

“... Now his perception and memory were perfect. With one quick look you and I perceive three wine glasses on the table; Funes perceived every grape that had been pressed into the wine and all the stalks and tendrils of it's vineyard. He knew the forms of the clouds in the southern sky on the morning of April 30, 1882 and could compare them in his memory with the veins in the marbled binding of a book he had seen only once, or with the feathers of spray lifted by an oar on the Rio Negro on the eve of the Battle of Quebracho... I suspect, nevertheless, that he was not very good at thinking. To think is to ignore (or forget) differences, to generalize, to abstract.. In the teeming world of Ireneo Funes there were nothing but particulars...”

- Jorge Luis Borges
Funes The Memorius (1944)

Asperger's 101: An Introduction to Terms and Techniques

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Goals of presentation

- Talk about the diagnosis of Asperger's Syndrome (AS) and the various "autism spectrum disorders" (ASDs)
- Discuss some of the overlap of AS with other diagnostic labels
- Review some of the research on cognitive differences in persons with ASD's
- Discuss some ways to address social and academic issues of these children

What are Autism Spectrum Disorders?

- "Autism" first recognized by Leo Kanner in the 1943 paper
 - Diagnosis came into wide use within a decade
- "Asperger's Syndrome" first described by Hans Asperger in 1944 paper
 - He referred to it as "autistic psychopathy"
 - Largely forgotten until 1980's then included in DSM-IV in 1994

What are Autism Spectrum Disorders?

- DSM-IV = The Diagnostic and Statistical Manual of the American Psychiatric Society – 4th Edition
 - The “bible” of psychiatric diagnosis in the US
 - Defines every formally recognized “mental disorder” by a set of observable criteria.
 - DSM-V to be released this year
- ICD-10 = International Statistical Classification of Diseases and Related Health Problems – 10th Edition
 - Rest of the world uses this
 - Since DSM-IV, the two books are largely aligned in their definitions

What are Autism Spectrum Disorders?

- DSM-IV recognizes 5 “Pervasive Developmental Disorders”
 - Autistic Disorder
 - Asperger’s Disorder
 - Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS)
 - Childhood Disintegrative Disorder
 - Rett’s Disorder
- “Pervasive Developmental Disorders” as a blanket term is used interchangeably with “Autism Spectrum Disorders” by most clinicians

What are Autism Spectrum Disorders?

- DSM-V to be released this May
- Changes the diagnostic categories for many mental health and developmental disorders
- Asperger's Syndrome and PDD-NOS diagnoses now eliminated
- All subsumed under "Autism Spectrum Disorder" diagnosis
 - separate ratings for three levels of severity of impairment
- May take several years for this to affect practice

What are Autism Spectrum Disorders?

- Several other related disorders have been proposed by others:
 - Non-Verbal Learning Disability (NLD)
 - Largely diagnosed by those working in LD field
 - Hyperlexia
 - Again diagnosed by those in LD field
 - Semantic-Pragmatic Disorder
 - Largely diagnosed by Speech Pathologists
 - Sensory Integration Disorder
 - Typically diagnosed by occupational/physical therapists

What are autism spectrum disorders?

- The diagnosis a child gets depends as much on who they are evaluated by as the nature of their problems.
- There is no clear distinction among these diagnoses, and between diagnosable and “normal” conditions
- Most times, the diagnostic label is less critical than a clear understanding of the individual’s pattern of strengths and weaknesses
 - Main role of diagnosis is in determining access to services

DSM –IV Criteria for Asperger’s Syndrome

- Qualitative impairment in social interaction, as manifest by at least two of the following:
 - marked impairment in the use of multiple non-verbal behaviors such as eye-to-eye gaze, facial expression, body posture, and gestures to regulate social interaction
 - failure to develop peer relationships appropriate to development level
 - lack of spontaneous seeking to share enjoyment through joint involvement with others
 - a lack of social or emotional reciprocity

DSM-IV Criteria for Asperger's Syndrome

- Restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifest by at least one of the following:
 - encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal in intensity or focus
 - apparently compulsive adherence to specific non-functional routines or rituals
 - stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting or complex whole-body movements)
 - persistent preoccupations with parts of objects.

DSM-IV Criteria for Asperger's Syndrome

- There is no clinically significant general delay in language (e.g. single words used by age 2 years, communicative phrases used by age 3 years)
- There is no clinically significant delay in cognitive development or in the development of age appropriate self-help skills, adaptive behavior, (other than social interaction) and curiosity about the environment in childhood.

DSM-IV Criteria for Asperger's Syndrome

- Criteria are not met for another specific Pervasive Developmental Disorder or Schizophrenia
- The disturbance causes clinically significant impairment in social, occupational or other important areas of functioning

Associated features of ASDs

- Uneven cognitive development
- OCD-like behaviors
- Sensory perceptual issues
- ADHD-like behaviors
- Rigid about transitions
- Limited diet, gastrointestinal problems
- Inconsistent emotional reactions
- Poor speech prosody
- Overly literal interpretation of language
- Motor deficits
- Insensitivity to pain
- Social interest but poor social comprehension

Associated features of ASDs

- Hyperlexia
- Exceptional rote verbal memory
- Hypersensitivity
 - “Tactile defensiveness”
- Sleep and arousal regulation problems
- “Overfocus”
- Epilepsy
- Tic Disorders
- More common in males
- More common in relatives of persons with AS
- Often a “shadow syndrome” in fathers of AS sons

Cognitive Differences in ASDs

- At least three major differences found consistently in research:
 - Problems in Executive Functioning
 - Problems with Theory of Mind
 - Problems in Central Coherence

Cognitive Differences in ASDs

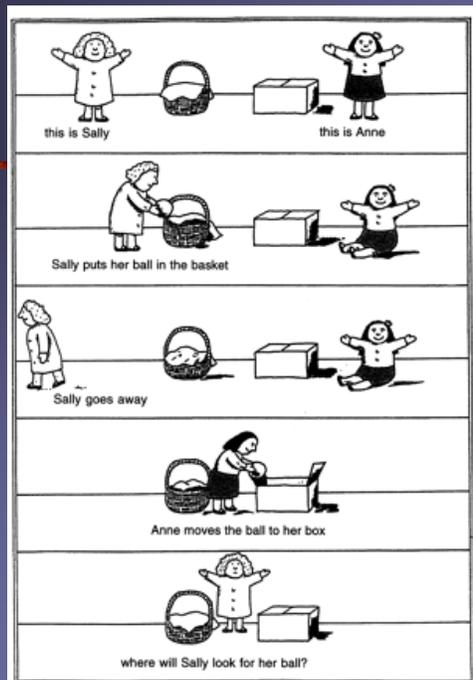
- Executive Functioning
 - Ability to plan, organize, and structure themselves and their environment
 - “Thinking about thinking” (and thinking about doing)
 - How do I start? How long will it take? What will I need? What do I do now?
- Children with ADHD have similar issues and there is clearly some overlap in these diagnoses

Cognitive Differences in ASDs

- What do executive functioning deficits look like?
 - Disorganized
 - Rigid, inflexible, poor adaptation to change
 - Do not anticipate consequences well
 - Do not consider choices
 - Poor at self-reflection, self-monitoring, and time management
 - Appear impulsive
 - Unable to delay or inhibit irrelevant behaviors
 - Unable to restart when stuck

Cognitive Differences in ASDs

- Weakness in “Theory of Mind”
 - The ability to take the perspective of another person and “put yourself in their shoes”
 - This causes obvious problems with social interaction and leads many kids to avoid social situations
 - Less obviously affects reading comprehension
 - can’t understand characters’ motivations
 - Also affects written expression
 - can’t take perspective of the reader so can’t communicate ideas effectively



Cognitive Differences in ASDs

■ Central Coherence

- A term for our tendency to see the “big picture” or the small details
 - Low central coherence = focus on small details
 - High central coherence = focus on big picture
- Most ASD kids are very detail oriented at the expense of the big picture
 - They have “low central coherence”

Cognitive Differences in ASDs

- Low central coherence leads to strengths in:
 - Memorization of facts
 - Rote Arithmetic
 - Simple puzzles
 - Basic reading skills (hyperlexia)

Cognitive Differences in ASD

- Low central coherence causes problems with:
 - Generalizing from specific examples to broad rules
 - Applying previous learning to new cases
 - Adapting to changes in routine
 - Understanding motivations of others from observing their behavior
 - Understanding “theme” or “thesis” (reading and oral comprehension)
 - Writing (though basic grammar and spelling may be fine)
 - Abstract thinking

How to help...

- What not to do...
 - Don't use consequences for misbehavior that reinforce social problems
 - Isolating child from peers, humiliating or making them stand out in any way.
 - Don't expect behavior just because it is “common sense”
 - Our idea of “common sense” is often exactly what AS kids lack.

How to help...

- Transitions:
 - Visual scheduling (written or with icons)
 - Review of daily schedule at outset and intermittently during day
 - Frequent verbal reminders
 - Preparation for changes in routine
 - Provision of low stimulation environment for temporary escape

How to help...

- Attention:
 - Seat near front
 - Physical prompts (tap on shoulder)
 - Attention to sensory factors in class (noise, light etc.) that may distract
 - Use of more interactive/active teaching strategies

How to help...

■ Anxiety:

- Major factor in behavioral problems for ASD kids (often not admitted directly)
- Have child make “successive approximations” to overcome fears/worries
- Do not try to overcome when panicked
- Teach relaxation (breathing, muscle relaxation) to help work through

How to help...

■ Restricted Interests:

- Don't deny the restricted interests but use as entry point to deepen and broaden learning
 - If they like weather channel, can use as means to explore geography, personal feelings of those impacted by storms, physics of weather, impact of weather on history (Napoleon's Russian campaign, etc.)

How to help...

- Restricted Interests:
 - Remember that academically successful kids far more likely to turn restricted interests to useful ends
 - Academic interest
 - Social outlet (train clubs)
 - Career
 - Only limit this expression if truly disruptive to class or socialization

How to help...

- Building social skills:
 - Harder because more fundamental
 - Steps outside of academic role a bit
 - Much teachers can do, and this often is of benefit to the entire class
 - Can integrate social skills into regular classroom activities

How to help...

- Building social skills:
 - Choose literature for class that has overt themes of social skills, social hierarchy, social gaffes, etc.
 - Discuss these in groups
 - Ask for discussion or writing of ideas to help characters
 - “How would you suggest Lisa cope with Bart’s teasing?”

How to help...

- Building social skills:
 - Perspective taking is a fundamental problem for ASD kids
 - Have them write essays or letters from historical figure or in voice of a fictional character
 - Have a class debate in which children intermittently told to argue someone else’s position
 - Ask for predictions from child about how class will vote, what a character will feel or do, what peer’s believe – then test these predictions

How to help...

- Building social skills:
 - Self-monitoring also a problem for ASD kids
 - Dress, walk, talk differently from peers
 - Acting and improvisation can be useful for this
 - Many ASD kids both poor at this and anxious about it
 - Not in front of whole school, but in-class dramatics may be useful

How to help...

- Building social skills:
 - Unstructured times (recess, playground) often the worst for these kids
 - Perfect storm of low structure, high sensory input, lack of peer supervision, and self-managed transition
 - Leads to starting trouble or getting picked on
 - Adult supervision also low at these times
 - Buddy system can help, even if its an assigned buddy.

How to help...

- Building social skills...
 - Pick an appropriate buddy
 - Intellectually matched, socially complimentary,
 - Ideally build on emerging relationship in classroom and facilitate it
 - E.G. Assign collaborative homework they will have to call each other to complete
 - Encourage parents to facilitate friendship as well
 - While respecting both kids privacy
 - Use buddy in class as well as during unstructured times

How to help...

- Building social skills...
 - Direct discussion/instruction in rote social skills (manners)
 - This won't save the day, but it's a big piece, and many kids don't get this these days
 - Don't chew with mouth open, say hello when other's greet you, don't pick your nose at the lunch table, etc.
 - Can address through books, group discussion
 - Not by singling ASD child out (be gentle)

For more information:

- Asperger's Syndrome: What Teachers Need to Know – Matt Winter (book)
- School Success for Kids with Asperger's Syndrome: A practical guide for parents and teachers. – Steven Silverman and Rich Weinfeld (book)
- Asperger's Syndrome: Success in the Mainstream Classroom – Dan Coulter (DVD)
- OASIS (Asperger's support online):
 - <http://www.udel.edu/bkirby/asperger/>
- Autism Society of America
 - <http://www.autism-society.org/>

Questions...

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