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Anxiety Disorders & Autism

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A Few Quick Words on the Presenter

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Prevalence of ASD

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

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 (4.5 – 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

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Meta-Analysis of Research on Comorbidity of ASD & Anxiety Disorders

Anxiety in Children and Adolescents with Autism Spectrum Disorders

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http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2692135/table/T1/

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Table 1

Studies of Anxiety in Children and Adolescents with ASD with Focus on Prevalence

Author (year)	N[a]	Sample Characteristics[b]	Anxiety measure[c]	Control group(s)[d]	Primary Findings
Bellini (2004)	41	AD(19), AS(16), PDD-NOS(6).Age range: 12-18 (M: 14); No MR; IQ: 99.94±18.81 [R]	P, S	None	Levels of anxiety [physical, social, separation/ panic, total] in ASD significantly higher than controls; parents reported significantly higher levels of anxiety and internalizing problems; 49% of sample obtained clinically elevated score for social anxiety (compared to 14% of general population).
Bradley et al. (2004)	12	AD. Age range: 12-20 (M: 16); FSIQ≤75 [M]	P	Age, gender, nonverbal IQ-matched(12)	42% (n = 5) of sample reached clinical significance for anxiety problems, compared to 0% of mentally retarded sample without autism.
de Bruin et al. (2006)	94	PDD-NOS. Age range: 6-12 [C]	Int	None	Anxiety disorders were second most prevalent comorbid condition in sample; 55.3% of sample had at least one anxiety disorder.
Evans et al. (2005)	25	ASD(unspecified). Age range: NA (M:9); Mean IQ: 59.6 [S]	P	Down Syndrome(43); age-matched TD(37); mental age-matched TD (45)	Compared to all three control groups, ASD sample had more specific fears (eg, phobias) and medical fears.
Gadow et al. (2005)	301	AD(103),AS(80), PDD-NOS (118). Age range: 6-12 (M: 8); clinic referrals [C]	P, O	Non-ASD referrals(181); regular ed (404); special ed (60)	25.2% and 19.5% of males and females, respectively, with ASD screened positive for generalized anxiety disorder.
Kim et al. (2000)	59	HFA(40),AS(19). Age range: 9-14 (M: 12) [C]	P	None	Rate of anxiety in ASD was significantly higher than in community sample; 13.6% had clinically significant generalized anxiety; 8.5% had separation anxiety.
Lecavalier (2006)	487	ASD. Age range: 3-12 (M: 9) [S]	P, O	None	22% and 11% of sample obtained parent- and teacher-ratings, respectively, above average on Insecure-Anxious subscale of Nisonger child behavior rating form.
Melfsen et al. (2006)	7	AS. Age range: 7-18 (M: 12) [C]	S	Clinical group, various diagnoses(341)	For the seven subjects in the clinical group with AS, mean social anxiety score was above clinical cutoff (M = 22.68).
Muris et al. (1998)	44	AD (15), PDD-NOS (29). Age range: 2-18 (M: 9) [C]	Int	None	37 (84%) met full criteria for at least one anxiety disorder. Simple phobia was most common disorder (n = 28).
Simonoff et al. (2008)	112	AD(62), PDD-NOS(50). Age range: 10-14 (M: 11) [R]	Int	None	41.9% met criteria for at least one anxiety disorder. Social anxiety disorder was the most common disorder (29.2%).
Sukhodolsky et al. (2008)	171	AD(151), AS(6), PDD-NOS(14). Age range: 5-14 (M:8) [C]	P	None	73 (43%) met screening cut-of criteria for at least one anxiety disorder. Higher levels of anxiety associated with higher IQ, functional language use, and stereotyped behaviors.

TD=typically developing

[a]Size of ASD sample

[b]Diagnosis: Number of participants with specific diagnoses. AD=Autistic Disorder, AS=Asperger's Syndrome, HFA=High-Functioning Autism, PDD-NOS=Pervasive-Developmental Disorder-Not Otherwise Specified, ASD=sample not categorized by specific diagnoses

Source [] of ASD sample: [C] Clinical sample, [R] State/National resource center or registry, [M] Multiple sources (e.g., parent groups, local agencies), [S] School districts

[c]Anxiety measure (modality): D=Direct: direct testing or assessment of child's skills or knowledge; P=Parent: parent-report measure; O=Other: other-report (e.g., teacher); S=Self: self-rating; Obs=Coded behavioral observations; I=Interview of parent and/or child; C=Clinical observations only.

[d]Composition of control group/comparison scores (N = number of subjects), if applicable. Note that only control groups ascertained as part of the study are included.

Quotes Taken from the National Autistic Society:

- "My mind was constantly whirring with thoughts, worries and concerns. The time spent with my obsession was the only time in which I had a clear mind - it gave me that much sought-after relaxation." *-Young person with Asperger Syndrome*

- "I quickly become overwhelmed [in social situations]. Is it surprising that I then feel like blocking the world out and literally putting my thoughts back in order? That I start to rock to tell myself which feelings are mine? That I start speaking to myself or groaning to block out other sounds and so that I know which thoughts are mine? I think anyone experiencing life this way would do the same." *-Adult with autism*

- "Reality to an autistic person is a confusing, interacting mass of events, people, places, sounds and sights... Set routines, times, particular routes and rituals all help to get order into an unbearably chaotic life. Trying to keep everything the same reduces some of the terrible fear." *-From Jolliffe (1992) in Howlin (2004), p.137*

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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.

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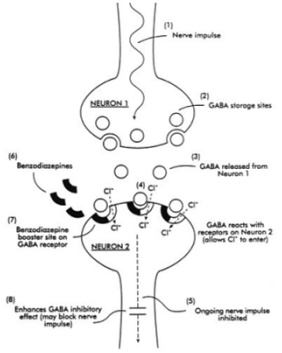
Symptoms of Anxiety in ASD Population

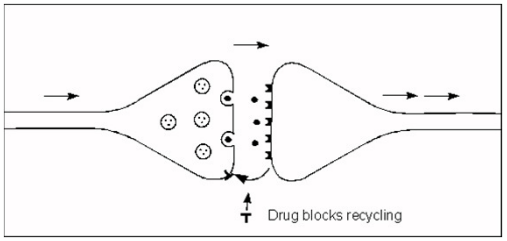
- Avoidance
- Distraction
- Disruptive Self-Stimulation/ Self-Calming
- Tantrums
- Physical Aggression
- Self-Injury
- Property Destruction

A Word on Medication

- Benzodiazepines
  - Xanax (alprazolam)
  - Klonopin (clonazepam)
  - Valium (diazepam)
  - Ativan (lorezapem)

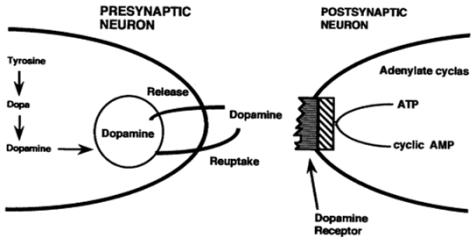


- Selective Serotonin Reuptake Inhibitors
  - Prozac (Fluoxetine)
  - Zoloft (Sertraline)
  - Paxil (Paroxetine)
  - Luvox (Fluvoxamine)
  - Lexapro (Escitalopram oxalate)
  - Celexa (Citalopram)



- Antipsychotic
  - Seroquel (Quetiapine Fumarate)

- Anti-Hypertensive
  - Clonodine (Catapres)



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Common, Non-Pharmaceutical Approaches to Addressing Anxiety in ASD Populations

- Supports/ Interventions Related to Executive Functioning
- Supports/ Interventions Related to Social & Communication Deficits
- Supports/ Interventions Related to Sensory Issues

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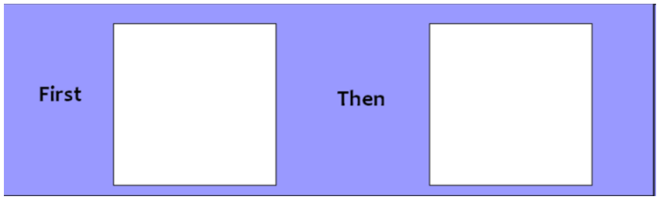
Common Supports/ Interventions, Related to Executive Functioning, Which Address Anxiety

- Schedules
- Calendars
- Social Stories
- Timers



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Common Supports/ Intervention Related to Social & Communication Deficits, Which Address Anxiety

- Therapy, Particularly ABA & Speech and Language

- Picture Exchange Communication Books

- Sentence Strips

- Choice Boards

- Augmentative and Alternative Communication Devices

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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

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What We Do When Supports/ Interventions Prove Ineffective

Assess Anew

- What was Used to Determine Initial Course of Intervention/ Supports? Could Something Have Been Missed?
- If They Were Once Effective, What Has Changed? Take a Holistic View.
- Strive to Be Objective: Antecedent, Behavior, Consequence Data
- Competing Reinforcement?

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Some Reasons Why Interventions/ Supports May Not Be Working

- Original Assessment Missed the Mark or Failed to Account for Some Variable
- Assessment was Sound, but Interventions/ Supports Don't Work or are Not Sufficient
- Supports, Themselves, May Have Begat Increased Anxiety. Too Fluid, Too Concrete?
- Environmental Factors
- Relational Factors
- Physiological Factors
- Previously Effective Intervention/ Supports Have Receded

Considerations Related to Manner of Approach, in Instances When the Basics Aren't Working

- Again, Try to Be Objective
- Don't Become Inflexible
- Think Environmentally and Systemically
- Be Mindful of Your Own State/ That of Supportive Parties
- Don't Feel Obliged to Adhere to Circumscribed Notions
- Distraction as a Technique
- It is All Right to Expect Less at Times

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Strategies to Help Improve Coping

- Systematic Desensitization/ Exposure Therapy
- Build in Unpredictability
- Skill Development
    - Learn to Use Cues
    - Modified SUDS Scale
    - Practice Calming Strategies
    - Establishing Identified Safe Spaces
    - Reinforce Attempts

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Example of Modified Subjective Units of Distress Scale

Zero:	One:	Two:	Three:	Four:	Five:	Six:	Seven:	Eight:	Nine:	Ten:
Complete relaxation. Deep sleep, no distress at all.	Awake but very relaxed; dosing off. Your mind wanders and drifts, similar to what you might feel just prior to falling asleep.	.A little bit upset, but not Noticeable unless you took care to pay attention to your feelings and then realize, "yes" there is something bothering me.	Mildly upset. Worried, bothered to the point that you notice it.	Mild distress such as mild feelings of bodily tension, mild worry, mild fear, or mild anxiety. Somewhat unpleasant but easily tolerated.	Moderately upset, uncomfortable. Unpleasant feelings are still manageable with some effort.	Moderate distress. Very Unpleasant feelings of fear, anxiety, anger, worry, apprehension and/or bodily tension such as a headache or upset stomach.	Starting to freak out, on the edge of some definitely bad feelings. You can maintain control with difficulty	High distress. High levels of fear anxiety, worry, and/or bodily tension. These feelings cannot be tolerated very long. Thinking and problem-solving is impaired. Freaking out.	Feeling extrmely freaked out to the point that it almost feels Unbearable and you are getting scared of what you might do. Feeling very, very bad, losing control of your emotions.	Feels Unbearably bad, beside yourself, out of control as in a nervous breakdown, overwhelmed, at the end of your rope. You may feel so upset that you don't want to talk because you can't imagine how anyone could possibly Understand your agitation.

Zero	One	Two	Three	Four	Five	Six	Seven	Eight	Nine	Ten
No coping skills necessary	No coping skills necessary	Feel a sheet of crumpled up paper. Rip paper. Write or draw.	Watch or read comedy. Talk to a peer. Rip paper. Write or draw. Magic tricks.	Rip paper. Watch or read comedy. Magic tricks. Clean.	Write or draw. Clean. Write or read comedy. Talk to an adult.	Write or read comedy. Talk to a peer or an adult.. Origami. Computer (if it's available to you).	Talk with a trusted adult. Origami. Write what you're feeling down and rip it up.	Color mandalas. Magic tricks. Reading (history or mark twain).	Exercise. Write poetry. Deep breaths. Scale drawing. Gym.	Phone call. Projects. Listen to music. Deep breathing. Shower.

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Intervention for Level 1 ASD & Anxiety

- The Work of Dr. Jeffrey Wood, Ph.D., UCLA
- A Modified Cognitive Behavioral Approach
- Original Three Phases:
    - Understanding Anxiety (E.G.: (1) Learning bodily cues, (2) recognizing facial expressions, etc.)
    - Skills Training (E.G.: (1) Relaxation, (2) positive "self-talk"(coaching oneself), (3) self-reward)
    - Skills Practice (50%+ of sessions) (E.G.: Children gradually attempt increasingly "challenging" feared situations to develop confidence & mastery.)
- Adaptations:
    - -Expanded emotion education & thought monitoring skills training using visual stimuli
    - -Friendship skills for youth
    - -Peer "buddy" and "playdate" programs at school and home to increase social engagement
    - -"Social coaching" at home and school
    - - Independence / self-help skills focus

Questions

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- Preschool
- Day School
- Transition Education Program
- Extended School Year Program
- Summer Social Language Leadership Program
- Boarding Academy
- Adult Autism Program
- Adult Autism Residence & Supported Living Settings
- Free Webinar & e-newsletter Series
- Online Resource Center

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