Mental Health and Autism Spectrum Disorder: The Elephant in the Room

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Disclosures

- Dr. Coplan is author of *Making Sense of Autistic Spectrum Disorders: Create the brightest future for your child with the best treatment options* (Bantam-Dell, 2010), and receives royalties on its sale

Outline

1) Statement of the Problem
   1) Compartmentalized Thinking
   2) “Us vs. Them” - What I learned from Newtown
2) Show me the data
   1) Intra-individual
   2) Intra-familial (with a glance at Family Mental Health)
   3) Basic Science
3) Does ASD predispose to violent crime?
4) Where do we go from here?
   1) Individual & Family care
   2) System change

For a complete copy of this session, go to www.drcoplan.com
ASD and Mental Illness: The Myth

The History of Science in 1 Slide

Description & Classification*
(Group items into categories, based on externally visible characteristics)

Analysis
(Explain & predict, based on an understanding of why and how things happen)

* Plato (428-328 BCE): “Carve Nature at its joints.” We can’t explain why or how things happen, but if we observe carefully, and group similar items into categories, eventually the big picture will emerge.

Problems with classification schemes based on appearance

- Different underlying mechanisms can produce similar-appearing results
- Similar underlying mechanism can produce different-appearing results

Which 2 go together?

Psychiatry: Where we are today

Description & Classification
(based on externally visible characteristics)

Analysis
(based on an understanding of fundamental mechanisms)

DSM5:
Categories based on symptoms → quest for symptom homogeneity within categories

DSM 6
(classification based on causation and brain systems)
Keep sub-dividing until clinical uniformity within categories has been achieved.

Make Diagnoses

Comorbidity:
A, B, C, etc. are completely different entities, that sometimes happen to co-exist.

Piet Mondrian (1872-1944) – Line over Form

Comorbidity:
“ASD and Mental Illness are different entities that sometimes co-exist”

Continuum:
ASD shades into Mental Illness, with no ‘bright line’ of separation.
In the world of Metamorphosis...

“Losing the diagnosis” does not mean “cured”

- Persistence of
  - Cognitive patterns
  - Behavioral patterns
  - Emotional patterns
- Emergence of Non-ASD psychiatric disorders
  - Anxiety
  - Depression
  - Mood Disorders
  - Schizophrenia

Presentation in Childhood

<table>
<thead>
<tr>
<th>ASD (Autism, PDD-NOS, AS)</th>
<th>NLD, SPLD*</th>
</tr>
</thead>
<tbody>
<tr>
<td>extended family</td>
<td></td>
</tr>
<tr>
<td>Broad Autism Phenotype</td>
<td></td>
</tr>
<tr>
<td>Non-ASD Psych D/O</td>
<td></td>
</tr>
<tr>
<td>NLD, SPLD*</td>
<td></td>
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</tbody>
</table>

* NLD: Non-Verbal LD, SPLD: Semantic-Pragmatic Lang. Disorder

Outcome for children with High Functioning ASD

<table>
<thead>
<tr>
<th>Adult Outcomes</th>
<th>NLD, SPLD</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Broad Autism Phenotype</td>
</tr>
<tr>
<td></td>
<td>Non-ASD Psych D/O</td>
</tr>
</tbody>
</table>

| NLD: Non-Verbal LD, SPLD: Semantic-Pragmatic Lang. Disorder |

Psychiatry: Coming soon...

Description & Classification
(based on externally visible characteristics)

Analysis
(based on an understanding of fundamental mechanisms)

DSM5:
Categories based on symptoms → quest for symptom homogeneity within categories

DSM6:
Classification based on underlying biology: “Mapping ASD from the inside out” (King & Lord 2011)
Outline

1) Statement of the Problem
   1) Compartmentalized Thinking
   2) “Us” vs. “Them” - What I learned from Newtown
   3) Show me the data
   4) Does ASD predispose to violent crime?
   5) Where do we go from here?
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...

(3 problems, actually)

1. There is no bright line between Autism Spectrum D/O and “Psychiatric” disorders
2. Shifting responsibility onto persons with “mental illness”:
   - Stigmatizes the mentally ill, and
   - Ignores the mental health needs of persons with ASD


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Outline

1) Statement of the Problem

2) Show me the data
   a) Intra-individual
   b) Intra-familial (with a glance at Family Mental Health)
   c) Basic Science

3) Does ASD predispose to violent crime?

4) Where do we go from here?

(a) Intra-Individual

• When co-morbidity approaches 100%, is it still “co”- morbidity?

Psychiatric Disorders in Children With Autism Spectrum Disorders: Prevalence, Comorbidity, and Associated Factors in a Population-Derived Sample

• 112 children with ASD, age 10-14
  • Assessed using the parent-report Strengths and Difficulties Questionnaire (SDQ)
    – 70% had at least one comorbid disorder
    – 41% had two or more

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety Disorder (any)</td>
<td>4.6%</td>
</tr>
<tr>
<td>Social anxiety disorder</td>
<td>2.4%</td>
</tr>
<tr>
<td>Separated anxiety disorder</td>
<td>1.2%</td>
</tr>
<tr>
<td>Panic disorder</td>
<td>0.3%</td>
</tr>
<tr>
<td>Simple phobia</td>
<td>0.3%</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>0.2%</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>0.2%</td>
</tr>
<tr>
<td>Separation anxiety disorder</td>
<td>0.2%</td>
</tr>
<tr>
<td>Any depressive disorder</td>
<td>5.4%</td>
</tr>
<tr>
<td>ADHD</td>
<td>20.9%</td>
</tr>
<tr>
<td>Tics</td>
<td>2.7%</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>11.7%</td>
</tr>
<tr>
<td>Tourette syndrome</td>
<td>9.5%</td>
</tr>
<tr>
<td>Trichotillomania</td>
<td>3.9%</td>
</tr>
<tr>
<td>Any comorbidity disorder</td>
<td>70%</td>
</tr>
</tbody>
</table>

*An additional 10.9% had irritability / depression not meeting DSM criteria
Psychiatric Symptom Impairment in Children with Autism Spectrum Disorders

- 115 pts w. ASD at University Hosp. Child Devel. Clinic
  - Age 6-12 yr; Male (86 %); White (91 %)
  - Mean Full Scale IQ (N=95): 85
    - <70: 24 (23 %)
  - Spectrum Dx:
    - Autistic Disorder: 31 %
    - Asperger’s Disorder: 19 %
    - PDD-NOS: 50 %
  - Child and Adolescent Symptom Inventory-4R
    - Parent & teacher ratings

Disorder Prevalence (%)*

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Impairment**</th>
<th>DSM-IV criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADHD (any type)</td>
<td>83%</td>
<td>82%</td>
</tr>
<tr>
<td>Oppositional defiant disorder</td>
<td>53%</td>
<td>34%</td>
</tr>
<tr>
<td>Conduct disorder</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>Anxiety disorders</td>
<td>70%</td>
<td>47%</td>
</tr>
<tr>
<td>Generalized anxiety disorder</td>
<td>48%</td>
<td>32%</td>
</tr>
<tr>
<td>Social phobia</td>
<td>51%</td>
<td>23%</td>
</tr>
<tr>
<td>Major Depressive D/O, Dysthymia</td>
<td>45%</td>
<td>19%</td>
</tr>
<tr>
<td>Manic episode</td>
<td>53%</td>
<td>16%</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>48%</td>
<td>10%</td>
</tr>
<tr>
<td>Any disorder</td>
<td>94%</td>
<td>84%</td>
</tr>
</tbody>
</table>

* Combined Parent and Teacher ratings
** “Impairment” = “Often or Very Often”

Mood D/O in ASD: Comorbidity or Continuum?
157 youth >15 y.o. with BPD-I

BPD-I only
110 (70%)

BPD + ASD
47 (30%)*

*Onset of BPD-I was significantly earlier in children with ASD

ASD, Psychosis, and Schizophrenia (SCZ)

Psychosis
- Psychosis: A symptom of mental illness characterized by radical changes in personality, impaired functioning, and impaired reality testing (hallucinations / delusions).
- Psychosis may appear as a symptom of
  - Mood d/o
  - Personality d/o
  - Schizophrenia
  - Schizophreniform d/o, Schizoaffective d/o, etc.
  - Psychotic disorders (Brief psychotic d/o, psychotic d/o due to a general medical condition, substance-induced psychotic d/o, etc.)

Schizophrenia
- A chronic psychotic disorder (or a group of disorders) marked by severely impaired thinking, emotions, and behaviors.
- Symptoms:
  - (+): Hallucinations, delusions, disorganized speech (loose associations); inappropriate, odd, or catatonic behavior
  - (-): Apathy / avolition; anhedonia, poor social function, speech
  - Cognitive: Impairment of attention, memory, planning (executive function), insight

http://medical-dictionary.thefreedictionary.com/schizophrenia

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The association between early autistic traits and psychotic experiences in adolescence

- Avon Longitudinal Study of Parents and Children (ALSPAC) birth cohort

- Onset of COS was earlier in children with prior Sx of ASD

Symptom development in childhood onset schizophrenia
Watkins JM, Asarnow RF, Tanguay PE.

Childhood Onset Schizophrenia < 10 yrs of age N=18
7 (39%): Autism

The association between early autistic traits and psychotic experiences in adolescence

Questions at age 7:
- Speech development
- How they got on with others (social interaction problems)
- Odd rituals or unusual habits that were hard to interrupt
- Hallucinations (visual, auditory)
- Delusions (being spied on, persecution, thoughts being read, reference, control, grandiose ability, other)
- Thought interference (thought broadcasting, insertion and withdrawal)

Questions at age 12: Any of the following in past 6 mo?
- Hallucinations (visual, auditory)
- Delusions (being spied on, persecution, thoughts being read, reference, control, grandiose ability, other)
- Thought interference (thought broadcasting, insertion and withdrawal)

"Childhood autistic traits, particularly speech problems and odd rituals or unusual habits, are associated with psychotic experiences in adolescence.

This may be a result of a shared aetiology or because autistic traits may also be an early precursor of psychotic experience"

"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

- “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

- 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

Q: What’s happening in this picture?
A: The kitten is on the boy’s back and is about to eat him.

Q: What’s happening in this picture?
A: The boy is hoarding animals.
Possible Relationship Between ASD and SCZ

How would your behavior change, if you suddenly lost Theory of Mind (ToM)?

- Primary failure to develop ToM
- Loss of previously acquired ToM
- Autism Spectrum Disorder
- Schizophrenia Spectrum Disorder

(b) - Intra-Familial: Psychiatric morbidity in the families of children with ASD

It's a family affair...

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250. 1943
There is a great deal of obsessiveness in the family background. The very detailed diaries and reports and the frequent remembrances, after several years, that the children had learned to recite twenty-five questions and answers of the Presbyterian Catechism, to sing thirty-seven nursery songs, or to discriminate between eighteen symphonies, furnish a telling illustration of parental obsessiveness.

Kanner, 1943
Anxiety

RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD

MRN: 07-0427

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Anxiety

RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD

MRN: 07-0427

www.drcoplan.com

TS, Anxiety, ASD

S.W. MRN 08-0485

MRN 12-0815

MRN 13-0876

MRN 13-0870

BPD, OCD, Anxiety, AS

C.A.; MRN 12-0811

MRN 12-0811

Speech Delay “Processing Disorder”
Severe mood problems in adolescents with autism spectrum disorder

- 91 adolescents w. ASD (M: 83)
- Measures:
  - IQ, Adaptive function, neuropsych measures
  - “Severe Mood Problems (SMP) Scale”
  - Explosive rage
  - Low mood
  - Depressive thoughts
  - Labile mood
  - Maternal self-report (GHQ)
  - maternal mood, anxiety and somatic difficulties

High SMP: 24 (26%)
Predictors of High SMP:
- Emotional & behavioral problems at age 12
- Autism severity (by parent report)
- Maternal GHQ: “The current analyses suggest a specific relationship between maternal affective symptoms and SMP in offspring”

Not predictors:
- Full Scale IQ
- Adaptive function

Bullying Experiences Among Children and Youth with Autism Spectrum Disorders.
Cappadocia, M.C., J.A. Weiss, and D. Pepler, JADD, 2011

- 192 parents of children diagnosed with ASD age 5–21
  - AS (54%), HFA (14%), PDD-NOS (13%), Autism (19%)
- Bullied (physical, verbal, social, cyber) with the past month: 77%
  - 1 time: 11%; 2-3 times: 23%; weekly: 13%; two or more times per wk: 30%

Risk factors for being bullied

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>p*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child - Gender</td>
<td>NS</td>
</tr>
<tr>
<td>Child - Age (being younger)</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Child - Social skills deficit</td>
<td>NS</td>
</tr>
<tr>
<td>Child - Communication difficulties</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Child - Internalizing mental health problems</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Child - Externalizing mental health problems</td>
<td>NS</td>
</tr>
<tr>
<td>Parent - Mental health problems</td>
<td>&lt;.01</td>
</tr>
<tr>
<td>Child - Fewer friends at school</td>
<td>&lt;.05</td>
</tr>
</tbody>
</table>

*NS = Not statistically significant. Smaller p = less likely to occur by chance.

The Real Elephant in the Room

("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

Danger Signs

• Inflexibility
  – Fixed roles
  – Fixed solutions
• Hypervigilance
  – Lack of trust in care providers
• Social Isolation
  – “Circle the wagons”
  – “Nobody helps us!”

Vignette #1

• “Obedience is very important to me.”
  – Father of 10 y.o. boy with ASD
  • Fa: Untreated anxiety d/o
  • Keeps unsecured firearms in the home
  • Describes 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
  • Mo.: Untreated Anxiety D/O
  • Family has no social supports
  • Child is on homebound instruction
  • Spends hours / day watching violent video games
  • Threatens to “kill” the examiner during evaluation when E. interrupts game play

Family Function: Resources

• The American Association of Marriage and Family Therapy
  – http://www.aamft.org/IMIS15/AAMFT/
• The Bowen Center
  – http://www.thebowencenter.org/

(c) - Basic Science

• ADHD
• Anxiety
• ASD
• Bipolar D/O
• MDD (Major Depressive D/O)
• Schizophrenia
Two more terms

- Phenocopy: Similar-appearing conditions arising from different genetic mechanisms
- Pleiotropy: Different-appearing conditions arising from the same genetic mechanism

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

Fig. 1. Evidence for genome-wide pleiotropy between psychiatric d/o.

TS, Anxiety, Depression, Bipolar D/O, ASD, ADHD

There appears to be no question that a phenotypic continuum links the schizophrenia 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.

deLacy & King 2013

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Outline
1) Statement of the Problem
2) Show me the data
3) Does ASD predispose to violent crime?
4) Where do we go from here?


- “There is a complete absence of research which has investigated the prevalence of ASD in general populations of people who had committed crime
- Results published so far provide no basis for addressing the question of whether an association exists between ASD and offending…”


• “Some studies have such small, unrepresentative samples that any estimate of prevalence of offending is epidemiologically meaningless
• Even the larger studies are of unrepresentative, clinical populations…”

Cohort Studies
Start with an entire population and follow all of them: Hard to do.*

<table>
<thead>
<tr>
<th>VIOLENT CRIME?</th>
<th>ASD?</th>
<th>YES</th>
<th>NO</th>
<th>Risk of violence</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>A</td>
<td>B</td>
<td>A / (A + B)</td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>C</td>
<td>D</td>
<td>C / (C + D)</td>
<td></td>
</tr>
</tbody>
</table>

Relative Risk (NO DATA)

“ASD-Yes” needs to be big enough to capture some children who commit crime. For example: If crime rate = 1%, we need at least 100 children with ASD to be reasonably sure of capturing at least one who commits crime (ignoring sampling error): A=1, B=99. If we assume a prevalence of ASD of 1 in 48, then (C+D) = 4,700 (Total sample size: 4,800)

“Currently, there is still no body of evidence to suppose that people with ASD are more prone to commit offences than anyone else. However, a small number of serious crimes can be linked to the core features of ASD.”

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

Case Series of adult males referred for forensic evaluation

Charges:
- Arson: 1 (serial fire-setting x 11 episodes)
- Sexual assault: 4
- Attempted murder: 1

Asperger’s syndrome in forensic settings
Murrie DC, Warren JL, 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
- Interpersonal Naiveté: A naïve and often impoverished understanding of human relationships… leaves AS patients vulnerable to mistreatment by others (and) may lead them to seek interpersonal contact in misguided ways

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

Common Themes
- Immediate Confession: 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.
- Sexual Frustration: 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....

Woodbury-Smith 2014

- “There are…no epidemiological community studies of unlawful behavior in ASD
- Small sample size and bias in ascertainment…limit the extent to which [the available] data can be… extrapolated to the wider … ASD population
- Nonetheless, these data do suggest that small numbers of adults with ASD may be predisposed to violent unlawful behavior.”
Case Control Studies

Start with individuals who have already committed crime.

<table>
<thead>
<tr>
<th>VIOLENT CRIME?</th>
<th>ASD?</th>
<th>ODDS of having ASD</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>A</td>
<td>(A/C)</td>
</tr>
<tr>
<td>NO</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>Refusals</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>Released prior to completion of study</td>
</tr>
</tbody>
</table>

Odds Ratio: "Convenience Samples"
- Clinical
- Criminal Justice

(A/C): ODDS that offender has ASD
(b/d): Odds that non-offender has ASD

(Odds Ratio): Are the odds of having ASD increased among offenders compared to non-offenders?

Identifying Individuals with Autism in a State Facility for Adolescents Adjudicated as Sexual Offenders: A Pilot Study

Sutton et al. Focus on Autism and Other Developmental Disabilities v 28 (3) 9/2013

Participants
N = 37
Mean age 17 yr (range: 14-20);
Caucasian: 22/37

Refusals
N = 3
Released prior to completion of study
N = 6

State Facility for Adjudicated Youth
Sex Offender Program
N = 46

Identification of individuals with Autism in a State Facility for Adolescents Adjudicated as Sexual Offenders: A Pilot Study

Sutton et al. Focus on Autism and Other Developmental Disabilities v 28 (3) 9/2013

Participants
N = 37
Mean age 17 yr (range: 14-20);
Caucasian: 22/37

Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior


- 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

Community Sample: 422 children detained or arrested for the first time <12
Refusals 117
Participants N = 308
2 Control Groups (Non-arrestees):
- Normal children
- Children with ASD
24 m F/U N = 235

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

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”

Autistic symptoms in childhood arrestees: longitudinal association with delinquent behavior

High functioning autistic spectrum disorders, offending and other law-breaking: findings from a community sample
Woodbury-Smith et al; The Journal of Forensic Psychiatry & Psychology
Volume 17, Issue 1, 108-120, 2006

Participants N = 25
Controls N = 20

Self-Report Offending Questionnaire
  - Burglary
  - Robbery
  - Theft (Shoplifting, handling stolen goods)
  - Drugs
  - Criminal Damage
  - Violence

Home Office Offender’s Index
(ASD subjects only)

“The rate of law-breaking...was significantly lower [in the ASD group]....
However... participants with a diagnosis of an ASD were significantly more likely to report activities which could be categorised as 'criminal damage'. Moreover, they tended to have a greater history of violent behaviours.”
High functioning autistic spectrum disorders, offending and other law-breaking: findings from a community sample

Woodbury-Smith et al; The Journal of Forensic Psychiatry & Psychology
Volume 17, Issue 1, 108-120, 2006

Table II. Results of Self-Reported Offending Questionnaire

<table>
<thead>
<tr>
<th>Law-breaking (as category of offence)</th>
<th>ASD group* proportion (N)</th>
<th>Comparison group* proportion (N)</th>
<th>( p^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burglary</td>
<td>4% (1)</td>
<td>0% (0)</td>
<td>0.0</td>
</tr>
<tr>
<td>Robbery</td>
<td>0% (0)</td>
<td>0% (0)</td>
<td>0</td>
</tr>
<tr>
<td>Theft: familiar stolen goods</td>
<td>9% (2)</td>
<td>10% (2)</td>
<td>0.1</td>
</tr>
<tr>
<td>Theft: shoplifting</td>
<td>11% (3)</td>
<td>20% (4)</td>
<td>0.2</td>
</tr>
<tr>
<td>Theft: other theft</td>
<td>0% (0)</td>
<td>10% (2)</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total offences</strong></td>
<td>16% (4)</td>
<td>30% (6)</td>
<td>10.0**</td>
</tr>
<tr>
<td><strong>Average risk</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Protective Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Risk Factors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Plus: Arson: 1; Sexual assault of a minor: 1

Kawakami, 2012

“Childhood adversities” (CAs):
- Maladaptive family functioning
  - Parental mental illness, substance use, criminality, family violence, physical or sexual abuse, neglect, loss of parent, divorce

- Plus:
  - Gender
  - Victim of bullying
  - HFA or AS vs. classical autism
  - Age at Dx of ASD

Kawakami, 2012

Subjects:
- 175 children & young adults with HFASD (M 147 / F28)
  - “Criminals”
    - N=36 (M30 / F6)
    - mean age 16.8 y (range 7–30 y)
    - (theft, voyeurism, juvenile prostitution, violence, running away, arson, blackmail, internet harassment)
  - Controls
    - N=139 (M117 / F22)
    - mean age 14.9 y (range 6–28)

Kawakami, 2012

Childhood Markers for Adult Criminal Behavior

(Kawakami 2012)

Risk Factors
- Neglect (OR = 15)
- Parental loss (Divorce, Death, Abandonment)
- Abuse (Psychological, Physical, Sexual)
- HFA or AS; IQ ≤ 70
- Delayed Diagnosis N/S
- Child: Gender, victim of bullying, hyperactivity
- Parent: Drugs/Alcohol; Mental Illness, Crime
- Domestic Violence

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Pre vs. Post Autism “Explosion”

- 1990: IDEA
  - Autism becomes reportable
- 1994: DSM IV
  - Asperger Syndrome; Menu Diagnosis
- Reported cases
  - Milder atypicality; IQ ≥ 70
- Pre-mid 90’s crime data:
  - Limited relevance, because the demographics of persons with ASD has changed radically

Core Features & Motives - Wing 1997

- Assumption that own needs supersede all other considerations
- Lack of awareness of wrongdoing
- Intellectual interest (Asperger: “Autistic acts of malice”)
- Pursuit of “special” interests (objects, people)
- Hostility towards family
- Hyperarousal
- Vulnerability
- Cry for help
- Revenge

Proposed Pathways from Core Features of ASD to Offending

Social Deficit:
- Theory of Mind, Egocentricity
- Cognitive Rigidity

- "Innocent" offending:
  - Theft, Stalking, Experimentation
  - Sexual Assault?
  - Arson?

Internalizing
- Behavior: Depression
  - Call for help

Externalizing
- Behavior: Anger
  - Revenge

Internalizing Externalizing
- Behavior: Depression
- Behavior: Anger

Obsessive Thinking

*No awareness of, or intent to do harm

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Crime in ASD: The Bottom Line (as of 2014)

- Overall rate of offending in ASD: Unknown
  - May be composed of low-risk and high-risk subgroups
- Intrinsic risk factors
  - HFA / AS, IQ ≥ 70
  - Hyperarousal / Hyperactivity / Mental Illness?
  - Male gender?
- Extrinsic risk factors
  - Delayed Dx
  - Neglect, Divorce, Abuse
  - Parental mental illness, drugs, crime?

What's Needed:

- Large-scale community-based studies → Relative Risk of crime (ASD vs. Non-ASD)
- Case-control studies in criminal populations → Odds of having ASD (Offenders : Non-offenders)
- Identification of intrinsic and extrinsic risk factors
- Implementation of targeted preventive strategies
  - Early Diagnosis
  - Family Mental Health
  - Other?

Outline

1) Statement of the Problem
2) Show me the data
3) Does ASD predispose to violent crime?
4) Where do we go from here?
   1) Individual & Family care
   2) System change

Individual Care

- Not “Co-Morbidity,” but Continuum and Metamorphosis
- “Losing the diagnosis” does not = “cure”
- Shift from Developmental Disability model to Mental Health model
- Need for adult services

Progression of Interventions (DD Model)

Coplan, J. Making Sense of Autistic Spectrum Disorders
Random House, 2010
Cognitive Rigidity
• Difficulty changing mental sets
• Routines
• Transitions
• Repetitious behaviors
• Perfectionism

Anxiety
• GAD
• OCD / TS
• Phobias
• Selective Mutism
• Depression
• Mood
• Substance Abuse
• Reality Testing

School-Based MH Services
• Proactively monitor student mental health
  – Don't wait for academic failure or disruptive behavior
  – Positive Behavior Support for Internalizing Behavior
  – Embed MH services within schools?

Family Care
• Recognize that ascertaining a child with ASD means strong possibility that one or both parents have Mental Health issues and/or family dysfunction that need to be addressed
  – This may be the single biggest element of the problem available for intervention
  – Addressing this issue will take a lot of people out of their comfort zone

Family Care
• The family is a system ➔ The unit of treatment is the family
• Get both parents involved
• Assess mental health of all 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.

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?
**Guiding Principles**

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

**Systems Change**

- ASD community needs to make common cause with MH community in advocating for child and adult MH services
  - Distinction between ASD and “psychiatric disorder” not scientifically tenable
  - Not financially viable
  - Not in the best interests of children and families
- Barriers
  - Hard to shift mental sets
  - Fear, Stigma
  - Institutional inertia / turf

Thank you

For a complete copy of this session, go to www.drcoplan.com