The Children's Hospital of Philadelphia®

RESEARCH INSTITUTE

CENTER FOR AUTISM RESEARCH

Autism Spectrum Disorders and Comorbid Conditions

Judith Miller, PhD

millerj3@email.chop.edu

January 2012

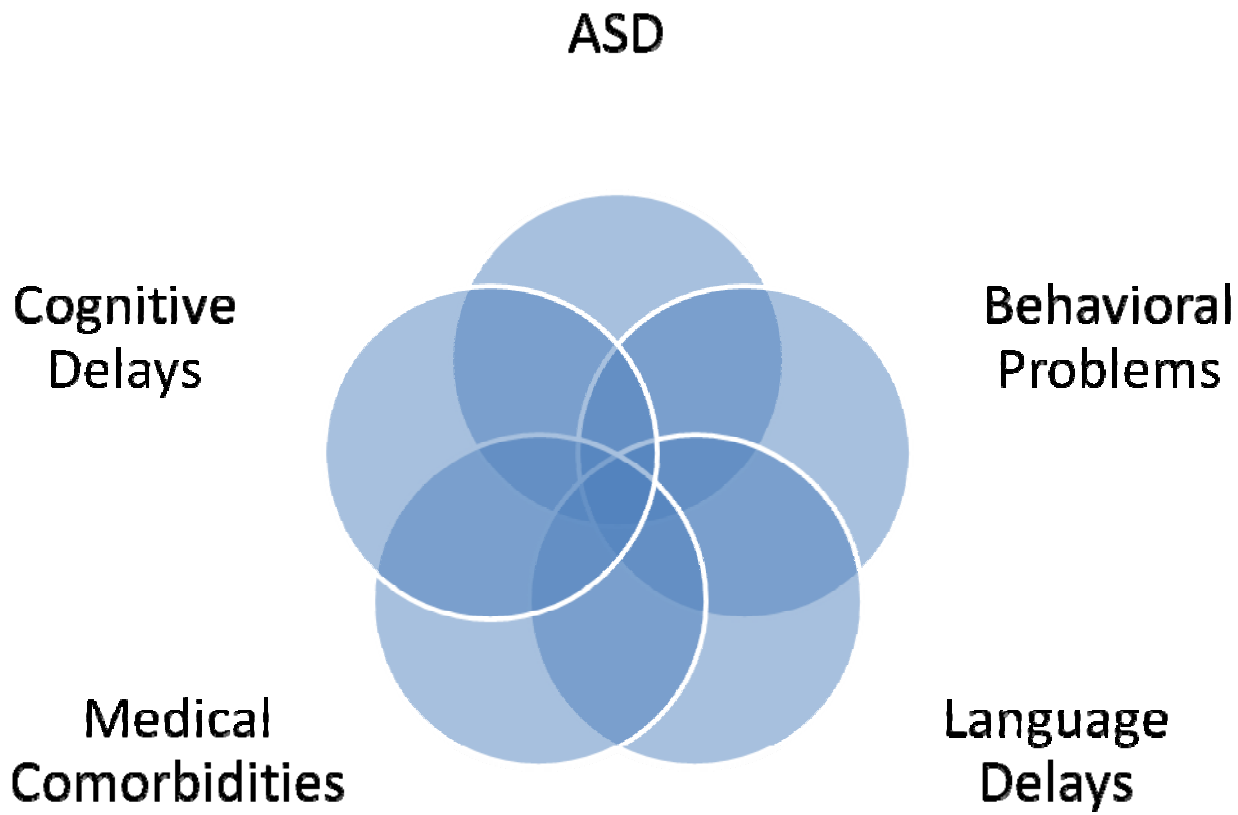
Educational Objectives

CENTER FOR AUTISM RESEARCH

- Discuss the most frequent comorbid psychiatric conditions
- Describe the process of differential diagnosis
- Describe the process of treating comorbid conditions and identifying targets for intervention

Autism is heterogeneous

CENTER FOR AUTISM RESEARCH



Common Comorbidities

CENTER FOR AUTISM RESEARCH

- Language disorders
- Cognitive delays
- Anxiety and mood disorders
- Attention disorders
- Neurological disorders
- Learning disorders
- Medical issues (Sleep, GI, genetic disorders)

Common Psychiatric Comorbidities

CENTER FOR AUTISM RESEARCH

- Intellectual Impairment
- Attention disorders
- Anxiety Disorders
- Tic Disorders
- Mood Disorders

How to make a differential diagnosis

CENTER FOR AUTISM RESEARCH

- Review available information (records, other evaluations)
- Gather observations and history
- Generate list of possible diagnostic explanations
- Carefully consider overlap between diagnoses and characteristics that can “fit” more than one disorder

Differential: ASD v. ADHD behaviors

Behavior	Is more like ASD	Could be either ASD or ADHD	Is more like ADHD
Videogames	Repetitive or asocial quality to play (circumscribed interest)	Can play videogames for hours Seems “obsessed”	Thrives on constant feedback video games provide (high stimulation)
Always moving	Rhythmic or stereotyped quality (pacing or flapping hands) which takes attention away from task at hand	Always on the go, can’t sit still, fidgety	Being active helps engagement (standing at desk while working, likes to be physically engaged)
Friendships	Stiff in interactions, doesn’t seem very interested in peers	Makes friends, but can’t keep them	Seeks peers who engage in impulsive or risky activities

Differential diagnosis: ASD v. ADHD

ASD Diagnostic Criteria	ASD – not ADHD	Could be ADHD
Nonverbal Communication	Stiff, no eye contact	Personal space issues
Friendships	Seeks peers out based on their toys/games	Makes friends but loses them quickly
Lack of sharing		
Emotional Reciprocity		
Delayed Language	No	
Conversations		Excessive talking
Stereotyped Language	History of clear echolalia	
Limited pretend play		
Circumscribed Interests	Repetitive talking about games; game facts	Video games for hours
Nonfunctional Routines		
Motor mannerisms		
Preoccupation with parts	Peers at objects	

Differential: ASD v. OCD

Behavior	Is more like ASD	Could be either ASD or Anxiety	Is more like Anxiety
Routines and rituals	Paces lunchroom after eating unless redirected; walks perimeter of playground at recess	Eats the same meal and sits at the same table every day for lunch.	Seems under pressure to do routines a certain way .
Repetitive language	Anticipating a transition or novel event	Asks same question over and over again	Looking for reassurance (OCD theme)
Lines up objects	Ego-syntonic; repetitive method of play	Orders by size, shape, or color; distressed if disrupted	Ego-dystonic, or under pressure to keep things “just so”

Differential diagnosis: ASD v. OCD

ASD Diagnostic Criteria	ASD – not OCD	Could be OCD
Nonverbal Communication	Does not improve with comfort or familiarity	Personal space issues; avoids eye contact or touch
Friendships	Close friends but activities are organized by parents	Uncomfortable around unfamiliar peers
Lack of sharing		
Emotional Reciprocity		
Delayed Language	No	
Conversations	Repetitive monologues	Repetitive reassurance seeking with parents
Stereotyped Language	Uses echoed words and phrases in conversation	Says certain words until it “feels right”
Limited pretend play		
Circumscribed Interests		
Nonfunctional Routines	Sameness is ego-syntonic	Hand-washing
Motor mannerisms		
Preoccupation with parts	Peers at reflective surfaces	Avoids objects with certain characteristics

Cognitive Development

- Between 20-70% of individuals with ASD also have intellectual impairments
  - Estimates differ based on sample (ASD v. Autism), and IQ test (verbal v. nonverbal)
  - Rate is decreasing with identification of higher functioning ASD, and with better intervention
- Uneven profiles are common, but not universal
- However, many individuals with ASD have low adaptive skills (even if their IQ is high)

Language Disorders

- Communication impairment (social use of language) is part of ASD
- Impairments in speech, sound processing, grammar, and vocabulary are not part of ASD but can co-occur.
- Delays in language acquisition are common
  - 20% will not acquire functional speech
  - Many will continue to show receptive or expressive impairments
- IQ correlates highly with language (but not perfectly)

Attention Disorders

CENTER FOR AUTISM RESEARCH

- According to DSM-IV, ADHD and ASD cannot both be diagnosed
- However, researchers have pushed for change with DSM-V
- Current research questions:
  - Is ADHD a point along the same spectrum as ASD?
  - Is ADHD a separate disorder that can co-occur with ASD[1,2]?
  - How do ADHD symptoms change with age or level of functioning[3,4,5]?

[1]Kim et al. 2000; [2]Lee and Ousley, 2006; [3]Burd et al. 2002; [4]Ghaziuddin et al. 1998; [5]Yoshida and Uchiyama 2004

Anxiety Disorders

CENTER FOR AUTISM RESEARCH

- Frequently seen in ASD
  - Generalized Anxiety Disorder (2%-35%)[1,2]
  - Separation Anxiety (2%-27%)[3,4]
  - Specific Phobias (10%-64%)[1,3]
  - Social Phobia (5%-12%)[5,6]
- Wide ranges of rates due to differences in samples and differential diagnosis
- Easier to identify anxiety disorders in high-functioning individuals, and it responds well to cognitive behavior therapy[7]

[1] Green et al. 2000; [2]Leyfer et al. 2006; [3]Muris et al. 1998; [4]Szatmari et al. 1989; [5]Gadow et al. 2004; [6]de Bruin et al. 2007; [7]Chalfant et al. 2007

Obsessive Compulsive Disorder

OCD	ASD
Anticipatory Anxiety (something bad will happen if I don't wash my hands 3 times)	Need for sameness ("This is how it must be done.")
Obsessions follow consistent themes (symmetry, numbers, contamination, harm)	OCD themes not seen
Compulsions follow OCD themes (hand washing, checking, repeating things a certain number of times)	OCD themes not seen
OCD is distressing ("ego-dystonic") to the individual	Need for sameness is usually not distressing to the individual with ASD ("ego-syntonic")
Does not have triad of ASD characteristics	Has triad of ASD characteristics

Psychosis

- Initially, autism was viewed as a childhood-onset form of schizophrenia
  - Diagnosis would be changed from Autism to Schizophrenia at age 18
  - Now, ASD is understood as a lifelong disorder
  - Schizophrenia can now sometimes be identified in childhood
- Psychosis
  - Negative symptoms (flattened affect, attention difficulties) share overlap with ASD
  - Positive symptoms (hallucinations, delusions) do not overlap with ASD
  - Must consider whether psychosis is due to a mood disorder v. schizophrenia

Targets for Intervention

CENTER FOR AUTISM RESEARCH

- Comorbid conditions are often the primary targets for treatment
- Differential diagnosis can help identify a specific target and its likely source
  - E.g., Differentiate what is ADHD v. ASD and then measure the ADHD symptoms during intervention
  - Identify a behavior that needs intervention, screen for possible causes other than ASD, and then design a targeted treatment plan

Choosing an intervention

CENTER FOR AUTISM RESEARCH

- Choose evidence-based interventions for your target behavior
- Work with a provider that knows enough about ASD to differentiate ASD and non-ASD behaviors
- Track the targeted behavior with your provider to make informed treatment choices and changes