



TELEBEHAVIORAL HEALTH CENTER OF EXCELLENCE

Child and Adolescent Behavioral Health Webinar Series:

Autism Spectrum Disorder and Other Neurodevelopmental Disorders: Intellectual Developmental Disorders & Language Disorders

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&
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Introducing the Presenters

Michele Iemolo is a licensed psychologist with experience in the screening, assessment, diagnosis and treatment of children with autism and related neurodevelopmental disabilities. Dr. Iemolo has extensive training and experience in treatment approaches for children and families including applied behavior analysis, dance-movement therapy, as well as parent coaching programs aimed at improving social communication. Dr. Iemolo is professor at New Mexico State University (NMSU) and conducts diagnostic evaluations of children zero to five years of age within NMSU's Autism Diagnostic Center. Dr. Iemolo has a contract with Indian Health Services through UNM to develop and disseminate webinars in the area of neurodevelopmental disorders.

Dina Hill is a licensed clinical neuropsychologist with experience in the assessment and diagnosis of children with genetic, neurological, and neurodevelopmental disorders. Over the past seven years, Dr. Hill has worked with the UNM CDD Prenatal Exposures Clinic and on the UNM Center grant investigating the effects of prenatal exposure on the developing child. Dr. Hill has a contract with Indian Health Services through UNM to develop and disseminate webinars in the area of neurodevelopmental disorders.

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Autism Spectrum Disorder and Other Neurodevelopmental Disorders: Intellectual Developmental Disorders & Language Disorders

This webinar will focus on developing healthcare providers' skills in the understanding of Autism Spectrum Disorder and the neurodevelopmental disorders of Intellectual Developmental Disorder and Language Disorders. Information will include comorbid and differential diagnostic considerations, overlapping versus distinguishing characteristics, identifying clinical presentations and discussion of possible interventions. Teaching tools will include a resource page and quick facts for providers.

Objectives

At the end of this presentation, participants will be able to:

1. Analyze overlapping versus distinguishing characteristics of Autism Spectrum Disorder with Intellectual Developmental Disorder and with Language Disorders.
2. Educate families on the clinical presentation of each neurodevelopmental disorder in the context of Autism Spectrum Disorder.
3. Counsel families on the development of treatment intervention plans and accessing services (e.g., therapists, prescribing providers).

Autism Spectrum Disorder

What is Autism Spectrum Disorder?

- A complex neurodevelopmental condition
 - Neurologically based- underlying genetic and neurobiological origins
 - Developmental- evident early in life and impacts social development
- Core characteristics
 - Impairments in social interaction and social communication
 - Presence of restricted behavior, interests and activities
- Wide variations in presentation

ASD Diagnostic Criteria: DSM V - TR

- **Deficits in social communication and social interaction (3)**
 - Social approach/interaction
 - Nonverbal communication
 - Relationships
- **Presence of restricted, repetitive patterns of behavior, interests, or activities (2)**
 - Stereotyped or repetitive motor movements, objects, speech
 - Routines
 - Restricted interests
 - Sensory

Percentage of Children with ASD and Comorbid Psychiatric Diagnoses

- **70-95%** of children and adolescents with ASD have at least one co-occurring psychiatric disorder (Gjevik, Eldevik, Fjaeran-Granum, & Sponheim, 2011; Joshi et al., 2010; Leyfer et al., 2006; Simonoff et al., 2008)
- **41-60%** of children and adolescents with ASD have two or more co-occurring disorders
- As many as **24%** of children and adolescents with ASD have three or more co-occurring disorders (Di Martino et al., 2017; Simonoff et al., 2008)

Identifying Autism is Challenging!

“If you’ve met one person with autism, you’ve met one person with autism.”

Identifying Autism is Challenging!

Observation Challenges:

- Observation and testing based on the “**lack**” of expected behavioral characteristics vs. the “**presence**” of unexpected (atypical) behavioral characteristics
- Looking for a **constellation** of behaviors, not just one red flag.

Important to identify the relevant comparison group:

- Social-communication impairments and RRBs **MUST** be judged in **comparison to developmental expectations**
- What would we *expect* (or **NOT** expect) based on this individual’s age, IQ, and language level?

How do we distinguish a lack of social skills learning opportunities (e.g., COVID repercussions), versus a true social impairment versus ASD versus other neurodevelopmental disorders?

Identifying Autism is Challenging!

- **Variability** in behaviors across **different children** with autism
- **Variability** in behaviors within the **same child** with autism across different **contexts** and across **time/development**
- **Ethnicity/Cultural Differences:**
 - Professionals are more likely to miss autism symptoms in children from some cultural and socioeconomic groups
 - non-white children are identified later
 - Families may have different expectations around social interaction or play behaviors
- **Trauma:**
 - Trauma and early disruption in care can complicate presentation

Intellectual Developmental Disorder (Intellectual Disability)

Diagnostic Criteria:

Criterion A: Deficits in **intellectual functions** confirmed by clinical assessment and individualized, standardized intelligence testing

- Approximately two standard deviations below the mean (75 or below)

Criterion B: Deficits in **adaptive functioning** that results in failure to meet developmental and socio-cultural standards for personal independence and social responsibility assessed in the areas of conceptual social, and practical domains

- At least one domain of adaptive functioning is sufficiently impaired that ongoing support is needed

Criterion C: Onset during developmental period

Severity Level: Mild, Moderate, Severe or Profound

Rates of Co-Occurring ASD and IDD

- 31% of children with ASD have IDD
- An additional 25% have “Borderline Intellectual Functioning”

Intervention Suggestions for Comorbid ASD and IDD

Traditional Treatment Approaches

- Early Intervention
- Behavior Therapy/Applied Behavioral Analysis (ABA)
- Parent Mediated Therapy
- Occupational Therapy/Sensory Processing
- Physical Therapy
- Speech/Language Therapy
- Nutritional Therapy
- Social Skill building
- Educational/Vocational Training/Supports

Other Treatment Approaches

- Mindfulness Based Stress Reduction (MBSR)
- Creative art therapies (music, dance, art)
- Cognitive-Behavior Therapy
- Dialectical Behavior Therapy

Intervention Suggestions for Comorbid ASD and IDD

Treatment Locations

- Early Intervention Services (0-3 years)
- School-Based Services (3-21 years)
- Community-Based Services
- Home Settings

Treatment Considerations

- Slower rates of treatment progress/need for more practice/repetition
- Planning for generalization of skills

Traditional Interventions/Adaptations for Comorbid ASD and IDD

- **Behavior Therapy/Applied Behavioral Analysis (ABA)**
 - Visual Schedules: Less words, more visuals/pictures.
- **Occupational Therapy/Sensory Processing**
 - Target development of motor skills and sensory tolerance for ADLs (e.g., activities of daily living)
- **Educational/Vocational Training/Supports**
 - Simplify and break down assignments or instructions

Other Treatment Approaches/Adaptations for Comorbid ASD and IDD

- **Mindfulness Based Stress Reduction (MBSR)**

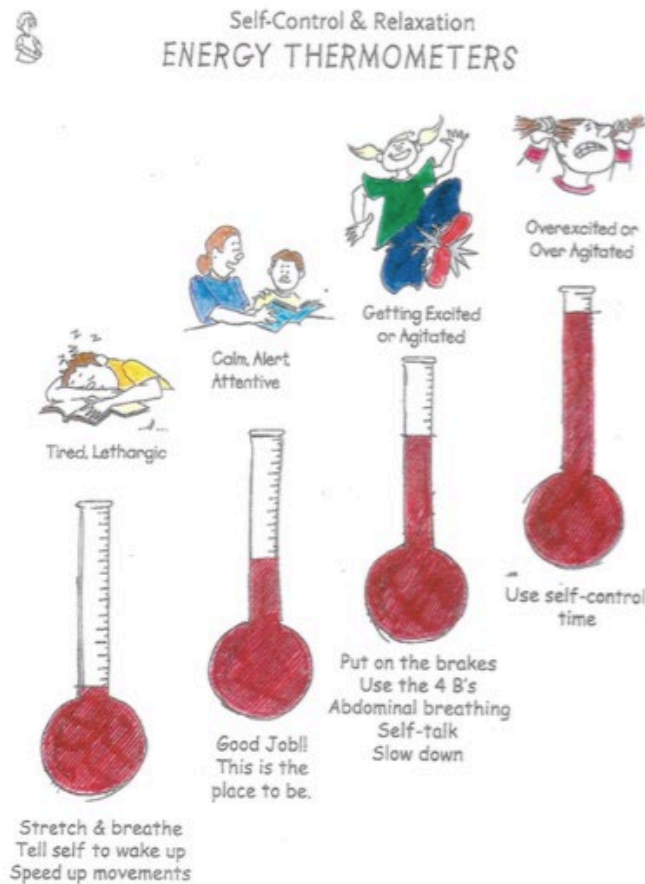
- **Body Scan:**

- Outline the body on paper, use outline as a visual
- Touch the part of the body you are focused on.
- Tense and release each part of the body

- https://www.youtube.com/watch?v=ihwcv_ofuME&t=63s

Other Treatment Approaches/Adaptations for Comorbid ASD and IDD

- Creative art therapy- dance movement therapy
 - Pairing words to movement, with visuals



Courtesy of Rene Kornblum

Language Disorders

Language Disorders

- Language Disorder*
- Mixed Receptive-Expressive Language Disorder
- Speech Sound Disorder
- Childhood-Onset Fluency Disorder (Stuttering)
- Social (Pragmatic) Communication Disorder

Diagnostic Criteria: Language Disorder

Criterion A: Persistent difficulties in the acquisition and use of language across modalities (i.e. - spoken, written, sign language, or other) due to deficits in comprehension or production that include the following:

- Reduced vocabulary
- Limited sentence structure
- Impairments in discourse

Language Disorders

Diagnostic Criteria Continued: Language Disorder

Criterion B: Language abilities are substantially and quantifiably below those expected for age, resulting in functional limitations in effective communication, social participation, academic achievement, or occupational performance, individually or in any combination.

Criterion C: Onset of symptoms is in the early developmental period.

Criterion D: The difficulties are not attributable to hearing or other sensory impairment, motor dysfunction, or another medical or neurological condition and are not better explained by intellectual disability or global developmental delay.

Rates of Co-Occurring ASD and Language Disorders

- 63% of all children diagnosed with ASD also have a language impairment
 - Although structural language impairment as part of a communication deficit is not a necessity for an ASD diagnosis (according to DSM-5), it is strongly associated with ASD (National Institute of Health, 2021)

Intervention Suggestions for Comorbid ASD and Language Disorders

Traditional Treatment Approaches

- Speech/Language Therapy
- Functional Communication Training (FCT)
- Social Narratives
- Social Skill building
- Educational/Vocational Training/Supports
- Behavior Therapy/Applied Behavioral Analysis (ABA)

Other Treatment Approaches

- Mindfulness Based Stress Reduction (MBSR)
- Creative art therapies (music, dance, art)
- Sound Therapy (e.g., Auditory Integration Training)

Intervention Suggestions for Comorbid ASD and Language Disorders

Treatment Locations

- Early Intervention Services (0-3 years)
- School-Based Services (3-21 years)
- Community-Based Services
- Home Setting

Treatment Considerations

- Slower rates of treatment progress/need for more practice/repetition
- Planning for generalization of skills
- Use visual supports/strategies
- Teach in natural settings

Traditional Interventions/Adaptations for Comorbid ASD and Language Disorders

- **Speech/Language Therapy & Functional Communication Training (FCT)**
 - Use of assistive technology supports/communication devices
- **Social Skill building**
 - Emphasis on social activities with minimal language requirements/target non-verbal communication (e.g., back and forth play, gestures, eye gaze, language at the level of the learner)

Other Treatment Approaches/Adaptations for Comorbid ASD and Language Disorders

Mindfulness Based Stress Reduction (MBSR)

– The Five Senses

- Have a box prepared for each of the 5 senses
 - Box 1: objects for 5 things you see (e.g., toy car, ball, pencil, book, flower, hat)
 - Box 2: piece of playdough, pom-pom, feather, sandpaper, etc.
 - Box 3: a recording of nature sounds
 - Box 4: scented candle, cinnamon stick, a scratch and sniff, etc.
 - Box 5: raisins, granola, etc.
- Provide a visual for each of the senses
 - <https://positivepsychology.com/wp-content/uploads/2017/01/Five-Senses-Worksheet.pdf>



Other Treatment Approaches/Adaptations for Comorbid ASD and Language Disorders

Creative art therapy-dance movement therapy

– Expanding a Movement

(Enhance, Add or Change)

- Teach growing and shrinking movements (gradients of the same movement), paired with vocalizations



Multistep Framework for Diagnosing Disorders

- Are the symptoms above and beyond what is expected for the individual?
- Do the symptoms cause functional impairment?
- Do the symptoms exceed typical responses to ASD-related challenges?
- Are there other facts that are triggering or perpetuating the psychiatric symptoms?

Diagnostic criteria:

- 1. Deficits in social-communication/interaction (3)**
 - Social approach/interaction
 - Non-verbal communication
 - Relationships
- 2. Presence of RRBs (2)**
 - Stereotyped or repetitive motor movements, objects, speech
 - Routines
 - Restricted interests
 - Sensory

Rate of co-occurrence:

- **70-95%** of children and adolescents with ASD have at least one co-occurring psychiatric disorder (Gjevik, Eldevik, Fjaeran-Granum, & Sponheim, 2011; Joshi et al., 2010; Leyfer et al., 2006; Simonoff et al., 2008)
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Multistep Framework for Differential Diagnosis

- Are the symptoms above and beyond what is expected for the individual?
- Do the symptoms cause functional impairment?
- Do the symptoms exceed typical responses to ASD-related challenges?
- Are there other facts that are triggering or perpetuating the psychiatric symptoms?

ASD Identification Challenges

- 1. Important to identify the relevant comparison group:**
 - Social-communication impairments and RRBs **MUST** be judged in **comparison to developmental expectations**
 - What would we *expect* (or **NOT** expect) based on this individual's age, IQ, and language level?
- 2. Variability**
 - Variability in behaviors across **different children** with autism
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IHS Previous Webinars

<https://www.ihs.gov/icp/training/>

Resources

- Guidance for identification and treatment of individuals with attention deficit/hyperactivity disorder and autism spectrum disorder based upon expert consensus
<https://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-020-01585-y>
- Autism Speaks: “Advances in understanding and treating the physical and mental health conditions that frequently accompany autism” <https://www.autismspeaks.org/science-news/autism-and-health-special-report-autism-speaks>
- Spectrum: Decoding the overlap between autism and ADHD:
<https://www.spectrumnews.org/features/deep-dive/decoding-overlap-autism-adhd/>
- Language Disorders in Children on the Autism Spectrum:
<https://www.research.chop.edu/car-autism-roadmap/language-disorders-in-children-on-the-autism-spectrum>
- Autism: <https://www.asha.org/public/speech/disorders/autism/>
- Intellectual Disability and ASD: <https://www.research.chop.edu/car-autism-roadmap/intellectual-disability-and-asd>
- Co-occurring intellectual disability and autism: Associations with stress, coping, time use, and quality of life in caregivers
(<https://www.sciencedirect.com/science/article/pii/S1750946721000404>)
- Is Motor Impairment in Autism Spectrum Disorder Distinct From Developmental Coordination Disorder? A Report From the SPARK Study
(<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7297441/>)
- Motor signature of autism spectrum disorder in adults without intellectual impairment
(<https://www.nature.com/articles/s41598-022-10760-5>)



Questions?

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