBT Resources

- Treatment guide for parents, teachers, and mental health professionals:
  - Managing Anxiety in People with Autism by Anne Chalfant
- Published manuals for Clinicians:
  - *CBT for Children and Adolescents with High-Functioning Autism Spectrum Disorders* by Angela Scarpa, Susan White, and Tony Attwood
- Online CBT Manual for Autistic Youth
  - MEYA—Website: <https://meya.ucla.edu/public/>
- Child Anxiety Tales (Phil Kendall)
  - Online parent training program (not specific to ASD)
- Book for parents:
  - *Helping Your Anxious Child: A Step-by-Step Guide for Parents* by Ronald Rapee





## Key Takeaways

- Anxiety is very common in autistic children and adults
- CBT has a strong evidence base for treating anxiety in autistic youth. More research is needed on effective interventions for anxiety in autistic adults
- Several modifications to traditional CBT approaches can be helpful when working with autistic youth



# Acknowledgements

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Special thanks for the time and dedication of the families who participated in these studies.