

# Autism and Anxiety Disorders: Assessment & Intervention



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# Brief Introduction



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## **Monarch Center for Autism**

- Preschool & Day School (ages 3-21)
- Transition Education Program (ages 14-21)
- Monarch Boarding Academy / residential treatment facility (ages 8-21)
- Adult Day & Residential Services (ages 18+)



# Disclosures

- I have no financial disclosures.

# Overview

- Anxiety disorders occur frequently in children with Autism Spectrum Disorder. Identification and treatment of these symptoms can be challenging.



# Objectives

- Define the diagnosis of anxiety disorders as described by the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)*
- Identify symptoms in individuals with ASD
- Discuss treatment of anxiety disorders
- Question & Answer



# What is Anxiety?

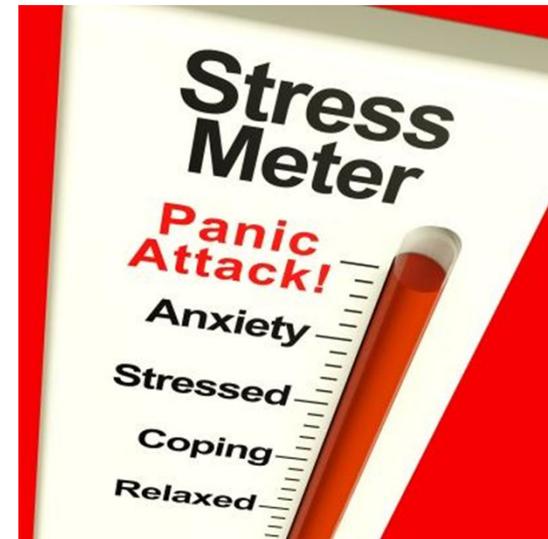
ME: WHAT COULD POSSIBLY GO WRONG?

ANXIETY: I AM GLAD YOU ASKED



# What are the Anxiety Disorders?

- According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5):
  - Separation Anxiety Disorder
  - Generalized Anxiety Disorder
  - Specific Phobia
  - Selective Mutism
  - Social Anxiety Disorder (Social Phobia)
  - Panic Disorder
  - Panic Attack Specifier
  - Agoraphobia
  - Substance/Medication-Induced Anxiety Disorder
  - Due to Another Medical Condition
  - Unspecified/Other specified



# Generalized Anxiety Disorder in DSM-5

## Diagnosis (DSM-V criteria)

- A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).
- B. The individual finds it difficult to control the worry.
- C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months):
  - Note:** Only one item is required in children.
  - 1. Restlessness or feeling keyed up or on edge.
  - 2. Being easily fatigued.
  - 3. Difficulty concentrating or mind going blank.
  - 4. Irritability.
  - 5. Muscle tension.
  - 6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).
- D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).
- F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

# Social Anxiety Disorder in DSM-5

- Marked fear or anxiety in one or more social or performance situations in which the person is exposed to possible scrutiny by others.
- Fear that they will act in a way (or show anxiety symptoms) that will be humiliating, embarrassing, or they will be rejected by others.
- Exposure to the feared social situation almost invariably provokes anxiety or a panic attack. The fear or anxiety is out of proportion to the actual threat of the situation.
- Feared social or performance situations are either avoided or endured with intense anxiety or distress.
- The fear or avoidance interferes significantly with the person's normal routine, occupational functioning, relationships, or social activities.
- For children and adults, the duration of symptoms must be at least 6 months.
- The fear or avoidance is not due to the direct physiologic effects of a substance or a general medical condition, and is not better accounted for by another mental disorder.
- If a general medical condition or another mental disorder is present, the social anxiety disorder is unrelated to it.
- The diagnosis can be further specified as "performance only" if the anxiety is focused specifically on public speaking or performing in public to a degree that there is marked functional impairment (e.g., interfering with ability to work).
- In children:
  - The anxiety must occur in peer settings, and not just in interactions with adults.
  - The anxiety may also be expressed by crying, tantrums, "freezing," or shrinking from social situations with unfamiliar people.

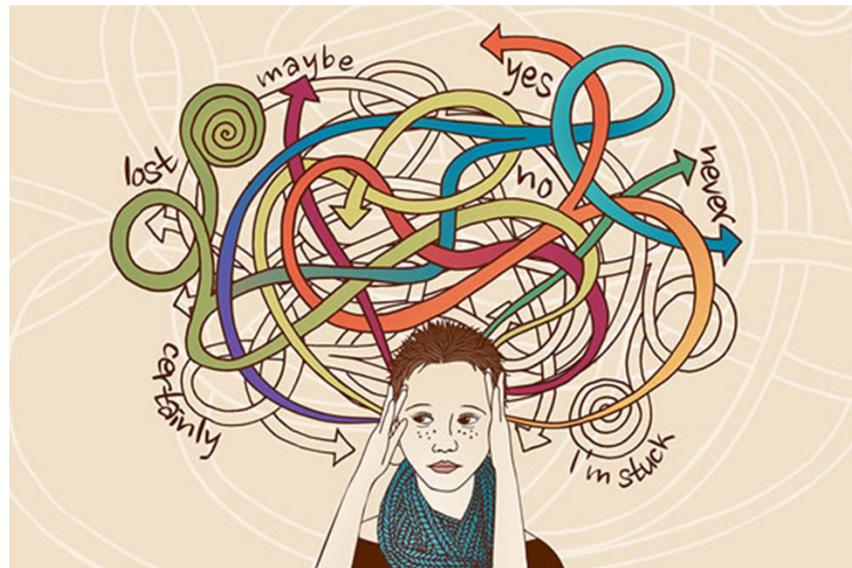
# Separation Anxiety Disorder in DSM-5

- Developmentally inappropriate and excessive fear or anxiety concerning separation from those to whom the individual is attached, as evidenced by at least three of the following:
  - Recurrent excessive distress when anticipating or experiencing separation from home or from major attachment figures.
  - Persistent and excessive worry about losing major attachment figures or about possible harm to them, such as illness, injury, disasters, or death.
  - Persistent and excessive worry about experiencing an untoward event.
  - Persistent reluctance or refusal to go out, away from home, to school, to work, or elsewhere because of fear of separation.
  - Persistent and excessive fear of or reluctance about being alone or without major attachment figures at home or in other settings.
  - Persistent reluctance or refusal to sleep away from home or to go to sleep without being near a major attachment figure.
  - Repeated nightmares involving the theme of separation.
  - Repeated complaints of physical symptoms when separation from major attachment figure occurs or is anticipated.



# What? No OCD?

- In DSM–5, it falls under its own category:
  - Obsessive-Compulsive and Related Disorders
- Others include Hoarding, Trichotillomania



# Obsessive-Compulsive Disorder in DSM-5

- Obsessions, Compulsions, OR both
  - Obsession: Recurrent thought or urge/image, disturbing and intrusive and can cause distress. Individual will attempt to ignore or neutralize thoughts.
  - Compulsion: Repetitive behaviors or mental acts people feel the need to perform in response to obsession, or rigid rule in order to prevent anxiety or dreaded situation but not connected in any way to neutralize threat.

# Anxiety Disorders

- Prevalence
  - In Children with ASD: ~40%
- Demographics:
  - Higher Verbal IQ?
  - Younger Children: Separation Anxiety Disorder
  - Older Children: GAD



# Prevalence of Autism Spectrum Disorder



**Identified Prevalence of Autism Spectrum Disorder**  
 ADDM Network 2000-2010  
 Combining Data from All Sites

Surveillance Year	Birth Year	Number of ADDM Sites Reporting	Prevalence per 1,000 Children (Range)	This is about 1 in X children...
2000	1992	6	6.7 (4.3 - 9.9)	1 in 150
2002	1994	14	6.6 (3.3 - 10.6)	1 in 150
2004	1996	8	8.0 (4.6 - 9.8)	1 in 125
2006	1998	11	9.0 (4.2 - 12.1)	1 in 110
2008	2000	14	11.3 (4.8 - 21.2)	1 in 88
2010	2002	11	14.7 (14.3 - 15.1)	1 in 68

# Thinking of Anxiety Differently

- Atypical Anxiety in ASD
  - A different construct of Anxiety
  - Strict definitions of anxiety may be exclusionary



# Atypical Anxiety in Autism

Atypical Anxiety	% Total	Examples from sample
Anxiety around routine, novelty and restricted interests	22	<i>In the absence of generalized worry:</i> Anticipatory worry or fear related to minor changes in routine (e.g., new or aberrant traveling routes); changes in daily schedule; excessive worry about losing access to special interest or about rule-breaking
Unusual specific fears	12	<i>In the absence of a generalized sensitivity to noise or sensory stimuli:</i> Fears of baby crying; coughing; radio jingle; spider webs; happy birthday song; supermarkets; bubbles; balloons; thorns; fire
Social fearfulness	8.5	<i>In youth who lack an awareness of social judgment:</i> somatic symptoms in social settings; frantic efforts to escape and avoid settings where other persons are present; increased self-injurious and aggressive behavior in social settings
Compulsive/ritualistic behavior	8.5	<i>In the absence of clear desire to prevent distress or a feared outcome:</i> Mealtime rituals, verbal rituals, insistence on use of specific phrases, insistence that computers be turned off, doors closed, sleeves rolled down, shoes kept on in car

# Diagnosis



# Diagnostic Complexities

- Communication
  - Limited or non-verbal status
  - Echolalia
- Co-morbid Intellectual Disability
  - Processing or other Learning Disability
- Overlapping Symptoms
- Reliance on Parent Report



# A Diagnostic Conundrum

## Autism Spectrum Disorder 299.00 (F84.0)

### Diagnostic Criteria

#### ***A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive, see text):***

1. Deficits in social-emotional reciprocity, ranging, for example, from **abnormal social approach and failure of normal back-and-forth conversation**; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
2. **Deficits in nonverbal communicative behaviors used for social interaction**, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
3. Deficits in developing, maintaining, and understanding relationships, ranging, for example, from **difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.**

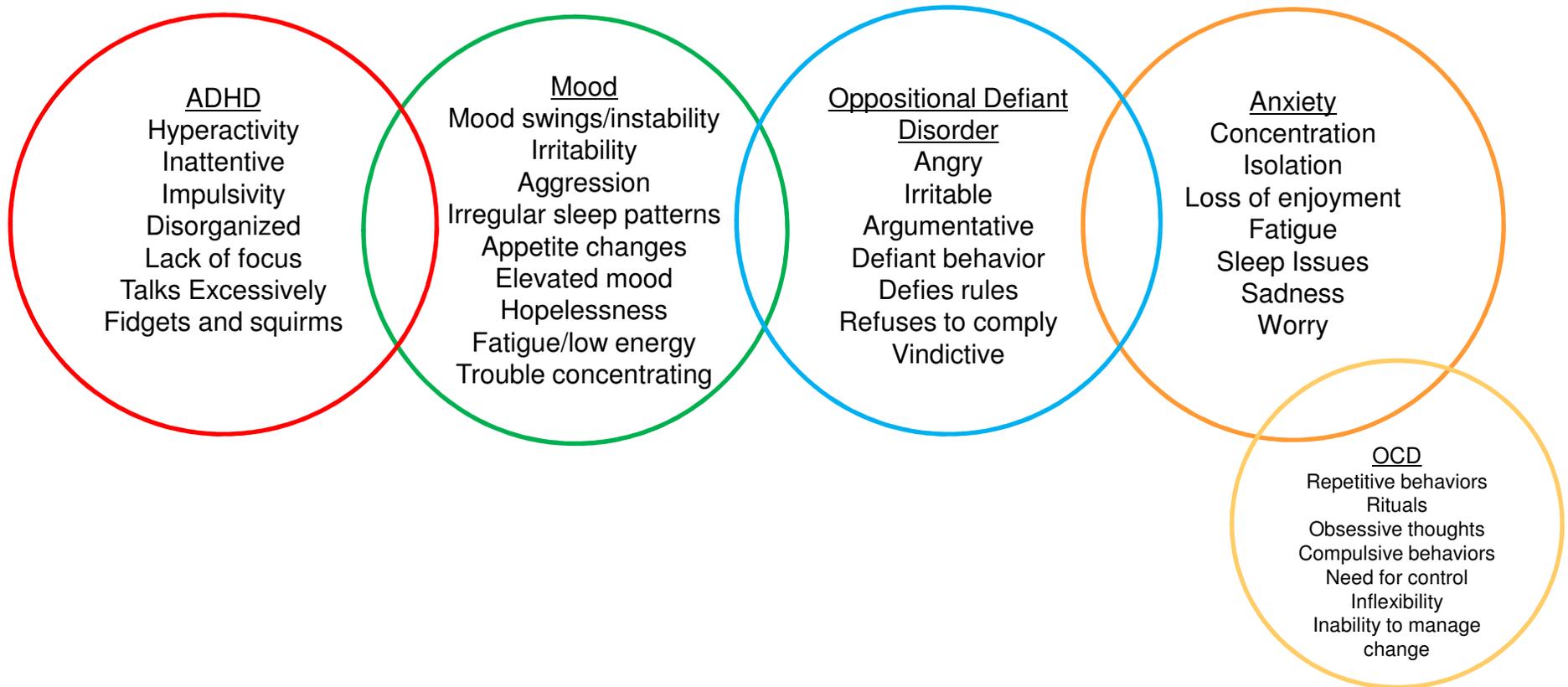
#### ***B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):***

1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
2. **Insistence on sameness, inflexible adherence to routines, or ritualized patterns or verbal nonverbal behavior** (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat food every day).
3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest).
4. **Hyper- or hyporeactivity to sensory input or unusual interests in sensory aspects of the environment** (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

# A Diagnostic Conundrum

- **Separation Anxiety Disorder:** Essential feature is excessive **fear or anxiety concerning separation from home or attachment figures.**
- **Specific Phobia:** A key feature is that the fear or anxiety is circumscribed to the presence of a particular situation or object, which may be termed the *phobic stimulus*.
- **Social Anxiety Disorder:** Essential feature is a marked or intense **fear or anxiety of social situations in which the individual may be scrutinized by others.**
- **Agoraphobia:** Fear or anxiety concerning two or more of...using public transportation, being in open spaces, being in enclosed places, standing in line or being in a crowd, and/or being outside of the home alone.
- **Generalized Anxiety Disorder:** Essential feature is **excessive anxiety and worry about a number of events or activities.**
- **Obsessive-Compulsive Disorder:** Characteristic symptoms are the presence of **obsessions and compulsions.**

# Common Co-Occurring Conditions



# Symptoms of Anxiety Disorder & Autism

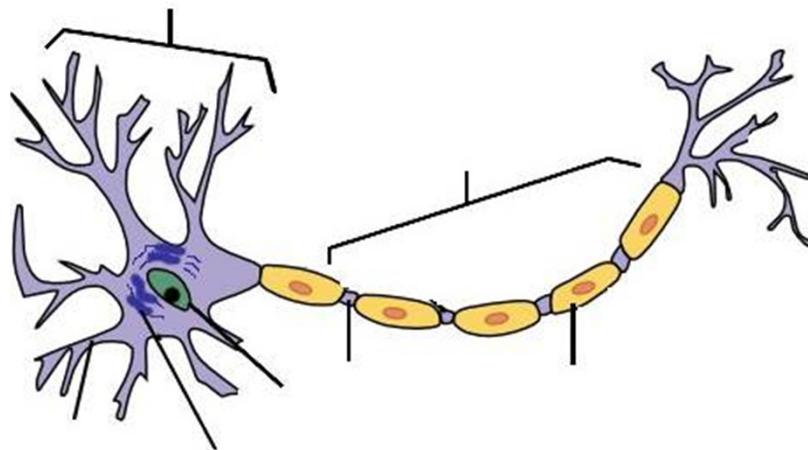
- Crying
- Increased rigidity or perseverations
- Clinging to preferred person
- Difficulty with sleeping
- Avoidant Eye Contact
- Tantrums
- Fearful affect
- Increase in aggression or irritability
- Physical signs: Nausea, increased heart rate, sweating

Vasa RA, Carroll LM, Nozzolillo AA, et al. *A systematic review of treatments for anxiety in youth with autism spectrum disorders. J Autism Dev Disord. 2014;44(12):3215–3229*[pmid:25070468](#).

Magiati I, Ozsivadjian A, Kerns C. Phenomenology and presentation of anxiety in autism spectrum disorder. *anxiety in children and adolescents with autism spectrum disorder: evidence-based assessment and treatment. 2017:33–54.*

# A Special Discussion of OCD

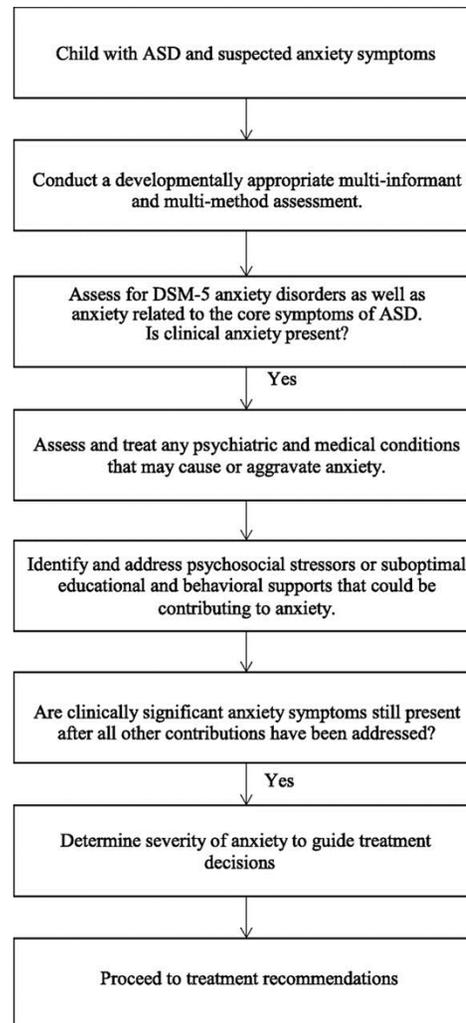
- Is it compulsive behaviors?
- Is it repetitive behavior seen in Autism?
- Is it sensory input?
- Is it an otherwise reinforced behavior?



# A Special Discussion of OCD

- One study:
  - Parent Rating
  - Those with ASD had obsessions of machines/TV/physical items; less about beliefs, psychology, imagination
- Another study:
  - ASD vs Control: Higher hoarding, repeating
  - OCD vs Control: Higher contamination, aggression, checking

# Assessment of anxiety in youth with ASD

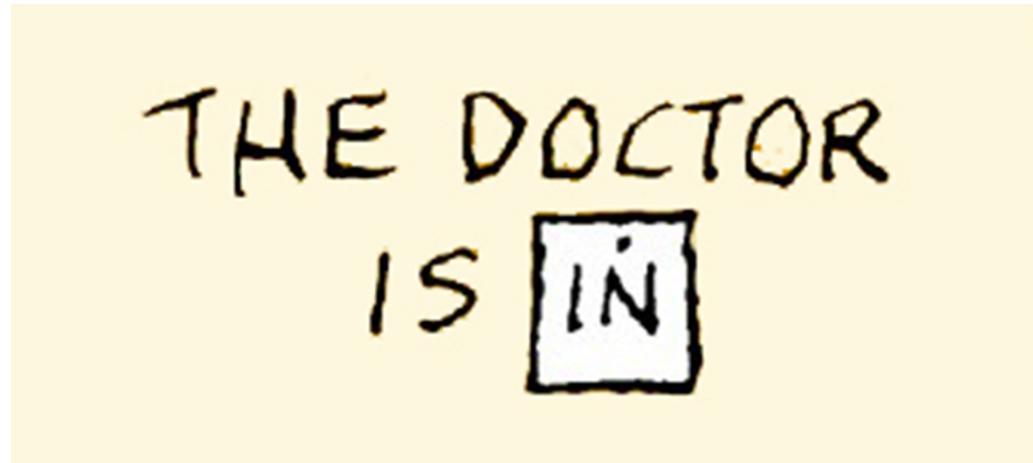


# How to Treat Individuals with a Dual Diagnosis of ASD & Anxiety Disorders

- Assessment
  - Multiple informants is Key!
  - If you can, take your time and gain assessments over a period of time
  - Assess for medical complications
  - Use of assessment tools (SCARED)
- Non-pharmacological Interventions
  - Behavioral Interventions
  - Sensory Interventions
  - Therapy
- Involvement of psychiatric professionals



# Treatment



# Psychotherapy

- CBT
  - Systematic Reviews find that modified version helpful in higher functioning children
  - Modifications include visuals, focusing on perseverations, parent trainings
- Behavioral/Supportive



# Common Supports/Interventions Related to Sensory Needs, Which Address Anxiety

- Thoughtful Control of Environmental Factors



- Noise Reducing Headphones



- Tactile Objects



- Outlets for Self-Stimulatory Behavior

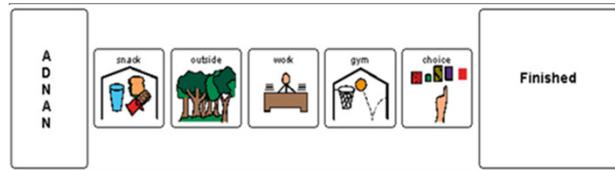


- Swings



# Common Supports/Interventions Related to Executive Functioning, Which Address Anxiety

- Schedules



- Calendars



- Social Stories

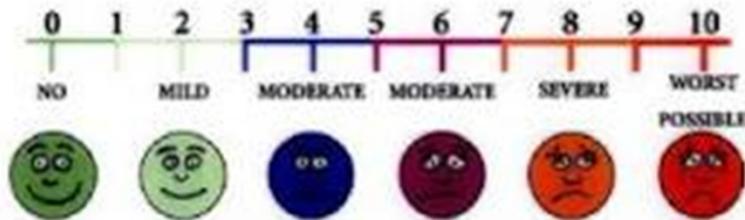


- Timers

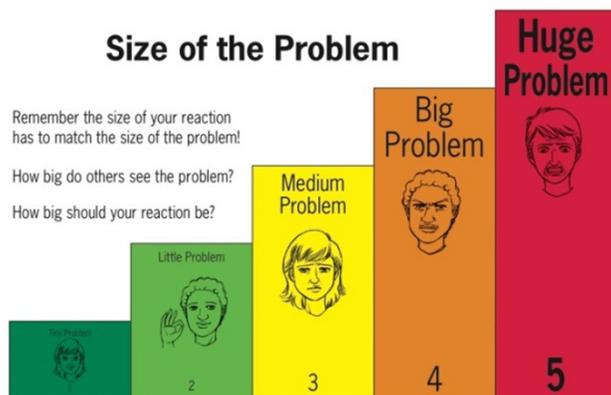


# The Zones of Regulation

Does your student know how to regulate his/her emotions and behaviors?



The ZONES of Regulation® Reproducible W



Visual adapted by Leah Kuyper, Donna Brittain and Jill Kazma for The Zones of Regulation® from the original work of Winner's Think Social! (2005), pages 44-45, www.socialthinking.com, and Burton and Curtis' The Incredible 5-Point Scale (2003), www.spoonstac.com

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## The ZONES of Regulation®

BLUE ZONE	GREEN ZONE	YELLOW ZONE	RED ZONE
Sad Sick Tired Bored Moving Slowly	Happy Calm Feeling Okay Focused Ready to Learn	Frustrated Worried Silly/Wiggly Excited Loss of Some Control	Mad/Angry Terrified Yelling/Hitting Elated Out of Control

Helping teachers and other professionals know when a student is in the “learning zone.”

# Pharmacological Management in Autism

- Basic Considerations
  - Medications should be used in combination with other modalities
  - Assessment should be performed by trained professional (pediatrician, DB pediatrician, child and adolescent psychiatrist)
  - If complicated or more than one suspected co-morbidity, want to consider a specialist
  - Changes in behavior with medication should be tracked and monitored for response/side effects



# Pharmacological Management in Autism

- Basic Considerations (continued)
  - With medications:
    - Start Low and go Slow
    - But you may not always end up there!
    - FDA approved (None!)
    - Off label (All!)
    - Should always be used in combination with non-pharmacological treatments because this is best practice

# Pharmacological Management of Anxiety in Autism

- In typically developing children, SSRI are first line pharmacologic treatment for Anxiety Disorders.
- FDA Approvals:
  - OCD: Zoloft, Fluvoxamine (Luvox), Prozac, Anafranil
  - Depression: Prozac and Lexapro
- In children with ASD:
  - Most studies combine outcome measures of anxiety/repetitive behaviors (not always the same thing!)
  - There are no FDA approvals for medications in Autism
  - Only FDA Approvals are for Aripirazole and Risperdone for irritability

# Pharmacology of Repetitive Behaviors in Children with Autism

- Children
  - Mixed Results when combining published and unpublished studies
  - Celexa RCT (n=149)
    - No improvement in repetitive behaviors or global improvement
  - Luvox (Fluvoxamine) showed did not show improvement in children
  - Fluoxetine (Prozac)
    - Shown an improvement in repetitive Behaviors in two published RCT
    - No improvement in unpublished study

King et al. Lack of efficacy of citalopram in children with autism spectrum disorders and high levels of repetitive behavior: citalopram ineffective in children with autism.

[Arch Gen Psychiatry](#). 2009 Jun;66(6):583-90. doi: 10.1001/archgenpsychiatry.2009.30

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Hollander et al. A placebo controlled crossover trial of liquid fluoxetine on repetitive behaviors in childhood and adolescent autism. *Neuropsychopharmacology*. 2005 Mar; 30(3): 582-9.

# Repetitive Behaviors in Autism

- Memantine (Namenda), D-Cyclosporine: Current evidence does not support their uses
- Adults
  - One study showing positive results in OCD behavior with clomipramine
  - Positive studies with Luvox and Prozac

# Alternative Medications

- Antipsychotics
  - Ie. Risperdal, Abilify, Geodon, Seroquel, Zyprexa
- Benzodiazepenes
  - Ie. Ativan (Lorazepam), Klonopin (Clonazepam), Xanax (alprazolam)

# Let's Talk about Side Effects

- Across all studies, children with Autism were more likely to have side effects
  - Including irritability, increased activity level, trouble with sleep, GI changes, increase in stereotypical behaviors



# Other Treatments

- Light therapy
- Movement
- Exercise
- Talk therapy
- Homeopathic Interventions
- Diet and Supplementation
- Art/Music Therapy



# Management of Anxiety During Episodic Events

- Exams, lab draws, new places can cause heightened level of anxiety
  - Social stories, Nonverbal Communication Boards, Tools for Distraction/Sensory Needs can all be helpful
  - Some medications may be used:
    - Alpha agonists
    - Benzodiazepines
    - Beta Blockers

# What to do When Supports/Interventions Prove Ineffective

1. Stop and reassess
2. Gather opinions from multiple sources, informants
3. Questions to ask:
  - Incorrect conceptualization?
  - Something in environment has changed?
  - Has something I have done (via medications) made things worse?
  - Which supports are working? Which are not?
4. Have honest and open dialogue with parents regarding response
5. Call for re-enforcements!



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# Acknowledgements

- Jennifer O'Keefe
- Carl Brass

# Question & Answer

## Monarch Center for Autism

- ❖ **Preschool**
- ❖ **Day School**
- ❖ **Transition Education Program**
- ❖ **Extended School Year Program**
- ❖ **Boarding Academy**
- ❖ **Adult Autism Program**
- ❖ **Adult Support Living Residences**
- ❖ **Free Webinar & e-newsletter Series**
- ❖ **Online Resource Center**
- ❖ **Welcoming Spaces Program**

- ✦ **Web:** [www.monarchcenterforautism.org](http://www.monarchcenterforautism.org)
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