


The School Psychologist's Role in the Identification of Autism

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NASP 2009 Annual Convention
President's Special Strand: Making a Difference
for Children with Autism

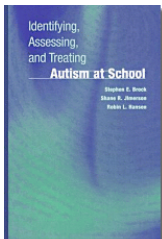
Tuesday, February 24, 2009



Acknowledgement

Adapted from...

Brock, S. E., Jimerson, S. R., & Hansen, R. L. (2006). *Identifying, assessing, and treating autism at school*. New York: Springer.



Presentation Outline

- Introduction: Reasons for Increased Vigilance
- Diagnostic Classifications and Special Education Eligibility
- School Psychologist Roles, Responsibilities, and Limitations
- Case Finding
- Screening and Referral
- Assessment

Introduction: Reasons for Increased Vigilance

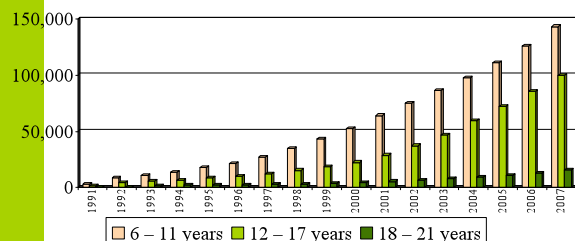
- Autistic spectrum disorders are much more common than previously suggested.
 - 60 (vs. 4 to 6) per 10,000 in the general population (Chakrabarti & Fombonne, 2001).
 - In 2000 and 2002, 1 out of every 150 eight-year-olds had autism (ADDM, 2007).
 - 899% increase in the numbers served under the autism *IDEA* eligibility classification between 1995 and 2007 (28,725 to 258,305; U.S. Department of Education, 2006).

Explanations for Changing ASD Rates in the General Population

- Changes in diagnostic criteria.
- Heightened public awareness of autism.
- Increased willingness and ability to diagnose autism.
- Availability of resources for children with autism.
- Yet to be identified environmental factors.

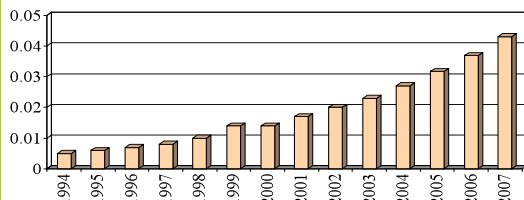
Increased Prevalence in Special Education (U.S. Department of Education, 2008)

Total Number of Student Classified as Autistic and Eligible for Special Education Under IDEA by Age Group



Increased Prevalence in Special Education (U.S. Department of Education, 2008)

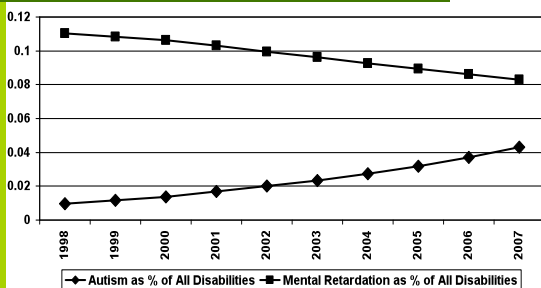
Student Classified as Autistic Under IDEA as a Percentage of all Students with Disabilities: 1994 to 2007



Explanations for Changing ASD Rates in Special Education

- Classification substitution
 1. IEP teams have become better able to identify students with autism.
 2. Autism is more acceptable in today's schools than is the diagnosis of mental retardation.
 3. The intensive early intervention services often made available to students with autism are not always offered to the child whose primary eligibility classification is mental retardation.

Introduction: Increased Prevalence in Special Education (adapted from Brock, 2006)



Reasons for Increased Vigilance

- Autism can be identified early in development, and...
- Early intervention is an important determinant of the course of autism.

Reasons for Increased Vigilance

- Not all cases of autism will be identified before school entry.
 - Average Age of Autistic Disorder identification is 5 1/2 years of age.
 - Average Age of Asperger's Disorder identification is 11 years of age Howlin and Asgharian (1999).

Reasons for Increased Vigilance

- Most children with autism are identified by school resources.
 - Only three percent of children with ASD are identified solely by non-school resources.
 - All other children are identified by a combination of school and non-school resources (57 %), or by school resources alone (40 %) Yeorgin-Allsopp et al. (2003).

Reasons for Increased Vigilance

- Full inclusion of children with ASD in general education classrooms.
 1. Students with disabilities are increasingly placed in full-inclusion settings.
 2. In addition, the results of recent studies suggesting a declining incidence of mental retardation among the ASD population further increases the likelihood that these children will be mainstreamed (Chakrabarti & Fombonne, 2001).
 3. Consequently, today's educators are more likely to encounter children with autism during their careers.

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Diagnostic Classifications

Pervasive Developmental Disorders

- Autistic Disorder
- Asperger's Disorder
- PDD-NOS
- Rett's Disorder
- Childhood Disintegrative Disorder

In this session the terms "Autism," or "Autistic Spectrum Disorders (ASD)" are used to indicate these PDDs.

Diagnostic Classifications

- Autistic Disorder
 - Markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests.
- Asperger's Disorder
 - Markedly abnormal or impaired development in social interaction and a markedly restricted repertoire of activities and interests (language abilities and cognitive functioning is not affected).
- PDD-NOS
 - Experience difficulty in at least two of the three autistic disorder symptom clusters, but do not meet diagnostic criteria for any other PDD.

Diagnostic Classifications

- Rett's Disorder
 - Occurs primarily among females and involves a pattern of head growth deceleration, a loss of fine motor skill, and the presence of awkward gait and trunk movement.
- Childhood Disintegrative Disorder
 - Very rare. A distinct pattern of regression following at least two years of normal development.

Special Education Eligibility: Proposed IDEIA Regulations

- IDEIA 2004 Autism Classification
 - P.L. 108-446, Individuals with Disabilities Education Improvement Act (IDEIA), 2004
 - Proposed USDOE Regulations for IDEA 2004 [§ 300.8(c)(1)]
 - *Autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's education performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotypical movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences. (i) Autism does not apply if a child's educational performance is adversely affected primarily because the child has an emotional disturbance, as defined in paragraph (c)(4) of this section. (ii) A child who manifest the characteristics of autism after age three could be identified as having autism if the criteria in paragraph (c)(1)(i) of this section are satisfied.*

Special Education Eligibility

- For special education eligibility purposes distinctions among PDDs may not be relevant.
- While the diagnosis of Autistic Disorder requires differentiating its symptoms from other PDDs, Shriver et al. (1999) suggest that for special education eligibility purposes "the federal definition of 'autism' was written sufficiently broad to encompass children who exhibit a range of characteristics" (p. 539) including other PDDs.

Special Education Eligibility

- However, it is less clear if students with milder forms of ASD are always eligible for special education.
- Adjudicative decision makers almost never use the *DSM IV-TR* criteria exclusively or primarily for determining whether the child is eligible as autistic" (Fogt et al., 2003).
- While *DSM IV-TR* criteria are often considered in hearing/court decisions, *IDEA* is typically acknowledged as the "controlling authority."
- When it comes to special education, it is state and federal education codes and regulations (not *DSM IV-TR*) that drive eligibility decisions.

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School Psychologist Roles, Responsibilities, and Limitations

1. School psychologists need to be vigilant for symptoms of autism among the students they serve, and better prepared to assist in the process of identifying these disorders.

School Psychologist Roles, Responsibilities, and Limitations

2. Case Finding
 - ***All School psychologists should be expected to participate in case finding*** (i.e., routine developmental surveillance of children in the general population to recognize risk factors and identify warning signs of autism).
 - This would include training general educators to identify the risk factors and warning signs of autism.

School Psychologist Roles, Responsibilities, and Limitations

3. Screening
 - ***All School psychologists should be prepared to participate in the behavioral screening of the student who has risk factors and/or displays warning signs of autism*** (i.e., able to conduct screenings to determine the need for diagnostic assessments).
 - ***All School psychologists should be able to distinguish between screening and diagnosis.***
4. Diagnosis
 - Only those School psychologists with appropriate training and supervision should diagnose a specific autism spectrum disorder.

School Psychologist Roles, Responsibilities, and Limitations

5. Special Education Eligibility
- All school psychologists should be expected to conduct the special education evaluations that can be a part of the diagnostic process and that determines educational needs.
 - NOTE:
 - The ability to conduct such assessments will require School psychologists to be knowledgeable of the accommodations necessary to obtain valid test results when working with the child who has an ASD.

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Case Finding

- Looking
 - for risk factors and warning signs of atypical development.
- Listening
 - REALLY LISTENING to parental concerns about atypical development.
- Questioning
 - caregivers about the child's development.

Case Finding: Looking for Risk Factors

- Known Risk Factors

- High Risk
 - Having an older sibling with autism.
- Moderate Risk
 - The diagnosis of tuberous sclerosis, fragile X, or epilepsy.
 - A family history of autism or autistic-like behaviors.

Case Finding: Looking for Warning Signs

- Infants and Preschoolers

- Absolute indications for an autism screening
 - No big smiles or other joyful expressions by 6 months.^b
 - No back-and-forth sharing of sounds, smiles, or facial expressions by 9 months.^b
 - No back-and-forth gestures, such as pointing, showing, reaching or waving bye-bye by 12 months.^{a,b}
 - No babbling at 12 months.^{a, b}
 - No single words at 16 months.^{a, b}

Sources: ^aFilipek et al., 1999; ^bGreenspan, 1999; and ^cOzonoff, 2003.

Case Finding: Looking for Warning Signs

- Infants and Preschoolers

- Absolute indications for an autism screening
 - No 2-word spontaneous (nonecholalic) phrases by 24 months.^{a, b}
 - Failure to attend to human voice by 24 months.^c
 - Failure to look at face and eyes of others by 24 months.^c
 - Failure to orient to name by 24 months.^c
 - Failure to demonstrate interest in other children by 24 months.^c
 - Failure to imitate by 24 months.^c
 - Any loss of any language or social skill at any age.^{a, b}

Sources: ^aFilipek et al., 1999; ^bGreenspan, 1999; and ^cOzonoff, 2003.

Case Finding: Looking for Warning Signs

- **School-Age Children** (preschool through upper grades)
 - **Social/Emotional Concerns**
 - Poor at initiating and/or sustaining activities and friendships with peers
 - Play/free-time is more isolated, rigid and/or repetitive, less interactive
 - Atypical interests and behaviors compared to peers
 - Unaware of social conventions or codes of conduct (e.g., seems unaware of how comments or actions could offend others)
 - Excessive anxiety, fears or depression
 - Atypical emotional expression (emotion, such as distress or affection, is significantly more or less than appears appropriate for the situation)

Sources: Adapted from Asperger's Syndrome A Guide for Parents and Professionals (Attwood, 1998), Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (APA, 1994), and The Asperger Syndrome Diagnostic Scale (Myles, Bock and Simpson, 2000)

Case Finding: Looking for Warning Signs

- **School-Age Children** (preschool through upper grades)
 - **Communication Concerns**
 - Unusual tone of voice or speech (seems to have an accent or monotone, speech is overly formal)
 - Overly literal interpretation of comments (confused by sarcasm or phrases such as "pull up your socks" or "looks can kill")
 - Atypical conversations (one-sided, on their focus of interest or on repetitive/unusual topics)
 - Poor nonverbal communication skills (eye contact, gestures, etc.)

Sources: Adapted from Asperger's Syndrome A Guide for Parents and Professionals (Attwood, 1998), Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (APA, 1994), and The Asperger Syndrome Diagnostic Scale (Myles, Bock and Simpson, 2000)

Case Finding: Looking for Warning Signs

- **School-Age Children** (preschool through upper grades)
 - **Behavioral Concerns**
 - Excessive fascination/perseveration with a particular topic, interest or object
 - Unduly upset by changes in routines or expectations
 - Tendency to flap or rock when excited or distressed
 - Unusual sensory responses (reactions to sound, touch, textures, pain tolerance, etc.)
 - History of behavioral concerns (inattention, hyperactivity, aggression, anxiety, selective mute)
 - Poor fine and/or gross motor skills or coordination

Sources: Adapted from Asperger's Syndrome A Guide for Parents and Professionals (Attwood, 1998), Diagnostic and Statistical Manual of Mental Disorders, 4th ed. (APA, 1994), and The Asperger Syndrome Diagnostic Scale (Myles, Bock and Simpson, 2000)

Case Finding: Looking for atypical development

• **Developmental Screening**

- Ages and Stages Questionnaire
 - Paul H. Brookes, Publishers
- Child Development Inventories
 - Behavior Science Systems
- Parents' Evaluations of Developmental Status
 - Ellsworth & Vandermeer Press, Ltd.

Case Finding: Looking for atypical development

• **Staff Development**

- Special educator efforts to educate teachers about the risk factors and warning signs of ASD would also be consistent with Child Find regulations [see 17 CCR 52040(b)(7)]. Giving teachers the information they need to look for ASD (such as is presented in this workshop) will facilitate case finding efforts.

Case Finding: Listening to caregivers

• **Referring Concerns That Signal the Need for Autism Screening**

- Communication Concerns
 - Does not respond to his/her name
 - Cannot tell me what s/he wants
 - Does not follow directions
 - Appears deaf at times
 - Seems to hear sometimes but not others
 - Does not point or wave bye-bye

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Listening to caregivers

- Referring Concerns That Signal the Need for Autism Screening
 - Social Concerns
 - Does not smile socially
 - Seems to prefer to play alone
 - Is very independent
 - Has poor eye contact
 - Is in his/her own world
 - Tunes us out
 - Is not interested in other children

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Listening to caregivers

- Referring Concerns That Signal the Need for Autism Screening
 - Behavioral concerns
 - Tantrums
 - Is hyperactive or uncooperative/oppositional
 - Doesn't know how to play with toys
 - Does the same thing over and over
 - Toe walks

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Listening to caregivers

- Referring Concerns That Signal the Need for Autism Screening
 - Behavioral concerns (continued)
 - Has unusual attachments to toys (e.g., always is holding a certain object)
 - Lines things up
 - Is oversensitive to certain textures or sounds
 - Has odd finger and/or body movement patterns

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Questioning caregivers

- Asking about socialization that probe for issues that would signal the need for an autism screening.
 - “Does s/he ...” or “Is there ...”
 - cuddle like other children?
 - look at you when you are talking or playing?
 - smile in response to a smile from others?
 - engage in reciprocal, back-and-forth play?
 - play simple imitation games, such as pat-a-cake or peek-a-boo?
 - show interest in other children?

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Questioning caregivers

- Asking about communication that probe for issues that would signal the need for an autism screening.
 - “Does s/he ...” or “Is there ...”
 - point with his/her finger?
 - gesture? Nod yes and no?
 - direct your attention by holding up objects for you to see?
 - anything odd about his/her speech?
 - show things to people?

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Questioning caregivers

- Asking about communication that probe for issues that would signal the need for an autism screening (continued).
 - “Does s/he ...” or “Is there ...”
 - lead an adult by the hand?
 - give inconsistent response to his/her name? ... to commands?
 - use rote, repetitive, or echolalic speech?
 - memorize strings of words or scripts?

Source: Filipek, P. A. et al. (1999). The screening and diagnosis of autistic spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

Case Finding: Questioning caregivers

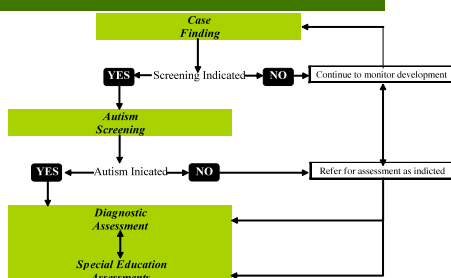
- Asking about behavior that probe for issues that would signal the need for an autism screening.
 - “Does s/he ...” or “Is there ...”
 - have repetitive, stereotyped, or odd motor behavior?
 - have preoccupations or a narrow range of interests?
 - attend more to parts of objects (e.g., the wheels of a toy car)?
 - have limited or absent pretend play?
 - imitate other people's actions?
 - play with toys in the same exact way each time?
 - strongly attached to a specific unusual object(s)?

Source: Filipek, et al. (1999) Screening and diagnosis of autism spectrum disorders. *Journal of Autism and Developmental disorders*, 29, 439-484.

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Adaptation of Filpek et al.'s (1999) Algorithm for the Process of Diagnosing Autism



Screening and Referral

- Screening is designed to help determine the need for additional diagnostic assessments.
- In addition to the behavioral screening (which at school should typically be provided by the school psychologist), screening should include medical testing (lead screening) and a complete audiological evaluation.

Behavioral Screening for ASD

- School psychologists are exceptionally well qualified to conduct the behavioral screening of students suspected to have an ASD.
- Several screening tools are available
- Initially, most of these tools focused on the identification of ASD among infants and preschoolers.
- Recently screening tools useful for the identification of school aged children who have high functioning autism or Asperger's Disorder have been developed.

Behavioral Screening of Infants and Preschoolers

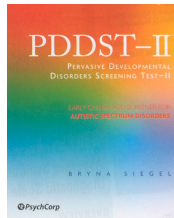
- *Checklist for Autism in Toddlers (CHAT)*
 - Baron-Cohen, S., Allen, J., & Gillberg, C. (1992). Can autism be detected at 18 months? The needle, the haystack, and the CHAT. *British Journal of Psychiatry*, 161, 839-43.
 - Baron-Cohen, S., Cox, A., Baird, G., Swettenham, J., Nightingale, N., Morgan, K., Drew, A., & Charman, T. (1996). Psychological markers in the detection of autism in infancy in a large population. *British Journal of Psychiatry*, 168, 158-163.
 - Baird, G., Charman, T., Baron-Cohen, S., Cox, A., Swettenham, J., Wheelwright, S., & Drew, A. (2000). A screening instrument for autism at 18 months of age: A 6-year follow-up study. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39, 694-702.
 - Baron-Cohen, S., Wheelwright, S., Cox, A., Baird, G., Charman, T., Swettenham, J., Drew, A., Coehring, P. (2000). Early identification of autism by the CHecklist for Autism in Toddlers (CHAT). *Journal of the Royal Society of Medicine*, 93, 521-525.

Behavioral Screening of Infants and Preschoolers

- *Modified Checklist for Autism in Toddlers (M-CHAT)*
 - Robins, D. L., Fein, D., Barton, M. L., & Green, J. A. (2001). The modified checklist for autism in toddlers: An initial study investigating the early detection of autism and pervasive developmental disorders. *Journal of Autism and Developmental Disorders*, 31, 131-144.

Behavioral Screening of Infants and Preschoolers

- *Pervasive Developmental Disorders Screening Test - II (PDDST-II)*
 - Siegel, B. (2004). Available from PsychCorp.



Behavioral Screening of School Age Children

- *Autism Spectrum Screening Questionnaire (ASSQ)*
 - Ehlers, S., Gillberg, G., & Wing, L. (1999). A screening questionnaire for Asperger syndrome and other high functioning autism spectrum disorders in school age children. *Journal of Autism and Developmental Disorders*, 29, 129-141.

Behavioral Screening of School Age Children

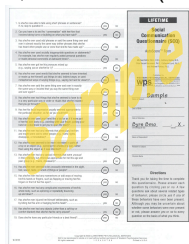
- *Childhood Asperger Syndrome Test (CAST)*
 - Scott, F. A., Baron-Cohen, S., Bolton, P., & Brayne, C. (2002). The CAST (Childhood Asperger Syndrome Test). *Autism*, 6, 9-31.

Behavioral Screening of School Age Children

- *Social Communication Questionnaire (SCQ)*
 - Berument, S. K., Rutter, M., Lord, C., Pickles, A., & Bailey, A. (1999). Autism screening questionnaire: Diagnostic Validity. *British Journal of Psychiatry*, 175, 444-451.
 - Rutter, M., LeCouteur, A., & Lord, C. (2003). *Social Communication Questionnaire*. Los Angeles, CA: Western Psychological Services.

Behavioral Screening of School Age Children

- *Social Communication Questionnaire (SCQ)*



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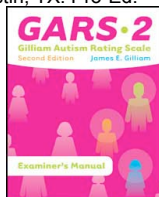
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Diagnostic Assessments

- Indirect Assessment
 - Interviews and Questionnaires/Rating Scales
 - Easy to obtain
 - Reflect behavior across settings
 - Subject to interviewee/rater bias
- Direct Assessment
 - Behavioral Observations
 - More difficult to obtain
 - Reflect behavior within limited settings
 - Not subject to interviewee/rater bias

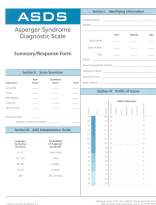
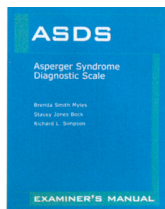
Indirect Assessment: Rating Scales

- The *Gilliam Autism Rating Scale (GARS)*
 - Gilliam, J. E. (2005). *Gilliam autism rating scale* (2nd ed.). Austin, TX: Pro-Ed.



Indirect Assessment: Rating Scales

- The *Asperger Syndrome Diagnostic Scale* (ASDS)



Indirect Assessment: Interview

- The *Autism Diagnostic Interview-Revised* (ADI-R)
 - Rutter, M., Le Couteur, A., & Lord, C. (2003). *Autism diagnostic interview-revised (ADI-R)*. Los Angeles, CA: Western Psychological Services.



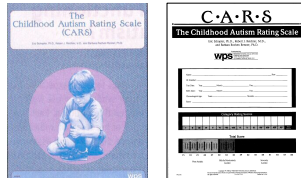
Direct Assessments: ADOS

- The *Autism Diagnostic Observation Schedule* (ADOS)
 - Lord, C., Rutter, M., Di Lavore, P. C., & Risi, S. (.). *Autisms diagnostic observation schedule*. Los Angeles, CA: Western Psychological Services.



Direct Assessments: CARS

- The *Childhood Autism Rating Scale* (CARS)
 - Schopler, E., Reichler, R., & Rochen-Renner, G. (1988). *The Childhood Autism Rating Scale* (CARS). Los Angeles, CA: Western Psychological Services.



Testing Accommodations

- The core deficits of autism can significantly impact test performance.
 - Impairments in communication may make it difficult to respond to verbal test items and/or generate difficulty understanding the directions that accompany nonverbal tests.
 - Impairments in social relations may result in difficulty establishing the necessary joint attention.
- Examiners must constantly assess the degree to which tests being used reflect symptoms of autism and not the specific targeted abilities (e.g., intelligence, achievement, psychological processes).

Testing Accommodations

- It is important to acknowledge that the autistic population is very heterogeneous.
- There is no one set of accommodations that will work for every student with autism.
- It is important to consider each student as an individual and to select specific accommodations to meet specific individual student needs.

Testing Accommodations

- Prepare the student for the testing experience.
- Place the testing session in the student's daily schedule.
- Minimize distractions.
- Make use of pre-established physical structures and work systems.
- Make use of powerful external rewards.
- Carefully pre-select task difficulty.
- Modify test administration and allow nonstandard responses.

Behavioral Observations

- Students with ASD are a very heterogeneous group, and in addition to the core features of ASD, it is not unusual for them to display a range of behavioral symptoms including hyperactivity short attention span impulsivity, aggressiveness, self-injurious behavior, and (particularly in young children) temper tantrums.
- Observation of the student with ASD in typical environments will also facilitate the evaluation of test taking behavior.
- Observation of test taking behavior may also help to document the core features of autism.

Cognitive Functioning

- Assessment of cognitive function is essential given that, with the exception of Asperger's Disorder, a significant percentage (as high as 80 percent) of students with ASD will also be mentally retarded.
- Severity of mental retardation can also provide some guidance regarding differential diagnosis among ASDs.
- IQ is associated with adaptive functioning, the ability to learn and acquire new skills, and long-term prognosis.
 - Thus, level of cognitive functioning has implications for determining how restrictive the educational environment will need to be.

Cognitive Functioning

- A powerful predictor of ASD symptom severity.
- However, given that children with ASD are ideally first evaluated when they are very young, it is important to acknowledge that it is not until age 5 that childhood IQ correlates highly with adult IQ.
 - Thus, it is important to treat the IQ scores of the very young child with caution when offering a prognosis, and when making placement and program planning decisions.
 - However, for school aged children it is clear that the appropriate IQ test is an "...excellent predictor of a student's later adjustment and functioning in real life" (Frith, 1989, p. 84).

Cognitive Functioning

- Regardless of the overall level of cognitive functioning, it is not unusual for the student being tested to display an uneven profile of cognitive abilities.
- Thus, rather than simply providing an overall global intelligence test score, it is essential to identify these cognitive strengths and weaknesses.
- At the same time, however, it is important to avoid the temptation to generalize from isolated or "splinter" skills when forming an overall impression of cognitive functioning, given that such skills may significantly overestimate typical abilities.

Cognitive Functioning

- Selection of specific tests is important to obtaining a valid assessment of cognitive functioning (and not the challenges that are characteristic of ASD).
- The *Wechsler* and *Stanford-Binet* scales are appropriate for the individual with spoken language.

Cognitive Functioning

- On the other hand, for students who have more severe language delays measures that minimize verbal demands are recommended (e.g., the *Leiter International Performance Scale – Revised*, *Raven Coloured Progressive Matrices*)

Functional/Adaptive Behavior

- Given that diagnosing mental retardation requires examination of both IQ and adaptive behavior, it is also important to administer measures of adaptive behavior when assessing students with ASD.
- Other uses of adaptive behavior scales when assessing students with ASD are:
 - a) Obtain measure of child's typical functioning in familiar environments, e.g. home and/or school.
 - b) Target areas for skills acquisition.
 - c) Identifying strengths and weaknesses for educational planning and intervention
 - d) Documenting intervention efficacy
 - e) Monitoring progress over time.

Functional/Adaptive Behavior

- Profiles of students with ASD are unique.
 - Individuals with only mental retardation typically display flat profiles across adaptive behavior domains
 - Students with ASD might be expected to display relative strengths in daily living skills, relative weaknesses in socialization skills, and intermediate scores on measures of communication abilities.
- To facilitate the use of the *Vineland Adaptive Behavior Scales* in the assessment of individuals with ASD, Carter et al. (1998) have provided special norms for groups of individuals with autism

Language Functioning

- *Peabody Picture Vocabulary Test – Third Edition*
- *Expressive One-Word Picture Vocabulary Test*
 - When interpreting the results of such measures, it is important to keep in mind that these tests may overestimate language abilities as they do not require sentence production or comprehension, nor do they assess social language or pragmatics.
 - Also, in many higher functioning students with ASD receptive language may be lower than expressive language.

Psychological Processes

- Helps to further identify learning strengths and weakness.
- Depending upon age and developmental level, traditional measures of such processes may be appropriate.
- It would not be surprising to find relatively strong rote, mechanical, and visual-spatial processes; and deficient higher-order conceptual processes, such as abstract reasoning.
- While IQ test profiles should never be used for diagnostic purposes, it would not be surprising to find the student with Autistic Disorder to perform better on non-verbal (visual/spatial) tasks than tasks that require verbal comprehension and expression.
 - The student with Asperger's Disorder may display the exact opposite profile.

Academic Achievement

- Assessment of academic functioning will often reveal a profile of strengths and weaknesses.
 - It is not unusual for students with ASD be hyperverbal/hyperlexic, while at the same time having poor comprehension and difficulties with abstract language. For others, calculation skills may be well developed, while mathematical concepts are delayed.
- For students functioning at or below the preschool range and with a chronological age of 6 months to 7 years, the *Psychoeducational Profile – Revised* may be an appropriate choice.
- For older, higher functioning students, the *Woodcock-Johnson Tests of Achievement* and the *Wechsler Individual Achievement Test* would be appropriate tools.

Emotional Functioning

- 65% present with symptoms of an additional psychiatric disorder such as AD/HD, oppositional defiant disorder, obsessive-compulsive disorder and other anxiety disorders, tics disorders, affective disorders, and psychotic disorders.
- Given these possibilities, it will also be important for the school psychologist to evaluate the student's emotional/behavioral status.
- Traditional measures such as the *Behavioral Assessment System for Children* would be appropriate as a general purpose screening tool, while more specific measures such as *The Children's Depression Inventory* and the *Revised Children's Manifest Anxiety Scale* would be appropriate for assessing more specific presenting concerns.

Contact Information

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