AUTISM SPECTRUM DISORDER: DSM-5 DIAGNOSTIC CRITERIA

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Autism Spectrum Disorder

- Neurodevelopmental disorder
  - Reflects understanding of the etiology of disorder as related to alterations in structure of brain
  - Occurs early in development
  - Affected by development
    - Some communication skills develop for almost 70% of children
    - Repetitive behaviors may change
- Impairments affect personal, social, academic, and occupational functioning throughout the lifespan
A Short History

- Leo Kanner in 1943 described observation of 11 pediatric patients

- Social Impairments
  - Described their impairments as “autistic disturbances of affective contact”
  - Social impairment “autistic aloneness” present from birth
  - Desire to be alone, inability to relate to others
Kanner’s Observations

- **Language Impairments**
  - Stereotyped language
  - Articulation difficulties were present
  - Use of echolalia
  - Did not use anticipatory gestures

- **Repetitive Behaviors**
  - Desire for sameness
  - Repetitive play with objects
  - “Fascination” with objects
Autism Spectrum Disorder Over Time
(Adapted from Fombonne, Quirke, & Hagen, 2011)

Kanner (1943)

ICD-9 (1977)
Recognition of infantile autism

ICD-10 (1992)
Pervasive Developmental Disorders

DSM-II (1968)
Schizophrenia, Childhood Type

DSM-III (1980)
Pervasive Developmental Disorders added

DSM-III-R (1987)
Infantile Autism was now Autism

DSM-IV (1994)
Coordination with ICD-10
Asperger's Disorder

DSM-IV Conceptualization of Pervasive Developmental Disorders

- Rett’s Syndrome
- Childhood Disintegrative Disorder
- Autism Spectrum Disorders
  - Autistic Disorder
  - Asperger’s Disorder
  - Pervasive Developmental Disorder, Not Otherwise Specified
DSM-IV: Autism Spectrum Disorders

1 = Autistic Disorder
2 = Asperger’s Disorder
3 = PDD-NOS

Social Impairment

Communication Impairment

Restricted and Repetitive Behaviors and Interests

3

1, 3

2, 3
DSM-IV Challenges

- Rett’s Syndrome
  - Associated with specific genetic mutation
  - Different developmental course

- Childhood Disintegrative Disorder
  - Different developmental course
    - Longer period of typical development
    - Regression
ASD: Challenges for the DSM-IV Model

- Asperger’s Disorder
  - Varied findings regarding diagnostic differences
  - Few differences when Verbal IQ is controlled
  - Frequently associated with “High Functioning Autism”
  - Lack of accurate historical information regarding development of language
PDD-NOS Challenges

- PDD-NOS was not clearly defined
  - Different studies, clinicians, conceptualized this disorder differently
    - Children with social impairment, WITHOUT repetitive behaviors
    - Children with social and language impairment, WITHOUT repetitive behavior
    - Children with social and language impairment WITH some repetitive behaviors
DSM-IV: Autism Spectrum Disorders

1 = Autistic Disorder
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Social Impairment

Communication Impairment

Restricted and Repetitive Behaviors and Interests

1, 3

2, 3

3
The broad category is now Autism Spectrum Disorder (ASD)

ASD is one diagnosis
- Specific distinctions are now removed

Reciprocal social interaction domain is now merged with the communication domain into one social-communication domain

Repetitive use of language is incorporated into repetitive behavior domain

All symptoms in the social communication domain, AND 2 of 4 symptoms in repetitive behavior and restricted interest domain
Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history:
- Deficits in social-emotional reciprocity
- Deficits in nonverbal communicative behaviors used for social interaction
- Deficits in developing, maintaining, and understanding relationships
Types of Social Communication Deficits

- Abnormal social approach
- Poor reciprocal communication
- Reduced sharing of interests
- Reduced sharing of emotions
- Reduced affect
- Failure to respond to social overtures
- Failure to adjust behavior according to context
- Reduced nonverbal communication
- Reduced use of eye contact
- Reduced use of communicative facial expressions
- Reduced use and understanding of gestures
- Deficits in maintaining peer relationships
- Poor imaginative play
DSM-5 Diagnostic Criteria for ASD: Restricted and Repetitive Behaviors

- Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history:
  - Stereotyped or repetitive motor movements, use of objects, or speech
  - Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior
  - Highly restricted, fixated interests that are abnormal in intensity or focus
  - Hyper- or hypo-reactivity to sensory input or unusual interest in sensory aspects of the environment
Types of Repetitive Behaviors in ASD

- Checking things
- Insists on routines
- Hand flapping
- Rocking
- Finger twisting
- Arranging objects
- Spinning objects
- Lining up objects
- Resists changes
- Turns in circles
- Attached to one object
- Interested in parts of objects
- Insists on specific order to activities
- Looks closely at objects
- Sensitivity to sensory stimuli
- Echolalia
- Stereotyped language
- Restricted interests
DSM-5 Conceptualization

- Social and Communication Impairments
- Autism Spectrum Disorder
- Restricted and Repetitive Behaviors and Interests
Changes to Diagnostic Approach

- Comorbid diagnoses are permitted
  - Attention Deficit Hyperactive Disorder (ADHD)
- Multiaxial approach no longer used
- Level of support indicated
  - Level 3: Very substantial support
  - Level 2: Substantial support
  - Level 1: Support
## DSM 5 Level of Support

<table>
<thead>
<tr>
<th>Severity Level</th>
<th>Social Communication</th>
<th>Restricted and Repetitive Behaviors</th>
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</thead>
<tbody>
<tr>
<td>Level 3-Very Substantial Support</td>
<td>Nonverbal, limited language—single words</td>
<td>Inflexibility with routines</td>
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<tr>
<td></td>
<td>Limited social interactions</td>
<td>Behaviors affect functioning in several areas</td>
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<tr>
<td></td>
<td>Limited response to social overtures</td>
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<tr>
<td>Level 2-Substantial Support</td>
<td>Verbal, primarily using phrases</td>
<td>Repetitive behaviors</td>
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<td></td>
<td>Abnormal responses to social interaction</td>
<td>observed by strangers</td>
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<tr>
<td></td>
<td>Inconsistent response to overtures</td>
<td>Difficulty with changes in routines</td>
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<tr>
<td>Level 1-Support</td>
<td>Fluent speech</td>
<td>Difficulty transitioning</td>
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<td>Difficulty initiating and maintaining relationships</td>
<td>Difficulties with organizing tasks</td>
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Incorporation of Specifiers

- Descriptors that will better describe the full picture of the individual being diagnosed
  - Cognitive functioning
  - Language functioning
  - Medical, genetic comorbidity
  - Comorbidity

- Specifiers are fixed AND fluid
  - Fixed: Associated with medical condition, genetic disorder
  - Fluid: Cognitive level, language functioning
Social (Pragmatic) Communication Disorder

- Difficulties with pragmatic aspects of communication—impairments in the social use of language
  - Turn taking in conversation
  - Introduction of new topics in conversation
  - Understanding when someone is disinterested
  - Understanding of non-literal use of language (What’s up?)
  - Use of gestures, facial expressions, body language
Social Communication Disorder

- Deficits result in functional limitations
- Deficits must be present in the early developmental period
  - May not be observed until social demands increase
    - Social demands increase as children age
- If significant repetitive behavior and restricted interests are present (or by history), a diagnosis of Social Communication Disorder is excluded
DSM-IV to DSM-5 Diagnosis

Asperger’s Disorder

Autism Spectrum Disorder
- Without language impairment
- Without intellectual impairment

Autistic Disorder with symptoms of inattention and hyperactivity

Autism Spectrum Disorder
- With ADHD
What Remains the Same

- ASD is a heterogeneous disorder
  - Core symptoms
  - Associated symptoms
  - Trajectory

- Accurate diagnosis is important
  - Parent interview—developmental history
  - Behavioral observation
  - Assessment of cognitive functioning
  - Assessment of language functioning
5-year-old Case Example: Developmental History

- 5 year, 1 month old male
- Developmental milestones were met on time
  - Single words at 12 months
  - Phrase speech at 19 months
- Average overall cognitive functioning
  - Nonverbal skills high end of average range
  - Verbal skills low end of average range
- Parent report of symptoms
  - Difficulty developing peer relationships
  - Insistence on daily schedule, and some difficulty with change
  - Repeating lines from videos
Behavioral Observations

- Autism Diagnostic Observation Schedule, 2nd Edition (ADOS-2)
  - Used fluent language
    - Some difficulty with syntax and tense
  - Difficulty with reciprocal conversation
    - Answered some questions but did not initiate
  - Poor insight into social relationships
  - Poor use of eye contact
  - Limited use of gestures, facial expressions exaggerated
  - Conversation centered around topics of interest
  - Scripted speech
  - Phrases out of context
Case Example: DSM-5 Diagnosis

- Autism Spectrum Disorder
- Level of support needed
  - Social Communication- Support (Level 1)
    - Difficulty with reciprocal conversation, but still using fluent language
  - Restricted and Repetitive Behaviors-Support (Level 1)
    - Stereotyped phrases
- Specifiers
  - Without intellectual impairment
  - Without language impairment
7-year-old Case Example: Developmental History

- 7 year, 4 month old female
- Developmental milestones delayed
  - Single words at 27 months
  - Phrase speech at 40 months
- Delayed cognitive functioning
  - Below average nonverbal skills
  - Significantly delayed verbal skills
- Parent report of symptoms
  - Inconsistent eye contact
  - Does not approach, or respond to peers
  - Carries objects with her
  - Insistence on returning objects to original placement
ADOS-2 Observations

- Used two and three word phrases
- Responded inconsistently to examiner questions
- Inconsistent use of eye contact
- No spontaneous descriptive gestures
- Some imaginative play
- Engaged in echolalia-repeated phrases examiner used
- Used scripted language out of context
- Repetitive play with toys-flicking eyes of a doll
- Unusual sensory interests
  - Looking at objects from the side of eyes
  - Looking at string for long periods
Behavioral Observations and Genetic Testing

Behavioral observations
- Spun objects during assessment
- Difficulty remaining seated during cognitive testing
- Frequently moved about the room
- Difficulty staying on task during cognitive testing
- Difficulty with executive functioning tasks

Genetic testing
- Genetic testing revealed 22q11.2 deletion
DSM-5 Diagnosis

- Autism Spectrum Disorder
- Level of support
  - Social communication-Substantial Support (Level 2)
  - Restricted and repetitive behaviors-Very Substantial Report (Level 3)
- Specifiers
  - With intellectual impairment
  - With language impairment
  - With known genetic condition-22q11.2
  - With Attention Deficit Hyperactivity Disorder, predominantly hyperactive/impulsive presentation
Questions?

Thank you