Autistic Spectrum Disorders: The Whole Student

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Autism by DSM-V

1) Impairment in Social Interaction

- Deficits in social reciprocity via approach, normal back and forth conversations, lack shared interests, emotions, failure to initiate/respond to social interactions
- Deficits in nonverbal communicative behaviors; poor eye contact, facial expressions
- Deficits in developing, maintaining, understanding relationships; lack interest, poor imaginative play

Autism by DSM-V

1) Restricted repetitive interests (2):

- Stereotyped or repetitive motor movements (stereotypies), or speech (echolalia)
- Inflexible adherence to routines or ritualized patterns; difficulty with transitions;
- Fixated interests abnormal in intensity/focuse (preoccupation with unusual objects, circumscribed interests)
- Hyper/hypo-reactivity to sensory inputs; indifference to pain, > smell, touch; fascinations with lights, sounds

Autism: DSM-V vs. IV

5 diagnoses to 1 (and a half)

- **Either both social delays AND restricted interests = *Autism*, or**
- **If no restricted interests, then *Social Communication Disorder* (social pragmatics)**
- **Prior Aspergers, et al "grandfathered"**

http://www.dsm5.org/Documents/changes%20from%20dsm-iv-tr%20to%20dsm-5.pdf

Asperger Syndrome

- Not associated with increased criminality
- More likely victims than victimizers
- Increased risk for mood disorders appears stronger than risk for psychotic disorders (- link between autism and schizophrenia)
- 18/21 met criteria for NLD vs. 1/19 HFA (Klin et al., 1995)

Splinter Abilities (“Idiot Savant”)

- Described by Rimland (1978)
- ? 10% autistic Pts had special ability
- Math calculations, memory, maps, music, art
- Associated with obsessiveness, repetitive behaviors
- Usually present by age 4; peak at 10
- Better at block design, abstracting

Autism in these United States

About 1 percent of the world population has autism spectrum disorder. (CDC, 2014)

Prevalence of autism in U.S. children increased by 119.4 percent from 2000 (1 in 150) to 2010 (1 in 68). (CDC, 2014)

Autism services cost U.S. citizens $236-262 billion annually. (Buescher et al., 2014)

A majority of costs in the U.S. are in adult services – $175-196 billion, compared to $61-66 billion for children. (Buescher et al., 2014)

Autism in these United States

Cost of lifelong care can be reduced by 2/3 with early diagnosis and intervention. (Järbrink K. Autism. 2007 Sep;11(5):453-63)

The U.S. cost of autism over the lifespan is about $2.4 million for a person with an intellectual disability, or $1.4 million for a person without intellectual disability. (Buescher et al., 2014)

35 percent of young adults (ages 19-23) with autism have not had a job or received postgraduate education after leaving high school. (Shattuck et al., 2012)

Autism in these United States

It costs more than $8,600 extra per year to educate a student with autism. (Lavelle et al., 2014) (The average cost of educating a student is about $12,000 – NCES, 2014)

In June 2014, only 19.3 percent of people with disabilities in the U.S. were participating in the labor force – working or seeking work. Of those, 12.9 percent were unemployed, meaning only 16.8 percent of the population with disabilities was employed. (By contrast, 69.3 percent of people without disabilities were in the labor force, and 65 percent of the population without disabilities was employed.) (Bureau of Labor Statistics, 2014)

Is Autism becoming more common?

Epidemiology

- Dx 1 in 2,000 (based on 20 studies over last 30 years) Fombonne et al., 1997)
- Increase reported to 1/150 (CDC, 2007)
- 6 studies with higher functioning Pts included which > from 1/2000 (autism) to 1/1000 (PDD)

(Tanguay, 2000)

How Heritable is ASD?

- **Autism**
  - **Monozygotic (identical) twins = 91%**
  - **Dizygotic (fraternal) twins = 0% (Steffenburg et al., 1989)**
- **PDD Spectrum**
  - **MZ twins = 92%**
  - **DZ twins = 10% (Le et al., 1996)**

Question #1

Which of the following is most true of the prognosis of ASD?

a) Early intervention is critical and usually will lead to complete normalization of development

b) Almost all toddlers diagnosed with autism or PDD-NOS will also have mental retardation

c) Some children with ASD can have a significant increase in IQ scores during the school years

d) Adults with ASD who remained in school programs through high school rarely require support in the community

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ASD – Prognosis (pre & post 1980)

- Live in hospital: >50% to 8%
- Live independently: 0% to 12%
- Work: 5% to 20%
- Romantic relationships: “few” to 20%

(Howlin, 1997)

ASD – Factors Related to Better Outcomes

- Communicative language by age 5-6
- Scoring in mild MR range or above
- Finding ability/competence to develop “niche”

Theory of the Mind (ToM)

- **Ability to infer/act on information about own and other's mental states (beliefs, intentions, desires)**
- **1st order: "What does ____ think about _____?"**
- **2nd order: "What does Tom think that Bill thinks about ____?" (Baron-Cohen, 1989)**
- **Core deficit in autism (*but not Asperger's*)**
- **Also found in ADHD, PDD, and NVLD (Schreier, 2001)**

Evaluation Screenings

1) ChAT (early screening; 18 mos)
2) ADOS-2 (schools like)
3) CASD (spectrum)
4) CARS-2 HF (>6yo, high functioning

http://www.txautism.net/uploads/target/AutismScreen_Assess.pdf

Adult Autism Planning

1) Partner with the School regarding Transition
2) Anticipate vocational/post-high school 2-4 yrs ahead
3) Clarify expectations with receiving program
4) Anticipate living arrangements toward independence

Adult Autism Planning: Family

1) Decide routines: how and when of family visits
2) Money; chores
3) Transportation
4) Vacations
5) Recreation
6) Community activities (church, choir, sports, movies, etc.)

Adult Autism Planning

Overview –A summary of the child's life to date and your aspirations for the future

- **Family history**– Information and "favorite memories" relating to parents, grandparents, siblings and friends, as well as the child
- **Medical care**– Detailed description of disabilities, with medical history, medications and current healthcare providers
- **Benefits**– List of programs such as Medicaid and Supplemental Security Income (SSI),in which the child is enrolled, agency contacts, case numbers, documentation requirements

Adult Autism Planning

Persons with identified disability can apply for waivers for economic support

Diagnosed disability before age 22 (or if head injury after)

For adults our (NCDHHS) services may include training in activities to strengthen appropriate developmental functioning in areas of self-care, mobility, socialization, independent living, and self-advocacy and rights

http://medicaidwaiver.org/state/north_carolina.html

http://www.ncdhhs.gov/divisions/mhddsas

http://www.ncdhhs.gov/assistance/disability-services/

Adult Autism Planning

- **Benefits**– List of programs such as Medicaid and Supplemental Security Income (SSI),in which the child is enrolled, agency contacts, case numbers, documentation requirements
- **Daily routines** – Include activities he loves or hates, and chores typically performs
- **Diet** – Likes and dislikes, allergies, interactions with medication
- **Behavior management** –Programs in place, level of success, unsuccessful past efforts
- **Residential** – Current living arrangements and changes which may be necessary in your absence

Adult Autism Planning

- **Education**– Programs to date and preferences for the future
- **Social life** – Activities he enjoys, including vacations
- **Career**– Types of work he enjoys/might enjoy and supports required
- **Religion-**Role this plays in child's life

End-of-life–List preferences and arrangements that have been made.

http://www.autism-society.org/living-with-autism/future-planning/letter-of-intent/

Here's what we focus on these days:

Intervention Targets

1) **Social Communication**
   (Social Pragmatics, Participation)
2) **Sensory Development**
   (Managing Sensory Sensitivities)
3) **Daily Life Skills**
   (Transitions, Work/College)

Social Communication

1) Intention (request, comment, refuse, persuade, negotiate)
2) Frequency (compare between)
3) Discourse Management (topic stability, turn-taking, repair [repeat, rephrase, add])

http://www.iidc.indiana.edu

Social Communication

1) **Register Variation (politeness; asking for cookie, seek babysitter)**
2) **Social Role Awareness (treat police officer differently than peers)**
3) **Presupposition (perspective-taking, quantity, quality, relevance)**

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Paralinguistics

1) Prosody (inflection; voice)
2) Gaze (eye contact; look away)
3) Gestures (emphasis)
4) Proximity (body in space)

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Other Social Behaviors

1) Conventional Gestures (culture-specific conventions; what's "appropriate" there)
2) Facial Expressions (consistent with verbal expression)
3) Social Actions (dress, holding back comments)

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Social Pragmatic Tactics

1) Social Stories (C. Gray)
2) Social Detective (M. Garcia-Winner)
3) Video Modeling
4) Stay-Play-Talk (remain in the game, and discuss)
5) Comic strip/short story exercises (displacement/projection)

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Independence

1) Prepare for home/apt amidst others (not gated, all-disability grouping); "scattered-site" housing (vs. isolated)
2) Does not impose restrictions on visitors, daily life activities, etc.
3) Service-independent; person can chose which services

http://autisticadvocacy.org

http://disabilityrightsnc.org

Comorbidities – PDD

- MR = 75%
- ADHD = 28%
- OCD = 19%
  - Obsessions more about how things work than about people (Baron-Cohen & Wheelwright, 1999)
- Depression = 15%

(Klin & Volkmar, 1997)

PDD – Adult (Psycho)pathology

- Risk of Schizophrenia not increased
- Depression: 12-33% Asperger's
- Anxiety: 7%
- Epilepsy: 18-33%
- Criminality: 2%

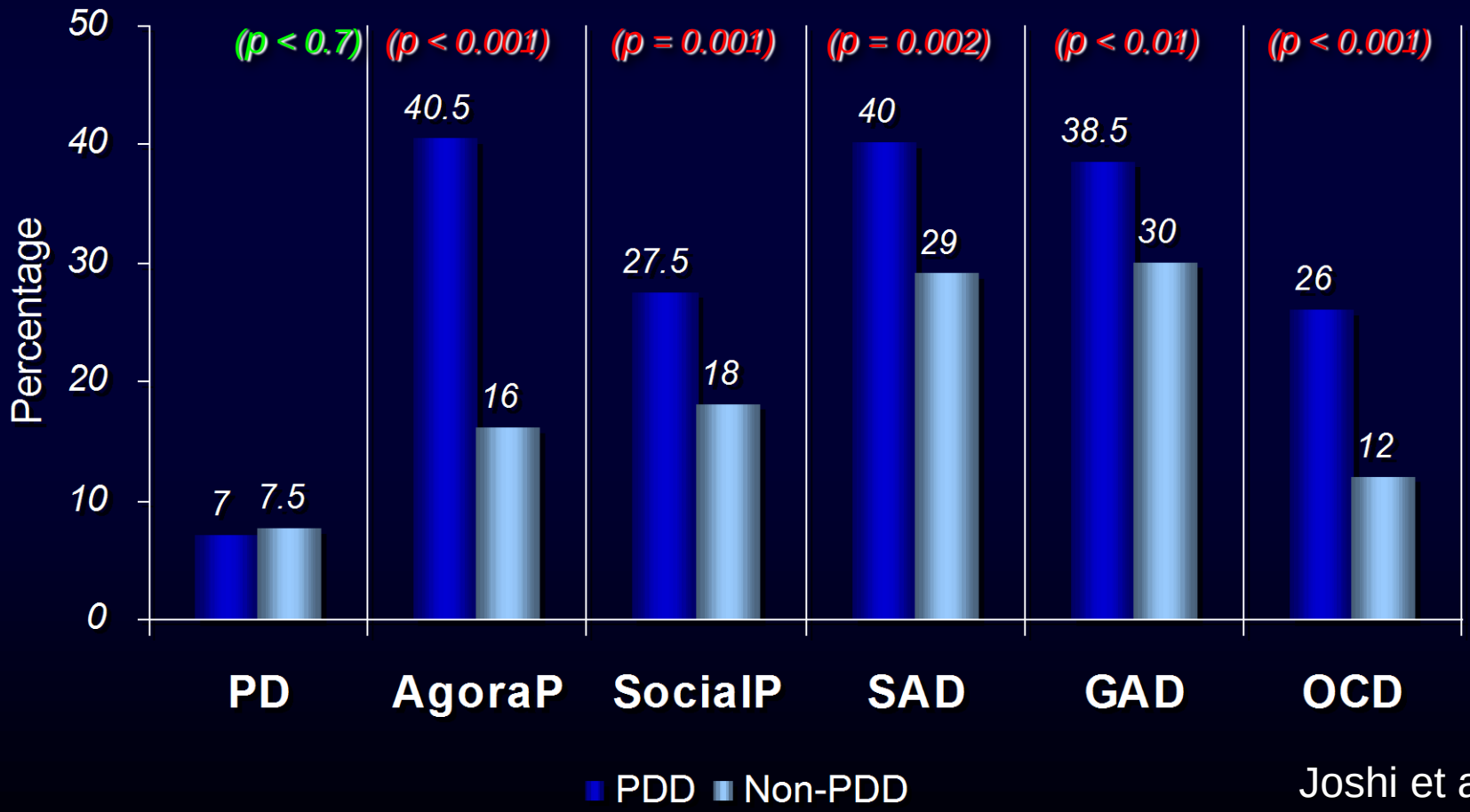
(Harris, 1998)

PDD and other Psychiatric Disorders

- MDD in 37% Autistic Families vs. 11% controls
- 64% depressive Episode *before* birth of PDD child (Smalley, McCracken et al., 1995)
- Social Phobia 20% in 1st degree, 10 times higher than relatives of controls (Piven & Palmer, 1999)
- Older age of Fathers (Burd et al., 1999)

Prevalence & Clinical Correlates of ASD: Comorbidity

Anxiety Disorders



Joshi et al., 2007

Medication: HFPDD Pts

- Yale group: 109 Pts receiving Rx
- SSRI = 27%

  (Prozac, Zoloft, Paxil, Luvox, Celexa)
- Atyp Neuro = 13%

  (Risperdal, Zyprexa, Seroquel, Geodon, Abilify)
- Anxiolytics = 6%

  (Buspar, Klonopin, Ativan, Xanax)
- TCA = 6%

  (Pamelor, Elavil, Norpramin)

(Martin et al., 1999)

Medication: HFPDD Pts

- Yale group: 109 Pts receiving Rx
- Stimulant = 20%

  (Ritalin, Concerta, Adderall, Cylert)
- Mood Stabilizers = 9%

  (Depakote, Tegretol, Lithium)
- Antihypertensives = 6%

  (Catapres, Tenex)
- Old Antipsychotics = 5%

  (Haldol, Mellaril, Navane, Trilafon)

(Martin et al., 1999)

Medication: PDD

- Risperidone "FDA-Indicated" for aggression/irritability in PDD
- SSRI antidepressants, stimulants often used, at very low to normal doses
- Alzheimer and memory agents used somewhat (amantadine)
- Secretin, Vitamins have not proven useful thus far