Mental Health and Autism Spectrum Disorder: The Elephant in the Room
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Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1943
• N = 11 (M 8; F 3)
• Age: 2 to 8 yr.
• Symptoms in four domains:
  1. Impaired socialization
  2. Idiosyncratic language
  3. Repetitious behaviors
  4. Unusual responses to sensory stimuli

Impaired Socialization
• “Aloof”
• “Withdrawn”
• Limited eye contact
• Indifferent to others

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Idiosyncratic Language
- Echolalia
- Delayed Echolalia
- Pronoun Reversal
- Odd inflection

Repetitious Behaviors
- Rigid Routines
- Stereotypies
- Lining up / spinning objects

Unusual sensory responses
- “Petrified of vacuum cleaner”
- Drawn to, or afraid of, spinning objects
- Mouthing behavior
- Ingesting inedible materials
- Food selectivity

Kanner, 1938 → 1943
“Between the ages of 5 and 6 years, they gradually abandon echolalia and learn spontaneously to use personal pronouns.

“Language becomes more communicative, at first in the sense of a question-and-answer exercise, and then in the sense of greater spontaneity of sentence formation....

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1938 → 1943
“Food is accepted without difficulty. Noises and motions are tolerated more than previously. The panic tantrums subside. The repetitiousness assumes the form of obsessive preoccupations...

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943
Kanner, 1938 → 1943

“Reading skill is acquired quickly, but the children read monotonously, and a story or a moving picture is experienced in unrelated portions rather than in its coherent totality...”

*Central coherence*

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1938 → 1943

“Between the ages of 6 and 8, the children begin to play in a group, still never with the other members of the group, but at least on the periphery alongside the group.

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1938 → 1943

“People are included in the child’s world to the extent to which they satisfy his needs...

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1943

All of this makes the family feel that, in spite of recognized ‘difference’ from other children, there is progress and improvement.

Leo Kanner, 1943

Kanner, 1943

It is not easy to evaluate the fact that all of our patients have come of highly intelligent parents. This much is certain, that there is a great deal of obsessiveness in the family background. The very detailed diaries and reports and the frequent reminiscence, 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.

One other fact stands out prominently. In the whole group, there are very few really warmhearted fathers and mothers. For the most part, the parents, grandparents, and collaterals are persons strongly preoccupied with abstractions of a scientific, literary, or artistic nature, and limited in genuine interest in people. Even some of the happiest marriages are rather cold and formal affairs.

Three of the marriages were dismal failures. The question arises whether or to what extent this fact has contributed to the condition of the children. The children’s aloofness from the beginning of life makes it difficult to attribute the whole picture exclusively to the type of the early parental relations with our patients.

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943

Kanner, 1943

We must, then, assume that these children have come into the world with innate inability to form the usual, biologically provided affective contact with people, just as other children come into the world with innate physical or intellectual handicaps. If this assumption is correct, a further study of our children may help to furnish concrete criteria regarding the still diffuse notions about the constitutional components of emotional reactivity. For here we seem to have pure-culture examples of infantile autistic disturbances of affective contact.”

Kanner, L. Autistic Disturbances of Affective Contact. Nervous Child, (2) 217-250, 1943
Kanner, 1971

- Deceased: 1
- Lost to follow-up: 2
- Institutionalized: 5
- Living on work farm: 1
- Living at home: 2
  - BA degree / bank teller
  - Sheltered workshop / machine operator

Kanner’s contributions

- Clinical Description
  - Social, Language, Repetitious behavior, & Sensory aversions / attractions
- Described the Natural History of improvement over time (irrespective of treatment)
- Attribution: An “inborn disturbance of affective contact”

Neuropsychological Deficits in Children with ASD

- Abnormal regulation of arousal
- Abnormal regulation of attention
- Abnormal regulation of sleep
- Abnormal Sensory Processing
- Cognitive Rigidity

Cognitive Rigidity

(Difficulty shifting mental sets)

- Without a doubt
- Reply hazy, try again
- Signs point to NO
- Better not tell you now...

“Externalizing Behaviors”
- Insistently repetitious behavior
- Difficulty with unmet expectations
- Perfectionism
- Compulsions
- (Aggression, SIB)

“Internalizing Behaviors”
- Perfectionism
- Obsessions
- (Anxiety / Depression)
Cognitive Rigidity: Changes in Routine / Unmet Expectations

Perfectionism

Perfectionism

Perfectionism

Compulsions

Anxiety

Joseph F: 15 y.o. boy Asperger Syndrome

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

RD. 7 y.o. F, nl IQ, PDD-NOS & Anxiety. Father: GAD
MRN: 07-0427

"The house is on fire and we are running for our life."

A.W.: 9 year old boy with PDD-NOS and normal IQ (MRN 11-07710)

Anxiety

"Standing in the Atlantic Ocean. The ocean has a very high surface, up to their mouth, so they can't breathe." Six year old boy with ASD and Anxiety.

Depression

KO; 10 yr old female, PDD-NOS, normal IQ

IB; 12 yr old male, Mild ASD, Superior IQ

"Draw a picture of your family with everybody in the picture doing something."

IB; 12 yr old male, Mild ASD, Superior IQ
**Clinical Pearl**

- Beware of Cognitive Rigidity masquerading as ADHD
  - Perseveration on inner stimuli: “Inattentive”
  - Perfectionism:
    - “Problems w. task completion”
    - (Or: Task avoidance!)
  - Anxiety:
    - “Rushes through work”
    - “Out of seat behavior”
Dysregulation of Arousal & Mood

- “If he gets up on the wrong side of the bed we know it’s going to be a bad day.”
- “We feel like we’re walking on egg shells”

Anger (mood)

JH; 10 yr old male, PDD-NOS

Regulation of Arousal & Mood

Hypoarousal ➞ Calm & Relaxed ➞ Fight or Flight Response

“Red Alert”
- Adrenaline
- Heart Rate
- Resp. Rate
- Combative

Impulsive + Agitated / Disruptive

Rigid + Perseverative

Cognitive Rigidity

Agitation

Stereotypies

Impulsivity

Routines

Stereotypies

Agitation

SIB

JH; 10 yr old male, PDD-NOS

Melatonin

Disordered Sleep

Metabolism

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Abnormal regulation of arousal

Abnormal regulation of attention
- (Perseveration)
- (Inattention)

Cognitive Rigidity

Abnormal regulation of sleep

Abnormal Sensory Processing
- Sensory Threshold
- Hypo-arousal
- Hyper-arousal

Sensory Overload

Agitation
- Aggression
- SIB
- Sensory Overload
- Impulsivity
- Hyperactivity
- Routines
- Stereotypies
- Sensory-Seeking

Disordered Sleep

Atypical neuroleptics
- \( \alpha \)-2 agonists

SSRIs

Opiate antagonists

Melatonin

The whole is greater than the sum of its parts

Max Wertheimer

Mental Health in ASD.....

the elephant in the room
Comorbidity:
“ASD and Mental Illness are different entities that sometimes co-exist”
Reality…

Not “Co-Morbidity” of discrete entities, but A Continuum:
- No “bright lines” between entities
- Intermediary forms are unique
- Orange is neither Red nor Yellow!

As per Mother Nature…

Metamorphosis:
“Over time, ASD evolves into Mental Illness.”

Atypical features improve over time…
...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

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

Long-Term Outcome

- “Losing the diagnosis” does not mean “cured”
- Persistence of
  - Cognitive patterns
  - Behavioral patterns
  - Emotional patterns
- Symptoms ⇒ Quirks ⇒ Traits
- Non-ASD neuropsychiatric disorders

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Presentation in Childhood

Extended Family

ASD (Autism, PDD-NOS, AS)

Broad Autism Phenotype

- Social Impairment
- Communication Impairment
- Restricted, repetitive behaviors & interests
- Anxiety Disorders
- Obsessive-Compulsive Disorder
- Depression, Bipolar Disorder
- Alcoholism

Non-ASD Psych D/O

NLD, SPLD

Outcome for children with High Functioning ASD

Adult Outcomes

Non-ASD Psych D/O

Core Features

Social Language Repetitive Behavior Sensory/Motor

Cognitive Rigidity

Insistence on Sameness

Perfectionism

Dysregulation of Arousal Hypoactivity & Agitation

Core Features

Social Language Repetitive Behavior Sensory/Motor

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

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Mental Health and ASD

February 6, 2014

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Core Features
Social
Language
Repetitive Behavior
Sensory/Motor

Anxiety D/O

Cognitive Rigidity
"Insistence on Sameness"
Perfectionism

Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse

Unipolar Depression
Anxiety D/O

Cognitive Rigidity
"Insistence on Sameness"
Perfectionism

Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse

OCID TS

Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse

Cognitive Rigidity
"Insistence on Sameness"
Perfectionism

Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse

Cognitive Rigidity
"Insistence on Sameness"
Perfectionism

Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse

Cognitive Rigidity
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Cognitive Rigidity
"Insistence on Sameness"
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Dysregulation of Arousal
Hypoactivity ⇒ Agitation

Sensory Processing
Motor Impulse
Mental Health and ASD

“Losing the Diagnosis” does not equal “Cured”

Neuropsychological and Neuropsychiatric impairment in persons with ASD

Children with ASDs, age 10+:
Neuropsychiatric co-morbidity

Adults with ASD – Online Survey
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”

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

What's happening in this picture?
“Two strangers got into the house and are handing out newspapers.”

“What’s happening in this picture?

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

“What’s happening in this picture?

“They are stealing the children.”

ASD and Schizophrenia

Childhood Onset ASD

Most

Adults with ASD

1-35% (+) for CSZ

Adults with SCZ

Up to 50%

Child. Onset SCZ

Ian Research Report #1 - May 2007

http://www.iancommunity.org/Ian_research_reports

Parents & Siblings of Children with ASDs: Issues of Attention and Mood (self-report survey)

Ian Research Report #1 - May 2007

http://www.iancommunity.org/Ian_research_reports

ASD and Non-ASD psychiatric morbidity in the families of children with ASD

It’s a family affair…

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Anxiety, ASD

Generalized Anxiety D/O

ASD Anxiety

R.D. MRN 07-0427
TS, Anxiety, ASD

- Generalized Anxiety D/O
- Obsessive Traits
- ASD with normal NV IQ
- Tourette Syndrome

DB. MRN: 08-0543

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

- Depression
- Bipolar D/O
- Generalized Anxiety D/O w. Panic Attacks
- ASD
- TS
- ADHD

AH, MRN 13-0887

BPD, OCD, Anxiety, AS

- Bipolar Disorder
- OCD
- Anxiety
- Asperger Syndrome
- Anxiety
- Speech Delay “Processing Disorder”

C.A.; MRN 12-0811

Laboratory Evidence

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

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

Andrea Morena De Luca, Scott W. Myllym, Thomas D. Heilbronner, Daniel Morena De Luca, David W. Evans, David M. Ledbetter

Lancet Neurology 2013: 12: 406-414

<table>
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*Frequency is individual referred for chromosomal microarray testing. Common indications for testing include neurodevelopmental disorders and multiple congenital anomalies.

Table 1: Variable expressivity in selected microdeletion syndromes

Morena De Luca et al, 2013
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.

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

Danger Signs

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

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

The Real Elephant in the Room

Child w. ASD + Parent with MH D/O = 👎


Table 2: Variable expressivity in selected single gene mutations

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Mental Health and ASD

ASCEND

February 6, 2014

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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?”

House Rule #2

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

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?

Neurodevelopmental Pediatrics of the Main Line, PC

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: ...

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.

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

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

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

Progression of Interventions

- Social Skills Groups
- Social Stories
- DTT
- VB
- OT
- NET, PRT, DIR
- SLP
- TEACCH

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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

• 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/


Thank you

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