Pediatric Mental Health Care Access Grant

Autism Spectrum Disorder:

Historical and Current Presentation

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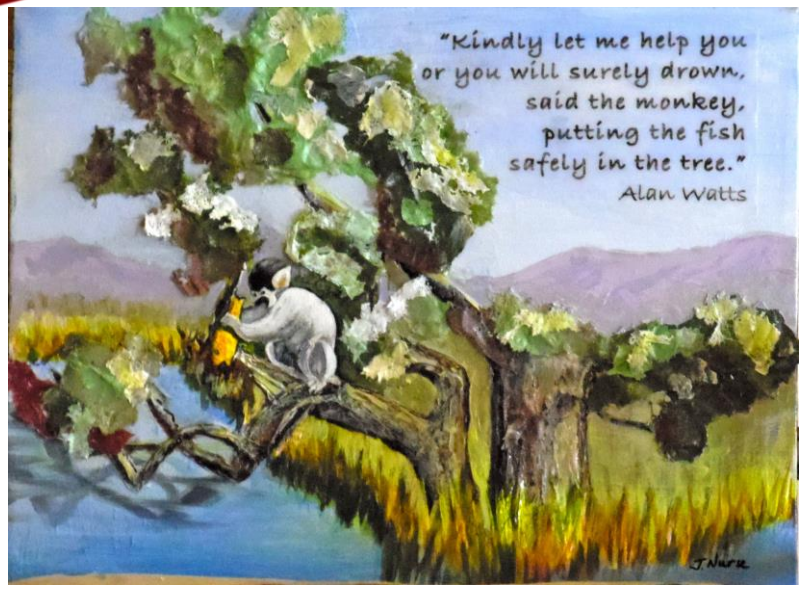


OBJECTIVES

1. Describe the history and increasing prevalence of Autism Spectrum Disorder
2. Outline the co-occurring behavioral presentation of Autism Spectrum Disorder
3. Describe the current DSM-5 diagnostic criteria of Autism Spectrum Disorder

AGE OF ONSET

- Most often identified by parents in the months preceding child's second birthday
- Earliest point in development for reliable detection period is from 12 to 18 months
- Diagnoses made around 2-3 years are generally stable
- AAP recommends that all children be screened at 18-24 months

HISTORICAL PERSPECTIVE

- Leo Kanner (1943) coined the term "early infantile autism" to describe young children with autistic symptoms
- Hans Asperger (1944) defined a milder form of autism known as Asperger Syndrome
- Prevalence (https://www.cdc.gov/ncbddd/autism/data.html)
  - 2000 = 1:150
  - 2006 = 1:110
  - 2008 = 1:88
  - 2014 = 1:59

DEFINING FEATURES OF AUTISM

- Biologically-based lifelong neurodevelopmental disability
- A complex neurodevelopmental disorder characterized by abnormalities in:
- Social behavior
- Language and communication skills, and
- Specific/intense behaviors and interests

SOCIAL INTERACTION IMPAIRMENTS

- Deficits in social and emotional reciprocity
- Unusual nonverbal behaviors
- Social imitation, sharing focus of attention, make-believe play
- Limited social expressiveness
- Atypical processing of faces and facial expressions
- Joint attention

COMMUNICATION IMPAIRMENTS

- One of the first signs of language impairment is inconsistent use of early preverbal communications
- Lacking declarative gestures, such as showing
- Deficits in functional communicative language
- Qualitative language impairments
- Pronoun reversals
- Echolalia
- Perseverative speech
- Impairments in pragmatics (sarcasm, concrete/literal)

RESTRICTED/REPETITIVE BEHAVIORS/INTERESTS

- Stereotyped body movements
- Repetitive sensory and motor behaviors
- Insistence on sameness of behaviors
- Self-stimulatory behavior
- A craving for stimulation to excite their nervous system
- A way of blocking out and controlling unwanted stimulation from environment that is too stimulating

ASSOCIATED CHARACTERISTICS OF ASD

- Intellectual deficits and strengths
  - "Splinter Skills"
- Ipsative strengths in certain cognitive areas
  - Visual-spatial skills
- Sensory and perceptual impairments
  - Sensitivity to light/sound/food aversions
- Medical conditions
  - Seizures

ASSOCIATED CHALLENGES

- Affect Recognition
  - Interpreting emotion in facial expressions
- Theory of mind (ToM)
  - Difficulty putting yourself in someone else's shoes (empathy/sympathy)
- Executive functions (higher-order planning and regulatory behaviors)
- Abstract reasoning or "Central Coherence"
  - "Seeing the forest for the trees"

COMORBID DISORDERS AND SYMPTOMS

- Intellectual Disability
- ADHD
- Anxiety
- Depression
- Oppositionality
- Mood disorders
  - Depression
  - Disruptive Mood Dysregulation Disorder

MEDICAL CONDITIONS

- About 10% of children with ASD have a comorbid medical condition
  - Motor and sensory impairments, seizures, immunological and metabolic abnormalities
- Sleep disturbances occur in 65%
- Gastrointestinal symptoms occur in 50%
  - Many times exacerbated by lack of variety of food due to aversion (sensory)

DSM-5 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):

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 interest, emotions, or affect; to failure to initiate or respond to social interactions.

DSM-5 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):

2) Deficits in nonverbal communicative behaviors used for social interaction, ranging for example, from poorly integrated verbal and nonverbal communication; to abnormalities in contact and body language or deficits in understandings and use of gesture; to a total lack of facial expressions and nonverbal communication.

DSM-5 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):

3) Deficits in developing, maintaining and understanding relationship, 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

DSM-5 DIAGNOSTIC CRITERIA

(B) Restricted respective patterns of behavior, interest ,or activities, as manifested by at least two the following, currently or by history (examples are illustrative, not exhaustive) :

1) Stereotyped or respective motor movements, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases).

DSM-5 DIAGNOSTIC CRITERIA

(B) Restricted respective patterns of behavior, interest ,or activities, as manifested by at least two the following, currently or by history (examples are illustrative, not exhaustive) :

2) Insistence on sameness; inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behaviors (e.g., extreme distress at small changes, difficulties with transactions, rigid thinking patterns, getting rituals, need to take same route or eat same food every day).

DSM-5 DIAGNOSTIC CRITERIA

(B) Restricted respective patterns of behavior, interest ,or activities, as manifested by at least two the following, currently or by history (examples are illustrative, not exhaustive) :

3) Highly restricted, fixated interest that abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).

DSM-5 DIAGNOSTIC CRITERIA

(B) Restricted respective patterns of behavior, interest ,or activities, as manifested by at least two the following, currently or by history (examples are illustrative, not exhaustive) :

4) Hyper-or hyperactivity to sensory input or unusual interest in sensory aspects of environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textural, excessive smelling or touching of objects, visual f fascination with lights or movement).

CASE STUDY

- **JOHN DOE**
- **8y/o**
- **MALE**
- **3RD GRADE**
- **WHITE/CAUCASIAN**
- **REFERRAL SOURCE & CONCERN**
  - **John was referred for neuropsychological evaluation due to concerns of Autism Spectrum Disorder**

CASE STUDY

- PREVIOUSLY DIAGNOSED
  - ANXIETY, MODERATE, RECURRENT
  - OPPOSITIONAL DEFIANT DISORDER
- SYMPTOMS
  - ATTENTION DIFFICULTY and IMPULSIVITY,
  - CHRONIC IRRITABILITY, and AGGRESSION,
  - EXCESSIVE WORRY,
  - DIFFICULTY WITH ADJUSTMENT TO CHANGE IN ROUTINE
  - SENSITIVITY TO LOUD AND UNEXPECTED NOISE
  - PERFORMING WELL ACADEMICALLY
  - SIGNIFICANT DIFFICULTY WITH PEER INTERACTIONS

CASE STUDY

- **TEST PROCEDURES** (5.5 HOURS)
  - Mental Status Examination Including Neurobehavioral Evaluation,
  - Quick Neurological Screening Test – Third Edition – Revised (QNST-3R)
  - Green's Medical Symptom Validity Scale (MSVT),
  - Wechsler Intelligence Scale for Children – Fifth Edition (WISC-V)
  - Conners' Continuous Performance Test – Third Edition (CPT-3),
  - NEPSY-2
  - Behavior Assessment System for Children – Third Edition (BASC-3),
  - Vineland Adaptive Behavior Scales – Third Edition (VABS-3)
  - Autism Diagnostic Observation Schedule – Second Edition (ADOS-2), and
  - Autism Spectrum Rating Scale (ASRS)

CASE STUDY

• MENTAL STATUS EXAM

- Cooperation required encouragement necessary at times during the examination.
- Oriented x 3
- Affect appeared flat/euthymic
- Mood was reported as "fine" although mood was variable throughout the examination with sadness and irritability mixed among largely complaint behavior indicating difficulty with insight
- Focused/sustained attention appeared variable and Devin was observed to become distracted at times during the examination
- Socially disinhibited
- Concrete and literal directions were used throughout the examination with the assistance of visuals including a Time Timer.
- Eye contact was fleeting
- Use of nonverbal communication and gaze in order to guide conversation was limited at times
- Speech was precise and pedantic
- Social reciprocity was limited/absent
- Fixed interest on Star Wars - Very difficult to interrupt when discussing this fixed interest.
- Judgment, reasoning, and insight appeared limited

CASE STUDY

- **PERFORMANCE TESTING WAS ADEQUATE**
- **SENSORY-MOTOR FUNCTIONING**
  - **Visual acuity using a near point estimate indicated 20/25 vision for each eye**
  - **Visual line- and angle-orientation was average**
  - **auditory sensory perception to be within normal limits for each ear**
  - **No evidence of finger agnosia was present for the left hand, but possible mild agnosia was present for the right**
  - **gait and station were observed to be mildly impaired**
  - **Finger-to-nose assessment showed fine motor coordination to be slightly impaired for both hands**
  - **Simple manual dexterity, as measured by finger tapping, was within normal limits for both hands.**
  - **Strength of grip was within normal limits for both hands.**
  - **No evidence of dysnomia was present. Verbal expression was characterized by no evidence of dysarthria.**

CASE STUDY

- **COGNITIVE**
  - Overall cognitive ability was in the Average range (WISC-V FSIQ=104; 61st percentile)
  - Overall verbal ability was Superior (VCI=124; 95th percentile)
    - personal weakness in social comprehension (SS=7; 16th percentile) compared with his other abilities.
  - Overall visual-spatial and visual fluid reasoning abilities were average (VSI=100; 50th percentile; FRI=103; 58th percentile).
  - Overall working memory was below average (WMI=85; 16th percentile)
  - Overall processing speed was below average(PSI=89; 23rd percentile)
    - Performance on processing speed tasks requiring writing (WISC-V PSI) was less developed than verbal fluency and scanning (NEPSY-2 Speeded Naming & Word Generation) indicating difficulty quickly and efficiently generating and producing written information

CASE STUDY

- **EXECUTIVE FUNCTIONING**
  - ATTENTION
    - refused to complete the CPT-3
    - auditory attention measures were above average for a relatively simple task
    - largely average for a more complex auditory attention task
    - Impulsive responding on both
  - SELF-MONITORING
    - Impaired
  - SOCIAL PERCEPTION
    - Impaired Theory of Mind
    - Impaired Affect Recognition

CASE STUDY

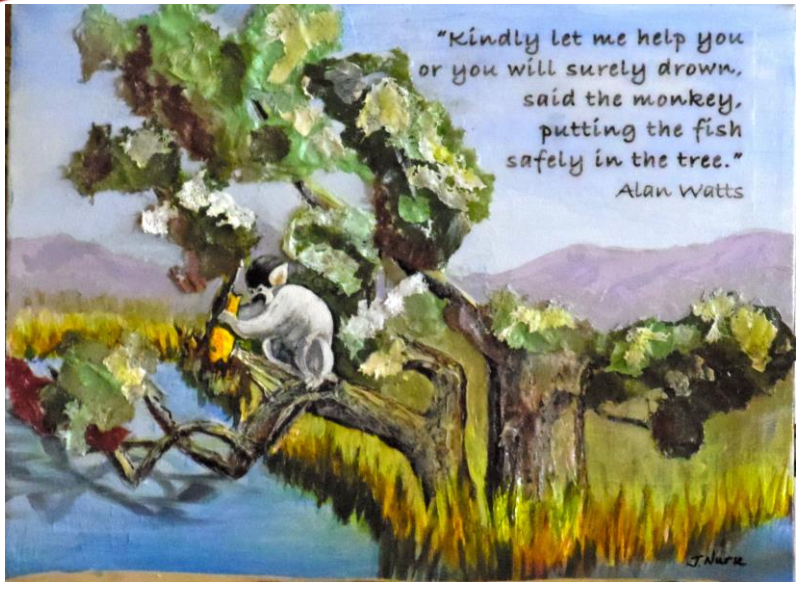
- BEHAVIOR REPORTS
  - PARENT
    - Attention problems
    - Hyperactivity
    - Aggression
    - Conduct problems
    - Social communication/interaction deficits consistent with autism
  - SELF
    - Elevated sense of inadequacy
    - Attention problems
  - TEACHER
    - Loses things necessary for tasks
    - Talks excessively,
    - Does not follow through on instructions

CASE STUDY

- RECOMMENDATIONS
  - Disability Waiver
  - Autism Waiver/Voucher
  - IEP
    - Significant verbal strength
    - Attention
    - Behavior
  - Individual/Family/In-Home Therapy
    - Dysregulated behavior and adaptive skills deficits
  - Referral to child psychiatrist
    - significant executive functioning difficulty including behavioral dysregulation, attention difficulty, and anxiety.

CASE STUDY

- **RECOMMENDATIONS**
  - **Social-Skills Training**
    - **Theory of mind**
    - **Affect recognition**
  - **Occupational Therapy**
    - **Noise sensitivity**
    - **Behavior**
    - **Processing speed for written information**
  - **Physical Therapy**
    - **Gait and station**
    - **Fine-Motor Coordination**



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