Twice-Exceptionality: The Intersection of ASD and Giftedness

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Learning Objectives

1. Features of ASD to guide screening and referral process.

2. Needs of twice-exceptional population of high ability individuals with ASD.

3. Interventions and ongoing management of this patient population.
Outline

• Definitions
  • Autism Spectrum Disorder
  • Giftedness
  • Twice-Exceptionality

• Intersection of High Ability and ASD
• Assessment Procedures
• Interventions/Recommendations
• Lifespan Considerations
• Case Example
• Questions
Autism Spectrum Disorder

DSM-5 criteria:

• Deficits in social communication and social interaction
  – Social-emotional reciprocity
  – Nonverbal communication
  – Developing, maintaining, and understanding relationships

• Restricted interests/repetitive behaviors (2 of 4)
  – Stereotyped, repetitive motor movements
  – Insistence on sameness, inflexible routines, or rituals
  – Highly restricted, fixated interests of unusual intensity
  – Hyper- or hyporeactivity to sensory input

• No separate diagnoses (Autistic Disorder, Asperger Disorder, PDD-NOS)
“Know the Signs” (Autism Speaks)

• No joyful expressions by 6 months
• No back-and-forth sharing of sounds, smiles or other facial expressions by 9 months
• No babbling by 12 months
• No back-and-forth gestures such as pointing, showing, or reaching by 12 months
• No words by 16 months
• No meaningful, two-word phrases (beyond imitating or repeating) by 24 months
• Any loss of speech, babbling, or social skills
Giftedness

Marland Report (1972):

• GT students are "those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance."

• Five areas: intellectual ability, academic aptitude, creative thinking, leadership, and visual/performing arts.
Twice-Exceptionality

A student is considered *twice-exceptional* when he or she is identified as gifted/talented in one or more areas while also possessing a learning, emotional, physical, sensory, and/or developmental disability.
Types of Twice-Exceptionality

1. GT with physical disabilities
2. GT with sensory disabilities
3. GT with Autism Spectrum Disorder
4. GT with emotional and/or behavioral disorders
5. GT with Attention-Deficit/Hyperactivity Disorder
6. GT with specific learning disabilities
Barriers

• Why are these students at risk?
  – Talents mask disabilities
  – Disabilities mask potential
  – No identification

• May not receive appropriate services.
Intersection of High Ability and ASD
Overlap in Characteristics

- Intense interests
- Pedantic speech
- Excellent memory
- Precocious language development
- Early academic abilities
- Talent in math and science
- Asynchronous development
- Concerned with fairness and justice
- Difficulties with peer interactions
- Hypersensitivity to sensory stimuli
Case Study

“Carrie”:  
- 13 years old  
- Accelerated from 6th grade to 8th grade  
- Precocious language, gifted reader, fluent in several languages  
- Difficulties with attention, organization, self-care, making friends

“Hannah”:  
- 12 years old  
- Accelerated math, ELP, considered for whole grade acceleration  
- Bilingual, gifted in math  
- Difficulties with impulsivity, organization, shyness, making friends
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<th>“Carrie”</th>
<th>“Hannah”</th>
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<td>ASD</td>
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</table>
Summary of Results

• Intellectual: Carrie lower Processing Speed
• Academic: Carrie lower expressive language
• Large differences in adaptive functioning (communication and socialization)
• Psychosocial functioning variable (Carrie = elevated parent and teacher scores consistent with ASD)
• ASD assessment clearly differentiated the two girls

Take home message:
• Comprehensive assessment is crucial for appropriate diagnosis in this population
Characteristics of High Ability Students with ASD

• “If you’ve met one child with autism, you’ve met one child with autism.”
• Diagnosed later than lower functioning individuals
• Often first receive misdiagnosis of another disorder
• Variable cognitive abilities
• Strong language abilities, but problems with reciprocity
• Remarkable academic talents
• Fine motor deficits
• Restricted interests and behavioral rigidity
• Low adaptive skills
• Co-morbid anxiety and executive functioning concerns
• Desire social relationships
Research Example

Comparison of gifted youth with and without ASD:

• Both groups have exceptional IQ’s (>130)
  • Processing Speed

• Significant differences in Adaptive Behavior
  • Socialization, Daily Living Skills, Communication

• Parent & teacher differences in behavioral & emotional functioning
  • Atypicality, Withdrawal, Attention, Depression, Hyperactivity
  • Adaptability, Activities of Daily Living, Social skills

• Self-report anxiety, depression, sense of inadequacy, social stress
The figure below provides a visual display of students’ abilities, and emphasizes the significant differences in the cognitive, academic and adaptive functioning skills of twice-exceptional students with ASD. The Belin-Blank Center is an active leading contributor to this body of research and several recent publications have been included in this document (see Annotated Bibliography).

Parent-rated adaptive skills:
- Socialization: 6
- Parent-rated appropriate behavior: 3

Teacher-rated adaptive skills:
- Teacher-rated appropriate behavior: 8

Parent-rated appropriate behavior:
- Parent-rated adaptive skills: 11

Teacher-rated appropriate behavior:
- Teacher-rated adaptive skills: 20

Communication: 50
Daily living skills: 47
Self-perception of academic functioning: 52
Self-perception of emotional functioning: 55
Working memory: 78
Oral language: 84
Written language: 88
Math achievement: 90
Reading achievement: 95
General intellectual ability: 97

The Paradox of Twice-Exceptionality • Figure • 2
Key Findings

• Extremely large discrepancies observed in cognitive, academic, and adaptive functioning profiles.

• Confusing to the student and to those who work and live with him/her (e.g., why are some things so easy and others so hard?).

• Verbal and nonverbal reasoning skills are typically much stronger than working memory and processing speed.

• Impacts academic functioning.
Assessment Procedures
Assessment Procedures

1. Review of records (educational, medical)

2. Interviews with parent and child

3. Individual administration of
   a. Intelligence
   b. Academic achievement
   c. Other areas of functioning as indicated (e.g., measures of executive functioning, memory, and motor skill)
Assessment Procedures

4. Behavioral rating scales
   a. Parent and Teacher ratings
   b. Measures of self-concept, depression, anxiety

5. Adaptive functioning

6. Autism-specific measures
   a. Autism Diagnostic Interview-Revised
   b. Autism Diagnostic Observation Schedule – 2nd Edition
Interventions/Recommendations
Recommendations: Medical

• Consult with pediatrician or child/adolescent psychiatrist

• May benefit from medical intervention for specific symptoms:
  • Executive functioning concerns
  • Anxiety
  • Obsessive-compulsive behaviors
  • Depression
  • Aggression
Recommendations: Counseling

• Executive Functioning
• Social Skills
• Anxiety/Depression/Coping
• Sleep/Healthy lifestyles
• Adaptive Skills
• Managing inappropriate behaviors
• Loneliness and Isolation
• Advocacy/Self-Advocacy Training
• Career planning
• Internet/video game addiction
• Sexuality
Recommendations: Educational

- IEP/504 Plan
- Testing accommodations
- Address learning challenges
- Behavioral supports
- Social Skills Training
- Monitor for bullying
- Access to appropriate GT services/acceleration
- Patience, flexibility, and understanding
Recommendations: Home

- Extracurricular and enrichment activities
- Social skills training
- Behavioral supports
- Adaptive skills
- Self-Advocacy
- Private therapies
- Online resources
  - Autism Speaks 100 Day Kit
  - Wrong Planet
High Ability ASD in Adulthood

• Best outcomes: higher cognitive and language skills; history of intervention
• Functional improvement, continued issues with core deficits
• Unemployment and underemployment
  – Interview skills, communication, socialization, sensory issues, sleep
• Supportive employment shows promise
• Comorbid depression and anxiety; elevated suicidality
• Lower rate of marriage despite desire for close relationships
  – Misperceptions of social situations, inappropriate advances, lack of appropriate sexual education, at-risk for exploitation
• Low incidence of crime/violence
  – Social misunderstanding, obsessions, behavioral rigidity
High Ability ASD in Adulthood

Anecdotes from practice

- Barriers in transition to adulthood:
  - Executive functioning
  - Sleep
  - Adaptive skills
  - Rigidity around goals
  - Adjustment to change

- Positive examples
  - Invigorating and accommodating work environment
  - Supportive family
  - Careers in academia, engineering, computer science
  - Developed positive coping/adaptive skills
Questions

Thank you!

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