Victimization and Children with Autism

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Autism Abuse Examples

Mother Kills Self and Son with Autism Over School Placement

- On August 2, the bodies of psychiatrist Margaret Jensvold and her 13-year-old, Ben Barnhard, were found in their home in Kensington, Maryland, an upper-middle class suburb of Washington, D.C.
- Jensvold, a Johns Hopkins-educated psychiatrist specializing in women's health who worked at Kaiser Permanente, had left a note:
  - "School – can't deal with school system," the letter began, Jensvold's sister, Susan Slaughter, told The Associated Press.
  - And later: "Debt is bleeding me. Strangled by debt."

Mother Suffocates 3yr old Autism

- Karen McCarron, an Illinois pathologist, suffocated her three-year-daughter Katherine “Katie” McCarron with a plastic bag in her mother’s house.
- McCarron then drove the body of her daughter back home and put her to bed as if she were asleep.
- She was found guilty of killing Katie in 2008, sentenced to 36 years in prison

Restraint Death

- Michael Renner-Lewis - Dead
  - Restrained by school officials
- Became agitated
  - Four staffers restrained the boy by grabbing his limbs and holding him to the ground
- Lost consciousness
  - Pronounced dead at Bronson Methodist Hospital.
- Autopsy Report Cause of Death
  - "prolonged physical restraint in prone position associated with extreme mental and motor agitation”
- Death was ruled “Accidental”

12yr Old Boy with Autism

- 911 Call
  - “I’ve terminated the life of my autistic son”
- Police Respond to Home
  - Father sitting on couch
  - Two bloody knives in kitchen sink
  - Ulysses in bathroom
- Bathroom
- Father – 10 previous arrests for domestic violence
- Neighbor comment

Older Child with Autism

- Two caregivers were caught on surveillance video abusing a non-verbal, boy with severe autism hundreds of times over a three-week period in August
- According to detectives, the non-verbal victim with autism in this case had no ability to communicate to others that he was being abused by his caregivers.
- The suspects were employed by the victim's family for more than two years
- Cameras were up in their home for nearly a month and captured more than 2,000 images of the caregivers abusing Jamey over and over again.
- There are slaps, kicking, punches and a lot more.
- "I couldn't believe what I saw," said Mark. "It wasn't just one time, it was dozens and dozens [of times]."

Disproportionate Victimizations

- People with developmental disabilities are disproportionately at high risk for violent victimization, abuse, and neglect (USDOJ, 2014; Petersilia et al., 2001)
- Among persons with disabilities, the rate of rape and aggravated assault increased from 2009 to 2012.
  - (USDOJ, 2014)

Disproportionate Victimizations

- Some offenders specifically seek victims with disabilities because they are perceived (Lang & Frenzel, 1988):
  - To be vulnerable
  - Unable to seek help
  - Cannot or will not report the crime
- Risk of victimization is likely increased if the offender believes the victim will not be able to successfully or credibly tell anyone about the crime (Bryen, Carey, & Frantz, 2003)
- The nature of the child's disability may prevent them defending themselves, escaping from the abusive situation, or reporting the abuse; this may cause potential perpetrators to believe they can "get away with it" (Ammerman & Patz, 1996; Wolcott, 1997).

Susceptibility to Victimizations: Autism

Autism

- Perceived Vulnerability
- Deficits in Expressive Communication
- Referential Communication Deficits
  - Referential communication requires a speaker to provide enough specific information to a listener so that the listener knows to what the speaker is referring (i.e., communicating information not already known by the listener)
- Deficits in Detecting Deception
- Attribution of "Autism" Behaviors
  - Assuming behaviors are attributable the child's autism and not some other cause

Autism Spectrum Disorder - Taxonomy

- Classic Autism
  - Most severe, developmental delays
- Asperger's Syndrome
  - Language develops normally, IQ is average to above, social deficits, pragmatic communication
- High Functioning Autism
  - Minimal dysfunction in mirror neurons, less severe characteristics
- Rett Syndrome
  - Affects more females, genetic base, characterized by decelerated head growth from 5 to 48 months, loss of previously learned hand skills, severe disability
- Concept of "High Functioning" vs. "Low Functioning"
  - Typically relates to communication……

Use of the Term "Function"

- Labeling someone as low or high functioning
- Better to use
  - Level of Independence
  - Support Needs
  - Skill Sets
- Receptive Language versus Expressive Language
  - Bias in the U.S. and all over the World
  - The Story of "Bert"
- Assumptions Pledge
- Use of language
  - Treating People like People

Autism Distinguishing Features

- **Emotion and expressive/receptive verbal disconnect**
  - "I'm happy."
  - "You make me angry."
  - Expectation of commensurate facial expressions, voice tone, and body language connected to that emotion
  - Passive monotone voice with unusual pronunciations
- **Facial Expressions**
  - Audience Participation

Autism: Definition

Autism:

- Defined
  - "a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age 3, that adversely affects a child's educational performance. Other associated behaviors include engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences" [P.L. 108-446]
- Spectrum Disorder (ASD)
  - Mild to Severe

Autism – Peace Officer Responses

(Modell & Mak, 2008)

"What does the term Autism mean to you?"

- Themes
  - Appx. 81% incorrectly identified accurate Autism characteristics or did not know
  - Appx. 20% identified Autism as a social interaction deficit and/or communication deficit
  - Many varied responses
    - Over 20 respondents identified mental retardation as an autism characteristic
    - Living in a fantasy
    - Unusual abilities
    - Mental Illness
    - Learning Disability
    - Physical Disability
  - "Rain man"

Autism Incidence

United States Average

- 1980: 1 in 10,000
- 2005: 1 in 150
- 2008: 1 in 88
- 2010: 1 in 68

- Most common question?
  - Does observed increase in diagnosis represent a true increase?

Autism – Etiology

Theories

- Vaccines
  - US Epidemiological Studies
  - Japan Study on MMR
- Mercury (Thimerosal)
  - RhoGAM (Rh- ♀ Rh+ ♂)
- Chromosome or Single Gene?
  - 10 – 25% can identify chromosomal abnormality dup15q11-13 or single gene
  - 75-90% Idiopathic

Autism – Etiology

- Prenatal Ultrasound
  - FDA warns against use of medically non-indicated or commercial devices
- Folic Acid and gene expression (Arthur Beaudet, MD.)
- ICSI Procedure
- Terbutaline
  - Premature Delivery

Autism - Etiology

- Paternal Age
  - 40 yrs or older 5.75x more likely than under 30yrs after controlling for birth, SES, and maternal age
- Drugs for Depression (SSRI)
  - Year before giving birth: 2x greater risk
  - First trimester: 4x greater risk
    - Prozac / Paxil / Zoloft
- Lack of prenatal vitamins 3 months before and the first month of pregnancy

Autism: Most Recent Evidence

- Children born within 1 year of sibling – 150% more likely to be diagnosed with autism
  - Journal of the American Academy of Child and Adolescent Psychiatry, 2014
- Pregnant women who lived in close proximity to fields and farms where chemical pesticides were applied experienced a 66% increased risk of having a child with autism spectrum disorder or other developmental delay.
- Associations were stronger when the exposures occurred during the 2nd and 3rd trimesters of the women's pregnancies.
  - Pesticides
    - **Organophosphates**
    - **Pyrethroids**
    - **Carbamates**
  - Environmental Health Perspectives Journal, 2014
- Women exposed to fine particle air pollution – 2x likely to have a child with autism when exposed during 3rd trimester (neuron growth and migration)
  - Environmental Health Perspectives Journal, 2014

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New Research on Autism

Proceedings of the National Academy of Sciences, August 2014

Oxytocin

- Oxytocin affects children's ability to function socially
- Children with naturally high levels of oxytocin are more savvy at communicating with others and interpreting social signals or situations
  - Higher oxytocin levels = better social functioning
- Oxytocin appears to be a universal regulator of social functioning in both typically developing children as well as those with autism
- All children with autism have social deficits, but in the study these deficits were worst in those with the lowest blood oxytocin levels and mildest in those with the highest oxytocin levels.
- While oxytocin levels in the children with autism were similar to those of their unaffected siblings and children without autism in the study, the researchers did find that increasing oxytocin levels improved social functioning in all three groups

New Research on Autism *Cerebral Cortex, July 2014*

Brain Flexibility

- Across a set of brain connections known to be important for switching between different tasks, children with autism showed reduced 'brain flexibility' compared with typically developing peers
- Task engagement requires various brain connections
  - Less activity in kids with autism
  - Children with more severe symptoms of autism displayed even less of this "brain flexibility"
- Reduced flexibility often causes difficulty when children with autism are faced with new situations
- Researchers also found a connection between the severity of restricted and repetitive behaviors and the degree of inflexibility

New Research on Autism *PLOS ONE, July 2014*

Sensory Integration Disorder, Autism and the Brain

- Brain scans show similarities and marked differences
- White matter ("wiring" that links different areas of the brain) was examined
- Both children with SID and autism had reduced connectivity in areas of the brain involved in basic sensory information, however
  - Only the children with autism had impairment in specific parts of the brain essential for social-emotional processing
  - Children with SID had less connectivity in the tracts of the brain involved in sensory processing
- One of the most striking new findings is that the children with SID show even greater brain disconnection than the kids with a full autism diagnosis in some sensory-based tracts

Autism

- What were parents told?
  - 1970's (Refrigerator Mother Hypothesis)
  - 1990's (Positive Reinforcement)
  - Today (fMRI's) and Mirror Neurons

Mirror Neuron Systems

- Specific subsets of neurons (called Mirror Neurons) are activated when an individual performs certain actions
- These same neurons activate when the individual observes others performing the same movements
- Implication: "mirror neurons provide a direct internal experience and therefore understanding, of another person's act, intention or emotion" (Rizzolatti, et al., 2006 pg. 58)
- Intention of an action is significant factor in which mirror neurons (specific to different areas of the brain) are fired
- Mirror neurons respond strongly to the intention of an act
  - Ex. Monkey's action of grasping – depending on final goal, mirror neurons fire differently (more strongly to understood goal)

Mirror Neurons and Autism

- Mirror neurons fire for meaningful motor behavior connected to emotional systems (Williams, 2001)
- When this is impaired, it impairs imitation which is critical for language
- *The severity of ASD has been correlated to the severity of mirror neuron dysfunction (activity) [Dapretto et al., 2006].

Mirror Neuron Systems

Emotions

- Disgust
  - Ex. when observing disgust on the face of someone else – mirror neurons in the anterior insula are activated
  - The observer and the observed share a neural mechanism that enable a form of direct experiential understanding
  - This may represent a physical neural mechanism for empathy that permits the understanding of emotions in others
- Pain
  - Ex. When feeling pain or witnessing pain in others, the anterior insula and anterior cingular cortex mirror neurons activate
- This may provide a neural basis for interpersonal relationships on which more complex social behaviors are built – allowing us to empathize with others

Mirror Neurons and Autism

- Mirror neurons may be involved in empathy and the perception of another individual's intentions
- Mirror neurons are involved in the interpretation of complex intentions
  - Inferior Frontal Gyrus (movement guidance and assessment of intentions of others)
- Mirror neurons allow our brain to mentally simulate others actions
- Individuals with Autism have dysfunctional mirror neuron systems
  - Mu WAVE suppression on EEG in premotor cortex

Mirror Neurons and Autism

Characteristics of Autism that may be explained by dysfunction in the mirror neuron system

Characteristics

- Deficit in ability to construct a "theory of other minds" (Frith & Baron –Cohen) – Empathy
- Difficulty imitating others
  - Dysfunction in mirror neurons of the Anterior Cingulate Cortex (regulation of empathy and other emotions)
- Difficulty interpreting metaphors
  - Requires cross domain mapping (Angular Gyrus)
  - Bouba / Kiki Test

Mirror Neurons and Autism

Mirror Neurons and Autism

Characteristics

- Sensory Integration Disorder
  - Disruption or distortion of meaningfulness or intensity of sensory input
  - Dysfunction in salience landscape may result in disproportionate and inappropriate autonomic responses
  - Self – stimulation may have calming effect or assist in regulation of emotional responses to environmental stimuli

Sensory Integration

Understanding Autism

Nervous System 101

- Central Nervous System – Brain and Spinal Cord
  - Peripheral Nervous System - contains only nerves and connects the brain and spinal cord (CNS) to the rest of the body
    - Autonomic Nervous System – contains Sympathetic and Parasympathetic Systems
- Sympathetic Nervous System – "Fight or Flight"
- Parasympathetic Nervous System – "Rest and Digest"
- **Neurotransmitters**
- Sympathetic response causes increase in Cortisol
- Parasympathetic response increases Serotonin and Dopamine
- Serotonin – safety/satisfaction – helps regulate input
- Dopamine – focus/attention
- Cortisol – stress chemical that uses up Serotonin
- Lack of Serotonin – impulsive behavior / depression
- Release Serotonin – Pressure/Vestibular Movement/Proprioception
- Release Dopamine – Touch/Proprioception
- Specific movements can serve to release the proper neurotransmitters if there is a deficiency – This is where intervention comes in!

Hierarchical Levels of Function Theory

- **Lowest part of the brain – Brain Stem**
  - **Integration**
    - **Visual (vision) [midbrain]**
    - **Auditory (hearing)**
    - **Vestibular (balance/head movements)**
    - **Proprioceptive/Kinesthetic (body sense)**
    - **Tactile (touch)**
    - **Olfactory (smell) [cortex]**
    - **Gustatory (taste)**

Sensory Integration Dysfunction (SID/DSI) Sensory Processing Disorder (SPD)

- For the most functional understanding, you should know:
- Children will either seek (sometimes called aggressive) sensory input or avoid (sometimes called defensiveness) sensory input or not register sensory input (sometimes called under-registration)
- Certain behaviors may be associated with the particular disorder/dysfunction
- Mild disorder will typically not affect life's functions
- Severe disorder will need intervention because it will impact, school, social, and home life (pervasive).

What it may feel like: Examples

- Visual – fluorescent lights (may perceive the cycling of the lights – feels like being in a strobe light – similar to an old flickering light bulb – how could a child sitting in a chair concentrate?)
- Auditory – vacuum cleaner or birds chirping (may sound like fingernails on a chalk board)
- Gustatory – strong tasting food (may taste like battery acid)
- Olfactory – perfume (may be like taking a deep breath from a bleach bottle)
- Tactile – light touch (may feel like someone is touching an open wound)
- Proprioceptive – coordinated movements (like a bull in a china shop)
- Vestibular – Stand up!

Sensory Integration Dysfunction

Another Example of our "Senses"

- Back of your hand – ¾ inch
  - 9 feet of blood vessels
  - 30 hairs and 300 sweat glands
  - 4 oil glands
  - 39 feet of nerves with 9000 nerve endings
  - 6 cold sensors and 36 heat sensors
  - 75 pressure sensors
  - 600 pain sensors

Emotions

- Face emotion processing
  - Convey emotion/mental state of others
  - Directs our attention to what is important
  - Important social information is conveyed by faces
  - Research tells us that the brain of individuals with ASD activate differently when presented with emotional faces compared to typically developing children

Eye Gazing

- Eye Gaze – directs joint attention and allows for imitation and sharing experiences
  - Our brains react differently when gaze is directed at you
    - (Ex. angry face)
  - Impaired in individuals with ASD
  - Frontal lobe is activated in typically developing children, not in those with ASD
  - Children with ASD see faces and emotions, but the significance of the emotion is not processed

Voice Tone

- Typically developing children – auditory cortex responds (activates right hemisphere emotion) to emotion filled tone – regardless of whether or not they are instructed to pay attention to it
- ASD – less activity in auditory cortex, but much more when instructed to pay attention to tone
- In order to process emotions, we must integrate look on face, tone, and context cues
  - In typically developing children we see frontal lobe activity (not in children with AS)
  - Children with ASD are concrete in communications as they don't get intent

Communication

Communication: Autism

- **Communication**
  - Vocal Verbal
  - Non-Vocal Verbal
- **Concrete and Literal**
  - "Are you pulling my leg?"
- **Sometimes an initial question can be too difficult or the person is not oriented to answering questions – use**
  - **Reverse Scaffolding**
- **Ex. Mary**

Reverse Scaffolding

Interview Techniques: Adaptations

- **Reverse Scaffolding**
  - Ex. "Pick up the paper"
    - "Raise your hand"
      - "Touch your nose"
        - "Give me a high five"
          - "Go pick up the paper"
- **High Probability (HP) Instructional Sequence**
  - Building momentum and increasing response effort
    - Vocal Verbal Response
    - Non-Vocal Verbal Response
- **HP Sequencing Examples**

Communication: Autism

Echolalia

- Repeating of words spoken by others
- Normal in children as a developmental process
- Not random speech
- Taking his "turn" in the conversation
- Strategies
  - Time
  - Reduction of Anxiety
  - Patience

Echolalia

Communication: Autism

Sub-vocalizations

- Reflects a strategy to vocalize the thought processes in the individual's mind ("hearing)" what they are thinking
- Rehearse what is going to be said or to practice something the individual is planning to do
- These should not be considered stalling tactics or an attempt to lie
- Not the same as "talking" from person with a psychiatric disturbance (hallucination)

- Ex. George

George

Communication: Autism

Perseveration

- Hyperfocus on a particular topic or subject unrelated to the topic of discussion
- Strategies
  - Re-direct the victim if they perseverate off topic
  - Re-frame the question if it elicits an off topic discussion

- Example……

Justin - Perseveration

Communication: Autism

- **Saliency**
  - Emotional "strength or pull" of an experience
  - Helps all people remember things – good or bad
    - Lunch 2 Wednesdays ago?
- The saliency of common events may be greater for individuals with disabilities
- Salience Landscape Theory
  - Perceptions of emotional significance

Keith: Saliency

Final Considerations

- Range of communication abilities
  - Both receptive and expressive
- Anxiety / Stress
  - Increases in maladaptive behaviors
    - Perseveration
    - Echolalia
    - Responses to sensory input
- Increase your experience
- Q & A

Contact Info

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