





Autism Canada's Statement On The Sandy Hook Elementary School Tragedy 12/17/2012

· It has been reported that the shooter at Sandy Hook Elementary School had autism. In the weeks and months to come there will be much more information about his condition, but today it has never been more important to understand that autism / Asperger's is not a mental health condition. Autism is a neurological condition.....



ARI Statement on the Newtown, CT Tragedy

The staff at the Autism Research Institute is deeply saddened by yesterday's tragic events at Sandy Hook Elementary School in Newtown, Connecticut...

Some public comments have drawn potentially inaccurate and stigmatizing conclusions about a link between the diagnosis [of autism] and a propensity for violence and lack of empathy... Autism is not a mental health disorder - it is a neurodevelopmental disorder...



Autism Society of America Statement 12/17/2012

- · No evidence exists to link autism and premeditated violence...
- · Individuals with autism who act aggressively typically do so because they are reacting to a situation...
- · Many of the individuals with Asperger's syndrome who have committed crimes had co-existing psychiatric disorders...

Reality

The more...cases of insanity that I have had to deal with, the more strongly the fact has impressed itself upon me that it is fruitless to endeavor to draw up an elaborate scheme of classes, orders, and genera, into which cases of insanity are to be grouped...[T]here are wide differences between different cases, but...the differences are not abrupt...Cases will always occur partaking pretty equally of the nature of two adjoining groups, and other cases will occur which exhibit at one time the features of one group, and at another time those of another.

Charles Arthur Mercier (1852-1919). Sanity and Insanity (1890). (quoted in King & Lord 2011)



Claude Monet (1840-1926)

Outline

- ➤ Natural Hx of ASD (review)
- · Psychiatric co-morbidity in persons w. ASD
- ASD and Non-ASD psychiatric morbidity in the families of children with ASD
- **Family Mental Health**
- **Practical suggestions**
- Summary

Natural History: "The temporal course of a disease from onset to resolution"

Center for Disease Control & Prevention

ASD has a Natural History of improvement over time, irrespective of intervention

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Clinical	Decreasing Atypicality / Increasing Age ⇒			
Domain ↓	Severe / Youngest	Moderate / Older	Mild / Older	
1. Social Interaction	No eye contact No physical affection Cannot be engaged in imitative tasks	Intermittent eye contact Seeks affection "on his own terms" May invade personal space of others (not true affection) In imitative tasks, although with difficulty	Good eye contact «Shows interest in others, but often does not know how to join in «Easily engaged in imitative activities «Rigid; has difficulty if perceives that rules have been broken »Difficulty with "Theory of Mind" tasks	

Theory of Mind

- Realization that other people have an internal mental & emotional state, different from one's own
- Ability to gauge the internal mental & emotional state of others
 - Able to infer motives & predict behavior of others
 - Empathy
 - Humor

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Theory of Mind

Muff

Muff is a little yellow kitten. She drinks milk. She sleeps on a chair. She does not like to get wet.

Q: How would Muff feel, if you gave her a bath? A: Clean!

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Theory of Mind

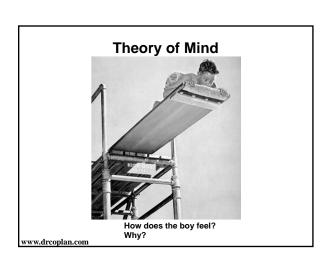
Camping

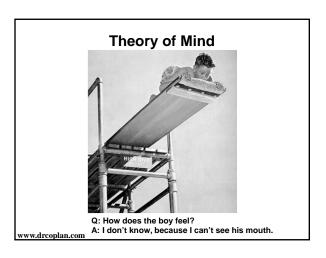
Six boys put up a tent by the side of the river. They brought things to eat with them. When the sun went down, they went into the tent to sleep. In the night, a cow came and began to eat grass around the tent. The boys were afraid. They thought it was a bear.

Is this a sad story, a scary story, or a funny story?

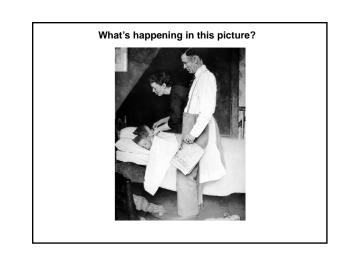
•A scary story, because the boys were scared. (PDD-NOS)
•It was a most unusual story, because you don't often find cows in the woods. (Asperger Syndrome)

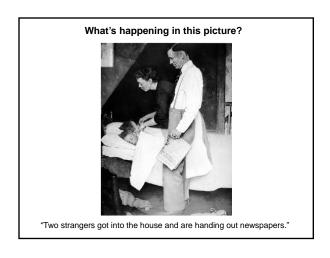
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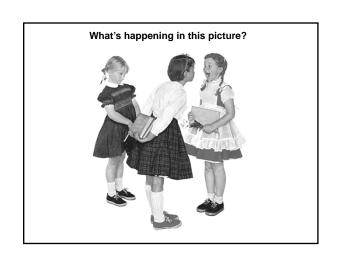


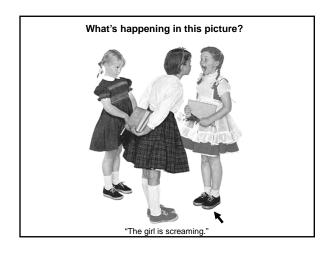


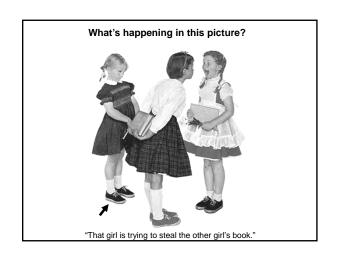
	Decreasing Atypicality / Increasing Age ⇒				
Clinical Domain ↓	Severe / Youngest	Moderate / Older	Mild / Older		
3. Repetitious Behaviors Cognitive	*Extreme distress if routines are changed or when required to transition from one task to another *Fascination with odd objects (tags, wheels, fans, etc.)	Same, but with diminishing level of distress; able to accept verbal preparation for changes in routine Complex repetitious play (lining up objects, memorizes numbers, letters, etc)	May demonstrate conscious awareness of preference for routines; easier to self-modulate *Play remains repetitious, but repetitive quality is more subtle; preoccupation with arcane topics *Problems with Central Coherence		
Motoric	•Frequent, intense stereotypical movements (flapping, spinning, toe-walking, finger twiddling)	Motor stereotypies occasional; may re-emerge when excited	Motor stereotypies rare or absent		

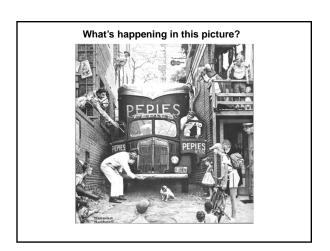


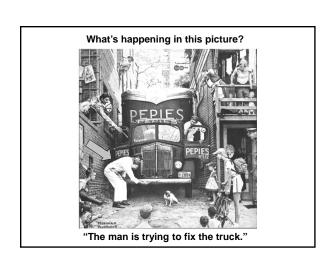


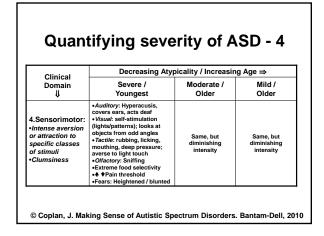


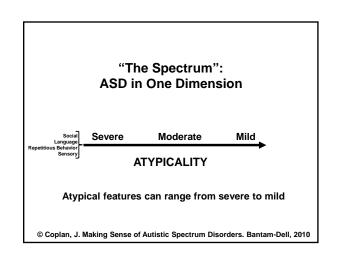


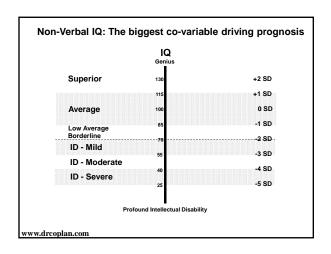


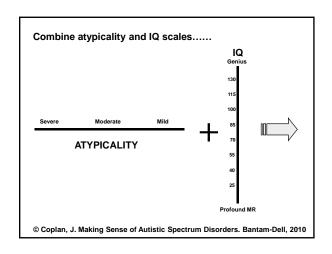


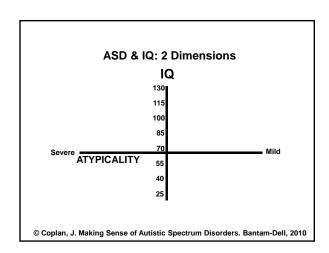


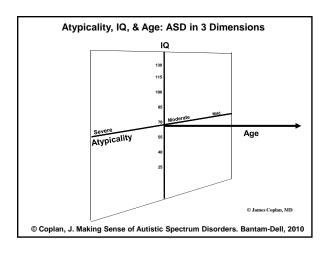


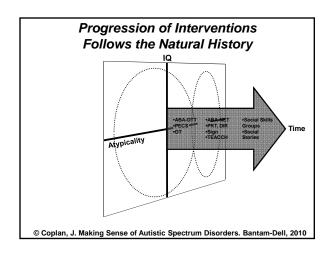


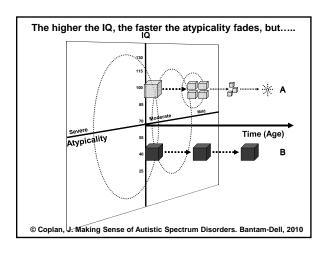


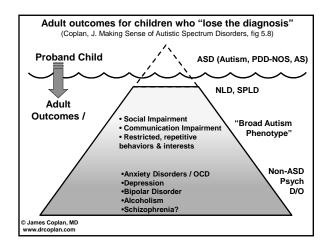


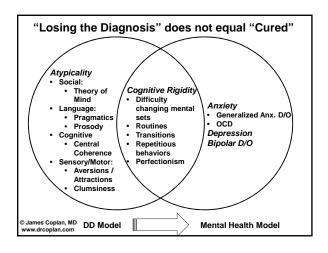










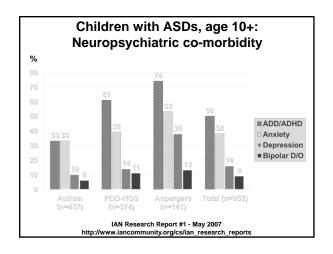


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James Coplan, 2013.

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Examining the comorbidity of bipolar disorder and autism spectrum disorders: a large controlled analysis of phenotypic and familial correlates in a referred population of youth with bipolar I disorder with and without autism spectrum disorders.

J Clin Psychiatry. 2013 Jun;74(6):578-86. Joshi G, Biederman J, Petty C.

J Clin Psychiatry. 2013 Jun; 74(6):578-86. Joshi G, Biederman J, Petty C Goldin RL, Furtak SL, Wozniak J.

- Secondary analysis of data from a family study of youth with Bipolar I D/O (probands = 157, relatives = 487)
- 30% (47/155) of Bipolar I probands met criteria for ASD
 Age at onset of Bipolar I was significantly earlier in the presence of ASD comorbidity (4.7±2.9 y vs 6.3±3.7 y; p=.01)
- Phenotypic and familial correlates of bipolar disorder were similar in youth with and without ASD comorbidity

"Is Schizophrenia on the Autism Spectrum?"

King & Lord, 2011

- "Schizotypal Personality" is distinguished by
 "unusual preoccupations, unusual perceptual
 experiences, odd thinking and speech (e.g.,
 overelaborate, or stereotyped), inappropriate or
 constricted affect, behavior or appearance that
 is odd, eccentric, or peculiar; lack of close
 friends or confidants other than first-degree
 relatives, and social anxiety..."
- c/w Wing's "Active but odd" ASD phenotype

"Is Schizophrenia on the Autism Spectrum?"

King & Lord, 2011

 "What arguably distinguishes schizophrenia spectrum from autism spectrum in two individuals who otherwise share all of these symptoms is the presence of paranoid ideation...

"Is Schizophrenia on the Autism Spectrum?"

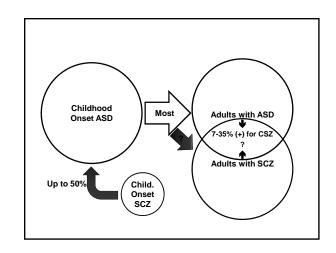
King & Lord, 2011

- "Given the degree of overlap, one might reasonably ask if paranoid thinking could be a logical downstream consequence of a common underlying difficulty in the perception of social communication"
- · Theory of Mind deficits are seen in:
 - ASD: Proband children & their Non-ASD parents
 - SCZ: Proband adults & their Non-SCZ parents

ASD & Schizophrenia: Epidemiology

- Prevalence
 - ASD ~ 1/100
 - SCZ ~ 1/100 (lifetime risk)
- Joint occurrence of ASD and SCZ
 - Predicted (if independent): 1/10,000
 - Observed (small samples, ascertainment bias):
 - Outcome studies, children w. ASD: How many develop SCZ?
 Howlin 2004 (N=68; none developed SCZ; underpowered)
 - Howlin 2004 (N=68; none developed SC2; underpowered)
 Childhood Onset Psychosis: 50% had prior PDD
 - Rapoport et al 2009, Unenge & Hallerback 2012
 - Adults with ASD: 7-35% meet criteria for SCZ
 Howlin 2000, Stahlberg 2004; Mouridsen 2008a, b
 - · Adults with SCZ: Unknown how many meet criteria for ASD

Refs: King & Lord 2011; deLacy & King 2013



Psychosis and Schizophrenia In adults with ASD*

Table 1 Psychosis and schizophrenia (SCZ) in adults with autism spectrum disorder (ASD) diagnoses

Reference	Number	Diagnosis	Age (years)	Psychotic symptoms
Tantam (1991)	85	ASD	Adult	21% psychosis 4% SCZ
Tantam (1988)	60	Autism, 46	16-65, mean 24	12% psychosis
Wing (1981)	18	ASD	16+	50% SCZ spectrum
Szatmari et al. (1989)	16	Autism, IQ >68	Mean 26	25% hallucinations
Konstantareas & Hewitt	14	Autism, high functioning	17-33, mean 25, males	50% SCZ
(2001)				Disorganized subtype

- Older literature (more severe)
- Convenience samples rather than prospective cohorts

de Lacy, Nina. King, Bryan H. Revisiting the relationship between autism and schizophrenia: toward an integrated neurobiology. Annual Review of Clinical Psychology. 9:555-87, 2013

Monogenic conditions associated with both ASD and Schizophrenia Spectrum

Table 4 Selected monogenic conditions associated with both autism spectrum disorder and schizophrenia spectrum psychopathology and their behavioral phenotypes

Disease	% w/ASD	% w/SCZ	Neuropsychiatric phenotype	Location	Gene	Gene product function
Fragile X syndrome	21-50	NR	Aggression, anxiety, ID, hyperactivity	Xq27.3	FMR1	Negative regulator of translation
Phenylketonuria	5-20	NR	DD, seizures	12q24.1	PAH	Catecholamine synthesis
Prader-Willi ^a - UPD - del	50 25	85 56	Hyperphagia, OCD, disruptive behaviors, mood disorders	15q11.2	snoRNA HBII-85	Regulates methylation of other substrate RNAs
MECP2- related disorders ^b	25–97	60	Rett: psychomotor regression, ID PPM-X: BAD Parkinsonism	Xq28 Xp22	MECP2 CDLK5	Transcription regulation, phosphorylates MECP2
Lujan-Fryns	62	10	Mild ID, shyness Hyperactivity Aggression	Xq31.1	MED12	Mediates RNA polymerase, regulates SOX9, neural crest
Succinic semialdehyde deficiency	NR	NR	DD, ataxia, hypotonia, absent speech, seizures	6p22	ALDH- 5AI	Breakdown product of GABA

de Lacy, Nina. King, Bryan H. Revisiting the relationship between autism and schizophrenia. toward an integrated neurobiology. Annual Review of Clinical Psychology. 9:555-87, 2013

ASD and SCZ: Shared Psychopharmacology

- Neuroleptics
 - The only FDA approved drugs for ASD
 - Originally developed for SCZ
- Oxytocin
 - OXTR and OXT \triangle 's in ASD and SCZ

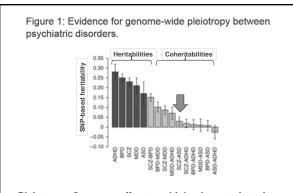
de Lacy, Nina. King, Bryan H. Revisiting the relationship between autism and schizophrenia: toward an integrated neurobiology. Annual Review of Clinical Psychology. 9:555-87, 2013

If ASD and SCZ are etiologically related: Why isn't comorbidity higher?

- Timing
 - Critical periods (ex: monocular visual deprivation; hypothyroidism)
- Systems impacted / Site of Lesion(s)
 - Neuronal proliferation, migration, cortical folding, synaptic function, local & regional connectivity
- Severity
 - Perhaps severity of ASD ♠ risk for developing SCZ
 - But severe ASD can also mask psychiatric d/o's, including SCZ
- · Lack of recognition
 - Genetic eval not usually done in SCZ
 - Expectation effects? (ADOS cannot distinguish ASD from SCZ)

Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs
Cross-Disorder Group of the Psychiatric Genomics Consortium

Nature Genetics: v. 45, pp 984-994(2013)



Pleiotropy: One gene affects multiple phenotypic traits

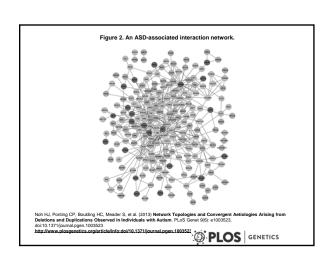
Nature Genetics: v. 45, pp 984–994(2013)

Network Topologies and Convergent Aetiologies Arising from Deletions and Duplications Observed in Individuals with Autism

Hyun Ji Noh, Chris P. Ponting, Hannah C. Boulding, Stephen Meader, Joseph D. Buxbaum, Dalila Pinto, Christian R. Marshall, Anath C. LionelStephen W. Scherer, Caleb Webber PLOS Genetics, June 6 2013

http://www.plosgenetics.org/article/info%3Adoi%2F10.1371%2Fjournal.pgen.1003523

- 192 genes form an interconnected cluster
- Patients with copy number variations within this cluster possess on average, 3 CNV's
- Many of these genes are implicated in psychiatric disorders in humans (anxiety, e.g.), and/or behavioral abnormalities in animal models (abnormal nurturing behavior, e.g.)



deLacy & King 2013

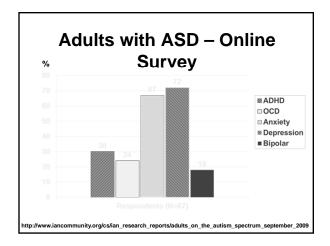
There appears to be no question that a phenotypic continuum links the SCZ and autism spectra; moreover, it incorporates neuropsychiatric deficits associated with all of the classic neurodevelopmental disorders [ID...DD... ASD...ADHD, and SCZ]. Affected persons display some subset of symptoms from this neurodevelopmental superset, in individually varying phenotypes likely molded by pleiotropy, different types of genetic defects, and epigenetic mechanisms.

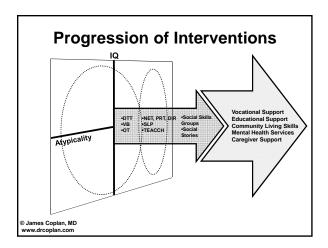
Transition to Adulthood

"Our son turned 13 last year. We are noticing that...the world interacts very differently to an autistic child vs. an autistic man."

Parent of teen with ASD

MRN 04-0011





Does ASD predispose to violent crime?



Suspect's fiancée tells of a kind, gentle man

Heather Clemens said she never had a clue.

"It was something I never expected — not him, or the person I thought he was," she said. "Had I known he was vicious at heart, I would have done everything to make sure he was not out in society."

She was speaking of James L. Troutman, 24, her fiancé and roommate, and now the suspect in the killing of 9-year-old Skyler Kauffman.

She said he had Asperger's syndrome, a disorder characterized by difficulties in social interactions.

The two met at her mother's apartment in Souderton, where Troutman was a neighbor. Her first impression was that Troutman was a very gentle guy but a bit introverted.

"He had a hard time understanding things," Clemens said. "You have to break it down and tell it again."

Suspect's fiancée tells of a kind, gentle man

Troutman kept a tote full of Legos and enjoyed making buildings, taking them apart, and then making something else. "He made me a heart once," she said.

He would also do odd jobs and yard work for friends and family, she said.

She was so blinded by her view of him, she said, that she never thought to connect him to the screams she heard coming from the basement of the apartment complex Monday.

LA Fitness Center Shooting In Pennsylvania Leaves 4 Dead



AUTISM'S GADFLY

http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.htm

August 5, 2009

Will neurodiversity diagnose George Sodini with autism?

Last night.....a man entered a gym in the vicinity of Pittsburgh Pennsylvania. He walked into a room where a "Latin impact" aerobics class was being held. He turned out the lights and drew a gun out of his gym bag. He started shooting, killing three women and then killing himself....

AUTISM'S GADFLY

http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html

".... Apparently, the man was frustrated by the fact that he was 48 years old and had not had a girlfriend for a long time. In fact he kept a detailed online diary describing his frustrations and his plan to go out and kill some women at some point; apparently revenge for being rejected so much. Looking at the diary we see his occupation was a software designer, a job that Simon Baron-Cohen, Temple Grandin and others have claimed requires autistic traits...."

AUTISM'S GADFLY

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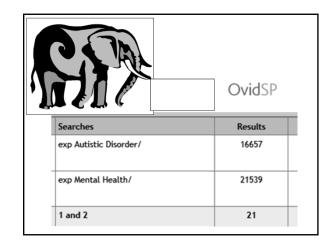
Sodini had written: 'The biggest problem of all is not having relationships or friends, but not being able to achieve and acquire what I desire in those or many other areas....Everthing stays the same regardless of the effert I put in...'

Sound familiar? Well, this is someone with computer skills and social impairments who was frustrated by celibacy. Perhaps neurodiversity could diagnose him with autism as they have diagnosed Bill Gates..."

AUTISM'S GADFLY

http://autismgadfly.blogspot.com/2009/08/will-neurodiversity-diagnose-george.html

"...Of course, most persons who suffer from loneliness regardless of whether or not they are autistic will not go out on a shooting spree, but it is frustrating. This man was clearly deranged. He may or may not have had an autism spectrum disorder, but I feel in order to be fair neurodiversity should take the bad with the good. If they are going to preach about what a gift autism is and say that Bill Gates, Stephen Spielberg, Einstein, Jefferson, etc. prove that autism is such a gift because these individuals have or had it, why not say that Sodini may have been autistic also."



Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law

Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

 "Link between ASD and violent crime is inconclusive and is supported by only 11 of 147 studies on the subject Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law

Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

 A recent small-sample study indicated a reduced incidence of law breaking among individuals with high-functioning ASD, but...an increased history of violent behavior and criminal damage... In other words, while the overall rate of criminal behavior diminished, violent behavior and damage associated with this behavior increased...

Emerging Perspectives on Adolescents and Young Adults With High-Functioning Autism Spectrum Disorders, Violence, and Criminal Law

Lerner, M et al; J. Am Acad of Psychiatry and the Law Online, 4/2012

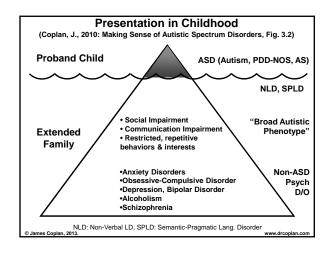
- There may be unique features of ASDs that are important to consider when violent crime is committed by individuals with HFASD:
 - · Theory of Mind
 - Emotional Regulation
 - Moral Reasoning
- Lack of cross-disciplinary, non-biased data (clinical series; informative censoring, etc.)

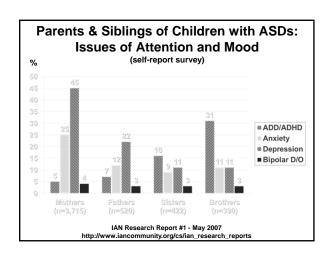
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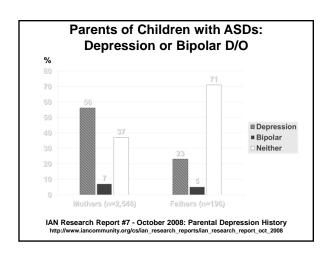
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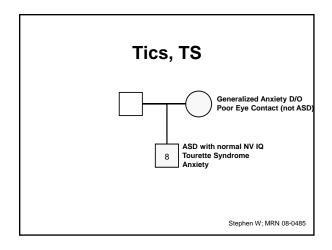
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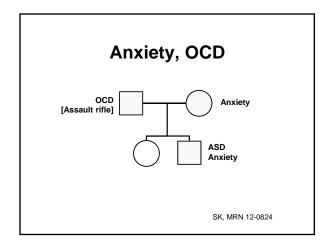
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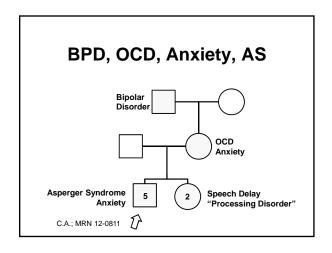












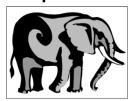
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ww.drconlan.

The Real Elephant in the Room



Child w. ASD + Parent with MH D/O =



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Family Mental Health

("We give our children roots and wings" - Hodding Carter)

Family Mental Health is a key ingredient in outcome for all children, but especially for the child with developmental disability, who is less able to work around obstacles arising from family dysfunction than a child with normal development.

James Coplan, 201

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Signs of Family Mental Health

- Cognitive, Emotional, and Tactical Flexibility
 - Shifting alliances (adults vs. kids, "boys vs. girls," etc.)
- Shifting roles (role of "hero" or "in the doghouse")
- Shifting solutions (one size does not fit all; "equitable" vs. "equal")
- Shifting combinations for activities. All legitimate combinations should come up once in a while.
- Sense of humor / playfulness / resilience

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Individual Mental Health as a contributor to family mental health

- Parents of children with ASD: High frequency of neuropsychiatric disorders (esp. anxiety, depression)
- Limits adult's ability to achieve full differentiation
- Limits adult's ability to respond in a flexible manner to the extraordinary demands from child w. ASD

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Danger Signs

- Inflexibility
 - Fixed roles
 - Fixed solutions
- Hypervigilance
 - Lack of trust in care providers
- Social Isolation
 - "Circle the wagons" mentality
 - "Nobody helps us!"

Vignette #1

- "Obedience is very important to me."
 - Father of 10 y.o. boy with ASD
 - · Father has untreated anxiety d/o
 - · Works in law enforcement
 - Keeps unsecured firearms in the home
 - Perceives his son with ASD as "a predator," because "everything is all about him"

Vignette #2

- "Nobody helps us."
 - Mother of 14 y.o. boy with ASD
 - · Family has no social supports
 - Child is on homebound instruction
 - Spends hours / day watching violent video games
 - Threatens to "kill" the examiner during home visit

What you can do in the office

House Rule #1

- Get both parents to come in for the interview & informing session
 - Have a sofa if possible, and watch the body language
 - "What do you think about what your spouse just said?"

Probe Questions

(In ascending order of intimacy)

- Do you and your partner ever go out as a couple? When was the last time?
- · Who else do you have as supports?
- What have you told your other children / parents?
- Tell me a little bit about yourself / how you were raised / your own mental health?

James Coplan, 2013

www.drcoplan.com

House Rule #2

 No medication unless parents agree to behavioral and MH evaluation for their child and/or themselves, if you deem it necessary

Neurodevelopmental Pediatrics of the Main Line, PC

Psychoactive Medication - Informed Consent Form

Medication cannot cure developmental or behavior problems. However, medication can sometimes alleviate biologically-based symptoms, such as inattention, impulsivity, anxiety, depression, cognitive rigidity, agitation, disruptive, or self-injurious behavior. Medication alone is frequently less effective than medication plus behavioral or mental health services.

Therefore, in addition to administering psychoactive medication to your child, Dr. Coplan may recommend behavioral and/or mental health services as part of your child's treatment plan as follows:

Neurodevelopmental Pediatrics of the Main Line, PC

Psychoactive Medication - Informed Consent Form

Therapy for your child focusing on:

- Direct modification of your child's behavior
- · Anxiety management
- · Enhancing your child's self-esteem
- Enhancing your child's social skills
- · Self-awareness, including the implications of your child's diagnosis

Therapy for yourselves (parents) to address one or more of the following:

- Differences between parents in management style
- Intrinsic parental issues, such as anxiety or depression, that may be impacting your ability to address your child's behavior
- . The impact of your child's disability on family function

House Rule #3

- The family is a system → The unit of treatment is the family
- · Assess mental health of all players
- · Assess relationships among the players
- Fostering the family's ability to move forward is my #1 goal. The child's parents & siblings will be involved with my patient long after I have left the stage.

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Outline

- Natural Hx of ASD
- Psychiatric co-morbidity in persons w. ASD
- ASD and Non-ASD psychiatric morbidity in the families of children with ASD
- Family Mental Health
- Practical Suggestions
- > Summary

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Summary

- ASD has a natural history for improvement over time, insofar as the atypical features are concerned, but...
- Co-morbid mental health issues present a progressively greater challenge
- ASD in a child is a red flag for developmental and/or mental health disorders in parents / siblings

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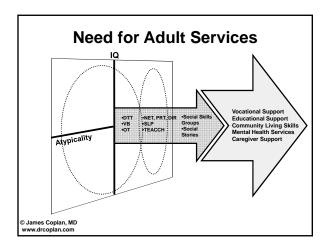
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Summary

- To be successful, intervention needs to be multimodal and family-centered
 - Mental health intervention
 - Child: Self-awareness, self-esteem, self-regulation
 - Parents: Address their own MH issues
 - Family: Take a family-system approach
 - Flexibility / Resilience within the family structure
 - Siblings are at high risk for genetically based morbidity, and/or collateral damage bec/o family system dysfunction
 - Educational / Vocational services
 - Psychotropic Medication often

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Summary

- Need for Adult Services
 - Clinics for "Long-Term Survivors of Childhood ASD" patterned after Long-Term Survivors of Childhood Cancer
 - Mental Health
 - Job coaching
 - Social contact
 - Family / Caregiver support (parents, partners)
 - Developmental screening of offspring

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Summary

- · Need for Better Research
 - Prevalence of ASD in adults?
 - Psychiatric Comorbidity
 - Obstacles
 - Privacy issues
 - "Informative censoring"
 - · Cross-Disciplinary collaboration
 - Child / Adult
 - DD / Mental Health
 - Long-term funding

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Resources

- Coplan, J. Making Sense of Autistic Spectrum Disorders. Random House, 2010.
- Married with Special Needs Children; A couples' guide to keeping connected. Marshak LE and Prezant, FP. Woodbine, 2007
- Voices from the spectrum. Parents, grandparents, siblings, people with autism, and professionals share their wisdom. Ariel, CN and Naseef, R (eds). Jessica Kingsley, 2006
- The American Association of Marriage and Family Therapy http://www.aamft.org/iMIS15/AAMFT/
- The Bowen Center: http://www.thebowencenter.org/

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