

Outline

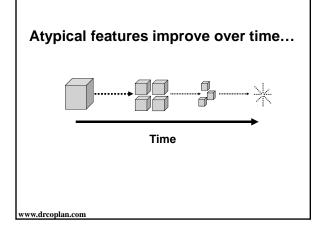
Clinical Features and Natural History of ASD [8:30 -10:00 a.m.]

- · Leo Kanner's lasting contributions
- Behavior Management
- Psychopharmacology for non-medical professionals
- Behaviorism and Its Limitations

Break [10:00 - 10:15]

Mental Illness in ASD: The Elephant in the Room [10:15 - 11:30]

- Neuropsychiatric Co-Morbidity
- Family function / dysfunction
- Does ASD predispose to violent crime?
- Proposed care model



...But society is raising the bar.



Transition to Middle School

"Friendship is getting more complex and he is falling further behind his peers... We think he may be lonely."

Parent of a 10 y.o. boy with ASD and normal IQ

ZE; MRN 06-0361

Transition to Middle School

Now that he's 10, he's less cute. It was cute when he was 5; not when he's 10.

MRN 06-0299

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.

MRN 04-0011

Transition to Adulthood

Sometimes he is so average. Sometimes he is so autistic.

Mother of a 16 y.o. boy with ASD and uneven cognitive development

DC: MRN 13-0854

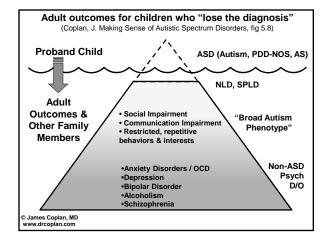
"Losing the diagnosis"

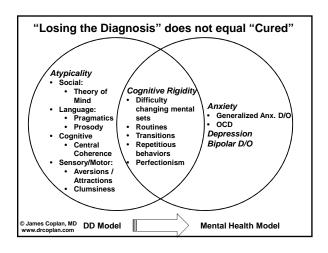
 Just because someone outgrows childhood criteria for ASD does not mean that they are cured

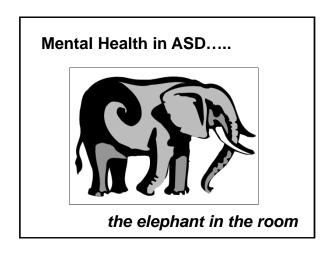
Long-Term Outcome

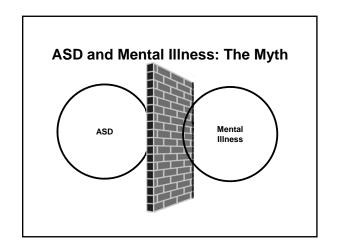
- "Losing the diagnosis" does not mean "cured"
- Persistence of
 - Cognitive patterns
 - Behavioral patterns
 - Emotional patterns
- Non-ASD neuropsychiatric disorders

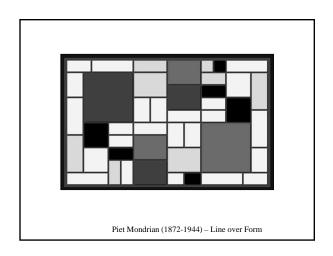
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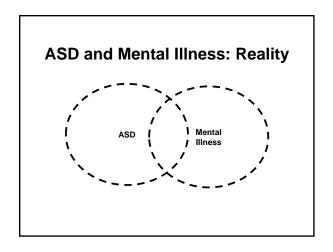


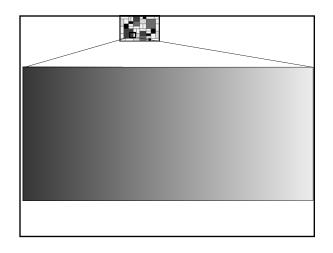


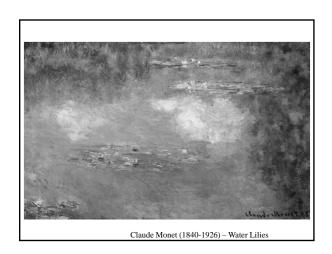


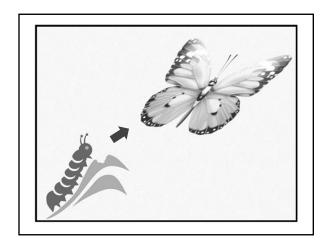


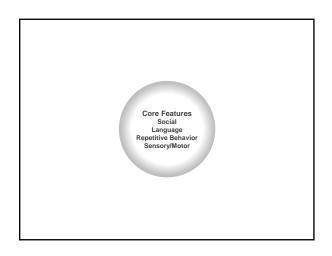


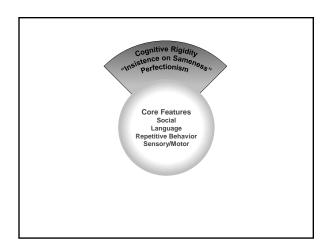


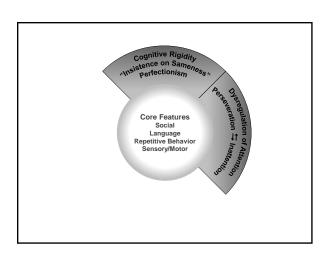


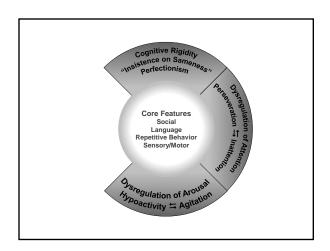


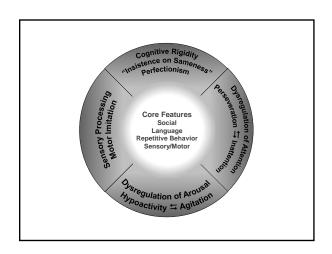


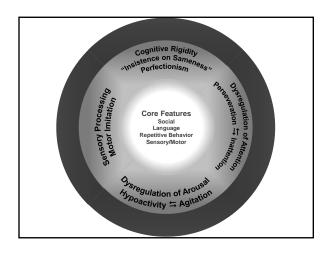


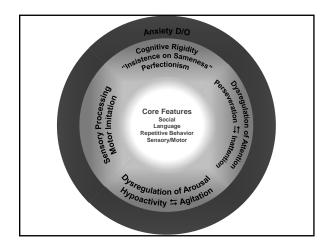


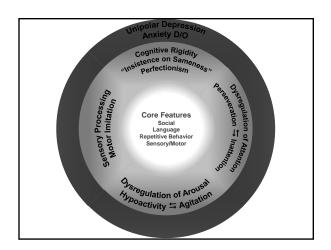


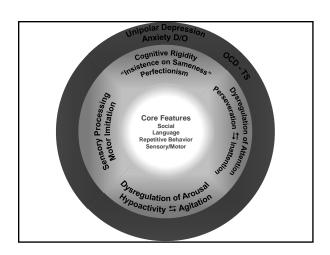


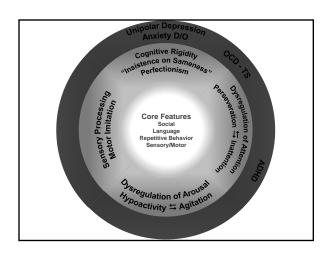


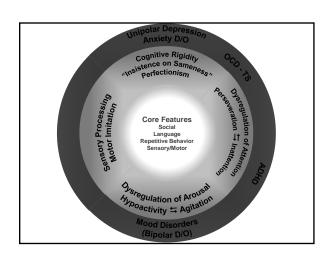


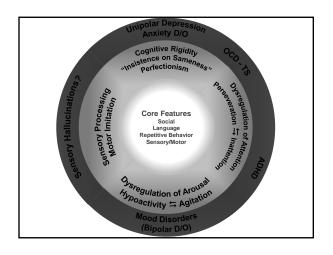


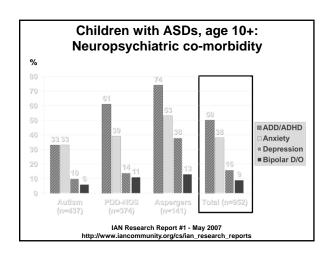


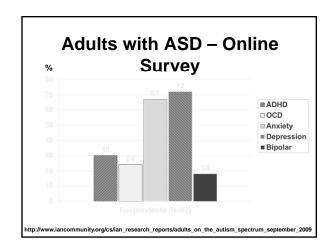




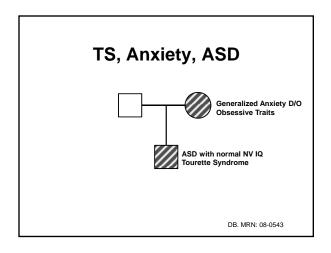


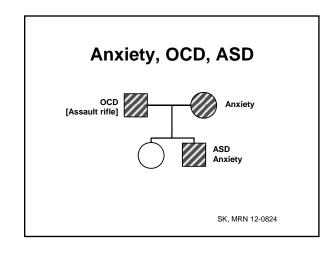


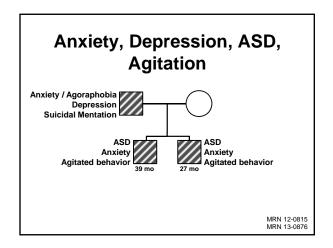


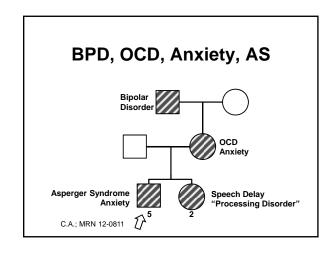


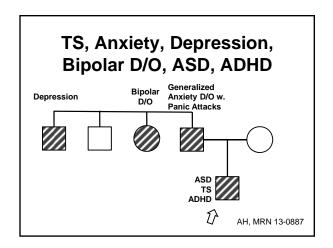


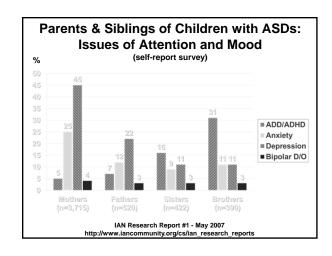


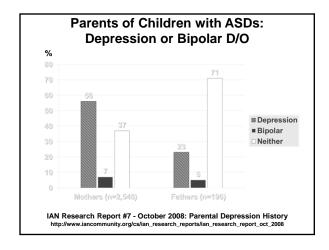












Epidemiologic Evidence

- ADHD
- Anxiety
- ASD
- Bipolar D/O
- Schizophrenia

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.

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

Subjects & Methods:

- Secondary analysis of data from a family study of youth with Bipolar I D/O (probands = 157, relatives = 487)
- Results
 - 30% (47/155) of Bipolar I probands met criteria for ASD
 - Onset of Bipolar I occurred earlier in the presence of ASD (4.7±2.9 y vs 6.3±3.7 y; p=.01)

"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..."

"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"

What's happening in this picture?



"Two strangers got into the house and are handing out newspapers."

Laboratory Evidence

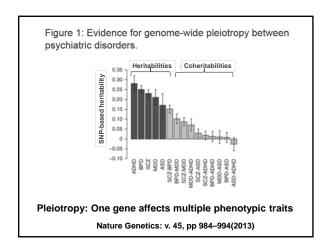
- ADHD
- Anxiety
- ASD
- Bipolar D/O
- Schizophrenia

Genetic relationship between five psychiatric disorders estimated from genome-wide SNPs

<u>Cross-Disorder Group of the</u>

<u>Psychiatric Genomics Consortium</u>

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



Developmental brain dysfunction: revival and expansion of old concepts based on new genetic evidence

Andres Moreno-De-Luca*, Scott M Myers*, Thomas D Challman, Daniel Moreno-De-Luca, David W Evans, David H Ledbetter

Lancet Neurology 2013: 12: 406-414

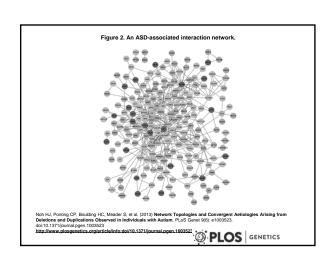
	Frequency in clinical cohorts*	Intellectual disability or developmental delay	Autism spectrum disorder	Schizophrenia	Epilepsy
22q11.2	1 in 167	√	√	√	√
16p11.2	1 in 241	√	√		√
1q21.1	1 in 309	√	√	√	√
15q13.2-q13.3	1 in 358	√	√	√	√
7q11.23	1 in 415	√	√		√
15q11.2-q13	1 in 553	√	√	√	√
17q21.31	1 in 700	√	√		√
16p13.11	1 in 788	√	√	√	√
17q12	1 in 985	√	√	√	√
17p11.2	1 in 985	√	√		√
8p23.1	1 in 1854	√	√		√
5q35	1 in 1970	√	√		√
3q29	1 in 2101	√	√	√	

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

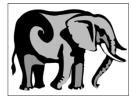
Hyun Ji Noh, Chris P. Ponting, Hannah C. Boulding, Stephen Meader, Joseph D. Buxbaum, Dalila Pinto, Christian R. Marshall, Anath C. LionelStephen W. Scherer, Caleb Webber PLOS Genetics, June 6 2013

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.)



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.

......

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)
 - Decreased Theory of Mind skills
 - Limits adult's ability to respond in a flexible manner to the extraordinary demands from child w ASD

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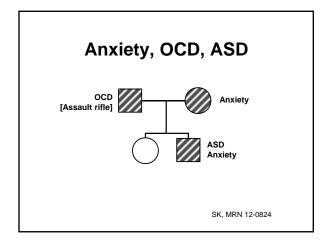
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Danger Signs

- 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
 - Mother has untreated Anxiety D/O

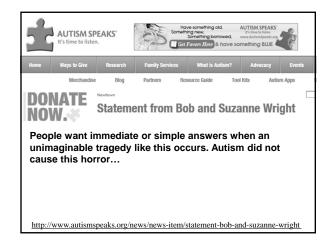




Does ASD predispose to violent crime?

FOR EVERY COMPLEX PROBLEM THERE IS A SIMPLE SOLUTION... AND IT IS WRONG

H. L. Mencken





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...



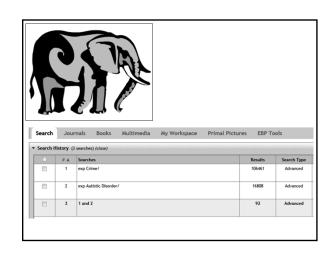
Autism Society of America Statement 12/17/2012

- 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...

We have a problem here...

- ASD and MH are not mutually exclusive, separable entities
- Shifting responsibility onto "Mental Health Disorders":
 - 1. Stigmatizes the MH population, and
 - 2. Ignores the MH needs of the ASD population





Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Case Series of adult males referred for forensic evaluation

Charges:

- Arson (1)
- Sexual assault (4)
- Attempted murder (1)

Asperger's syndrome in forensic settings

Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Case History

AB: 31 y.o. male, arrested for arson

Referred for forensic psychiatric evaluation after 11 episodes No prior criminal history or clinical diagnosis

His parents described a developmental history in which he was generally shy and quiet and considered "peculiar" by teachers. In school, he had some concentration difficulties due to being extremely careful about details. His parents described a series of special interests, to which AB devoted extensive research time....His parents also described a strict adherence to routines. For example, they described meals as "ceremonies" in which every part was to be performed in a certain order. When his parents tried to make changes in his routines, AB became very irritated....

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Often, he left jobs after conflicts with supervisors or other staff. His boss described AB as so wedded to routines that he was unable to be flexible or cope with unanticipated changes.

Socially, he had some friendships, but these occurred one at a time. He was reportedly bullied, or at least showed an oversensitivity to behaviors by peers. For example, years later, he reported being unable to forget incidents such as being shot at with a water gun.

AB lived with his parents and had no sexual or romantic relationships. But, he explained that if he could just afford a large apartment, he would immediately be married.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

According to his parents, about one year before the crimes AB became increasingly irritable and verbally aggressive. During this time, he tended to isolate himself more often, to purchase numerous pornographic magazines, and to ruminate about episodes during his childhood in which he believed schoolmates mistrated him.

During evaluation, AB described the year prior to his offense as a period in which he became increasingly preoccupied with those who had wronged him and increasingly convinced that he needed to avenge himself. He reportedly considered burglary for revenge, but later began to fantasize about firesetting. When AB saw an arson report on the news, he decided that firesetting was the best way to solve his problems.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70. 2002

AB was referred for forensic evaluation after he was charged with 11 cases of arson. For two months, he broke into summer homes in his neighborhood, dousing them with gasoline and setting them with gasoline and setting them

When apprehended by police, he immediately confessed to the crimes and explained that they were a means of revenge against schoolmates who had harassed him during his youth. Investigation revealed that there was actually no relationship between the summer homes and the schoolmates, but AB described small details of the houses that had reminded him of peers who had harassed him. He reported feeling satisfied and calm after the fires.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

CD, a 27 year-old male, was referred for evaluation after a sexual offense involving a teenage male. At the time of the evaluation CD carried an Asperger's diagnosis based on adult functioning and early history. In kindergarten, for example, he was described as "oblivious to everyone around him." Mental health records from his adulthood also noted his marked social impairments and deficits in nonverbal communication. CD graduated high school with a mediocre academic record, and worked for several years as a fast-food worker with limited customer contact.

Although he was intensely preoccupied with having intercourse, his efforts to find partners tended to be rather passive and naive. CD summarized his courtship strategy as "hanging around" a woman "until sex happened."

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Unfortunately, his attempts at sexual contact—both those that resulted in intercourse and those that did not—tended to result in CD being used or exploited by others. For example, he repeatedly took women from his housing project shopping for lingerie, thinking that doing so could be a prelude to sexual contact, but the women would leave after he made the purchase...He also related stories of attempts to make sexual contact that resulted in women stealing possessions or money from him, and in one instance, beating him severely.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

His first contact with the legal system and our subsequent evaluation occurred after CD had repeated sexual contact with a 15-year-old male over a period of several days. CD met the young man, who reportedly had no place to stay at the time, in their apartment complex laundromat and the two subsequently went to CD's home. Over the ensuing days, CD bought the young man a variety of presents, gave him money, and had an active sexual relationship with him.

The contact ended when CD was no longer willing to give the youth money. The youth left CD's home, taking his stereo. When CD went to the police station to report this theft, he was subsequently arrested for sexual assault against a minor.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Common Themes

 Deficient Empathy: Each of the four men charged with a sex offense, as well as the man who attempted murder, seemed genuinely unaware of the harm they caused their victims. Likewise, the arsonist appeared untroubled that he destroyed property belonging to strangers, rather than to those against whom he sought revenge

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Common Themes

 Interpersonal Naiveté: A naïve and often impoverished understanding of human relationships...not only leaves Asperger's syndrome patients vulnerable to mistreatment by others, but also may lead them to seek interpersonal contact in misguided ways...CD maintained a sexual relationship with a teenage male and demonstrated his ignorance of the inappropriateness of this relationship by going to the police to complain that the youth took his stereo when the relationship ended.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

Common Themes

Immediate Confession: At least four of the six men
were quick to confess to the police. This could reflect a
variety of traits ranging from deficient shame, poor
judgment, lack of experience, or an impaired
appreciation of the social and legal consequences of a
confession, to simple forthrightness, rule-abiding
behavior or honesty. This warrants additional research,
as it would be of considerable significance if such
confessions were not fully competent or voluntary.

Asperger's syndrome in forensic settings Murrie DC, Warren JI, and Kristiansson M Int J Forensic Ment Health 1:59–70, 2002

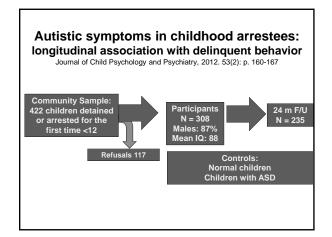
Common Themes

• Sexual Frustration: At least five of the six men had sexual problems, and four were quite harmful to others when acting upon their sexual drive, highlighting the quandary faced by men who are interpersonally less equipped to initiate or sustain the types of intimate relationships commonly associated with consensual sexual contact...Clinicians working with Asperger's syndrome patients should recognize that social impairments combined with a desire for attachment or sexual experience could lead to illegal behavior...The use of pornography was one socially tolerated ways by which several of the men in our sample pursued an impersonal sexual outlet....

Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

Research Objectives:

- To compare childhood arrestees with matched comparison groups on levels of autistic symptoms
- To assess the predictive value of autistic symptoms for future delinquent behavior
- Children's Social Behavior Questionnaire (CSBQ)
- **Observed Antisocial Behavior Questionnaire**
- . Diagnostic Interview Schedule for Children (DISC)



Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

Results:

- Indicators of atypicality:
 - ASD > Arrestees > Normals, p < 0.01
- For Arrestees:
 - CBSQ score predicted future delinquent behavior (p < 0.001, even after adjusting for externalizing behavior)

Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

Journal of Child Psychology and Psychiatry, 2012. 53(2): p. 160-167

- · Conclusions:
- Childhood arrestees...have more autistic symptoms than children from the general population, and less than autistic individuals
- Among the arrestees, autistic symptoms were uniquely positively associated with future delinquent behavior
- Although mediated by co-occurring externalizing disorders, autistic symptoms predicted delinquent behavior over and above externalizing disorders

Bottom line...

- This topic deserves research
- Most studies are small scale ("underpowered") and suffer from ascertainment bias, lack of controls, poor outcome measures, etc.



What you can do

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 /
- · Tell me a little bit about yourself / how you were raised / your own mental health?

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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NASP: School-based Mental Health Services

- "Mental health is directly related to children's learning and development. It encompasses or intersects with interpersonal relationships, social-emotional skills, behavior, learning, academic motivation, certain disabilities, mental illness (e.g., depression or bipolar disorder), crisis prevention and response, school safety and substance abuse. Each of these issues affects not only the success and well-being of the individual student but also the school climate and outcomes for all students.
- "School-Based Health Clinics" where students and their families can come to the school for all medical, social-emotional, and/or behavioral health services

http://www.nasponline.org/advocacy/overview_sbmh.pdf

The Student is your charge, but often the unit of treatment is the family

- · Assess mental health of all players
- Assess relationships between / among the players ("family systems approach")
- The child's parents & siblings will be involved with this child long after you have left the stage.

James Coplan, 2013

www.drcoplan



Summary

- ASD has a natural history for improvement over time, insofar as visibly atypical features are concerned
- Cognitive & behavioral patterns persist
- Mental Illness is not "a separate problem."
 Rather, impaired MH is another expression of shared neurobiology
- Over time, mental health issues present a progressively greater challenge, that may supersede the ASD

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Summary

- ASD in a child is a red flag for developmental and/or mental health disorders in parents / siblings
- Optimal outcome for the child with a disability depends upon addressing the parents' mental health issues, as well as the child's developmental and mental health needs

James Coplan, 2013.

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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

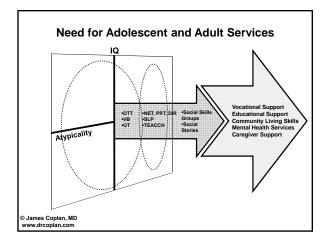
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Summary

- 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 HealthLong-term funding
 - · 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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Thank you