Disruptive and Challenging Behaviors with Children and Adolescents with Autism Spectrum Disorder and ADHD

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Speaker Disclosure Information

Dr. Cara Daily is a licensed pediatric psychologist and Board Certified Behavior Analyst with Daily Behavioral Health and Jhope Foundation. She is an adjunt professor at Kent State University and the author of The Key to Autism. She has no other relevant financial or non-financial relationships to disclose.

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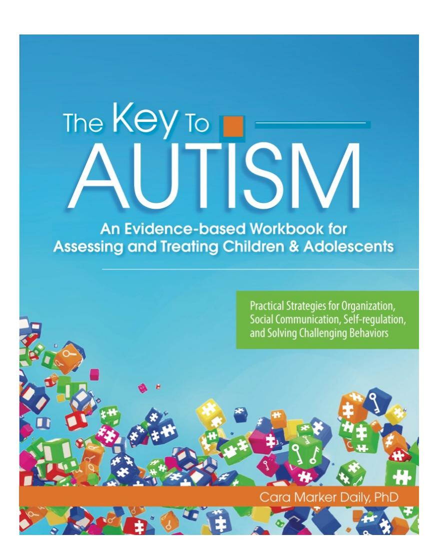

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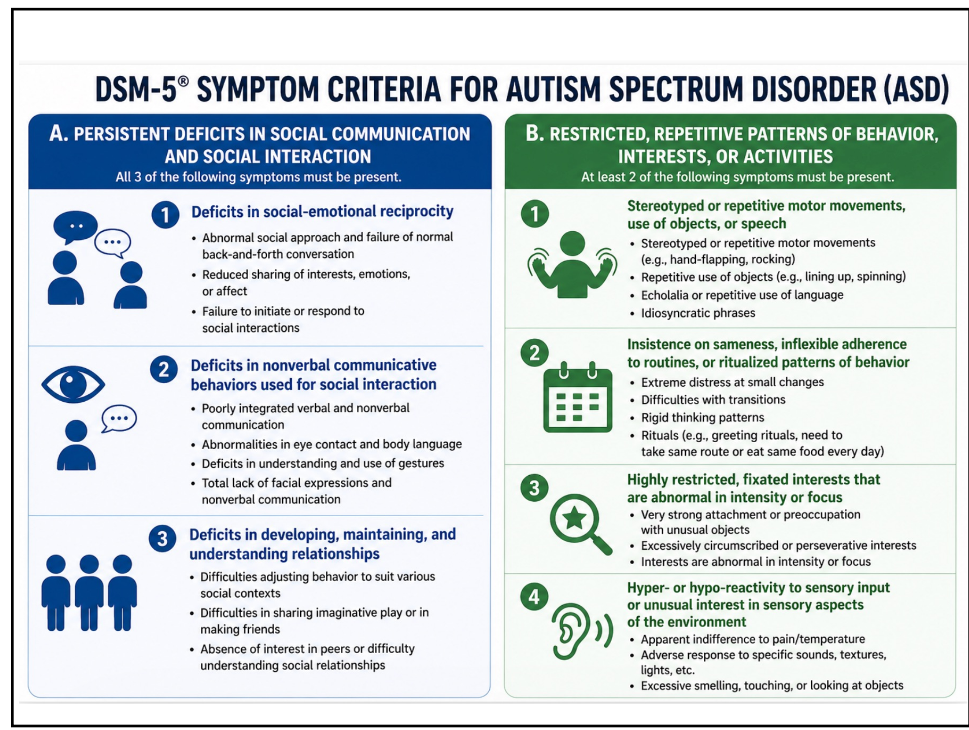
My Family

Outline

I. Understanding Autism and ADHD
- A. Diagnostic Criteria
- B. Assessment Tools
- C. Brain Function

II. Evidence-Based Interventions
- A. Behavioral Strategies
  1. Functional Behavioral Assessment
  2. Teaching More Appropriate Behaviors
  3. Decreasing Negative Behaviors
  4. Treating Challenging Behaviors



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DSM 5 Diagnostic Criteria: Autism Spectrum Disorder

- Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).
- Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.
- These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be below that expected for general developmental level.

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DSM 5 Diagnostic Criteria: Autism Spectrum Disorder

Note: Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder. Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder.

DSM 5 Diagnostic Criteria: Autism Spectrum Disorder

Specify if:

With or without accompanying intellectual impairment

With or without accompanying language impairment

Associated with a known medical or genetic condition or environmental factor

(Coding note: Use additional code to identify the associated medical or genetic condition.)

Associated with another neurodevelopmental, mental, or behavioral disorder

(Coding note: Use additional code[s] to identify the associated neurodevelopmental, mental, or behavioral disorder[s].)

With catatonia (refer to the criteria for catatonia associated with another mental disorder, pp. 119-120, for definition) (Coding note: Use additional code 293.89 [F06.1] catatonia associated with autism spectrum disorder to indicate the presence of the comorbid catatonia.)

DSM 5 Diagnostic Criteria: Autism Spectrum Disorder

Severity level	Social communication	Restricted, repetitive behaviors
Level 3 "Requiring very substantial support"	Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others. For example, a person with few words of intelligible speech who rarely initiates interaction and, when he or she does, makes unusual approaches to meet needs only and responds to only very direct social approaches	Inflexibility of behavior, extreme difficulty coping with change, or other restricted/repetitive behaviors markedly interfere with functioning in all spheres. Great distress/difficulty changing focus or action.
Level 2 "Requiring substantial support"	Marked deficits in verbal and nonverbal social communication skills; social impairments apparent even with supports in place; limited initiation of social interactions; and reduced or abnormal responses to social overtures from others. For example, a person who speaks simple sentences, whose interaction is limited to narrow special interests, and how has markedly odd nonverbal communication.	Inflexibility of behavior, difficulty coping with change, or other restricted/repetitive behaviors appear frequently enough to be obvious to the casual observer and interfere with functioning in a variety of contexts. Distress and/or difficulty changing focus or action.
Level 1 "Requiring support"	Without supports in place, deficits in social communication cause noticeable impairments. Difficulty initiating social interactions, and clear examples of atypical or unsuccessful response to social overtures of others. May appear to have decreased interest in social interactions. For example, a person who is able to speak in full sentences and engages in communication but whose to- and-fro conversation with others fails, and whose attempts to make	Inflexibility of behavior causes significant interference with functioning in one or more contexts. Difficulty switching between activities. Problems of organization and planning hamper independence.

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ICD-11

"Autism spectrum disorder is characterized by persistent deficits in the ability to initiate and to sustain reciprocal social interaction and social communication, and by a range of restricted, repetitive, and inflexible patterns of behaviour and interests. The onset of the disorder occurs during the developmental period, typically in early childhood, but symptoms may not become fully manifest until later, when social demands exceed limited capacities. Deficits are sufficiently severe to cause impairment in personal, family, social, educational, occupational or other important areas of functioning and are usually a pervasive feature of the individual's functioning observable in all settings, although they may vary according to social, educational, or other context. Individuals along the spectrum exhibit a full range of intellectual functioning and language abilities."

ICD-11

Autism spectrum disorder with disorder of intellectual development and with mild or no impairment of functional language.

- All definitional requirements for both autism spectrum disorder and disorder of intellectual development are met and there is only mild or no impairment in the individual's capacity to use functional language (spoken or signed) for instrumental purposes, such as to express personal needs and desires.

ICD-11

Autism spectrum disorder without disorder of intellectual development and with impaired functional language.

- All definitional requirements for autism spectrum disorder are met, intellectual functioning and adaptive behaviour are found to be at least within the average range (approximately greater than the 2.3rd percentile), and there is marked impairment in functional language (spoken or signed) relative to the individual’s age, with the individual not able to use more than single words or simple phrases for instrumental purposes, such as to express personal needs and desires.

ICD-11

Autism spectrum disorder with disorder of intellectual development and with impaired functional language.

- All definitional requirements for both autism spectrum disorder and disorder of intellectual development are met and there is marked impairment in functional language (spoken or signed) relative to the individual’s age, with the individual not able to use more than single words or simple phrases for instrumental purposes, such as to express personal needs and desires.

ICD-11

Autism spectrum disorder without disorder of intellectual development and with absence of functional language.

- All definitional requirements for autism spectrum disorder are met, intellectual functioning and adaptive behaviour are found to be at least within the average range (approximately greater than the 2.3rd percentile), and there is complete, or almost complete, absence of ability relative to the individual’s age to use functional language (spoken or signed) for instrumental purposes, such as to express personal needs and desires.

ICD-11

Autism spectrum disorder with disorder of intellectual development and with absence of functional language.

- All definitional requirements for both autism spectrum disorder and disorder of intellectual development are met and there is complete, or almost complete, absence of ability relative to the individual's age to use functional language (spoken or signed) for instrumental purposes, such as to express personal needs and desires."

Autism Spectrum Disorders (ASD): Prevalence & Etiology

- 1 in 6 children diagnosed with a neurodevelopmental disorder
- In 2024, 1 in 36 children diagnosed with autism in US
- In 2020, 1 in 37 children in BC
- In 2019, 1 in 50 in Canada
- 4 to 5 times more common in boys
- Biologically based neurodevelopmental disorder
- No known etiology?
- Highly heritable

(CDC, 2024, Ministry of Child and Family Services in British Columbia, 2020, Public Health Agency of Canada, 2019).

Autism Spectrum Disorders (ASD): Etiology

- Correlation with Maternal and Paternal Age (Croen and colleagues, 2007; See Kolevzon and colleagues, 2007, for a review)

- Teratogens related to autism risk in first trimester (see Arndt, Strodgell and Rodier, 2004)
  - Maternal rubella infection
  - Ethanol
  - Thalidomide
  - Valproic acid
  - Misoprostol

Autism Spectrum Disorders (ASD): Etiology

- Maternal Factors, such metabolic syndrome (diabetes, hypertension, and obesity), bleeding, infection, rubella, measles, mumps, chicken pox, influenza, herpes, pneumonia, syphilis, varicella zoster, cytomegalovirus, bacteria infection, and pregnancy complications which require hospitalization (Karimi & Colleagues, 2017)

- Perinatal factors, such as low birth weight, abnormally short gestation length, and birth asphyxia

- Post-natal factors associated with ASD include autoimmune disease, viral infection, hypoxia, mercury toxicity

- Epidemiological studies have found no association between vaccines (as environmental risk factors) and increased risk of autism

  - (for more information, see review by Park and Colleagues, 2016; Karimi and Colleagues, 2017).

ADHD Overview

Two Categories:
- Inattention
- Hyperactivity/Impulsivity

Presentation Types:
- Predominantly Inattentive
- Predominantly Hyperactive/Impulsive
- Combined

DSM 5 – ADHD Criteria Inattentive Symptoms

- Displays poor listening skills
- Loses and/or misplaces items needed to complete activities or tasks
- Sidetracked by external or unimportant stimuli
- Forgets daily activities
- Diminished attention span
- Lacks ability to complete schoolwork and other assignments or to follow instructions
- Avoids or is disinclined to begin homework or activities requiring concentration
- Fails to focus on details and/or makes thoughtless mistakes in schoolwork or assignments

DSM 5 – ADHD Criteria Hyperactive/ Impulsive Symptoms

Hyperactive Symptoms:
- Squirms when seated or fidgets with feet/hands
- Marked restlessness that is difficult to control
- Appears to be driven by "a motor" or is often "on the go"
- Lacks ability to play and engage in leisure activities in a quiet manner
- Incapable of staying seated in class
- Overly talkative

Impulsive Symptoms:
- Difficulty waiting turn
- Interrupts or intrudes into conversations and activities of others
- Impulsively blurts out answers before questions completed

DSM 5 – ADHD Criteria

- Symptoms and/or behaviors that have persisted ≥ 6 months in ≥ 2 settings (e.g., school, home, church).
- Symptoms have negatively impacted academic, social, and/or occupational functioning.
- In patients aged < 17 years, ≥ 6 symptoms are necessary; in those aged ≥ 17 years, ≥ 5 symptoms are necessary.

DSM 5 – ADHD Criteria

- Symptoms present prior to age 12 years
- Symptoms not better accounted for by a different psychiatric disorder (e.g., mood disorder, anxiety disorder) and do not occur exclusively during a psychotic disorder (e.g., schizophrenia)
- Symptoms not exclusively a manifestation of oppositional behavior

ICD-11 – ADHD Criteria

A persistent pattern (e.g., at least 6 months) of inattention symptoms and/or a combination of hyperactivity and impulsivity symptoms that is outside the limits of normal variation expected for age and level of intellectual development. Symptoms vary according to chronological age and disorder severity.

Inattention

- Several symptoms of inattention that are persistent, and sufficiently severe that they have a direct negative impact on academic, occupational, or social functioning. Symptoms are typically from the following clusters:
  - Difficulty sustaining attention to tasks that do not provide a high level of stimulation or reward or require sustained mental effort; lacking attention to detail; making careless mistakes in school or work assignments; not completing tasks.
  - Easily distracted by extraneous stimuli or thoughts not related to the task at hand; often does not seem to listen when spoken to directly; frequently appears to be daydreaming or to have mind elsewhere.
  - Loses things; is forgetful in daily activities; has difficulty remembering to complete upcoming daily tasks or activities; difficulty planning, managing and organizing schoolwork, tasks and other activities.
- ***Note:*** Inattention may not be evident when the individual is engaged in activities that provide intense stimulation and frequent rewards.

ICD-11 – ADHD Criteria

Hyperactivity impulsivity

- Several symptoms of hyperactivity/impulsivity that are persistent, and sufficiently severe that they have a direct negative impact on academic, occupational, or social functioning. These tend to be most evident in structured situations that require behavioural self-control. Symptoms are typically from the following clusters:
  - Excessive motor activity; leaves seat when expected to sit still; often runs about; has difficulty sitting still without fidgeting (younger children); feelings of physical restlessness, a sense of discomfort with being quiet or sitting still (adolescents and adults).
  - Difficulty engaging in activities quietly; talks too much.
  - Blurts out answers in school, comments at work; difficulty waiting turn in conversation, games, or activities; interrupts or intrudes on others conversations or games.
  - A tendency to act in response to immediate stimuli without deliberation or consideration of risks and consequences (e.g., engaging in behaviours with potential for physical injury; impulsive decisions; reckless driving)

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ICD-11 – ADHD Criteria

- Evidence of significant inattention and/or hyperactivity-impulsivity symptoms prior to age 12, though some individuals may first come to clinical attention later in adolescence or as adults, often when demands exceed the individual’s capacity to compensate for limitations.
- Manifestations of inattention and/or hyperactivity-impulsivity must be evident across multiple situations or settings (e.g., home, school, work, with friends or relatives), but are likely to vary according to the structure and demands of the setting.
- Symptoms are not better accounted for by another mental disorder (e.g., an Anxiety or Fear-Related Disorder, a Neurocognitive Disorder such as Delirium).
- Symptoms are not due to the effects of a substance (e.g., cocaine) or medication (e.g., bronchodilators, thyroid replacement medication) on the central nervous system, including and withdrawal effects, and are not due to a Disease of the Nervous System.

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ICD-11 - ADHD Specifier Codes

- 6A05.0 Attention Deficit Hyperactivity Disorder, predominantly inattentive presentation
- 6A05.1 Attention Deficit Hyperactivity Disorder, predominantly hyperactive-impulsive presentation
- 6A05.2 Attention Deficit Hyperactivity Disorder, combined presentation

ADHD Prevalence & Etiology

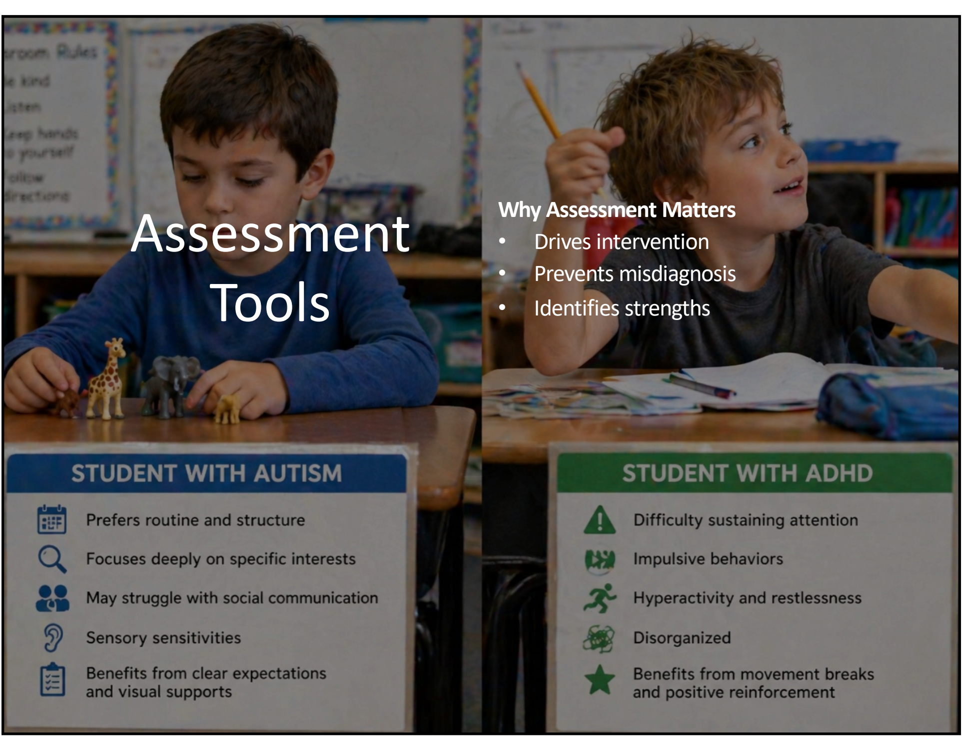
Prevalence
- ~5–7% of children worldwide
- ~2–5% of adults (often underdiagnosed)
  - Males diagnosed more often in childhood (approx. 2:1)

Etiology
- Strong Genetic Component - Heritability: ~70–80%

Environmental Risk Factors (Not primary causes)
- Prematurity
- Low birth weight
- Prenatal exposure (e.g., nicotine, alcohol)
- Early adversity

(CDC ADHD Data, 2022–2024, and CHADD)

AUTISM vs. ADHD
Understanding Key Similarities and Differences
AUTISM SPECTRUM DISORDER (ASD)
CORE FEATURES
• Differences in social communication and social interaction
• Restricted, repetitive patterns of behavior, interests, or activities
• Sensory sensitivities or differences
• Preference for routine and predictability
COMMON STRENGTHS
• Strong attention to detail
• Deep focus on areas of interest
• Loyalty and honesty
• Strong visual and pattern recognition
KEY SIMILARITIES
Neurodevelopmental conditions
Can impact attention, learning, and behavior
Challenges with executive functioning
Emotional regulation difficulties
Sensory processing differences
Higher risk for anxiety, depression, and other co-occurring conditions
Each person is unique—ranges of strengths and challenges
ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (ADHD)
CORE FEATURES
• Inattention (e.g., easily distracted, forgetful, disorganized)
• Hyperactivity (e.g., fidgeting, restlessness)
• Impulsivity (e.g., interrupting, difficulty waiting turn)
• Difficulty with self-regulation and executive functioning
COMMON STRENGTHS
• Creativity and out-of-the-box thinking
• High energy and enthusiasm
• Ability to think quickly
• Resilience and adaptability
IMPORTANT TO REMEMBER
Autism and ADHD can occur together. An individual can have both conditions.
Accurate understanding leads to better support, acceptance, and outcomes.
KEY DIFFERENCES
AUTISM
ADHD
Social differences are core and persistent
SOCIAL INTERACTION
Social challenges often due to impulsivity, inattention, or reading social cues quickly
Communication differences may include literal language and struggle with hidden rules
COMMUNICATION
Communication is often fast-paced, impulsive, and may include interrupting
Difficulty with changes in routine; prefers predictability and sameness
ROUTINE & FLEXIBILITY
Difficulty with organization; may crave novelty and get bored with routine
Interests are often intense, specific, and deeply focused
INTERESTS
Interests may change frequently; excitement driven by novelty
Sensory sensitivities are common and can be intense
SENSORY PROCESSING
Sensory differences may be present but are less central
IMPORTANT TO REMEMBER
There is overlap, but autism and ADHD are not the same.
Look beyond behavior to understand the individual.
DIFFERENT BRAINS. DIFFERENT STRENGTHS. INDIVIDUAL SUPPORT. LIMITLESS POTENTIAL.



Assessment Tools
Why Assessment Matters
• Drives intervention
• Prevents misdiagnosis
• Identifies strengths
STUDENT WITH AUTISM
Prefers routine and structure
Focuses deeply on specific interests
May struggle with social communication
Sensory sensitivities
Benefits from clear expectations and visual supports
STUDENT WITH ADHD
Difficulty sustaining attention
Impulsive behaviors
Hyperactivity and restlessness
Disorganized
Benefits from movement breaks and positive reinforcement

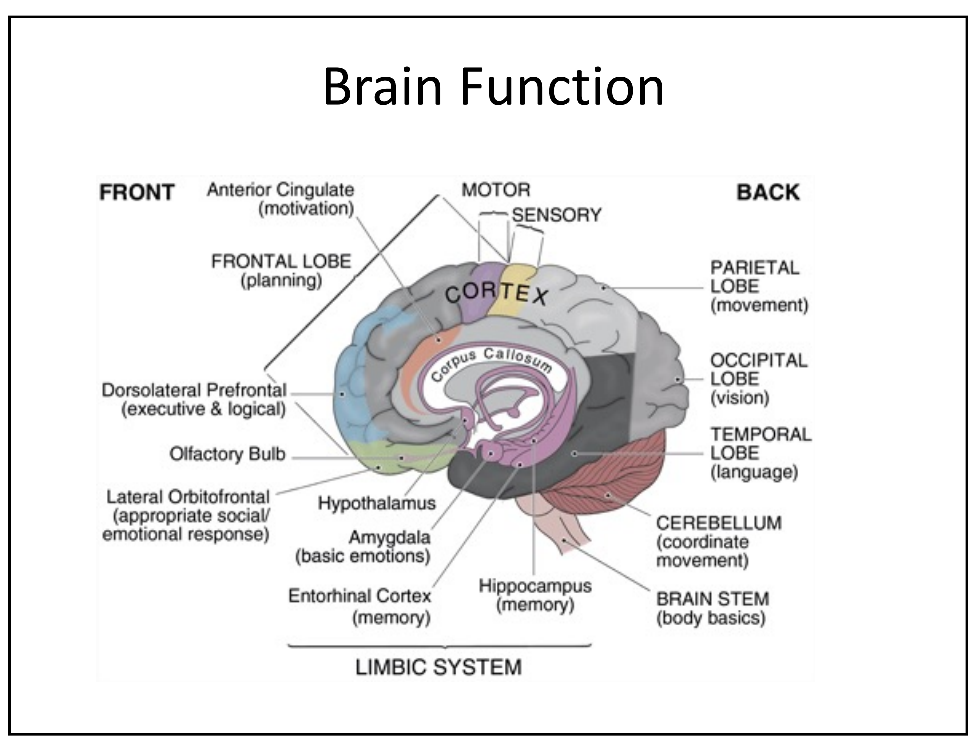
Autism Assessment Tools

- Clinical interview and developmental history
- ADOS-2 (gold standard observation)
- ADI-R (parent interview)
- CARS-2 (observation scale)
- SRS-2 (rating scale)

ADHD Assessment Tools

- Clinical interview + history
- Conners-4
- Vanderbilt Scales
- BASC-3
- Behavior Rating Inventory of Executive Function-2
- Cognitive, Executive Functioning, and Academic Testing
- Teacher/School data

Brain Function



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Applied Behavioral Analysis: Increasing Behaviors

<u>INCREASING DESIRABLE BEHAVIORS</u>

- Reinforcement: Something serves as reinforcement if
  1) it immediately follows a behavior <u>and</u>
  2) it increases the frequency of that behavior in the future.
- If it does NOT increase the behavior, it is NOT a reinforcement for that child.
- It is always better to reinforce (increase) a desirable behavior than to punish (decrease) an undesirable behavior. Doing so teaches good behavior! You should be giving at least 6 positives to your child for every negative you give. Make sure the reward is motivating for your child and is realistic for you to give the child.

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Applied Behavioral Analysis: Increasing Behaviors

Positive Reinforcement

- Positive reinforcers are things that you give to a child that increase a desirable behavior.
  - Rewards are hierarchical, ranging from the most simple reinforcers (for young children, intellectually disabled) up to more complex reinforcers (higher cognitive ability).

Negative Reinforcement

- Negative reinforcers are things that are removed from the environment that increase the child's behavior.
  - Example: Hitting a child who is bothering them and the child they hit runs away ⇒ the child running away serves as a negative reinforcer for hitting

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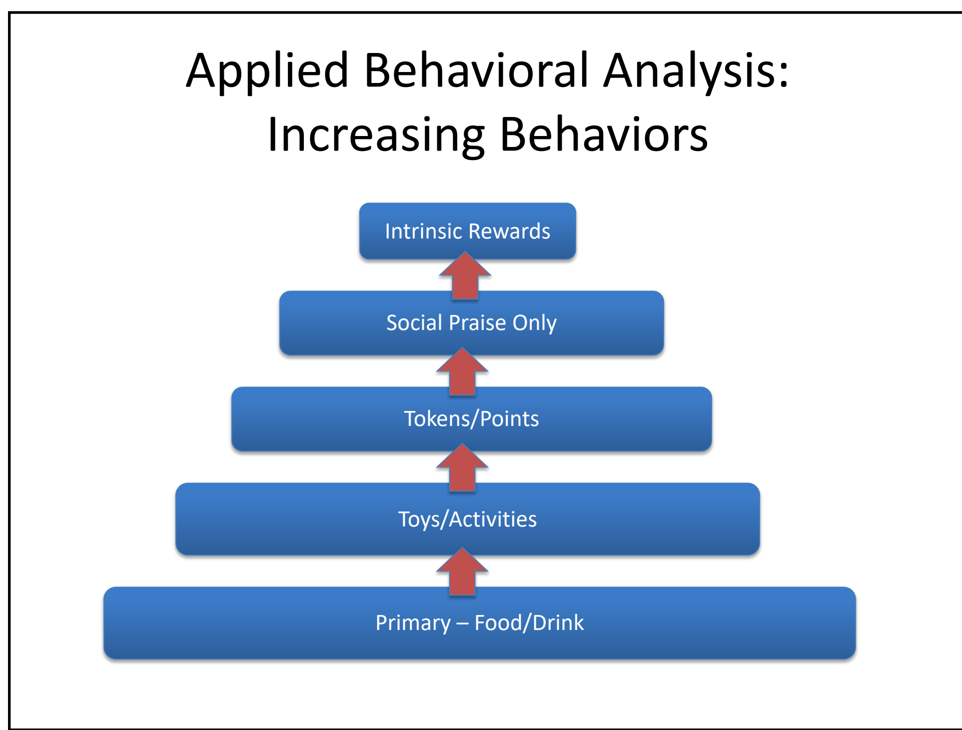
Applied Behavioral Analysis: Increasing Behaviors



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Applied Behavioral Analysis: Increasing Behaviors

Reinforcement Ideas

Favorite Dessert
Special Snack
Sports Equipment
Screens
Praise
Stay Up Late
Go to a Concert
Traveling
Go on a Special Trip
Attend a Sporting Event
Special Screen Privileges
Furnishings for Room
Have a Friend Over for Dinner or for Overnight
Favorite Meal
Small Toys
Music
Attention
Special Privileges
Go to a movie
Camping
Party
Tokens for General Exchange
Special Time with One Parent
Private Time in Room
Post Work in School or at Home

Applied Behavioral Analysis: Increasing Behaviors

When and How to Reinforce

- Noncontingent reinforcement
  - Create a pleasant and reinforcing environment by delivering reinforcers independent of what the child is doing.
  - Use when you first start working with a child
  - Make you and the environment reinforcing for the child
- Contingent Reinforcement:
  - Start reinforcing at the current behavioral level.
  - Reinforce each step.
  - Reinforce immediately
  - Don't wait for mastery – reinforce along the way.
  - When teaching new behavior, use "continuous reinforcement:"
  - Use "occasional reinforcement" for stable behaviors.

Applied Behavioral Analysis: Increasing Behaviors

Token Economy System

- A token should be something that the child can see, touch, and/or count.
- Child must be able to store and/or see how many tokens earned.
- Child must be able to exchange the tokens for actual rewards (back-up reinforcers) as frequently as necessary to maintain the child's motivation.
- Child should not be able to obtain a token from sources other than the parent, teacher, aide, etc.
- Child must know the token can be exchanged for various desirable rewards and be able to know in advance how many tokens are needed to "purchase" particular rewards. We can tell how much they value the tokens by how they take care of them, how they respond when they are administered, and even if they try to take them from other children.
- In some cases, tokens may be tally marks, etc., but other than this, the token should not be so large or small that the child is prevented form handling it.

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Applied Behavioral Analysis: Increasing Behaviors

Administering Tokens

- Administration of tokens SHOULD always be paired with verbal praise. Physical contact is good to give if reinforcing to the child.
- Tell the child WHY she/he earned a token (e.g., "I like the way you are sitting in your seat", "Good setting the table")
- With higher-level children, it is helpful if they know how many tokens they are earning for an activity before starting.
- Tokens must be given immediately after the behavior occurs, no matter how often the behavior occurs.
- Tokens should be given frequently for target behaviors.
- Give tokens CONSISTENLY, IMMEDIATELY, AND CONTINUOUSLY at first and as the behavior gets stronger, gradually increase the amount and difficulty of the behavior required for the same back-up reinforcer.

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Applied Behavioral Analysis: Increasing Behaviors

Teaching a Child to Value Tokens

- Start with one target behavior so the child will not be confused about what behavior earns tokens.
- As soon as the child engages in the target behavior, give him/her a token.
- IMMEDIATELY have the child give you back the token and then IMMEDIATELY give him/her a small back-up reinforcer (e.g., a raisin).
- Continue to use immediate trade until the child learns that they are "buying" the back-up reinforcer with the token. Then gradually increase the number of tokens the child earns before trading.
- As a child advances, increase the amount of time between trades and/or the number of tokens needed to earn certain reinforcers.

Challenging Behaviors: Behavioral Techniques

Name: Tommy **Week:**

Behavior	Mon	Tues	Wed	Thurs	Fri
Say Hello to my teacher	☺				
Total Stickers/Points	1				

Daily Reward:
Barbeque Chips
Stay up 15 minutes later
15 minutes extra on computer

Weekly Reward:
Go out for ice cream
Go to movie

Applied Behavioral Analysis: Increasing Behaviors

Ways to Teach Desirable Behaviors

Prompting

- Prompts are cues given by others in order to obtain the desired response. Prompts direct the learner's attention to the task at hand and its requirements. The purpose of a prompt is to give staff an opportunity to reinforce the desired behavior when it occurs.

Types of prompts:

- Verbal prompts are simply instructions that people give to a child. Verbal prompts may be given either spoken or singed.
- Gestural prompts consist of pointing or gesturing and indicates what the child should do.
- Physical prompts (or physical guidance) involves using physical contact to guide the child.
- Environmental prompts are things such as signs, posters (e.g., list of classroom rules).

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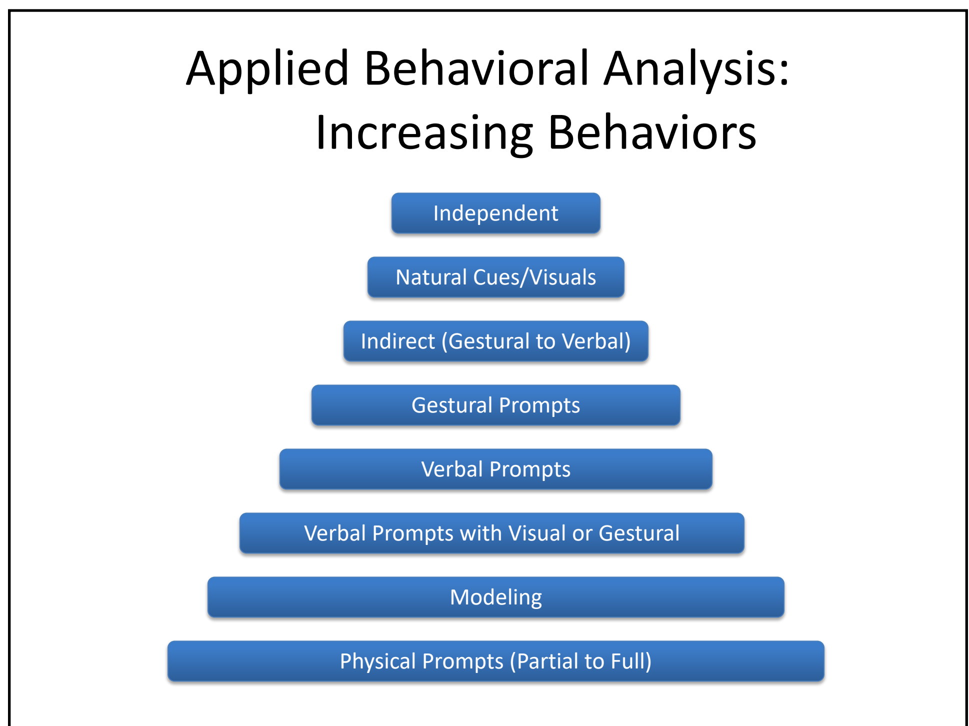
Applied Behavioral Analysis: Increasing Behaviors



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Applied Behavioral Analysis: Increasing Behaviors

Ways to Teach Desirable Behaviors

Fading

- Fading is the gradual elimination of prompts so that the learner is responding to the minimal cues that exist in the natural environment.
- Fading is used when a new behavior has been established and the child no longer needs as much direction. As soon as the behavior occurs without hesitation at your prompt, it's time to start fading the prompt. The purpose of fading is to increase the child's independent performance of the behavior so that the child does not rely on prompts to perform the behavior.

Applied Behavioral Analysis: Increasing Behaviors

Ways to Teach Desirable Behaviors

Shaping

- Shaping is a procedure used to establish single, complex behaviors. To shape a response, we start with a behavior a child can already perform and reinforce each "step in the right direction."

Steps in Shaping

- Observe the child to determine exactly what abilities the child displays in connection with the target behavior. We break down the behavior into little parts to see what the child CAN do.
- Arrange the setting for the maximum likelihood that the behavior will occur. If the behavior involves other people, or if particular environmental cues are necessary, arrange to have them present during shaping.
- Define the first approximation/step in the right direction that you will reinforce.
- Reinforce steps in the right direction toward the target response. Use the most powerful reinforcers you can. Reward these in-between steps with lots of praise, a hug, or whatever is reinforcing for your child.
- Use verbal, gestural, or physical prompts (only what's necessary) at all stages of the process.

Applied Behavioral Analysis: Increasing Behaviors

Ways to Teach Desirable Behaviors

Chaining

- Chaining is used to teach a more complex series of behaviors. Chaining teaches sequence of related behaviors, each of which provides the cue for the next, and the last of which produces a completed task.
- The goal of chaining is to tie together already existing behaviors (which may have been shaped previously) so the child can do the sequence independently – without any verbal prompting for "what comes next". Behaviors we chain include eating breakfast, setting the table, getting dressed/undressed, etc.

Applied Behavioral Analysis: Increasing Behaviors

Ways to Teach Desirable Behaviors

Steps in Chaining

- Divide the desired behavior into steps. The size of the steps will be determined by the abilities of the child.
- Determine which steps already exist and which ones will need to be individually shaped.
- Shape the behaviors which need to be learned, then the chaining begins. Chaining can be started from the first step and move to toward the last step OR it can start from the last step and move forward toward the first step. Whichever you choose, use that method consistently.

- Forward chaining. Start by reinforcing after the child does the first behavior in the sequence.
- Backward chaining. Always reinforce after the last step in the sequence and fade your prompts backward.

Applied Behavioral Analysis: Decreasing Behaviors

DECREASING BEHAVIORS

- **Punishment: By definition, something serves as punishment if: 1) it immediately follows a behavior and 2) it decreases the frequency of that behavior in the future.**
- We can decrease unwanted behaviors through a variety of methods. The following list ranges from least to most intrusive.
  - Extinction/Ignoring
  - Differential reinforcement of others (DRO)
  - Response cost
  - Time Out
  - Physical restraint - Not used in our practice
- You should use the least intrusive punisher so that the child has the opportunity to have the most independent control over his or her actions.

From Olson & Marker (2000). Inservice Training Manual – Pine Grove School.

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Applied Behavioral Analysis: Decreasing Behaviors

Although punishment can suppress behavior when used correctly, it has its disadvantages. It is not the best way to change behavior because:

- The child will try to avoid future punishment by doing less in general (the fewer “things” you do, the less likely you are to get punished). Repeated punishment leads to social withdrawal, depression, or lack of motivation. To avoid this make sure the child knows what behavior leads to being punished, so only that specific behavior will decrease.
- It may produce emotional behavior: the child may become nervous or upset prior to being punished.
- The child may become aggressive toward the parent, staff, or children.
- Negative modeling may occur: you risk teaching the child how to react when others are not doing what they want.
- The child may attempt to escape or avoid the punishment by avoiding the punisher, even when the child is not being punished.

Challenge: Try giving at least 6 reinforcers for every 1 punishment

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Applied Behavioral Analysis: Decreasing Behaviors

Extinction

- Extinction or Ignoring involves removing social reinforcement from a behavior that previously got lots of attention.

What to expect when using extinction:

- Extinction only works when you pair it with giving reinforcement for the appropriate behavior.
- Consistently withholding reinforcement results in a gradual decrease in the target behavior.
- When you first start using extinction, there will be a brief period when the target behavior will increase. This increase is called an extinction burst. An extinction burst is an indication that the extinction is working!
- Extinction may trigger aggression.
- Behavior that is firmly established is more resistant to extinction (e.g., behavior that has been intermittently reinforced in the past).
- Behavior that has been extinguished may return later, especially if you did not reinforce the competing behavior sufficiently.
- Consistency is the key!

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Applied Behavioral Analysis: Decreasing Behaviors

Differential Reinforcement of Other (DRO)

- **Differential reinforcement is a procedure that combines extinction and reinforcement to change the frequency of a behavior. The undesirable behavior is ignored. An alternate behavior is reinforced.**

Tips on using DRO:

- Use in combination with extinction and prompting.
- Be sure to select an alternative behavior that the child already knows how to perform.
- Reinforce appropriate behavior immediately.
- Avoid reinforcing other inappropriate behavior when using DRO.
- Use DRO for that behavior in all settings.
- Do not use DRO if the behavior is dangerous or life-threatening.

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Applied Behavioral Analysis: Decreasing Behaviors

Response Cost

- **Response cost is a form of punishment in which previously earned reinforcers are taken away when an undesirable behavior occurs.**

Tips for using Response Cost

- Always use reinforcement for appropriate behaviors if you are going to use response cost.
- You must make sure that the child has a previously given reinforcer to take.
- Determine what the child will lose for which specific behavior before the behavior occurs and response cost is used.
- Give the child 2 pieces of information: 1) why he/she lost the reinforcer and 2) how to earn the reinforcer again.
- Take away the reinforcer immediately after the unwanted behavior occurs.
- Be sure the child can earn back the lost reinforcer fairly quickly (this will depend on the level of the child)
- Make sure fines are realistic. Only take one reinforcer at a time.
- Response cost must be used consistently with all individuals working with the child. If it is not used consistently, the behavior may worsen.

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Applied Behavioral Analysis: Decreasing Behaviors

Time Out

- **Time Out are methods used to decrease inappropriate behavior. Both involve removing the child from a reinforcing situation after an undesirable behavior has occurred.**

Tips for using Time Out:

- Always use reinforcement for desirable behavior outside of Time Out.
- Time Out areas should be free of attractive and entertaining activities (e.g., TV, toys, other people).
- Time Out should be short. Three to five minutes is enough. A good rule of thumb is a minute for every year of their age. It is not the amount of time that the child is in Time Out that makes it effective. It's the being put in Time Out that modifies the behavior. The child will only understand the benefit of being calm if he/she comes out of Time Out when they are calm. If left too long, the child does not understand "what it takes" to get out. Don't be concerned about having to take the child back to Time Out too quickly. It will give the child additional opportunities to learn that "calm" behavior gets them out.

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Applied Behavioral Analysis: Decreasing Behaviors

Tips for using Time Out (continued):

- Monitor the child in Time Out, but do not let him/her catch you watching.
- You decide when a child is ready to leave Time Out. The child must be calm and quiet before leaving Time Out.
- Reinforce other children (if around) for their good behavior. The child in Time Out will hear how much fun/reinforcement the other children are having.
- Be aware that some children may use Time Out to avoid doing other tasks (e.g., school work, cleaning, etc.). Be sure the child completes the other tasks he or she missed during Time Out.

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Ethical Challenges in Punishment

- Executive Council of the Association for Behavior Analysis International (ABAI) position statement (2011) on Restraint and Seclusion
  - Welfare of the Individual - decisions should be made as part of the treatment team with client and caregivers
  - Informed Consent for interventions that are necessary, safe, and effective
  - Least Restrictive Treatment - evaluate the most favorable risk-to-benefit ratio, probability of treatment success, anticipated duration of treatment, distress caused by procedures, and distress caused by the behavior itself

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Ethical Challenges in Punishment

- Use of Restraints
  - Restraints are defined as "physically holding or securing the individual, either (a) for a brief period of time to interrupt and intervene with severe problem behavior or (b) for an extended period of time using mechanical devices to prevent otherwise uncontrollable problem behavior (e.g., self-injurious behavior) that has the potential to produce serious injury"
  - "A behavior intervention plan that incorporates contingent restraint must (a) incorporate reinforcement-based procedures, (b) be based on a functional behavior assessment, (c) be evaluated by objective outcome data, and (d) be consistent with the scientific literature and current best practices."

Ethical Challenges in Punishment

- Seclusion
  - Seclusion involves "isolating an individual from others to interrupt and intervene with problem behavior that places the individual or others at risk of harm."
- Time-Out
  - Time-out from reinforcement is an evidence-based treatment intervention that involves reducing or limiting the amount of reinforcement that is available to an individual for a brief period of time.
  - The behavior intervention plan that incorporates the use of time-out (or rare cases, seclusion) must (a) be derived from a behavioral assessment, (b) incorporate reinforcement strategies for appropriate behavior, (c) be of brief duration, (d) be evaluated by objective outcome data, and (e) be consistent with the scientific literature and current best practices.

Ethical Challenges in Punishment

- Emergency restraint or seclusion – informed consent must be given
  - Used only with dangerous or harmful behaviors that occur at unpredictable times that are not amenable to less restrictive behavioral treatment interventions and places the individual or others at risk for injury, or will result in significant loss of quality of life
  - Have well-defined criteria and de-escalation techniques, least restrictive physical intervention, and withdrawn according to price and mandatory release criteria.
  - Trained staff, with continuous in-service training, supervised by BCBA, Psychologist, trained professional
  - Continuously monitored with objective data collection
  - Only continued if safe and effective and then reduced

Applied Behavioral Analysis: Functional Behavioral Assessment

Finding Solutions for Problem Behaviors: ABC Analysis

- **ABC Analysis is a process for gathering information about the environmental stimuli that are controlling the behavior.**
- Antecedents (A)

  Antecedents are things or situations which happen before the target behavior. Examples of antecedents are asking a question, time of day, loud noise, a particular toy, etc. Certain behavior may regularly follow each of these antecedents.
- Behavior (B)

  This is the target behavior we are studying. It is very important to be specific in our descriptions so that others could easily recognize it.
- Consequences (C)

  Consequences are things or situations which immediately follow a particular behavior. They serve two purposes: to increase the behavior or to decrease the behavior that just happened.

Applied Behavioral Analysis: Functional Behavioral Assessment

Antecedent Analysis

There are several types of antecedents (also environmental stimuli):

- Cues the child gives
- Prompts others give
- Situations
- People
- Time of Day
- Activity
- Physical Setting

From Olson & Marker (2000). Inservice Training Manual – Pine Grove School.

Applied Behavioral Analysis: Functional Behavioral Assessment

Analysis of Function

- Two main functions of behavior:
  - To OBTAIN something desirable or communication
  - To AVOID/ESCAPE something undesirable
- By identifying the variables that maintain a behavior, we can also identify more adaptive ways of obtaining the same function.

Always teach a more appropriate behavior in a manner that makes meaning for the child.

From Olson & Marker (2000). Inservice Training Manual – Pine Grove School.

Applied Behavioral Analysis: Functional Behavioral Assessment

Classification of "Obtaining"

- Obtain attention/Communication attempt
  - If you believe that a child's behavior serves to obtain attention, then the child will perform this behavior more often if he/she gets attention. We would want to teach the child a more adaptive behavior for obtaining attention from others.
- Obtain activities/tasks
  - A child's behavior may be to obtain an activity.
- Obtain internal stimulation
  - A child may engage in a behavior in order to stimulate him/herself internally. In some cases, self-injurious behavior occurs for self-stimulation. The child may also be bored or may enjoy the sensory stimulation. As a result, you may try to teach the child another way of stimulating him/herself more appropriately.

From Olson & Marker (2000). Inservice Training Manual – Pine Grove School.

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Applied Behavioral Analysis: Functional Behavioral Assessment

Classification of "Escaping/Avoiding"

- Escape/Avoid attention/communication
  - Sometimes maladaptive behavior may occur when a child wants to be left alone. As an adaptive behavior, you may want to teach the child a more appropriate way of asking for a break.
- Escape/Avoid activities/tasks
  - Escape of tasks and demands is very common. A child may perform a maladaptive behavior to get out of doing a task. Make sure to monitor the difficulty of tasks.
- Escape/Avoid internal stimulation
  - Some children have difficulty with internal stimulation. The may be overly sensitive or may not like a particular type of stimulation.

From Olson & Marker (2000). Inservice Training Manual – Pine Grove School.

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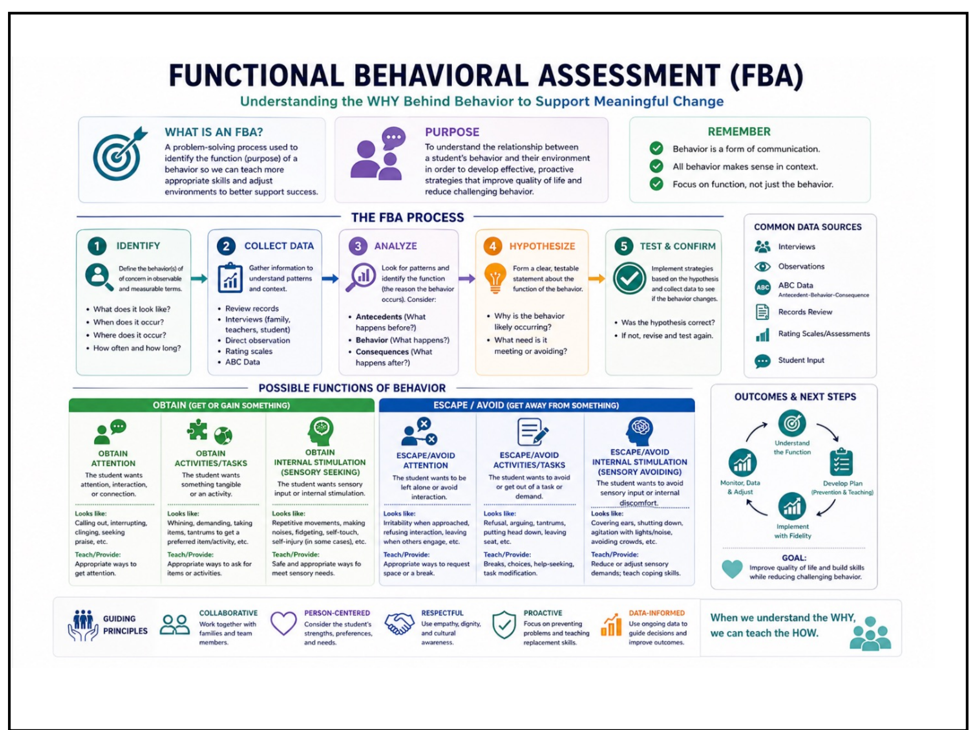

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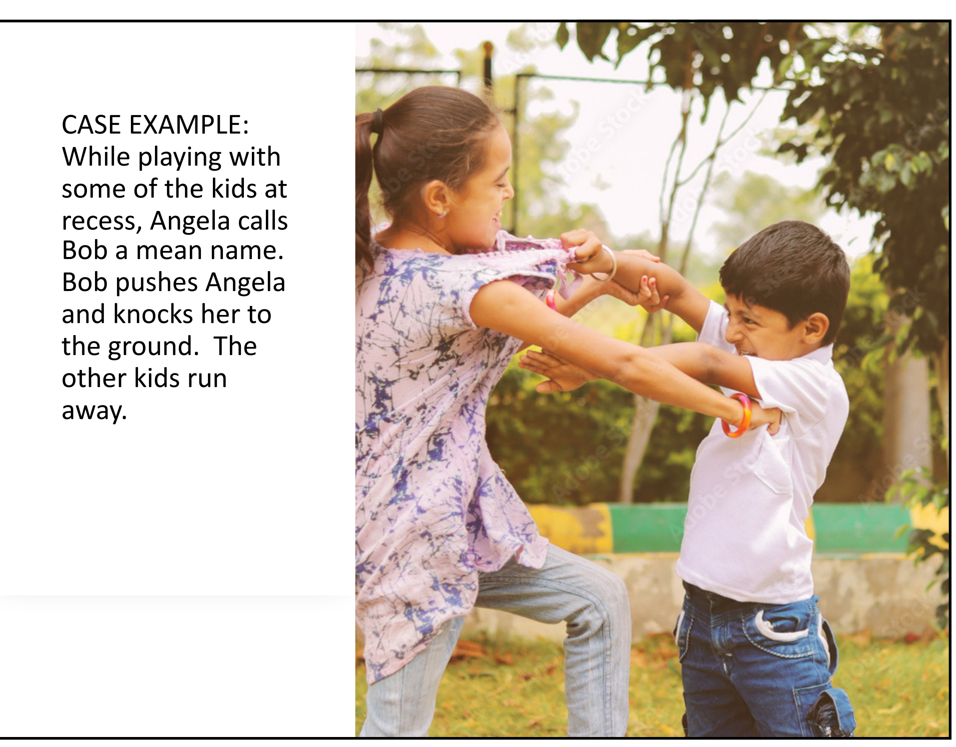

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Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
1) While playing with some of the kids at recess, Angela calls Bob a mean name. Bob pushes Angela and knocks her to the ground. The other kids run away.

A = Antecedent	B = Behavior	C = Consequences
Function: To obtain and/or avoid/escape Appropriate Behavior to Teach:		

Applied Behavioral Analysis: Functional Behavioral Assessment

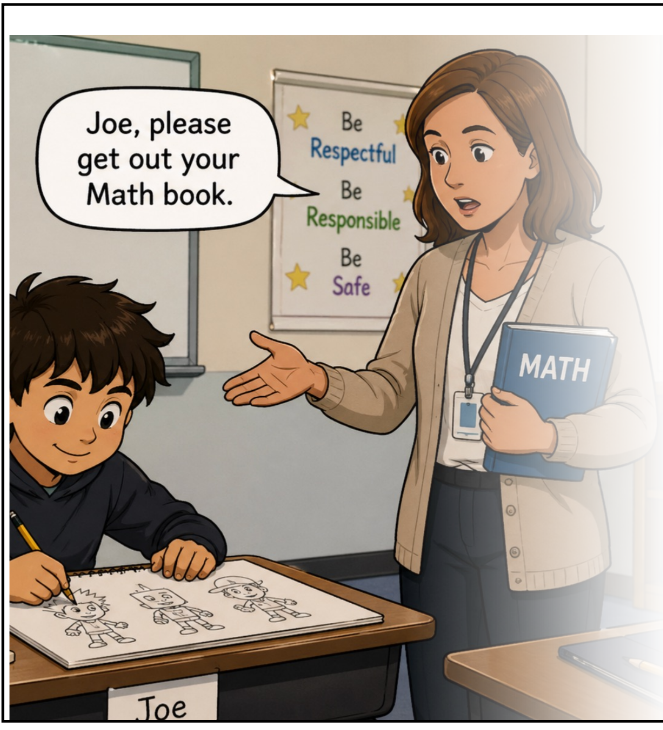
CASE EXAMPLE:
1) While playing with some of the kids at recess, Angela calls Bob a mean name. Bob pushes Angela and knocks her to the ground. The other kids run away.

A = Antecedent	B = Behavior	C = Consequences
ANGELA CALLS BOB MEAN NAME	**BOB PUSHES ANGELA**	**KIDS RUN AWAY**
Function: To obtain and/or avoid/escape Appropriate Behavior to Teach:		

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
1) While playing with some of the kids at recess, Angela calls Bob a mean name. Bob pushes Angela and knocks her to the ground. The other kids run away.

A = Antecedent	B = Behavior	C = Consequences
ANGELA CALLS BOB MEAN NAME	**BOB PUSHES ANGELA**	**KIDS RUN AWAY**
Function: To obtain and/or avoid/escape **COMMUNICATES ANGER, AVOID KIDS**		
Appropriate Behavior to Teach: - **BEFORE GETTING TO RECESS, TEACH HOW TO COMMUNICATE FEELINGS AND ASK FOR HELP. REINFORCE POSITIVE INTERACTIONS WHILE AT RECESS.**		



CASE EXAMPLE: Joe is drawing cartoon figures when his teacher tells him to get out his Math book. Joe continues to draw and doesn't respond to his teacher. Five minutes later, his teacher asks Joe to get his Math book out again.

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
2) Joe is drawing cartoon figures when his teacher tells him to get out his Math book. Joe continues to draw and doesn't respond to his teacher. Five minutes later, his teacher asks Joe to get his Math book out again.

A = Antecedent	B = Behavior	C = Consequences
Function: To obtain and/or avoid/escape Appropriate Behavior to Teach:		

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
2) Joe is drawing cartoon figures when his teacher tells him to get out his math book. Joe continues to draw and doesn't respond to his teacher. Five minutes later, his teacher asks Joe to get his math book out again.

A = Antecedent	B = Behavior	C = Consequences
TEACHER TELLS HIM TO GET OUT MATH BOOK	**JOE CONTINUES TO DRAW**	**JOE CONTINUES TO DRAW, FIVE MINUTES LATER, TEACHER ASKS AGAIN**
Function: To obtain and/or avoid/escape Appropriate Behavior to Teach:		

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
2) Joe is drawing cartoon figures when his teacher tells him to get out his math book. Joe continues to draw and doesn't respond to his teacher. Five minutes later, his teacher asks Joe to get his math book out again.

A = Antecedent	B = Behavior	C = Consequences
TEACHER TELLS HIM TO GET OUT MATH BOOK	**JOE CONTINUES TO DRAW**	**JOE CONTINUES TO DRAW, FIVE MINUTES LATER, TEACHER ASKS AGAIN**
Function: To obtain and/or avoid/escape **OBTAIN DRAWING, AVOID GETTING OUT MATH BOOK**		
Appropriate Behavior to Teach: **WHEN JOE CAN DRAW, VISUAL SCHEDULE FOR SUBJECTS, PRIME FOR HOW MUCH TIME HE HAS TO DRAW BEFORE GETTING OUT MATH BOOK, REINFORCE**		

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CASE EXAMPLE: While the class is engaged in small group activities that require talking, your child, Ally, rocks back and forth.

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Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
3) While the class is engaged in small group activities that require talking, your child, Ally, rocks back and forth.

A = Antecedent	B = Behavior	C = Consequences

Function: To obtain and/or avoid/escape

Appropriate Behavior to Teach:

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
3) While the class is engaged in small group activities that require talking, your child, Ally, rocks back and forth.

A = Antecedent	B = Behavior	C = Consequences
GROUP ACTIVITY	**ALLY ROCKS**	**GROUP ACTIVITY CONTINUES**

Function: To obtain and/or avoid/escape

Appropriate Behavior to Teach:

Applied Behavioral Analysis: Functional Behavioral Assessment

CASE EXAMPLE:
3) While the class is engaged in small group activities that require talking, your child, Ally, rocks back and forth.

A = Antecedent	B = Behavior	C = Consequences
GROUP ACTIVITY	ALLY ROCKS	GROUP ACTIVITY CONTINUES
Function: To obtain and/or avoid/escape	OBTAIN INTERNAL STIMULATION/CALMING MECHANISM	
Appropriate Behavior to Teach:	BEFORE STARTING GROUP ACTIVITY, TEACH HOW TO ASK FOR A BREAK OR HOW TO RELAX, REINFORCE	

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What are your examples?

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Applied Behavioral Analysis: Problem Solve Challenging Behaviors

A = Antecedent	B = Behavior	C = Consequences

Function: To obtain and/or avoid/escape

Appropriate Behavior to Teach:

Key Strategies for School Professionals
1. Prevention First: Set Students Up for Success

What this means
- The most effective behavior intervention is **preventing the behavior before it occurs** by designing environments that reduce stress, confusion, and overload.

Core practices
- Establish **predictable routines**
- Use **visual schedules and cues**
- Clearly define **expectations and transitions**
- Provide **advance notice of changes**
- Offer **choices to increase control**

Why it works
- Reduces anxiety (especially in autism)
- Reduces executive load (especially in ADHD)
- Minimizes triggers before escalation begins

Key
- Most challenging behavior is **predictable and preventable**

Key Strategies for School Professionals 2. Build Positive Relationships

What this means

- Behavior improves when students feel **safe, understood, and connected**

Core practices

- Greet students warmly
- Use **frequent positive interactions**
- Notice strengths and effort
- Maintain **non-contingent attention** (attention not tied to behavior)

Why it works

- Builds trust → reduces defensiveness
- Increases compliance and engagement
- Lowers need for attention-seeking behaviors

Key

- Relationship is often the **most powerful intervention**

Key Strategies for School Professionals 3. Teach and Reinforce Desired Behaviors

What this means

- Students must be **explicitly taught what to do instead**, not just told what not to do

Core practices

- Model expected behavior
- Practice through repetition
- Provide **immediate reinforcement**
- Use **specific praise** (not generic)

Why it works

- Many students lack **skill**, not motivation
- Reinforcement strengthens new behavior pathways
- **Example**
- Instead of: "Stop yelling"
  Teach: "Raise your hand and wait"

Key

- You cannot replace a behavior without **teaching a replacement**
- Effective intervention is **dynamic and data-driven**

Key Strategies for School Professionals
4. Use Effective Communication

What this means
- Instructions must match the student's **processing ability**

Core practices
- Use **clear, concise language**
- Give **one direction at a time**
- Pair verbal instructions with **visual supports**
- Avoid abstract or figurative language

Why it works
- Reduces confusion and overload
- Improves compliance and task completion

Key
- When behavior looks like defiance, it is often **misunderstanding**

Key Strategies for School Professionals
5. Recognize and Support Regulation Needs

What this means
- Behavior is strongly driven by a student's **nervous system state**

Core practices
- Identify early signs of dysregulation
- Teach regulation strategies:
  - Breathing
  - Movement
  - Breaks
- Provide **sensory supports**
- Use **calm-down spaces**

Why it works
- Students cannot learn or comply when dysregulated
- Regulation must occur before reasoning

Key
- Regulation before reasoning

Key Strategies for School Professionals
6. Use Proactive Behavior Support (FBA-Based)

What this means
- Understand the **function of behavior** and address the *why*

Core practices
- Conduct Functional Behavioral Assessment (FBA)
- Identify function:
  - Escape
  - Attention
  - Access
  - Sensory
- Modify environment and instruction
- Teach replacement behaviors

Why it works
- Behavior is **purposeful**
- Addressing the function eliminates the need for the behavior

Key
- Behavior is **communication**, not random

Key Strategies for School Professionals
7. Respond Calmly, Consistently, and Safely

What this means
- Adult response determines whether behavior **escalates or de-escalates**

Core practices
- Maintain **neutral tone**
- Use **minimal language**
- Avoid power struggles
- Provide space and choices

Why it works
- Escalation feeds off emotional reactions
- Calm responses regulate the student

Key
- The adult's nervous system becomes the student's **regulation anchor**

Key Strategies for School Professionals 8. Ensure Safety for All

What this means

- In dangerous situations, **safety overrides instruction**

Core practices

- Remove immediate danger
- Use crisis protocols
- Call for support early
- Maintain dignity and respect

Why it works

- Protects all individuals
- Prevents escalation into crisis-level events

Key

- Safety is the **first priority, not compliance**

Key Strategies for School Professionals 9. Collaborate and Communicate

What this means

- Effective support requires **team alignment**

Core practices

- Work with:
  - Families
  - Therapists
  - Specialists
- Share strategies and data
- Maintain consistency across environments

Why it works

- Inconsistent approaches reinforce behavior
- Collaboration improves accuracy and outcomes

Key

- Inconsistency is one of the biggest drivers of behavior problems

Key Strategies for School Professionals
10. Reflect, Use Data, and Continuously Improve

What this means

- Behavior support is an **ongoing process**, not a one-time fix

Core practices

- Track behavior patterns
- Review what works and what doesn't
- Adjust interventions based on data
- Continue skill-building

Why it works

- Behavior changes over time
- Data prevents guesswork

Key

- Effective intervention is **dynamic and data-driven**

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Brief Interventions including CBT strategies for Children and Adolescents with ADHD,
Autism, and Anxiety

Cara Daily, Ph.D., B

Outline

I. Cognitive Behavioral Therapy
- A. Self-Regulation Interventions
  1. Mindfulness
  2. Positive Imagery
  3. Progressive Muscle Relaxation
  4. Zones of Regulation
- B. Empirically Validated Manualized Programs
  1. Coping Cat
  2. Cat Project
  3. Stop and Think

II. Social Skills Training

III. Environmental Strategies

III.Psychopharmacology

Types of Anxiety

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

Assessment

- Broadband rating scales (BASC, CBCL)
- Anxiety specific
  - Revised Children's Anxiety and Depression Scale (RCADS)
    - Youth (8-18) and parent versions
  - Manifest Anxiety Scale for Children - 2 (MASC -2)
    - 8-19 years of age
    - Child and Parent Rating Scales
- Personality
- Behavioral observations/behavior samples (crying, tantrums, avoid)
- Interview with child/adolescent, parent
- Teacher data

Anxiety

- What does it look like in ASD?
  - Increased restlessness
  - Increases in *rumination*
  - May request that you confirm the same information over and over
  - May increase routines and rituals as a way to bring order into their life
  - May become more rigid in their thinking
  - May spend more time with special interest, using this as a way to escape situations that invoke anxiety
  - May regress to earlier behaviors

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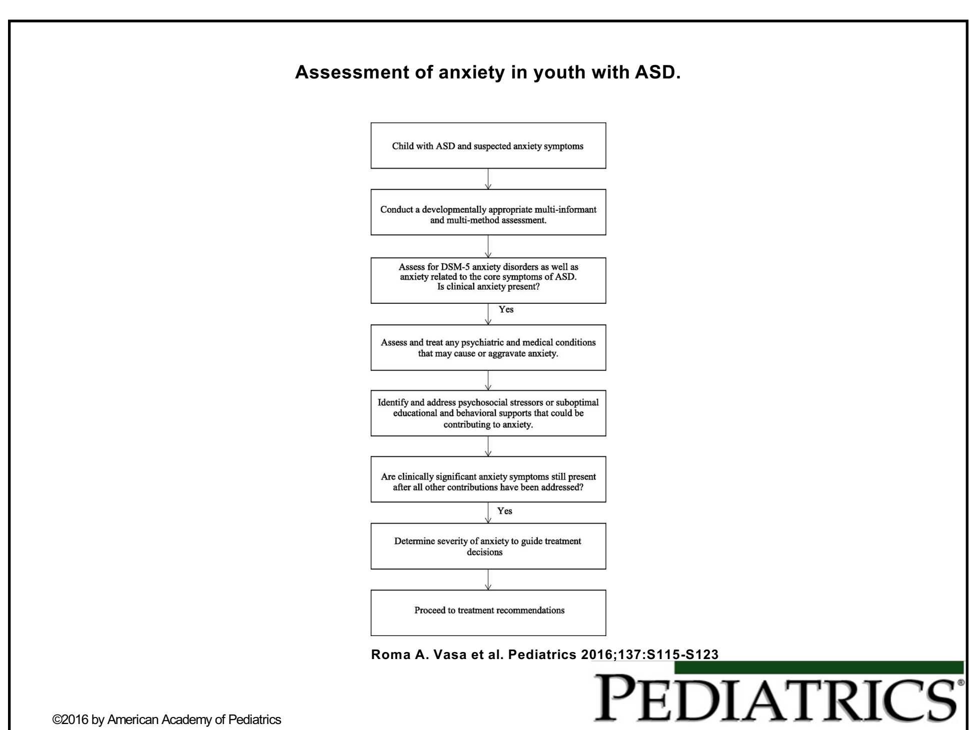

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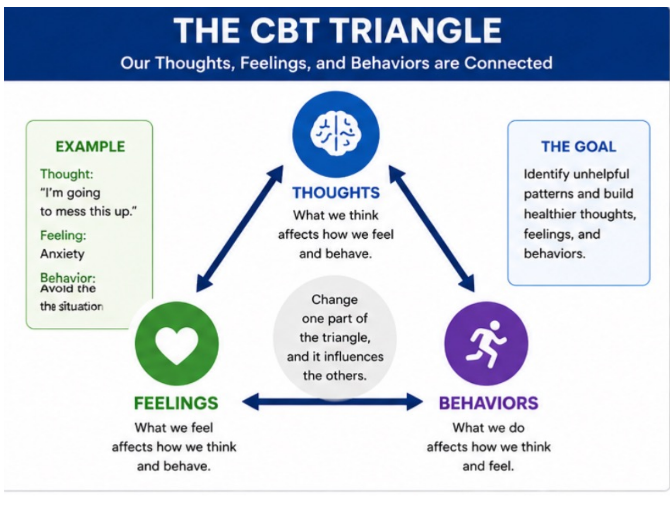
Cognitive Behavioral Therapy (CBT)



Modifying CBT

- Goals for a clinician during TX:
  - Focus on positive characteristics of client's attributes
  - Address the presenting concerns and core symptoms
    - Develop an exposure hierarchy
    - Identifying social problems
  - Benefits of groups training
    - Opportunities to practice new skills
    - Peer modeling and skills practice
  - Develop emotional awareness and insight

(White and colleagues, 2018)

Modifying CBT cont.

- Factors to be aware of for clinicians treating adolescent ASD populations:
  - Increased reliance on parents in treatment
  - Need for psychoeducation about comorbid symptoms
    - Anxiety and Depression
  - Treatment pace tends to be slower or more drawn out
    - Benefits of this, is more opportunities for practice and time to address rigid beliefs, behaviors, and thinking patterns

(White and colleagues, 2018)

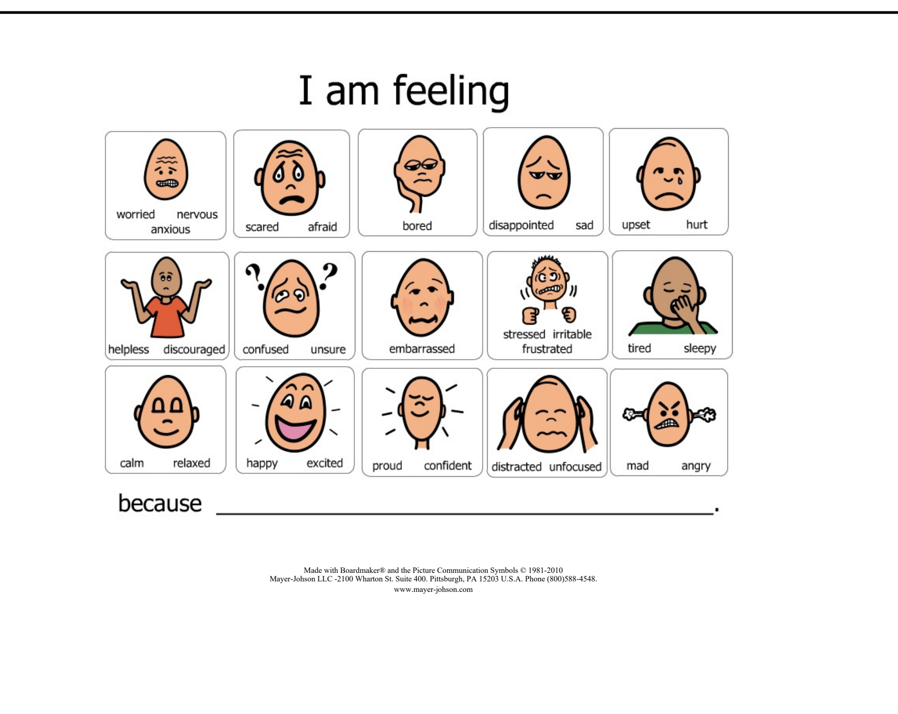
Modifying CBT cont.

- Involve the child's special interests in treatment
  - Benefits of this, the child can visual concept easier and this can be a good tool for connection and to incentivize
- Reduce your use of metaphors (and sarcasm)
- Promote high structured sessions, give transitional prompts and clear directions
- Use visuals!!!
- Set aside time in session for practice
  - Ex. planning at-home practices, can use modeling or role play

(White and colleagues, 2018)

Anxiety/Depression: Cognitive Behavioral Therapy

- Sleep, Diet, and Exercise
- Self-Regulation Strategies - Thought Regulation
  - Understanding Emotions
  - Identifying the Situation
  - Changing Distorted Thought Patterns



Worksheet

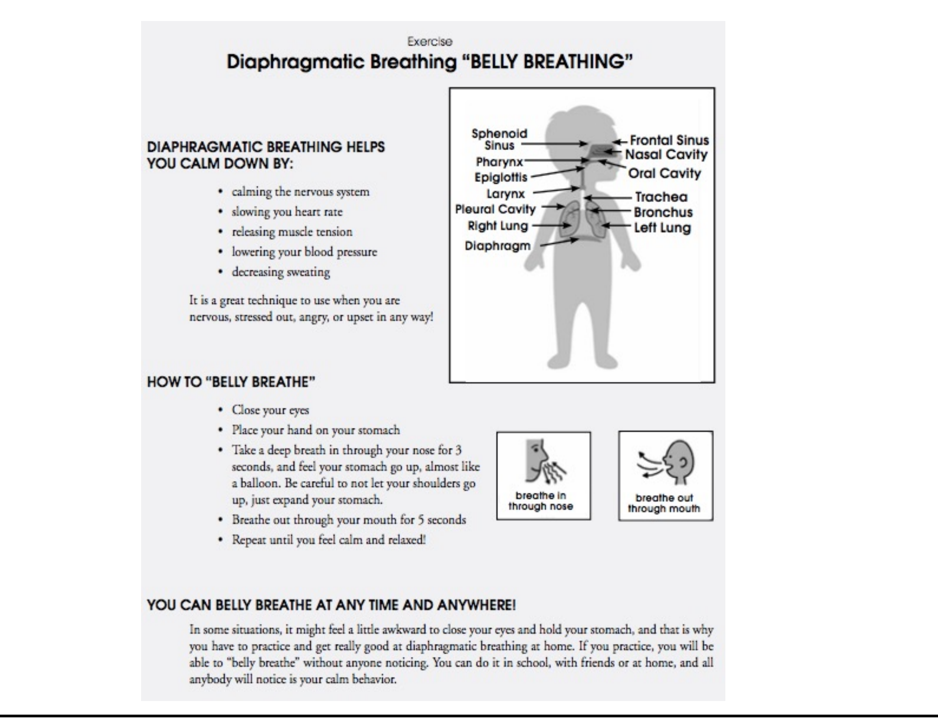
Thought Chart: Rational Response

Directions: Complete the information below to change the cognitive distortion into a rational response. An example has been provided to help you.

Situation	Emotion	Automatic Thought	Cognitive Distortion	Rational Response	Outcome
Describe situation that occurred.	**Label the feeling and rank how strong it is on a scale from 1 to 10.**	**Write down the thought you had.**	**Identify the cognitive distortion or twisted thinking pattern.**	**Identify a way to untwist your thinking and then write rational thought.**	**Label your feeling and rank how strong it is on a scale from 1 to 10.**
Mom tells me to get off video game	Frustrated - 8	She never lets me finish a game.	Over-generalization	Examined the evidence – she did let me finish the game last Monday. I'll ask her when I can finish the game.	Frustrated – 3

Anxiety/Depression: Cognitive Behavioral Therapy

- Self-Regulation Strategies - Physical Regulation
  - Diaphragmatic Breathing
  - Positive Imagery
  - Progressive Muscle Relaxation



Exercise

Diaphragmatic Breathing "BELLY BREATHING"

DIAPHRAGMATIC BREATHING HELPS YOU CALM DOWN BY:

- calming the nervous system
- slowing you heart rate
- releasing muscle tension
- lowering your blood pressure
- decreasing sweating

It is a great technique to use when you are nervous, stressed out, angry, or upset in any way!

HOW TO "BELLY BREATHE"

- Close your eyes
- Place your hand on your stomach
- Take a deep breath in through your nose for 3 seconds, and feel your stomach go up, almost like a balloon. Be careful to not let your shoulders go up, just expand your stomach.
- Breathe out through your mouth for 5 seconds
- Repeat until you feel calm and relaxed!

YOU CAN BELLY BREATHE AT ANY TIME AND ANYWHERE!

In some situations, it might feel a little awkward to close your eyes and hold your stomach, and that is why you have to practice and get really good at diaphragmatic breathing at home. If you practice, you will be able to "belly breathe" without anyone noticing. You can do it in school, with friends or at home, and all anybody will notice is your calm behavior.

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Positive Imagery Script

Lie or sit in a comfortable position. Feel your body against the chair and begin to focu on your breathing. Be aware of the in-breath. . . aware of the out-breath. . . breathing in, feeling calm, breathing out, and feeling at peace.

Now I'd like you to see yourself in a very special place. . . It could be a real place – a place you may have actually been – a beautiful spot in nature or comfortable spot in your own home. Your special place may be an imaginary place – a place in fairy tales – indoors or outdoors – it doesn't really matter. Should more than one place come to mind, allow yourself to stay with one of them.

The only thing that matters is that it is a place in which you are completely comfortable and safe. . . you feel comfortable and safe. Appreciate this scene with all your senses. Hear the sounds – smell the aromas, feel the air as it caresses your skin – experience the ground securely under you – touch and feel the whole environment that you are in.

Notice the colors that surround you. What is the temperature? Is it warm? Is it cold? Are you alone or are you with another person or people. Notice the qualities of the place that make it safe and comfortable.

Look around you to see if there is anything else that would make this place more safe for you. . . perhaps something that you need to remove from the place or something you need to bring in. . . and then notice how your body feels in this place. . . and now take some time to enjoy this feeling of safety in this special place. . .

Now thank yourself for taking the time. . . perhaps promising yourself and reassuring yourself that you will visit this place or some other place on your own, whenever you need to.

When you're ready. . . at your own pace. . . let your breathing deepen. . . very gradually let the awareness of your body against the floor or the chair return. . . and when you are ready. . . gently open your eyes.

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Progressive Muscle Relaxation

Directions: *Relaxation skills* may help you cope with stress, anger, illness, sleep problems, injury or pain. Relaxation exercises are designed to help you recognize and reduce body tension.

As you complete each exercise, think about each group of muscles. Notice the difference between the tight and relaxed muscles. If a feeling *of tightness continues in any group of muscles after you have repeated the exercise several times, focus again on relaxing that particular muscle group. Your whole body should feel loose and relaxed.*

Legs

Sit or lie down with your legs straight. Point your toes toward your head. Hold this position and feel the tightness in your calf muscles. Relax your muscles and let your entire leg go limp. Focus on making your calf as loose as you can. Repeat this exercise.

Lift and extend both legs until you can feel the tightness in your thigh muscles. Hold this position, feel the tightness of your thigh muscles. Relax until all of the tightness in your thigh muscles is gone. Repeat this exercise. Try to keep your feet and ankles relaxed while you are tightening your thighs.

Chest and Abdomen

Take a deep breath and fill your lungs with air. Hold the air in your lungs. Feel the tightness in your chest and abdominal muscles. Now release the air and relax. Breath normally. Notice how easily the air moves when you are relaxed. Repeat this exercise.

Relax for a few seconds, then tighten, the muscles in your abdomen. Hold this position feeling the tightness of the muscles. Release your abdominal muscles and relax, breathing normally again. Repeat this exercise.

Hands and Arms

Make your hand into a fist; close your fist tightly and hold it closed. Feel the tightness in the muscles of your hand and forearm. Now relax your hand. Let it go limp and wiggle your fingers. Feel the tightness leave your hand and fingers. The muscles in your hand and forearm should feel relaxed. Remember to hold the relaxed position longer than the tense position. Do this exercise two times on each hand.

Upper Arms

Keeping your hands relaxed and arms straight, raise your hands to shoulder height. Bend your arms at the elbows so that your hands rise up; tighten the muscles in your upper arms. Count to 5 and then lower your arms until your hands hang limply at your sides. Notice how relaxed your muscles feel as you count to 5 again. Make your arms as loose as you can. Repeat this exercise.

Shoulders

Raise your shoulders to your ears and notice the tightness in the muscles in your shoulders and neck. Hold this position and think about how your muscles feel. Relax and drop your shoulders to their normal position. Relax your shoulders even more, letting them drop toward the floor. Notice the difference between the feeling of tightness and the feeling of relaxation. Repeat this exercise.

Neck

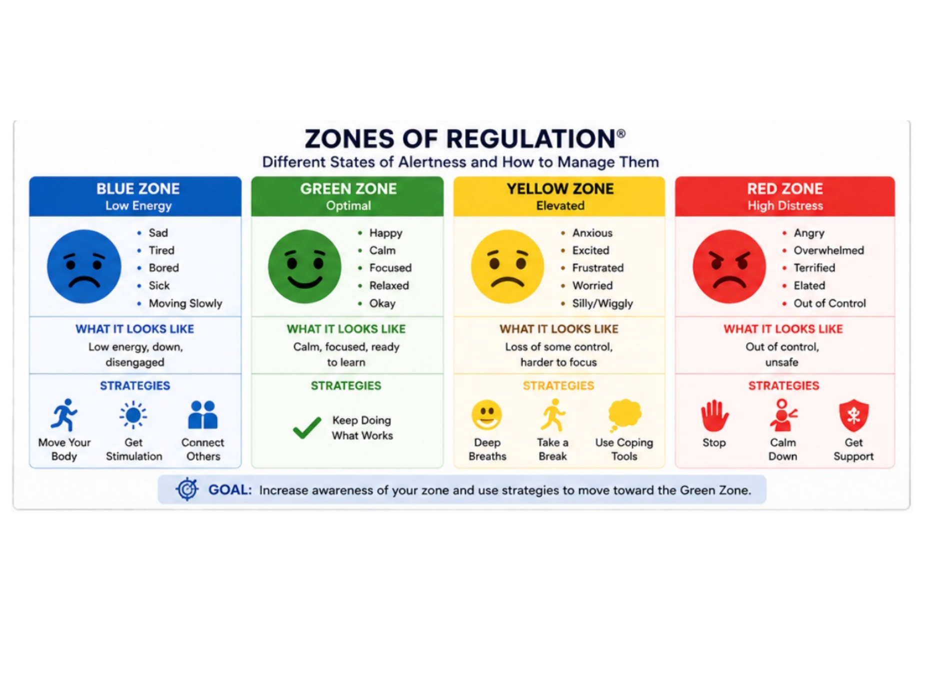
Move your head forward until your chin touches your chest. Notice the tension in the front of your neck, but especially in the back of your neck. Gradually put your head back in an upright position. Now put your head back as far as it will go, as if you were going to touch your head to your back. Notice where it is tense. Gradually put your head back in an upright position. This is the least tense position. While still in the relaxed position, tilt your head to the right, as if you were going to touch your head to your right shoulder. Bring your head back to the relaxed position. Now tilt your head to the left shoulder. Bring your head back to the relaxed position. Notice the difference when those muscles are loose and relaxed. Repeat exercise.

Face

Next, wrinkle your nose. Hold the position for five seconds and relax your face. Now tighten the muscles around your mouth and cheeks by putting your face in a forced smile. Your lips should be hard against your face. Notice how those muscles feel tight and tense. Gradually relax your face. Repeat the exercise.

Zones of Regulation

- Created by Leah Kuypers, MA Ed., OTR/L.
- Not an empirically-validated intervention, although some research indicates it is promising (Peters et al., 2024; Öhlböck et al., 2024; Suarez et al., 2019).
- Book, Digital, Companion Tools



Zones of Regulation Key Principles

All Zones Are OK

- The goal is NOT “stay in green”
- The goal is:
  - Awareness , Regulation, and Recovery

Behavior ≠ The Problem

- Behavior is a **signal of a zone**
- Example:
  - Yelling = Red Zone expression, Not “defiance”

Regulation Before Reasoning

- You cannot teach in Red
- You barely can in Yellow
- You teach best in Green

Zones of Regulation
Key Principles

Co-Regulation Comes First

- Especially for kids: - They "borrow" regulation from adults
- Your tone > your words

Zones ≠ Compliance Tool

- Misuse:
  - "You're in the red zone—stop it"
- Correct use:
  - "I see your body is in the red zone—let's help it calm down"

Anxiety:
Cognitive Behavioral Therapy

- McNally and colleagues (2013) - The Coping Cat Program for Children with Anxiety and Autism Spectrum Disorder: A Pilot Randomized Controlled Trial
- "May be a feasible and effective program for reducing clinically significant levels of anxiety in children with high-functioning ASD."
- Limitations - Need larger sample sizes and for it to be replicated.

Coping Cat

- Philip Kendall, Ph.D., ABPP and associates- Temple University
  - The Coping Cat Workbook, Second Edition
    - Ages 8-13, 16 sessions
  - Cognitive-Behavioral Therapy For Anxious Children: Therapist Manual, Third Edition
  - The Coping Cat Parent Companion
  - The CAT Project
    - Ages 14-17
  - Therapist Manual for Group Treatment
- Use Manual as guiding template, not rigid cookbook.
- All Coping Cat, Therapist Manual, Parent Companion, and CAT Project material in this presentation reprinted with permission by Philip Kendall.

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Coping Cat

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Coping Cat – Session 1

- Introduction
  - Building Rapport and treatment orientation
  - Goals:
    - Build Rapport
    - Orient child to the program
    - Encourage/support the child's participation
    - Assign an initial simple S.T.I.C task – "Show That I Can"
    - Engage in a fun end-of-session activity

Coping Cat – Session 1

Next describe a situation that happens on a typical day. Think of a time that was OK, not great but not bad either. Remember to say what the situation was and what you thought and how you felt.

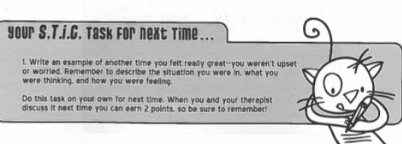
Normal Day

Situation	Your Thoughts	Your Feelings

Learning about S.T.i.C. tasks

We're going to end each session with an assignment we call a S.T.I.C. task. A S.T.I.C. task is something you can do to "Show That I Can (S.T.I.C.)." You will be learning lots of new things working with your therapist and doing this workbook. We want you to take what you learn with you and use those new skills in other situations. That's why we came up with the idea of S.T.I.C. tasks. They're your opportunity to practice what you've learned. Then at the beginning of each session, you can show your therapist what you have accomplished. It's your chance to boast!

Every time you do a S.T.I.C. task, you will receive 2 points or stickers that you can use to earn a reward. What kinds of rewards would you like to be able to earn? On page 73 you'll see a "Reward Menu." This is where you can list each reward and the number of points that it costs. After sessions 4, 8, 12, and 16, you can spend your points on some of the rewards you listed in the Reward Menu.



Your S.T.i.C. Task for next time...

1. Write an example of another time you felt really great--you weren't upset or worried. Remember to describe the situation you were in, what you were thinking, and how you were feeling.

Do this task on your own for next time. When you and your therapist discuss it next time you can earn 2 points, so be sure to remember!

Coping Cat – Session 2

- Recognizing Feelings
  - Identifying anxious feelings
  - Goals:
    - Build Rapport
    - Review STIC task from session 1
    - Introduce the concept that different feelings have different physical expressions
    - Normalize the experiences fears and anxiety
    - Begin to construct a hierarchy of anxiety-provoking situations
    - Assign STIC task

Coping Cat – Session 2

★ **Feelings Role Play: Can You Guess What I'm Feeling?**

Try and show your feelings using only your face and body. No words! You can do it! See if your therapist can guess what you are feeling.

★ **If I were in this situation I'd feel...**

Read the following stories and write in a feeling that you might have.

Draw a face to show that feeling.

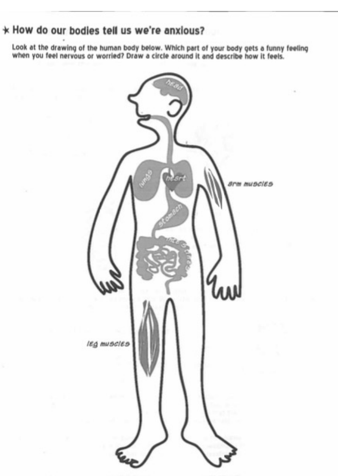
1. Your best friend comes running up to you on the playground. Your friend says, "Let's go play!"

What feeling would you have?

Coping Cat – Session 3

- How Does My Body React?
  - Identifying somatic responses to anxiety
  - Goals:
    - Review STIC task from Session 2
    - Discuss specific somatic reactions to anxiety
    - Practice identifying somatic responses
    - Introduce the “F” step (FEAR)
      - Feeling Frightened?
    - Prepare the child for the upcoming parent session
    - Assign STIC task

Coping Cat – Session 3



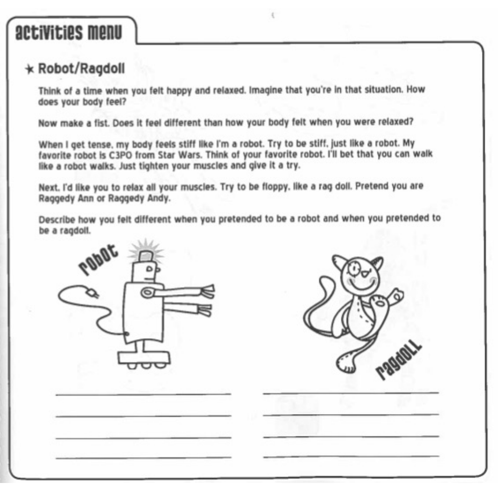
Coping Cat – Session 4

- Parent Meeting
  - First meeting with parents
  - Goals:
    - Provide additional information about treatment
    - Provide parents an opportunity to discuss their concerns
    - Learn more about the situations in which the child becomes anxious
    - Offer specific ways the parents can be involved in the program

Coping Cat – Session 5

- Let's Relax
  - Relaxation training
  - Goals:
    - Acknowledge the parent session
    - Review the STIC task from Session 3
    - Introduce the idea that many somatic feelings associated with anxiety involve muscle tension
    - Introduce the idea of relaxation and practice relaxation techniques
    - Develop the child's awareness of how and when relaxation might be useful
    - Practice relaxation via coping modeling and role-play
    - Practice relaxation with the child's parents
    - Assign STIC task

Coping Cat – Session 5



activities menu

★ Robot/Ragdoll

Think of a time when you felt happy and relaxed. Imagine that you're in that situation. How does your body feel?

Now make a fist. Does it feel different than how your body felt when you were relaxed?

When I get tense, my body feels stiff like I'm a robot. Try to be stiff, just like a robot. My favorite robot is C3PO from Star Wars. Think of your favorite robot. I'll bet that you can walk like a robot walks. Just tighten your muscles and give it a try.

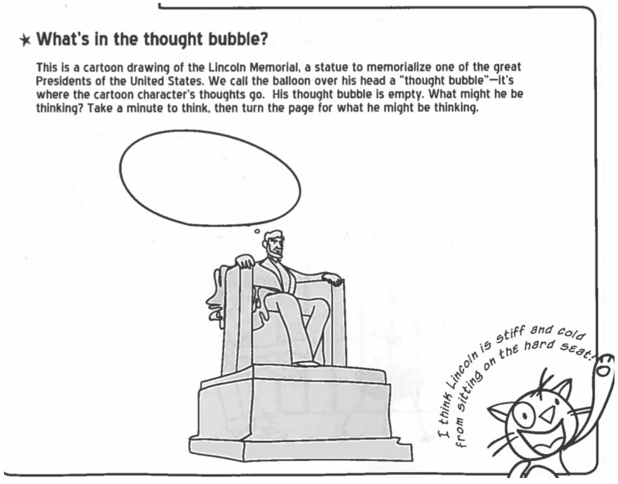
Next, I'd like you to relax all your muscles. Try to be floppy, like a rag doll. Pretend you are Raggedy Ann or Raggedy Andy.

Describe how you felt different when you pretended to be a robot and when you pretended to be a ragdoll.

Coping Cat – Session 6

- What Am I Thinking?
  - Identifying anxious self-talk and learning to challenge thoughts
  - Goals:
    - Review STIC task from Session 5
    - Introduce the concept of thoughts (self-talk)
    - Discuss self-talk in anxiety-provoking situations (anxious self-talk)
    - Differentiate anxious self-talk from coping self-talk
    - Introduce the "E" Step
      - Expecting bad things to happen?
    - Practicing coping self-talk
    - Assign STIC task

Coping Cat – Session 6



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Coping Cat – Session 7

- What Should I Do?
  - Reviewing anxious and coping self-talk and developing problem solving skills
  - Goals:
    - Review STIC task from Session 6
    - Review and discuss the first 2 steps in the FEAR plan
    - Introduce the "A" step
      - Attitudes and actions that can help
    - Discuss the concept of problem solving
    - Practice problem solving in anxious situations
    - Assign STIC task

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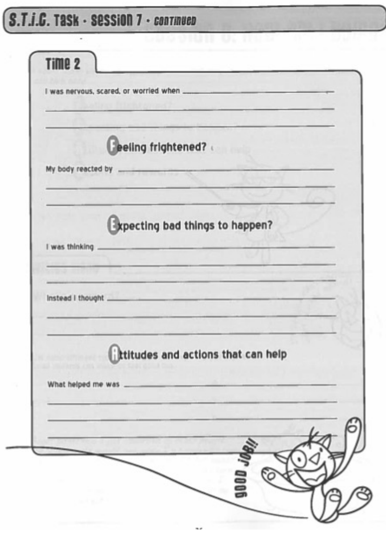
Coping Cat – Session 7


S.T.i.C. Task · Session 7 · continued

Time 2

I was nervous, scared, or worried when ______

Feeling frightened?

My body reacted by ______

Expecting bad things to happen?

I was thinking ______

Instead I thought ______

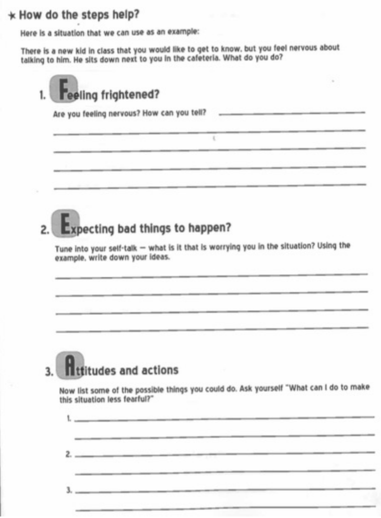
Attitudes and actions that can help

What helped me was ______

Coping Cat – Session 8

- How Am I Doing?
  - Introducing self-evaluation and self-reward and reviewing skills already learned
  - Goals
    - Review STIC task from Session 7
    - Introduce the “R” step
      - Results and rewards
    - Discuss the concept of self-rating and reward
    - Practice making self-ratings and rewarding oneself for effort
    - Review the FEAR plan
    - Apply the FEAR plan
    - Review the fear hierarchy and discuss exposure tasks
    - Acknowledge upcoming parent session
    - Assign STIC task

Coping Cat – Session 8



★ How do the steps help?

Here is a situation that we can use as an example:

There is a new kid in class that you would like to get to know, but you feel nervous about talking to him. He sits down next to you in the cafeteria. What do you do?

1. Feeling frightened?

Are you feeling nervous? How can you tell?

2. Expecting bad things to happen?

Tune into your self-talk — what is it that is worrying you in the situation? Using the example, write down your ideas.

3. Attitudes and actions

Now list some of the possible things you could do. Ask yourself "What can I do to make this situation less fearful?"

1.

2.

3.

Coping Cat – Session 9

- Parent Meeting
  - Second meeting with parents
  - Goals:
    - Provide additional information about the second half of treatment (i.e., exposure tasks)
    - Provider parents an opportunity to discuss their concerns
    - Learn more about the situations in which the child becomes anxious
    - Offer specific ways the parents can be involved in the second half of treatment

Coping Cat – Session 10

- Start Practicing
  - Practicing in low anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 8
    - Review the idea of progressing from learning new skills to practicing new skills
    - Practice using imaginal exposure in low anxiety-provoking situations
    - Practice in-vivo exposure task in low anxiety-provoking situations
    - Briefly review relaxation exercises
    - Plan an exposure task(s) for Session 11
    - Assign STIC task

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Coping Cat – Session 10

★ **Let's role play**

Using the plan you've developed, role play this situation with your therapist.

★ **Rate your level of anxiety**

Before each situation that you try out, I'd like you to rate how nervous or relaxed you'll be. Let's come up with a scale for you to use. For example, "0" could be very relaxed, and "8" could be extremely nervous or scared. These are already written in. Now you can add a description for "3" and "5" under the numbers.

0	1	2	3	4	5	6	7	8
very relaxed			______		______			very worried

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Coping Cat – Session 11

- More Practice
  - Practicing in low anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 10
    - Continue practicing in-vivo exposure task in low anxiety-provoking situations
    - Plan exposure task(s) for Session 12
    - Assign STIC task

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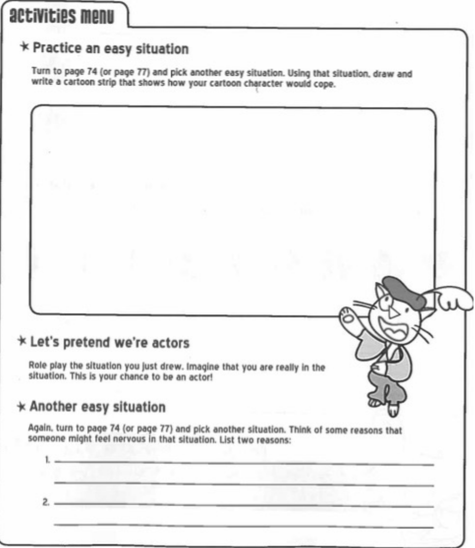
Coping Cat – Session 11



activities menu

★ Practice an easy situation

Turn to page 74 (or page 77) and pick another easy situation. Using that situation, draw and write a cartoon strip that shows how your cartoon character would cope.

★ Let's pretend we're actors

Role play the situation you just drew. Imagine that you are really in the situation. This is your chance to be an actor!

★ Another easy situation

Again, turn to page 74 (or page 77) and pick another situation. Think of some reasons that someone might feel nervous in that situation. List two reasons:

1. ______________________________

2. ______________________________

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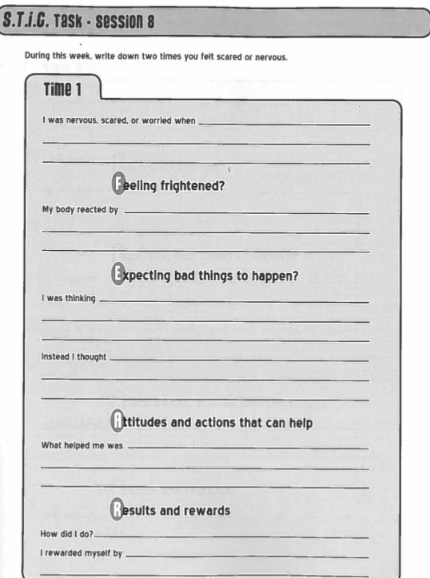
Coping Cat – Session 12

- More Practice
  - Practicing in moderate anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 11
    - Practice using imaginal exposure in moderately anxiety-provoking situations
    - Practice in-vivo exposure task in moderate anxiety-provoking situations
    - Plan exposure task(s) for Session 13
    - Assign STIC task

Coping Cat – Session 12



S.T.I.C. Task · Session 8

During this week, write down two times you felt scared or nervous.

Time 1

I was nervous, scared, or worried when ______

Feeling frightened?

My body reacted by ______

Expecting bad things to happen?

I was thinking ______

Instead I thought ______

Attitudes and actions that can help

What helped me was ______

Results and rewards

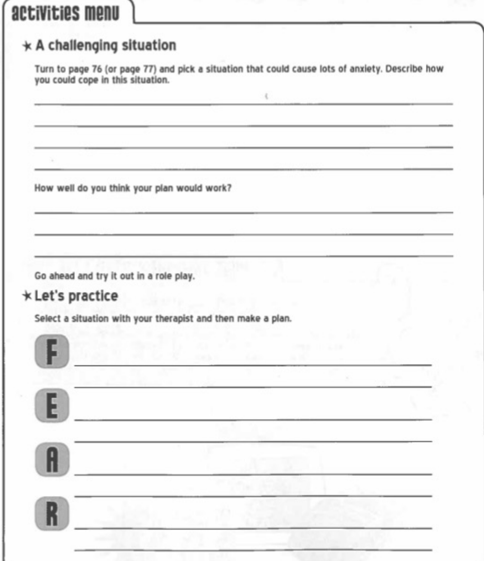
How did I do? ______

I rewarded myself by ______

Coping Cat – Session 13

- It's Getting Tougher
  - Practicing in moderately anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 12
    - Practice using in-vivo exposure task in moderate anxiety-provoking situations
    - Plan exposure task(s) for Session 14
    - Assign STIC task

Coping Cat – Session 13



activities menu

★ A challenging situation

Turn to page 76 (or page 77) and pick a situation that could cause lots of anxiety. Describe how you could cope in this situation.

How well do you think your plan would work?

Go ahead and try it out in a role play.

★ Let's practice

Select a situation with your therapist and then make a plan.

F

E

A

R

Coping Cat – Session 14

- Let's Practice Some More
  - Practicing in high anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 13
    - Practice using imaginal exposure in high anxiety-provoking situations
    - Practice in-vivo exposure task in high anxiety-provoking situations
    - Plan exposure task(s) for Session 15
    - Assign STIC task

Coping Cat – Session 14

Sometimes there might be several things that could cause you to worry in a situation. Think of all the things that might make you feel nervous in the situation you picked and how you would cope with each one.

Act out the situation.

★ **Practice a real situation**

Now let's really practice in the same situation. First, let's make a plan.

F

E

A

R

Coping Cat – Session 15

- Another Chance to Practice
  - Practicing in high anxiety-provoking situations using exposure tasks
  - Goals:
    - Review STIC task from Session 14
    - Practice in-vivo exposure task in moderate anxiety-provoking situations
    - Plan a closing exposure task for Session 16
    - Discuss briefly the end of treatment
    - Assign STIC task

Coping Cat – Session 15

activities menu

★ A scary situation

First pick a situation from page 75 (or page 77). Think of the scale from 0 to 8. Using that scale, pick a situation that would be a 4.

Using the FEAR plan, describe how you would cope with the situation.

F ____________________

E ____________________

A ____________________

R ____________________

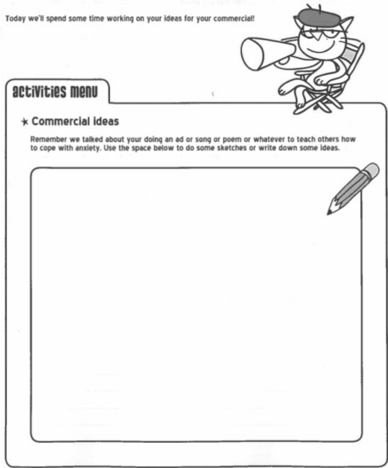
Role play the situation with your therapist, then describe how it went.

Thoughts	Feelings	Results

Coping Cat – Session 16

- You Did It!!
  - Practicing in high anxiety situations, producing the commercial, and terminating treatment
  - Goals:
    - Review STIC task from Session 15
    - Conduct a final exposure task in a high anxiety-provoking situation
    - Have fun producing the “commercial”
    - Review and summarize the treatment program and bring closure to the therapeutic relationship

Coping Cat – Session 16


Today we'll spend some time working on your ideas for your commercial!

activities menu

★ Commercial ideas

Remember we talked about your doing an ad or song or poem or whatever to teach others how to cope with anxiety. Use the space below to do some sketches or write down some ideas.

Coping Cat Parent Companion

- Used for parent when treating the child
- Education about anxiety and treatment
- Reads like a book about what is happening in each session.
- Gives relaxation scripts for parents to use with their child
- Educates about rewards during the program
- FEAR Plan – A Coping Guide

The FEAR Plan- A Coping Guide

1) F- Am I feeling anxious or frightened?
   - Pay attention to my body-- stomach aches, headaches, heart pounding, feeling warm, restless, irritable-- these can all be signs of anxiety
   - Start off by doing some deep breathing- maybe even other relaxation strategies. Relax.
   - Now it is time to put the rest of the FEAR plan into action

2) E- What am I expecting will happen? What is my self-talk?
   - Pay attention to my thoughts-- what am I thinking, what am I asking myself?
   - Does it sound like I am falling into a thinking trap?
   - Watch out for these thinking traps
     - *Walking with blinders:* Not thinking about all of the possible good things that could happen, only thinking about the bad ones
     - *The Repetitor:* If it happened once it's always going to happen that way
     - *The Catastrophe:* Always thinking the worst possible thing will happen
     - *The Pessimist:* Expecting things to always turn out badly
     - *Pick, Pick, Pick:* Picking out the negatives in the situation
     - *The Avoider:* Avoiding or staying away from things that make you nervous
     - *The Mind Reader:* reading minds & believing that someone is thinking bad things
     - *The Shoulds:* I should always get my homework right. I shouldn't feel nervous
     - *The Fortune Teller:* Predicting what will happen in the future
     - *The Perfectionist:* "I have to do it right all the time" "I cannot make mistakes"

3) A- What are attitudes and actions that might help? What is a coping thought that I could have in this situation?
   - Gather evidence for the thought. Do I know for sure this is going to happen?
   - What else might happen in this situation?
   - How many times has this happened before? How likely is it this will happen?
   - What is the worst thing that could happen? What would be so bad about that?
   - Begin *problem solving!*

4) R- Results and rewards- yeah! You did it!
   - See that wasn't so bad. Next time you'll be able to do it with no problem
   - Give yourself rewards for all of your accomplishments, not just when you do something perfectly

CAT Project

- For adolescents
- Age appropriate cartoons and examples
- Take Home Projects

CAT Project

Circle each of the following physical feelings you felt at that time (add others that we might have forgotten):

- Heart Pounding
- Heart Racing
- Nausea
- Lump in Throat
- Dizziness
- Smothering Sensations
- Butterflies
- Headache
- Ringing in the Ears
- Pain in the Chest
- Blushing
- Blurry Vision
- Chills
- Diarrhea
- Tingling
- Feeling Faint
- Shortness of Breath
- Shakiness (hands, head, knees)
- Tightness in the Chest
- Others:

The physical feelings that you circled will act as clues for knowing when you're feeling anxious in a situation. They'll be like your body's alarm to tell you that it's time to do something to feel less anxious. We call it **the FEAR Plan.**

We'll spend a lot of time working on the **FEAR** Plan. Let's start by giving you a brief introduction.

CAT Project

TAKE HOME PROJECT: This week write about one anxious experience similar to the situation you practiced today. Record what happened and how you used the steps.

Today's Date: ____________

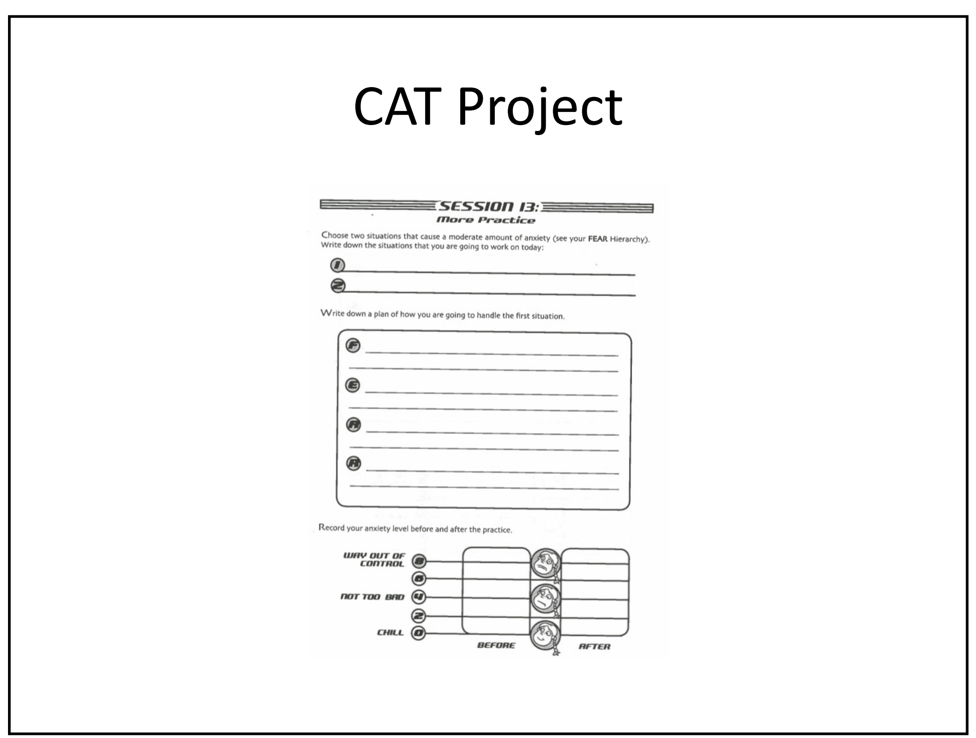
Situation: ____________

Feeling Frightened? ____________

Expecting Bad Things to Happen? ____________

Attitudes or Actions That Can Help: ____________

Results and Reward: ____________



CAT Project

SESSION 13:

More Practice

Choose two situations that cause a moderate amount of anxiety (see your **FEAR** Hierarchy). Write down the situations that you are going to work on today:

1 ____________

2 ____________

Write down a plan of how you are going to handle the first situation.

F ____________

E ____________

A ____________

R ____________

Record your anxiety level before and after the practice.

WAY OUT OF CONTROL 8

6

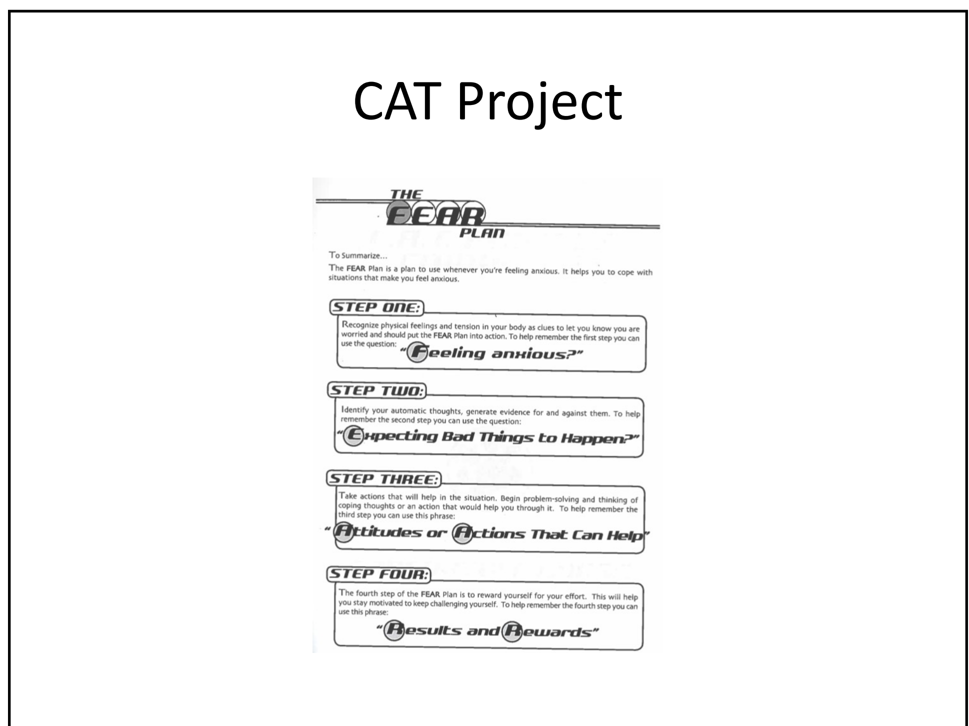
NOT TOO BAD 4

2

CHILL 0

BEFORE

AFTER



CAT Project

THE FEAR PLAN

To Summarize...

The **FEAR** Plan is a plan to use whenever you're feeling anxious. It helps you to cope with situations that make you feel anxious.

STEP ONE:

Recognize physical feelings and tension in your body as clues to let you know you are worried and should put the **FEAR** Plan into action. To help remember the first step you can use the question:

"Feeling anxious?"

STEP TWO:

Identify your automatic thoughts, generate evidence for and against them. To help remember the second step you can use the question:

"Expecting Bad Things to Happen?"

STEP THREE:

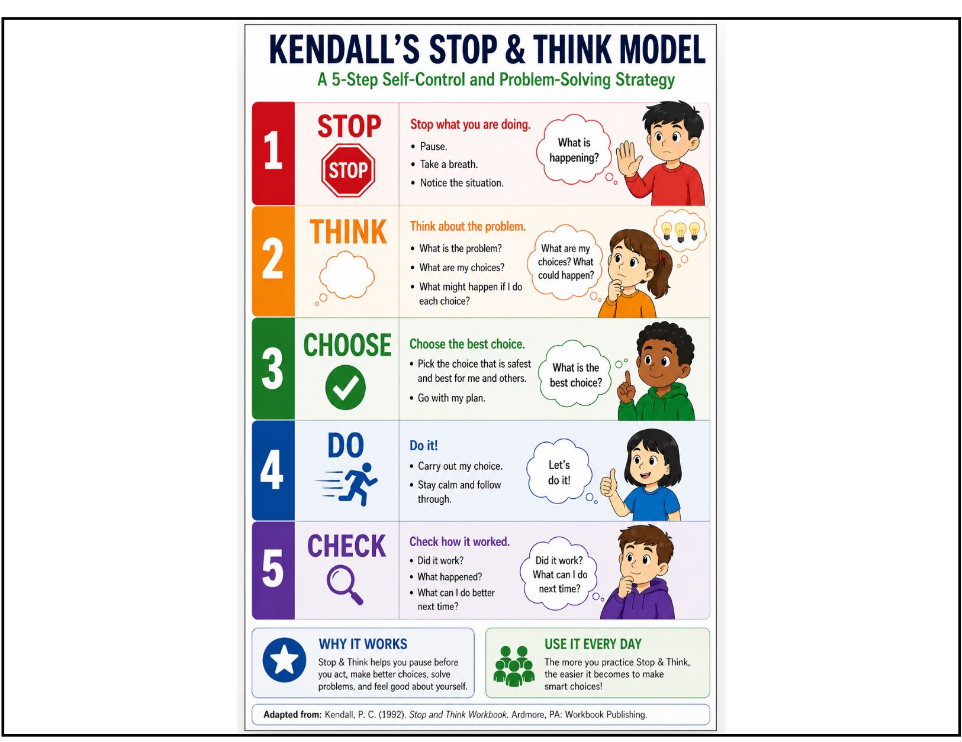
Take actions that will help in the situation. Begin problem-solving and thinking of coping thoughts or an action that would help you through it. To help remember the third step you can use this phrase:

"Attitudes or Actions That Can Help"

STEP FOUR:

The fourth step of the **FEAR** Plan is to reward yourself for your effort. This will help you stay motivated to keep challenging yourself. To help remember the fourth step you can use this phrase:

"Results and Rewards"



Stop and Think

Targets Primary Skills
- Impulse control
- Problem-solving
- Emotional regulation
- Social decision-making

Common Student Profiles
- ADHD (impulsivity, poor inhibition)
- Oppositional behaviors
- Social skill deficits
- Emotional dysregulation

How It's Used in Schools
- **Teaching Methods**
  - Modeling (teacher demonstrates thinking aloud)
  - Role-playing scenarios
  - Visual cue cards ("STOP – THINK")
  - Practice in real situations

Stop and Think

Classroom Example
- Student wants to shout out:
- STOP → pause
- THINK → "If I shout, I might get in trouble"
- CHOOSE → raise hand
- DO → wait
- CHECK → "That worked better"

Why It Works (Mechanism)
- It directly builds **executive functioning skills**:
  - Inhibitory control
  - Cognitive flexibility
  - Planning
- It turns **automatic behavior → deliberate behavior**

OCD - Diagnosis

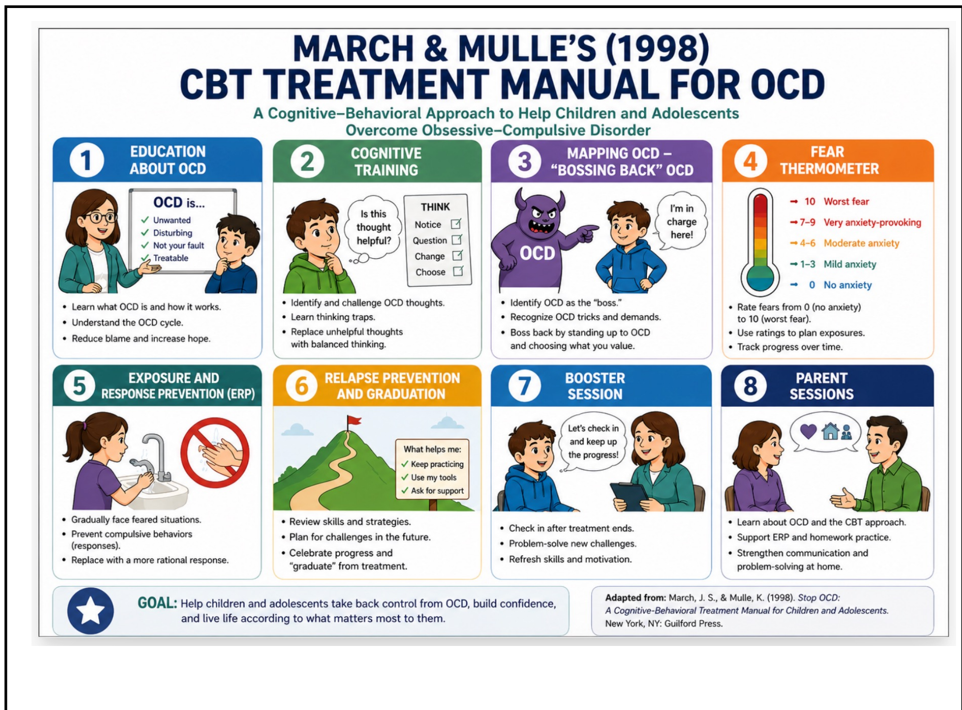
- You must have obsessions and compulsions
- The obsessions and compulsions must significantly impact your daily life
- You may or may not realize that your obsessions and compulsions are excessive or unreasonable
- Obsessions:
  - Intrusive, repetitive and persistent thoughts, urges, or images that cause distress
  - The thoughts do not just excessively focus on real problems in your life
  - You unsuccessfully try to suppress or ignore the disturbing thoughts, urges, or images
  - You may or may not know that your mind simply generates these thoughts and that they do not pose a true threat
- Compulsions:
  - Excessive and repetitive ritualistic behavior that you feel you must perform, or something bad will happen. Examples include hand washing, counting, silent mental rituals, checking door locks, etc.
  - The ritualistic compulsions take up a least one hour or more per day
  - You perform these physical rituals or mental acts to reduce the severe anxiety caused by the obsessive thoughts.

OCD

High functioning ASD – CBT and Exposure and Response Prevention (ERP)

- Lehmkuhl and colleagues (2008) – Case study with ERP
- Russell and colleagues (2013) - CBT with larger sample size using randomized controlled trial

Limitations – although demonstrating effectiveness in literature, more research needed to confirm.



Classroom Interventions

1. Structured & Predictable Environment (FOUNDATION)
2. Visual Supports (HIGH IMPACT)
3. Task Modification (MAKE WORK DOABLE)
4. Positive Reinforcement (BEHAVIOR DRIVER)
5. Behavioral Classroom Management (CORE ADHD INTERVENTION)
6. Environmental Modifications (LOW EFFORT, HIGH RETURN)
7. Social Skills & Communication Support
8. Movement & Sensory Regulation

Classroom Interventions

1. **Structured & Predictable Environment (FOUNDATION)**

This is the single most important intervention for BOTH groups

What it looks like:

- Visual schedules
- Clear routines and transitions
- Consistent rules and expectations

Why it works:

- Reduces anxiety (Autism)
- Reduces executive load (ADHD)

Evidence:

- Structured environments and routines improve engagement and reduce disruptions

Classroom Interventions

2. Visual Supports (HIGH IMPACT)

- Especially critical for Autism, but also highly effective for ADHD

Examples:

- Step-by-step task charts
- Visual schedules
- Models of completed work

Why it works:

- Reduces reliance on working memory
- Increases independence

Evidence:

- Visual supports are a core evidence-based practice for autism
- Checklists and visual aids improve task completion in ADHD

Classroom Interventions

3. Task Modification (MAKE WORK DOABLE)

- Most classroom failure is task mismatch, not behavior

Strategies:

- Break tasks into smaller steps
- Give one direction at a time
- Provide extra time

Why it works:

- Supports executive functioning
- Prevents overwhelm

Evidence:

- Breaking tasks and giving stepwise instructions improves outcomes

Classroom Interventions

4. Positive Reinforcement (BEHAVIOR DRIVER)

- One of the most powerful interventions in both populations

Examples:

- Token systems
- Praise for effort
- Immediate feedback

Why it works:

- Strengthens desired behaviors
- Increases motivation

Evidence:

- Behavioral reinforcement strategies are widely supported in ADHD and ASD interventions

Classroom Interventions

5. Behavioral Classroom Management (CORE ADHD INTERVENTION)

- This is considered *first-line school intervention* for ADHD

Includes:

- Clear expectations
- Immediate feedback
- Private redirection
- Frequent monitoring

Why it works:

- Directly targets regulation deficits

Evidence:

- Teacher-led behavioral interventions are effective for ADHD symptoms

Classroom Interventions

6. Environmental Modifications (LOW EFFORT, HIGH RETURN)

Examples:

- Preferential seating
- Reduced distractions
- Quiet work areas

Why it works:

- Improves attention
- Reduces sensory overload

Evidence:

- Environmental adjustments improve attention and engagement

Classroom Interventions

7. Social Skills & Communication Support

- Especially critical for Autism (but also ADHD)

Strategies:

- Social skills groups
- Modeling and role-play
- Explicit teaching of social rules

Why it works:

- Social skills are often not intuitive

Evidence:

- Social skills training and communication interventions improve outcomes
- Most effective in natural setting

Classroom Interventions

8. Movement & Sensory Regulation

- Often overlooked but extremely powerful

Examples:

- Movement breaks
- Fidget tools
- Sensory-friendly spaces

Why it works:

- Regulates nervous system
- Improves attention and behavior

Evidence:

- Individualized supports like movement and sensory tools can improve attention and engagement

Classroom Interventions

- Don't underestimate the importance of BREAKS!
- Structured Break Times
- Use of Break Card
- Break Area

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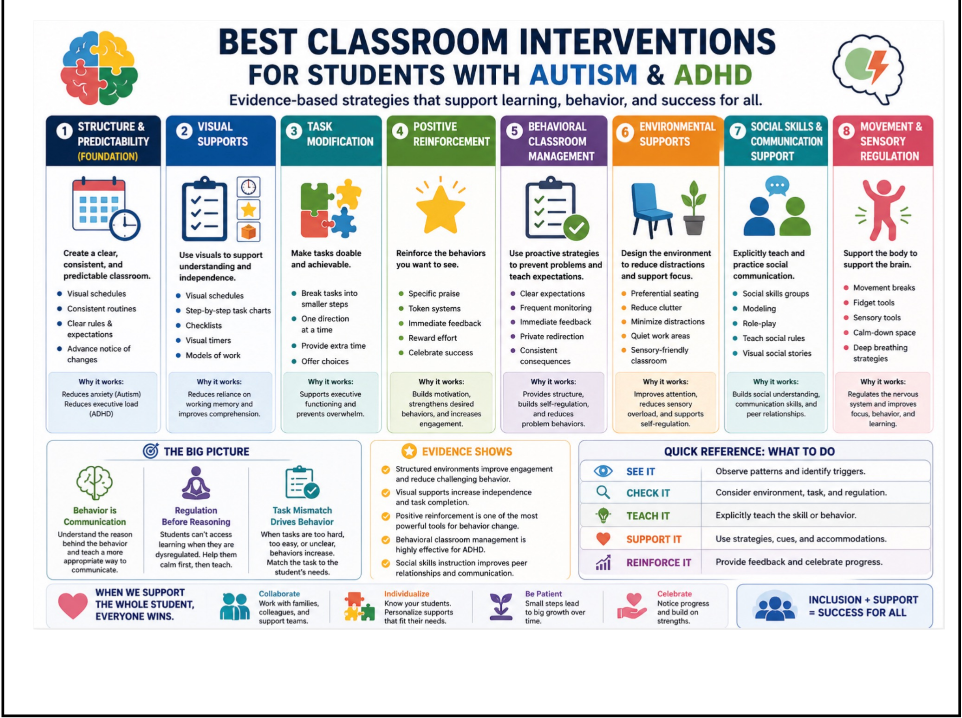

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ADHD Psychopharmacology

Stimulants (First-Line Treatment)

- **Methylphenidate-based**
  - Ritalin
  - Concerta
  - Focalin
- **Amphetamine-based**
  - Adderall
  - Vyvanse

Effectiveness

- Work in **~70–80% of individuals**
- Largest effect sizes of any psychiatric medication class
- Improve:
  - Attention
  - Impulse control
  - Task completion
  - Academic productivity

These are considered the **most effective treatments in all of child psychiatry**

ADHD Psychopharmacology

Non-Stimulants (Second-Line or Adjunct)

- Strattera (atomoxetine)
- Intuniv
- Kapvay

When Used

- Stimulants not tolerated
- Co-occurring anxiety, tics, or sleep issues
- Need for **all-day smoother coverage**

Effectiveness

- Moderate effect size (less than stimulants)
- Slower onset (2–6 weeks)

ADHD Psychopharmacology

Common Side Effects (Stimulants)
- Appetite suppression
- Sleep difficulty
- Irritability (especially as it wears off)
- Headaches / stomachaches

Non-Stimulant Side Effects
- Fatigue (guanfacine/clonidine)
- Blood pressure lowering
- GI issues (atomoxetine)
- Rare: suicidal thinking warning (atomoxetine)

Best outcomes occur when combined with:
- Behavioral strategies
- Parent/teacher training
- Academic supports
- Skill-building interventions

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ADHD Psychopharmacology

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Autism Psychopharmacology

Limitations of Research and Potential Risk

- Antipsychotics are the only medication proven to be effective in reducing repetitive and stereotypical behaviors in autism based on Fair Quality Studies. Other medications, such as antidepressants or those for ADHD, have not been replicated and/or are low quality studies (e.g., small sample sizes, lacking control groups, not randomized). Antidepressants are not considered effective in treating symptoms of autism in children. Risk factors include numerous side effects.

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Autism Psychopharmacology

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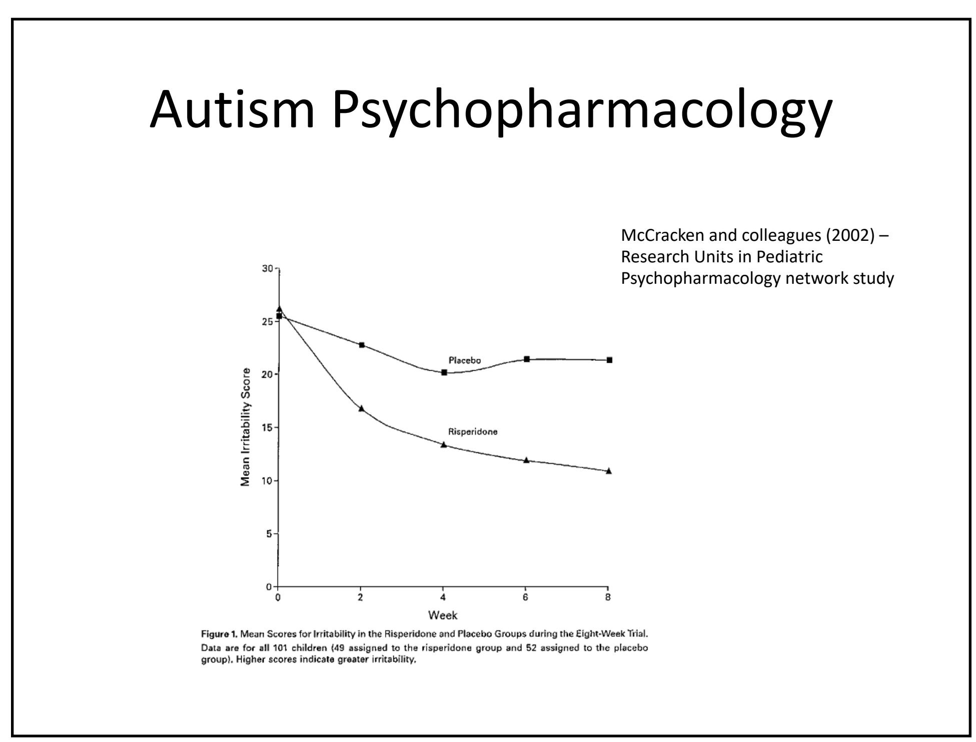
Autism Psychopharmacology

- Antipsychotics
    - McDougle and colleagues (1998)
    - 24 participants completed the trial. The experimental design was a 12-week, randomized, doubleblind, placebo-controlled phase followed by a 12-week, open-label risperidone treatment phase for individuals from the placebo group
    - Observed decreased aggression, repetitive behavior, irritability, anxiety, and depression
    - Considered a "Fair Quality Study"

Autism Psychopharmacology

- Risperidone (Risperdal) – FDA Approved
    - McCracken and colleagues (2002) – Research Units in Pediatric Psychopharmacology network study
    - n = 101, eight-week, double-blind placebo-controlled study
    - Ages 5-17 y, dx with autism
    - 1.8 (+ or – 0.7) mg day
    - 57% decrease on the Irritability subscale of the Aberrant behavior Checklist
    - 69% rated much improved versus 11% for placebo on the Clinical Global Impression – Improvement scale
    - Improvement on the Stereotypy and Hyperactivity subscales
    - No improvement on the Social Withdrawal or Inappropriate Speech subscales.
    - Side effect: Weight Gain



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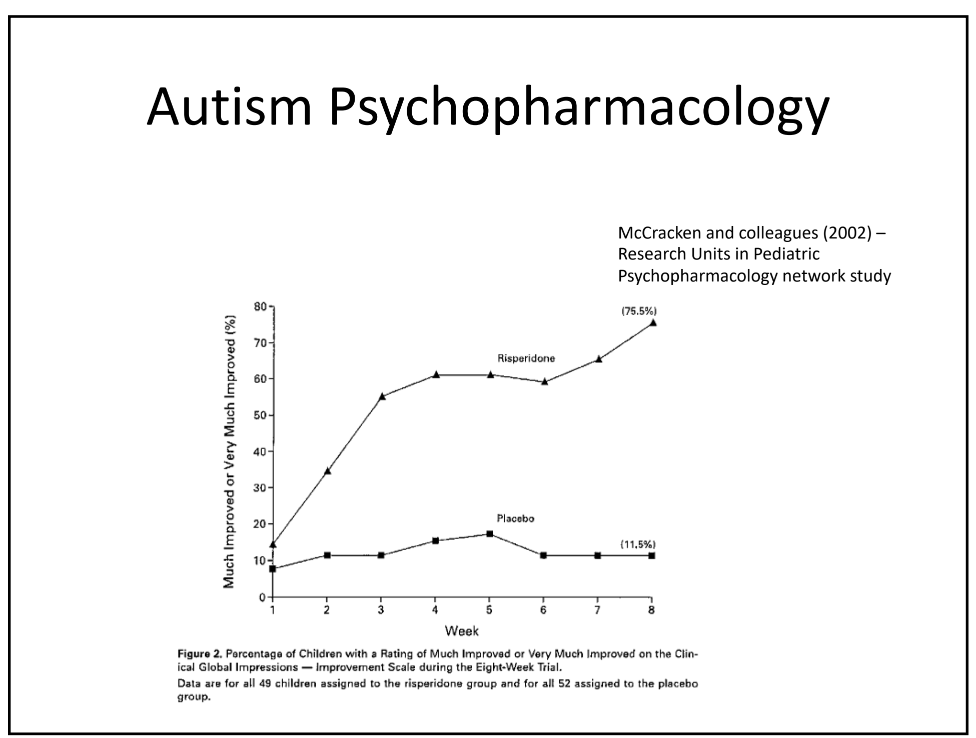

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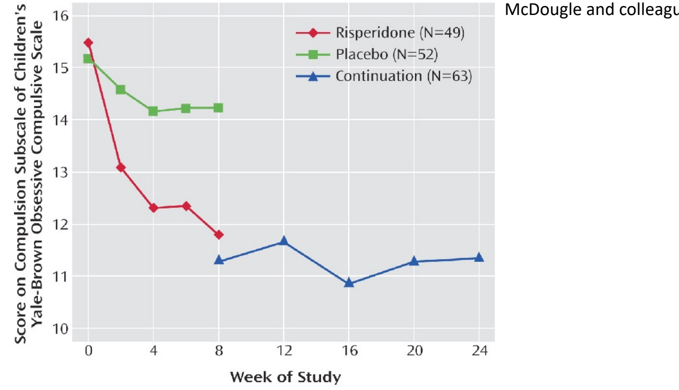
Autism Psychopharmacology

- Antipsychotics
  - Risperidone (Risperdal) –
    - McDougle and colleagues (2005)
    - n = 174
    - Reduced overall score on the Ritvo-Freeman Real Life Rating Scale and following subscales: Sensory Motor Behaviors, Affectual Relations, and Sensory Responses. No effects on Social Relatedness or Language.
    - Reduced scores on the Children's Yale-Brown Obsessive Compulsive Scale and Vineland maladaptive Behavior Domain.
    - Treatment response maintained for 6 months.

Autism Psychopharmacology



McDougle and colleagues (2005)

Figure 1. Scores for Compulsions on the Children's Yale-Brown Obsessive Compulsive Scale of Children and Adolescents in a Placebo-Controlled Risperidone Trial and Open-Label Continuation Study

Autism Psychopharmacology

- Limitations of Research and Potential Risk
  - Other medication studies have not been replicated and/or are low quality studies (e.g., small sample sizes, lacking control groups, not randomized). The medications discussed in the next several slides are not considered effective in treating symptoms of autism in children. Risk factors include numerous side effects.

Autism Psychopharmacology

- Antidepressants
  - Tricyclics
    - Clomipramine (Anafranil)
      - Decreased compulsive behavior, stereotypies, aggression and self-injury (Gordon et al, 1993)
  - SSRI's
    - Fluvoxamine (Luvox)
      - Decreased repetitive behavior, aggression, and inappropriate repetitive language in adults with autism (McDougle et al., 1996)
      - McDougle and colleagues repeated study in 2000 with children – limited improvement, adverse effects
      - Martin, Koenig, Anderson, & Scahill (2003) – pilot study of age-related differences. Minimized side effects by use of low initial dose with gradual increases – inconsistent responses.

Selective serotonin reuptake inhibitors (SSRIs) Review

- There is no evidence of effect of SSRIs in children and possible emerging evidence of harm.
  - One study reported significantly more adverse events in children on citalopram compared to placebo and one serious adverse event, a prolonged seizure (King, 2009). Both studies of fenfluramine reported adverse effects in children, including withdrawal and sadness that prompted dosage changes (Barthelemy, 1989) and weight loss (Barthelemy, 1989, Leventhal, 1993).
  - No significant differences were reported for side effects in children in the treatment or placebo group for fluoxetine (Hollander, 2005) and little information was available for side effects in children in the fluvoxamine study (Sugie, 2005).

(Williams and colleagues, 2013)

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Selective serotonin reuptake inhibitors (SSRIs) Review

- There is limited evidence of the effectiveness of SSRIs in adults from small studies in which risk of bias is unclear.
  - Some reported improvements in:
    - Clinical global impression (fluvoxamine and fluoxetine)
    - Obsessive-compulsive behaviors (fluvoxamine)
    - Anxiety (fluoxetine)
    - Aggression (fluvoxamine).

(Williams and colleagues, 2013, Reiersen & Handen, 2011)

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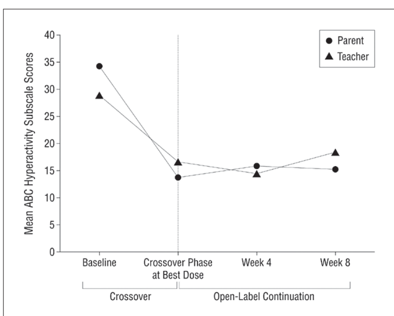
Autism Psychopharmacology

- Stimulants
  - Methylphenidate
  - Posey and colleagues (2005)
  - 72 children, ages 5-15 years with ASD with hyperactivity
  - Effect sizes ranging from 0.20 to 0.54 depending on dose and rater.
  - Thirty-five (49%) of 72 enrolled subjects were classified as methylphenidate responders.
  - Adverse effects led to the discontinuation of study medication in 13 (18%) of 72 subjects.

Autism Psychopharmacology

Posey and colleagues (2005)



- **Figure 2.** Mean Aberrant Behavior Checklist (ABC) hyperactivity subscale scores as rated by teachers and parents at baseline, at the best dose of methylphenidate during the crossover phase, and during the methylphenidate hydrochloride open-label continuation phase. Linear slopes were used to examine the change in the primary outcome measure over time during the 8-week open-label continuation phase. Parent-rated (F = 1.09; *P* = .30) and teacher-rated (F = 3.01; *P* = .10) ABC hyperactivity subscale score slopes were not significantly different from 0, suggesting a maintenance of response.

Autism Psychopharmacology

- Stimulants
  - Ritalin, Concerta, Metadate (Handen et al., 2000; Quintana et al., 1995, Ghanizadeh et al., 2019)
    - Improvement in symptoms of hyperactivity
    - Side effects: social withdrawal and irritability
- Clonidine (Catapres) (Rankhauser et al., 1992; Jaselskis et al., 1992, Ming et al., 2008)
    - Reduced irritability, hyperactivity, and impulsivity in double-blind trials
    - Side effects: tolerance, hypotension, rebound hypertension, over-sedation
- Guanfacine (Tenex) (Posey et al., 2004, Jahagirdar & Mahood, 2023)
    - Limited evidence. Improvements in insomnia, tics, hyperactivity and inattention (less sedation and rebound effect)

Psychopharmacology: Ethical Considerations

- Do individuals with ASD process medication differently than neurotypical individuals???

Questions???

Thank you!