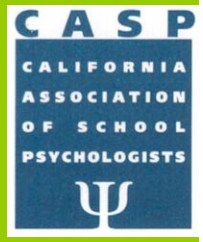
The Psycho-Educational Assessment of Students with Autism Spectrum Disorders

Stephen E. Brock, NCSP
- California State University Sacramento

Michael Slone, NCSP
- Irvine Unified School District

Clarissa Tuttle, NCSP
- Natomas Unified School District



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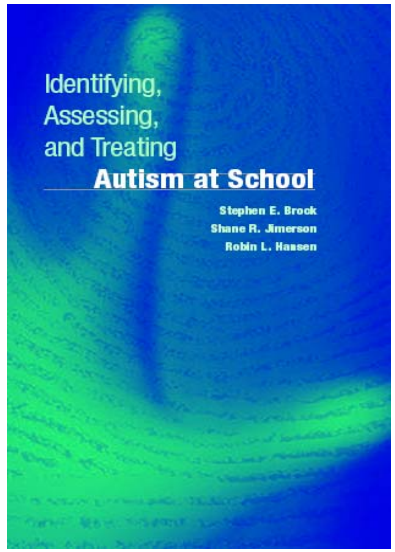
Acknowledgement

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
- Determining the Need for a Diagnostic Evaluation
- Elements of the Diagnostic Evaluation
- Determining Educational Needs and the Appropriate Placement & Services
- Psycho-educational Report Recommendations
- Conclusions

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 (Chakrabarit & Fombonne, 2001).
  - In 2000 and 2002, 1 out of every 150 eight-year-olds had autism (ADDM, 2007).
  - 570% increase in the numbers served under the autism *IDEA* eligibility classification between 1995 and 2005 (28,725 to 192,643; U.S. Department of Education, 2006).

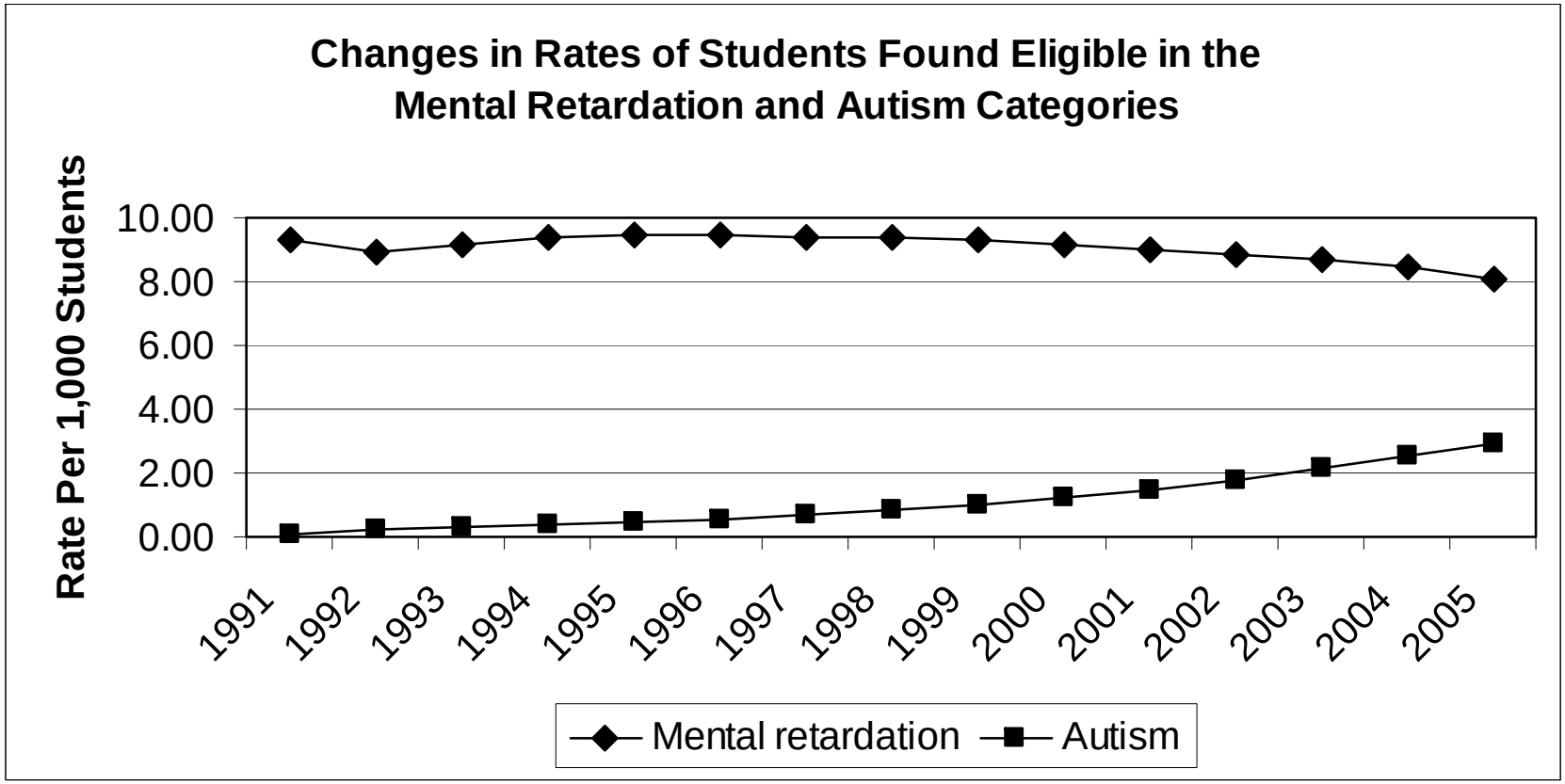
Introduction: Explanations for Changing ASD Rates in the General Population

- 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.

Introduction: Explanations for Changing ASD Rates in Special Education

- Classification substitution
  - IEP teams have become better able to identify students with autism.
  - Autism is more acceptable in today's schools than is the diagnosis of mental retardation.
  - 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 (Brock, 2006)



Introduction: Reasons for Increased Vigilance

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

Introduction: 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).

Introduction: 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 %) Yeargin-Allsopp et al. (2003).

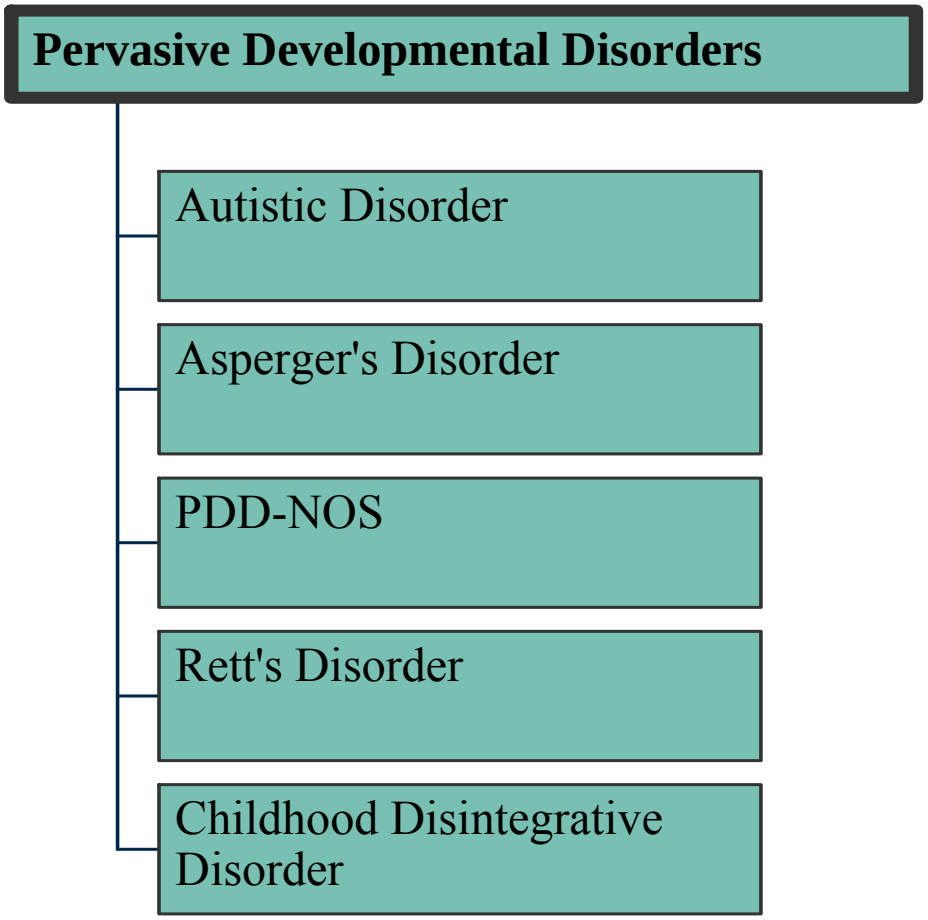
Introduction: Reasons for Increased Vigilance

- Full inclusion of children with ASD in general education classrooms.
  - Students with disabilities are increasingly placed in full-inclusion settings.
  - 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).
  - Consequently, today's educators are more likely to encounter children with autism during their careers.

Presentation Outline

- Introduction
- Determining the Need for a Diagnostic Evaluation
  - Diagnostic Classifications
  - Identifying ASD risk factors and warning signs
  - Screening and Referral
  - Screening Tools
- Elements of the Diagnostic Evaluation
- Determining Educational Needs and the Appropriate Placement & Services & Services
- Psycho-educational Report Recommendations
- Conclusions

Diagnostic Classifications



In this workshop the terms “Autism,” or “Autistic Spectrum Disorders (ASD)” will be 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.

Identifying ASD Risk Factors and Warning Signs

- Developmental surveillance
  - Gathering information
  - Parent and professional observations
  - Tracking developmental progress compared to peers
- Case Finding
  - ***Looking*** for risk factors and warning signs of atypical development.
  - ***Listening*** to parental concerns about atypical development.
  - ***Questioning*** caregivers about the child's development

Source: DDS, 2002; Filipek, et al., 1999

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 Risk Factors**

- Currently there is no substantive evidence supporting any one non-genetic risk factor for ASD.
- However, given that there are likely different causes of ASD, it is possible that yet to be identified non-heritable risk factors may prove to be important in certain subgroups of individuals with this disorder.
  - There may be an interaction between the presence of specific genetic defects and specific environmental factors.
  - Individuals with a particular genetic predisposition for ASD may have a greater risk of developing this disorder subsequent to exposure to certain non-genetic risk factors.
  - In particular, it has been suggested that prenatal factors such as maternal infection and drug exposure deserve further examination.

Identifying ASD Warning Signs

- Red Flag Indicators
  - 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 babbling by 12 months of age[a]
  - No back and forth gestures (e.g. pointing, showing, reaching or waving by 12 months)[a]
  - No words by 16 months[a]
  - No two-word meaningful phrases by 24 months[a]
  - ANY loss of speech, babbling or social skills at ANY age[a]

Source: [a]DDS, 2002; [b]Greenspan, 1999.

Identifying ASD Warning Signs

- Red Flag Indicators
  - Failure to attend to human voice by 24 months.
  - Failure to look at face and eyes of others by 24 months.
  - Failure to orient to name by 24 months.
  - Failure to demonstrate interest in other children by 24 months.
  - Failure to imitate by 24 months.

Source: Ozonoff, 2003.

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

- *CHecklist for Autism in Toddlers* (CHAT)
  - Designed to identify risk of autism among 18-month-olds
  - Takes 5 to 10 minutes to administer,
  - Consists of 9 questions asked of the parent and 5 items that are completed by the screener's direct observation of the child.
  - 5 items are considered to be "key items." These key items, assess joint attention and pretend play.
  - If a child fails all five of these items they are considered to be at high risk for developing autism.

CHecklist for Autism in Toddlers

CHAT SECTION A: History: Ask parent…	
1. Does your child enjoy being swung, bounced on your knee, etc.?	YES NO
2. Does your child take an interest in other children?	YES NO
3. Does your child like climbing on things, such as up stairs?	YES NO
4. Does your child enjoy playing peek-a-boo/hide-and-seak?	YES NO
5. Does your child ever PRETEND, for example to make a cup of tea using a toy cup and teapot, or pretend other things?	YES **NO**
6. Does your child ever use his/her index finger to point to ASK for something?	YES NO
7. Does your child ever use his/her index finger to point to indicate INTEREST in something?	YES **NO**
8. Can your child play properly with small toys (e.g., cars or bricks) without just mouthing, fiddling or dropping them?	YES NO
9. Does your child ever bring objects over to you (parent) to SHOW your something?	YES NO

From Baron-Cohen et al (1996, p. 159).

CHecklist for Autism in Toddlers

CHAT Section B: general practitioner or health visitor observation	
i. During the appointment, has the child made eye contact with your?	YES NO
ii. Get child's attention, then point across the room at an interesting object and say *'Oh look! There's a [name of toy]'*. Watch child's face. Does the child look across to see what you are point at?	YES **NO***
iii. Get the child's attention, then give child a miniature toy cup and teapot and say *'Can you make a cup of tea?'* Does the child pretend to pour out tea, drink it, etc.?	YES **NO†**
iv. Say to the child *'Where is the light?'*, or *'Show me the light'*. Does the child POINT with his/her index finger at the light?	YES **NO‡**
v. Can the child build a tower of bricks? (if so how many?) (No. of bricks:……)	YES NO
* To record Yes on this item, ensure the child has not simply looked at your hand, but has actually looked at the object you are point at. † If you can elicit an example of pretending in some other game, score a Yes on this item. ‡ Repeat this with '*Where's the teddy?*' or some other unreachable object, if child does not understand the word light. To record Yes on this item, the child must have looked up at your face around the time of pointing.	
Scoring: ☐ High risk for Autism: Fails A5, A7, Bii, Biii, and Biv ☐ Medium risk for autism group: Fails A7, Biv (but not in maximum risk group) ☐ Low risk for autism group (not in other two risk groups)	

From Baron-Cohen et al (1996, p. 159)

CHecklist for Autism in Toddlers

http://www.autismresearchcentre.com/tests/chat_test.asp

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

- *Modified Checklist for Autism in Toddlers* (M-CHAT)
  - Designed to screen for autism at 24 months of age.
  - More sensitive to the broader autism spectrum.
  - Uses the 9 items from the original CHAT as its basis.
  - Adds 14 additional items (23-item total).
  - Unlike the *CHAT*, however, the *M-CHAT* does not require the screener to directly observe the child.
  - Makes use of a Yes/No format questionnaire.
  - Yes/No answers are converted to pass/fail responses by the screener.
  - A child fails the checklist when 2 or more of 6 critical items are failed **or** when any three items are failed.

Behavioral Screening of Infants and Preschoolers

- *Modified Checklist for Autism in Toddlers* (M-CHAT)
  - The *M-CHAT* was used to screen 1,293 18- to 30-month-old children. 58 were referred for a diagnostic/developmental evaluation. 39 were diagnosed with an autism spectrum disorder (Robins et al., 2001).
  - Will result in false positives.
  - Data regarding false negative is not currently available, but follow-up research to obtain such is currently underway.

Modified Checklist for Autism in Toddlers

Modified Checklist for Autism in Toddlers (M-CHAT)

Please fill out the following about how your child **usually** is. Please try to answer every question. If the behavior is rare (e.g., you've seen it once or twice), please answer as if the child does not do it.

1.	Does your child enjoy being swung, bounced on your knee, etc.?	Yes	No
2.	**Does your child take an interest in other children?**	Yes	**No**
3.	Does your child like climbing on things, such as up stairs?	Yes	No
4.	Does your child enjoy playing peek-a-boo/hide-and-seek?	Yes	No
5.	Does your child ever pretend, for example, to talk on the phone or take care of		No
6.	Does your child ever use his/her index finger to point, to ask for something?		No
7.	**Does your child ever use his/her index finger to point, to indicate interest in**		**No**
8.	Can your child play properly with small toys (e.g. cars or bricks) without just		No
9.	**Does your child ever bring objects over to you (parent) to show you something?**		**No**
10.	Does your child look you in the eye for more than a second or two?	Yes	No
11.	Does your child ever seem oversensitive to noise? (e.g., plugging ears)	Yes	No

Robins et al. (2001, p. 142)

Modified Checklist for Autism in Toddlers

Modified Checklist for Autism in Toddlers (M-CHAT)

Please fill out the following about how your child **usually** is. Please try to answer every question. If the behavior is rare (e.g., you've seen it once or twice), please answer as if the child does not do it.

13.	**Does your child imitate you? (e.g., you make a face-will your child imitate it?)**		**No**
14	**Does your child respond to his/her name when you call?**	Yes	**No**
15.	**If you point at a toy across the room, does your child look at it?**	Yes	**No**
16.	Does your child walk?	Yes	No
17.	Does your child look at things you are looking at?	Yes	No
18.	Does your child make unusual finger movements near his/her face?	Yes	No
19.	Does your child try to attract your attention to his/her own activity?	Yes	No
20.	Have you ever wondered if your child is deaf?	Yes	No
21.	Does your child understand what people say?	Yes	No
22.	Does your child sometimes stare at nothing or wander with no purpose?		No
23.	Does your child look at your face to check your reaction when faced with		No

Robins et al. (2001, p. 142)

Modified Checklist for Autism in Toddlers

M-CHAT Scoring Instructions

A child fails the checklist when 2 or more critical items are failed OR when any three items are failed. Yes/no answers convert to pass/fail responses. Below are listed the failed responses for each item on the M-CHAT. Bold capitalized items are CRITICAL items.

Not all children who fail the checklist will meet criteria for a diagnosis on the autism spectrum. However, children who fail the checklist should be evaluated in more depth by the physician or referred for a developmental evaluation with a specialist.

1. No	6. No	11. Yes	16. No	21. No
2. NO	**7. NO**	12. No	17. No	22. Yes
3. No	8. No	**13. NO**	18. Yes	23. No
4. No	**9. NO**	**14. NO**	19. No	
5. No	10. No	**15. NO**	20. Yes	

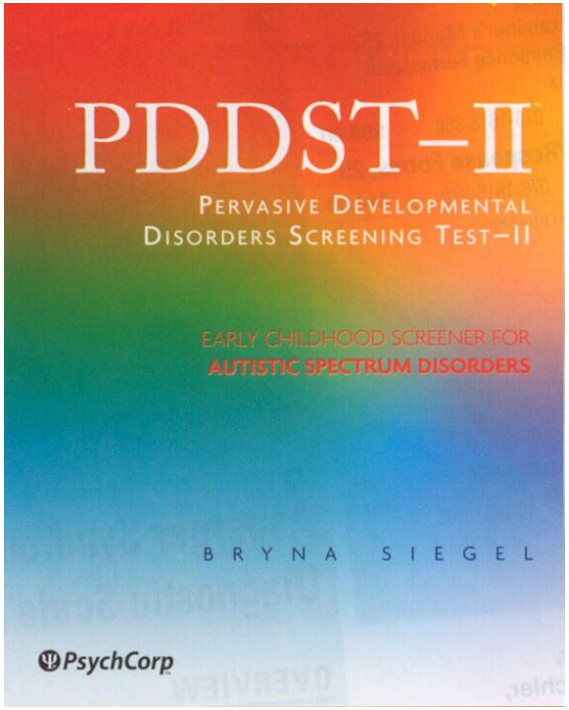
Robins et al. (2001)

Modified Checklist for Autism in Toddlers

http://www.firstsigns.org/downloads/m-chat.PDF

Behavioral Screening of Infants and Preschoolers

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



Behavioral Screening of Infants and Preschoolers

- *Pervasive Developmental Disorders Screening Test - II* (PDDST-II)
  - Has three stages
    - The *PDDST-II: Stage I* designed to help determine if a given child should be evaluated for an ASD.
  - Designed to be completed by parents
  - Should take no more than 5 minutes.
  - Odd numbered items are the critical questions used for autism screening.
  - If three or more of the odd numbered items are checked as being "YES, Usually True," then the result is considered a positive finding for possible ASD and a diagnostic evaluation indicted.

Behavioral Screening of Infants and Preschoolers

- *Pervasive Developmental Disorders Screening Test - II* (PDDST-II)
  - The odd numbered critical questions are ordered by age in order from highest predictive validity.
    - This means the more odd numbered items scored positive, and the more odd numbered items scored positive on the upper half of each section, the more strongly positive the screen.
  - Even numbered items significantly differentiate ASD-referred children from those with mild developmental disorders.
    - These items are also are ordered by age in order from highest to lowest predictive validity.

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

- *Autism Spectrum Screening Questionnaire* (ASSQ)
  - The 27 items rated on a 3-point scale.
  - Total score range from 0 to 54.
  - Items address social interaction, communication, restricted/repetitive behavior, and motor clumsiness and other associated symptoms.
  - The initial *ASSQ* study included 1,401 7- to 16-year-olds.
    - Sample mean was 0.7 (*SD* 2.6).
    - Asperger mean was 26.2 (*SD* 10.3).
  - A validation study with a clinical group (*n* = 110) suggests the *ASSQ* to be "a reliable and valid parent and teacher screening instrument of high-functioning autism spectrum disorders in a clinical setting" (Ehlers, Gillber, & Wing, 1999, p. 139).

Behavioral Screening of School Age Children

- *Autism Spectrum Screening Questionnaire* (ASSQ)
  - Two separate sets of cutoff scores are suggested.
    - Parents, **13**; Teachers, **11**: = socially impaired children
      - Low risk of false negatives (especially for milder cases of ASD).
      - High rate of false positives (23% for parents and 42% for teachers).
      - Not unusual for children with other disorders (e.g., disruptive behavior disorders) to obtain *ASSQ* scores at this level.
      - Used to suggest that a referral for an ASD diagnostic assessment, while not immediately indicated, should not be ruled out.
    - Parents, **19**; Teachers, **22**: = immediate ASD diagnostic referral.
      - False positive rate for parents and teachers of 10% and 9 % respectively.
      - The chances are low that the student who attains this level of ASSQ cutoff scores will not have an ASD.
      - Increases the risk of false negatives.

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.
    - A screening for mainstream primary grade (ages 4 through 11 years) children.
    - Has 37 items, with 31 key items contributing to the child's total score.
    - The 6 control items assess general development.
    - With a total possible score of 31, a cut off score of 15 "NO" responses was found to correctly identify 87.5 (7 out of 8) of the cases of autistic spectrum disorders.
    - Rate of false positives is 36.4%.
    - Rate of false negatives is not available

Childhood Asperger Syndrome Test

Childhood Asperger Syndrome Test (CAST)

1. Does s/he join in playing games with other children easily?	YES	NO
2. Does s/he come up to you spontaneously for a chat?	YES	NO
3. Was s/he speaking by 2 years old?	YES	NO
4. Does s/he enjoy sports?	YES	NO
5. Is it important to him/her to fit in with the peer group?	YES	NO
6. Does s/he appear to notice unusual details that others miss?	YES	NO
7. Does s/he tend to take things literally?	YES	NO
8. When s/he was 3 years old, did s/her spend a lot of time pretending (e.g. play-acting begin a superhero, or holding a teddyÕs tea parties)?	YES	NO
9. Does s/he like to do things over and over again, in the same way all the time?	YES	NO
10. Does s/he find it easy to interact with other children?	YES	NO
11. Can s/he keep a two-way conversation going?	YES	NO
12. Can s/he read appropriately for his/her age?	YES	NO
13. Does s/he mostly have the same interest as his/her peers?	YES	NO
14. Does s/he have an interest, which takes up so much time that s/he does little else?	YES	NO
15. Does s/he have friends, rather than just acquaintances?	YES	NO
16. Does s/he often bring you things s/he is interested in to show you?	YES	NO

From Scott et al. (2002, p. 27)

Childhood Asperger Syndrome Test

17. Does s/he enjoy joking around?	YES	NO
18. Does s/he have difficulty understanding the rules for polite behavior?	YES	NO
19. Does s/he appear to have an unusual memory for details?	YES	NO
20. Is his/her voice unusual (e.g., overly adult, flat, or very monotonous)?	YES	NO
21. Are people important to him/her?	YES	NO
22. Can s/he dress him/herself?	YES	NO
23. Is s/he good at turn-taking in conversation?	YES	NO
24. Does s/he play imaginatively with other children, and engage in role-play?	YES	NO
25. Does s/he often do or say things that are tactless or socially inappropriate?	YES	NO
26. Can s/he count to 50 without leaving out any numbers?	YES	NO
27. Does s/he make normal eye-contact?	YES	NO
28. Does s/he have any unusual and repetitive movements?	YES	NO
29. Is his/her social behaviour very one-sided and always on his/her own terms?	YES	NO
30. Does s/he sometimes say ÕyouÕ or Õs/heÕ when s/he means ÕIÕ?	YES	NO
31. Does s/he prefer imaginative activities such as play-acting or story-telling, rather than numbers or lists of facts?	YES	NO
32. Does s/he sometimes lose the listener because of not explaining what s/he is talking about?	YES	NO
33. Can s/he ride a bicycle (even if with stabilizers)?	YES	NO
34. Does s/he try to impose routines on him/herself, or on others, in such a way that is causes problems?	YES	NO
35. Does s/he care how s/he is perceived by the rest of the group?	YES	NO
36. Does s/he often turn the conversations to his/her favorite subject rather than following what the other person wants to talk about?	YES	NO
37. Does s/he have odd or unusual phrases?	YES	NO

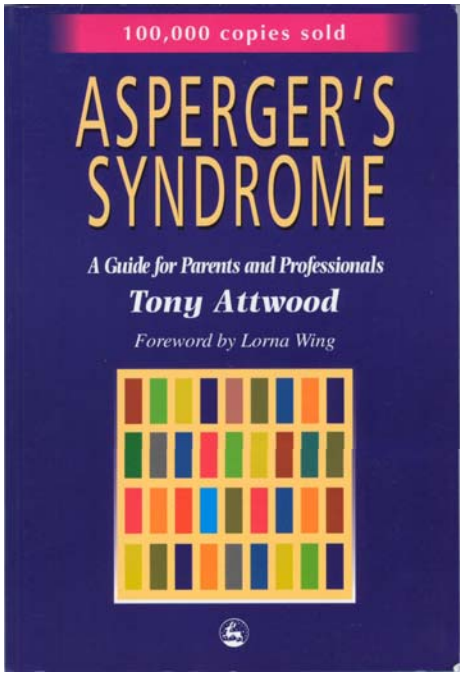
From Scott et al. (2002, pp. 27-28)

Childhood Asperger Syndrome Test

http://www.autismresearchcentre.com/tests/cast_test.asp

Behavioral Screening of School Age Children

- *Australian Scale for Asperger's Syndrome* (A.S.A.S.)
  - Garnett & Attwood (1998)
  - Parent/Teacher rating scale
  - 24 questions, 1-6 scale
  - 10 behavioral characteristics, yes/no
    - If most questions are 2 to 6
    - If a majority of questions are yes
    - Then diagnostic referral is indicated



Australian Scale for Asperger's Syndrome (ASAS)

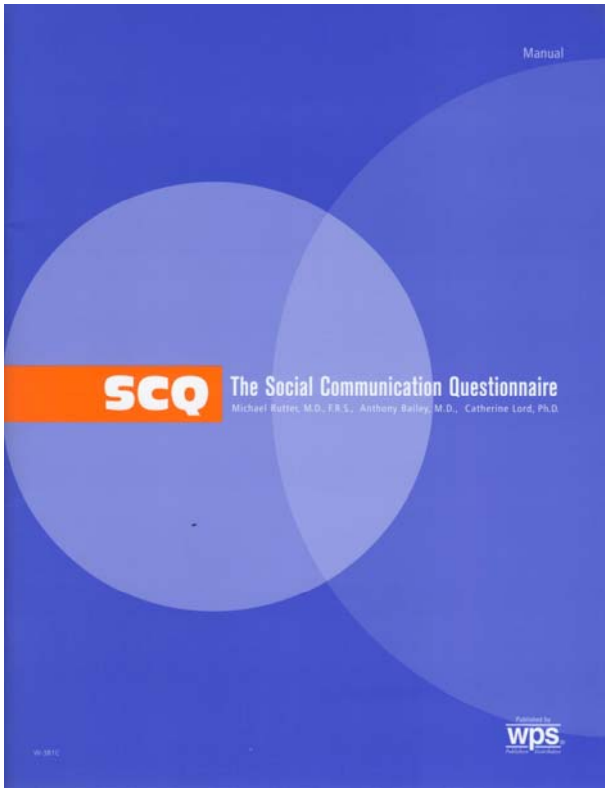
http://www.mind-steps.com/assessments/assessment.htm

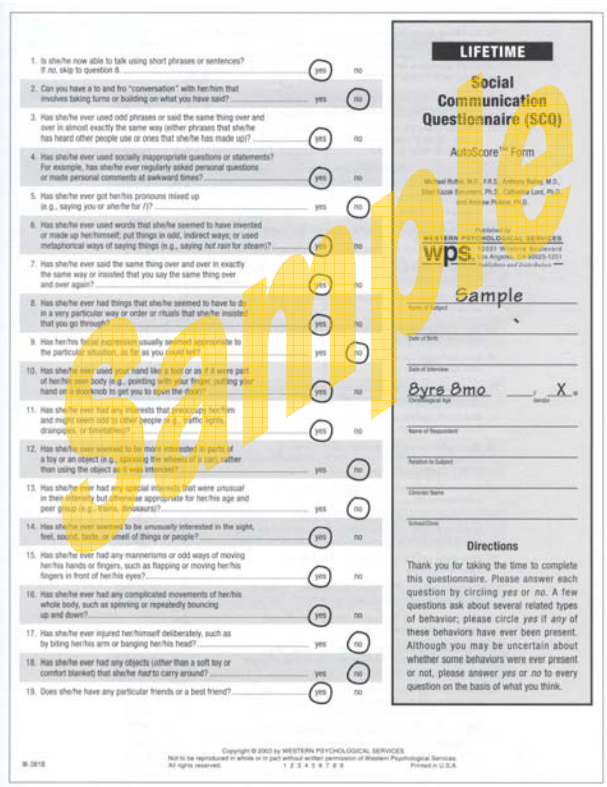
Behavioral Screening of School Age Children

- *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)





Behavioral Screening of School Age Children

- *Social Communication Questionnaire* (SCQ)
  - Two forms of the *SCQ*: a *Lifetime* and a *Current* form.
    - ***Current*** ask questions about the child's behavior in the past 3-months, and is suggested to provide data helpful in understanding a child's "everyday living experiences and evaluating treatment and educational plans"
    - ***Lifetime*** ask questions about the child's entire developmental history and provides data useful in determining if there is need for a diagnostic assessment.
  - Consists of 40 Yes/No questions asked of the parent.
  - The first item of this questionnaire documents the child's ability to speak and is used to determine which items will be used in calculating the total score.

Behavioral Screening of School Age Children

- *Social Communication Questionnaire* (SCQ)
  - An “AutoScore” protocol converts the parents’ Yes/No responses to scores of 1 or 0.
  - The mean *SCQ* score of children with autism was 24.2, whereas the general population mean was 5.2.
  - The threshold reflecting the need for diagnostic assessment is 15.
  - A slightly lower threshold might be appropriate if other risk factors (e.g., the child being screened is the sibling of a person with ASD) are present.

Behavioral Screening of School Age Children

- *Social Communication Questionnaire* (SCQ)
  - While it is not particularly effective at distinguishing among the various ASDs, it has been found to have good discriminative validity between autism and other disorders including non-autistic mild or moderate mental retardation.
  - The *SCQ* authors acknowledge that more data is needed to determine the frequency of false negatives (Rutter et al., 2003).
  - This *SCQ* is available from Western Psychological Services.

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Autistic Disorder Diagnostic Criteria

A. A total of six (or more) items for (1), (2), and (3), with at least two from (1), and one each for (2) and (3):

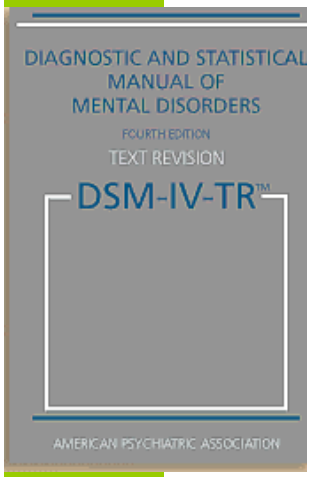
(1) qualitative impairment in social interaction, as manifested by at least two of the following:

a) marked impairment in the use of multiple nonverbal behaviors such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction

b) failure to develop peer relationships appropriate to developmental level

c) a lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g., by lack of showing, bringing, or pointing out objects of interest)

d) lack of social or emotional reciprocity



Autistic Disorder Diagnostic Criteria

A. A total of six (or more) items for (1), (2), and (3), with at least two from (1), and one each for (2) and (3):

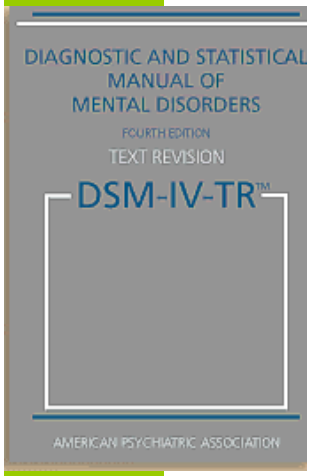
(2) qualitative impairments in communication as manifested by at least one of the following:

a) delay in, or total lack of, the development of spoken language (not accompanied by an attempt top compensate through alternative modes of communication such as gesture or mime)

b) in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others

c) stereotyped and repetitive use of language or idiosyncratic language

d) lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level



Autistic Disorder Diagnostic Criteria

A. A total of six (or more) items for (1), (2), and (3), with at least two from (1), and one each for (2) and (3):

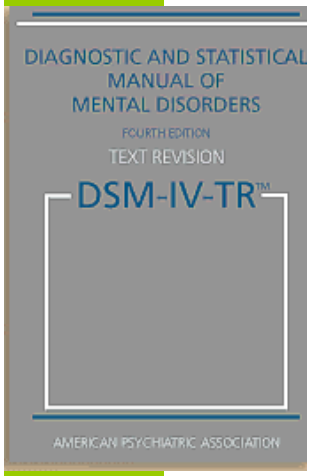
(3) restricted repetitive and stereotyped patterns of behavior, interests, and activities, as manifested by at least one of the following:

a) encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus

b) apparently inflexible adherence to specific, nonfunctional routines or rituals

c) stereotyped and repetitive motor mannerisms (e.g., hand or finger flapping or twisting, or complex whole-body movements)

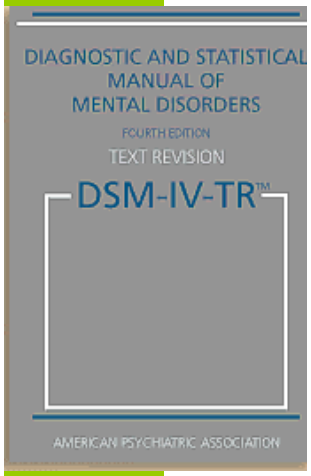
d) persistent preoccupation with parts of objects



Autistic Disorder Diagnostic Criteria

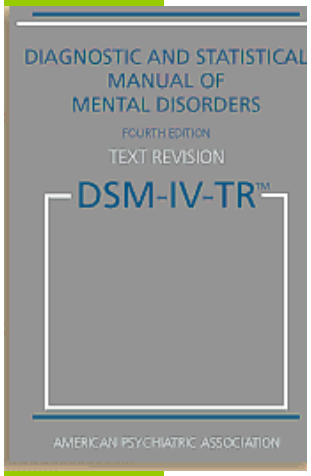
B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction, (2) language as used in social communication, or (3) symbolic or imaginative play.

C. The disturbance is not better accounted for by Rett's Disorder or Childhood Disintegrative Disorder.



Other ASDs

- Asperger's Disorder
  - The criteria for Asperger's Disorder are essentially the same as Autistic Disorder with the exception that there are no criteria for a qualitative impairment in communication.
  - In fact Asperger's criteria require "… no clinically significant general delay in language (e.g., single words used by 2 years, communicative phrases used by 3 years").



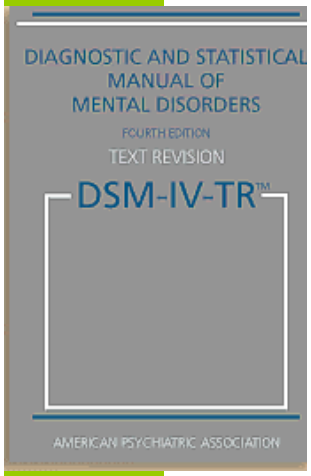
Other ASDs

- Childhood Disintegrative Disorder (CDD)
  - Criteria are essentially the same as Autistic Disorder.
  - Difference include that in CDD there has been …

(a) "Apparently normal development for at least the first 2 years after birth as manifested by the presence of age-appropriate verbal and nonverbal communication, social relationships, play, and adaptive behavior;" and that there is

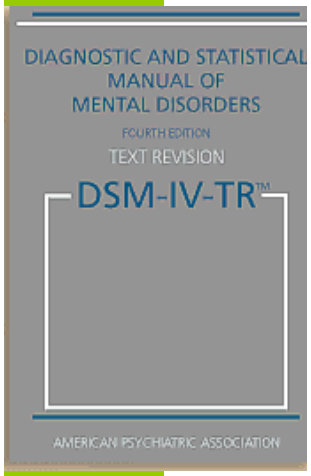
(b) "Clinically significant loss of previously acquired skills (before age 10 years) in at least two of the following areas:

1. expressive or receptive language;
2. social skills or adaptive behavior;
3. bowel or bladder control;
4. play;
5. motor-skills."



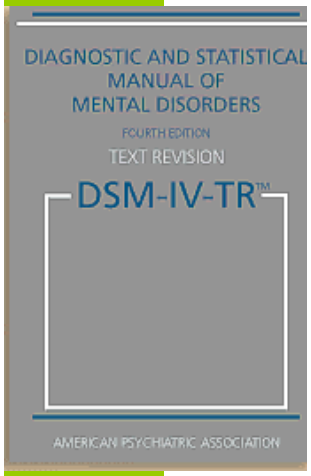
Other ASDs

- Rett's Disorder
  - Both Autistic Disorder and Rett's Disorder criteria include delays in language development and social engagement (although social difficulties many not be as pervasive).
  - Unlike Autistic Disorder, Rett's also includes
    - (a) head growth deceleration,
    - (b) loss of fine motor skill,
    - (c) poorly coordinated gross motor skill, and
    - (d) severe psychomotor retardation.



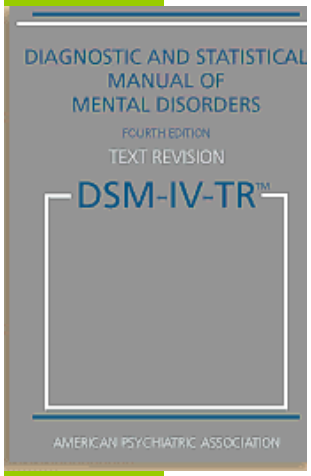
Symptom Onset

- Autistic Disorder is before the age of three years.
  - Before three years, their must be “delays or abnormal functioning” in at least one of the following areas: (a) social interaction, (b) social communicative language, and/or (c) symbolic or imaginative play.
- Asperger’s Disorder may be somewhat later.
- Childhood Disintegrative Disorder is before the age of 10 years.
  - Preceded by at least two years of normal development.
- Rett’s Disorder is before the age of 4 years.
  - Although symptoms are usually seen by the second year of life.



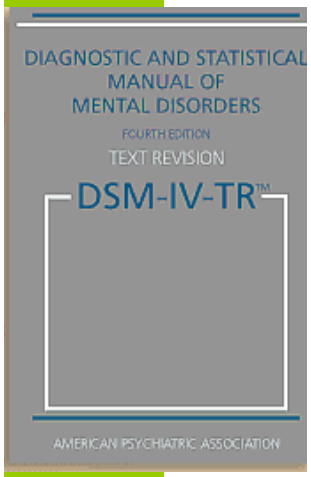
Developmental Course

- Autistic Disorder:
  - Parents may report having been worried about the child's lack of interest in social interaction since or shortly after birth.
  - In a few cases the child initially developed normally before symptom onset. However, such periods of normal development must not extend past age three.
  - Duration of Autistic Disorder is typically life long, with only a small percentage being able to live and work independently and about 1/3 being able to achieve a partial degree of independence. Even among the highest functioning adults symptoms typically continue to cause challenges.



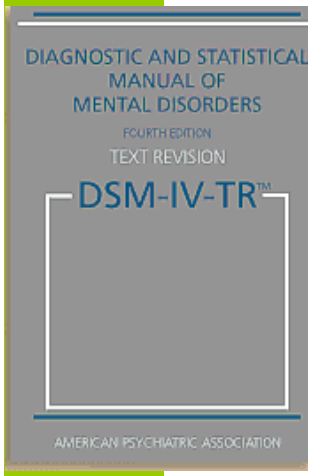
Developmental Course

- Asperger's Disorder:
  - Motor delays or clumsiness may be some of the first symptoms noted during the preschool years.
  - Difficulties in social interactions, and symptoms associated with unique and unusually circumscribed interests, become apparent at school entry.
  - Duration is typically lifelong with difficulties empathizing and modulating social interactions displayed in adulthood.
- Rett's and Childhood Disintegrative Disorders:
  - Lifelong conditions.
  - Rett's pattern of developmental regression is generally persistent and progressive. Some interest in social interaction may be noted during later childhood and adolescence.
  - The loss of skills associated with Childhood Disintegrative Disorder plateau after which some limited improvement may occur.



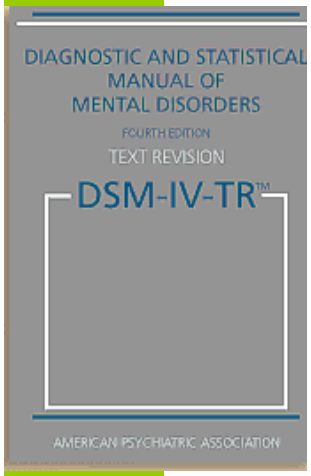
Associated Features

- Asperger's Disorder is the only ASD not typically associated with some degree of mental retardation.
- Autistic Disorder is associated with moderate mental retardation. Other associated features include:
  - unusual sensory sensitivities
  - abnormal eating or sleeping habits
  - unusual fearfulness of harmless object or lack of fear for real dangers
  - self-injurious behaviors
- Childhood Disintegrative Disorder is associated with severe mental retardation.
- Rett's Disorder is associated with severe to profound mental retardation.



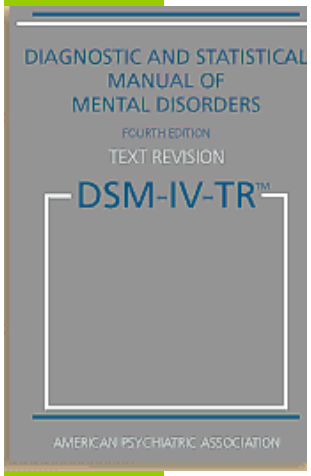
Age Specific Features

- Chronological age and developmental level influence the expression of Autistic Disorder.
  - Thus, assessment must be developmentally sensitive.
    - For example, infants may fail to cuddle; show indifference or aversion to affection or physical contact; demonstrate a lack of eye contact, facial responsiveness, or socially directed smiles; and a failure to respond to their parents' voices.
    - On the other hand, among young children, adults may be treated as interchangeable or alternatively the child may cling to a specific person.



Gender Related Features

- With the exception of Rett's Disorder, which occurs only among females, all other ASDs appear to be more common among males than females.
  - The rate is four to five times higher in males than in females.



Differential Diagnosis

Rett's Disorder	• Affects only girls • Head growth deceleration • Loss of fine motor skill • Awkward gait and trunk movement • Mutations in the MECP2 gene
Childhood Disintegrative Disorder	• Regression following at least two years of normal development
Asperger's Disorder	• Expressive/Receptive language not delayed • Normal intelligence • Later symptom onset

Differential Diagnosis

Schizophrenia	• Years of normal/near normal development • Symptoms of hallucinations/delusions • Loss of fine motor skill • Awkward gait and trunk movement • Mutations in the MECP2 gene
Selective Mutism	• Normal language in certain situations or settings • No restricted patterns of behavior
Language Disorder	• No severe impairment of social interactions • No restricted patterns of behavior

Differential Diagnosis

ADHD	• Distractible inattention related to external (not internal) stimuli • Deterioration in attention and vigilance over time
Mental Retardation	• Relative to developmental level, social interactions are not severely impaired • No restricted patterns of behavior
OCD	• Normal language/communication skills • Normal social skills
Reactive Attachment Disorder	• History of severe neglect and/or abuse • Social deficits dramatically remit in response to environmental change

Developmental and Health History

- Prenatal and perinatal risk factors
  - Greater maternal age
  - Maternal infections
    - Measles, Mumps, & Rubella
    - Influenza
    - Cytomegalovirus
    - Herpes, Syphilis, HIV
  - Drug exposure
  - Obstetric suboptimality

Developmental and Health History

- Postnatal risk factors
  - Infection
    - Case studies have documented sudden onset of ASD symptoms in older children after herpes encephalitis.
    - Infections that can result in secondary hydrocephalus, such as meningitis, have also been implicated in the etiology of ASD.
    - Common viral illnesses in the first 18 months of life (e.g., mumps, chickenpox, fever of unknown origin, and ear infection) have been associated with ASD.
  - Chemical exposure?
  - MMR?

Developmental and Health History

- Developmental Milestones
  - Language development
    - Concerns about a hearing loss
  - Social development
    - Atypical play
    - Lack of social interest
  - Regression

Developmental and Health History

- Medical History
  - Vision and hearing
  - Chronic ear infections (and tube placement)
  - Immune dysfunction (e.g., frequent infections)
  - Autoimmune disorders (e.g., thyroid problems, arthritis, rashes)
  - Allergy history (e.g., to foods or environmental triggers)
  - Gastrointestinal symptoms (e.g., diarrhea, constipation, bloating, abdominal pain)

Developmental and Health History

- Diagnostic History
  - ASD is sometimes observed in association with other neurological or general medical conditions.
    - Mental Retardation (up to 80%)
    - Epilepsy (3-30%)
      - May develop in adolescence
      - EEG abnormalities common even in the absence of seizures
    - Genetic Disorders
      - 10-20% of ASD have a neurodevelopmental genetic syndrome
        - Tuberous Sclerosis (found in 2-4% of children with ASD)
        - Fragile X Syndrome (found in 2-8% of children with ASD)

Developmental and Health History

- Family History
  - Epilepsy
  - Mental Retardation
  - Genetic Conditions
    - Tuberous Sclerosis Complex
    - Fragile X Syndrome
    - Schizophrenia
    - Anxiety
    - Depression
    - Bipolar disorder
  - Other genetic condition or chromosomal abnormality

Developmental and Health History

- Autism Diagnostic Evaluation:
  - Health, Family, Developmental, & Behavioral History Interview Form
  - Available: http://www.csus.edu/indiv/b/brocks/Courses/EDS%20243/student_materials.htm

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Multi-Disciplinary ASD Assessment

- Include Qualitative & Quantitative Assessments by:
  - Psychologist: Cognitive, Adaptive & Problem Behaviors, Social-Emotional/Play & ASD-Specific
  - SLP: Speech/Oral Motor, Language, Play & Social-Pragmatics
  - Teacher: Academic Skills & School Functioning
  - Nurse: Vision, Hearing and H&D Screening
  - Physician: Neurologist, Lead Screening & Lab Tests
  - Others:
    - OT = Fine Motor and/or Sensory Processing?
    - APE/PT = Gross Motor?

Qualitative Assessment Data

- Qualitative Assessments May Include:
  - Non-standardized Observations (e.g., narratives)
  - Non-standardized Interviews
    - Parent/Caregiver Interviews
    - Teacher/Provider Interviews
    - Student Interviews
- Informal DSM-IV and/or Other Checklists

Qualitative Assessment Data

- Student Observations:
  - Unstructured: playground, lunch, free play, etc.
  - Structured: adult-directed activities, table tasks
- Interviews:
  - Parent/Teacher Interviews: Current and/or previous social, behavior and/or communication concerns?
  - Student Interview: Casual conversation with student and/or play-based interaction probing for red flags.

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Quantitative Assessment Data

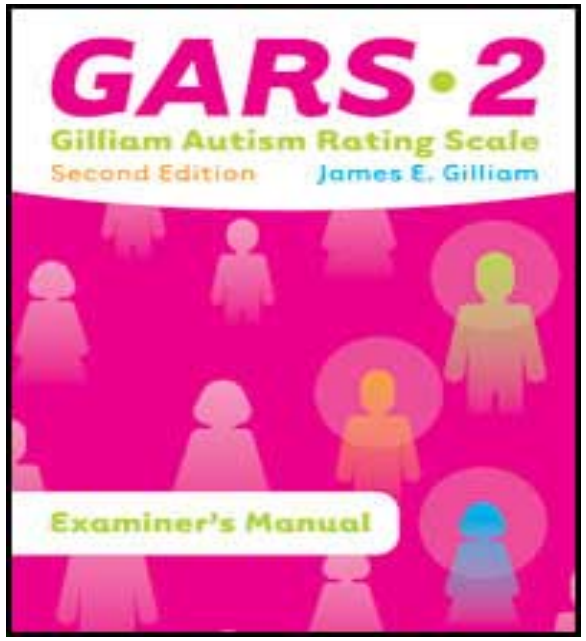
- Indirect Assessment
  - Interviews and Questionnaires/Rating Scales
    - Easier to obtain
    - Reflect behavior across settings
    - Subject to interviewee/rater bias
- Direct Assessment
  - Behavioral Observations
    - Can be more difficult and time consuming to obtain
    - Reflect behavior within limited settings/times
    - Not subject to interviewee/rater bias

Quantitative Assessment Data

- **Indirect ASD Interview/Rating Scale Measures**
  - Gilliam Autism Rating Scale-2 (GARS)
  - Asperger Syndrome Diagnostic Scale (ASDS)
  - Autism Diagnostic Interview-Revised (ADI-R)
- **Direct ASD Observational Measures:**
  - Childhood Autism Rating Scales (CARS)
  - Autism Diagnostic Observation Schedule (ADOS)

Indirect Assessment: GARS-2

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

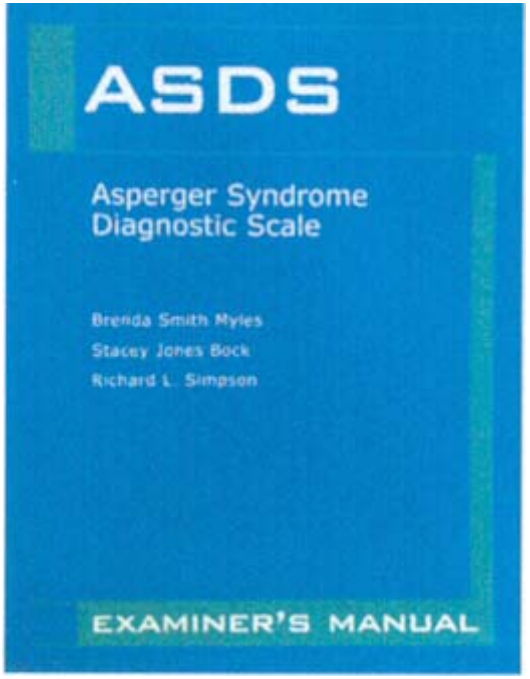


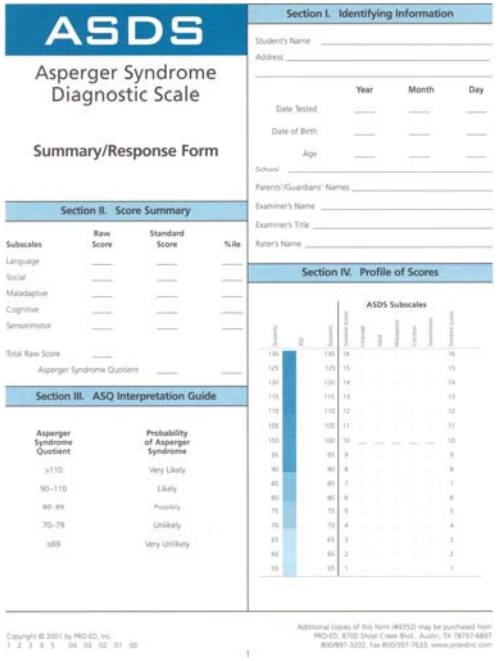
Indirect Assessment: GARS-2

- **The *Gilliam Autism Rating Scale, 2nd Ed. (GARS-2)***
  - New normative group: 1,107 individuals ages 3 to 22 reported to have autism
  - 42 items, 3 Subscales and an Autism Index (AI) Score
  - Subscales: Social Interaction, Communication, and Stereotyped Behaviors assess current behavior
  - A structured parent interview form replaces the Early Development subscale to investigate parent perceptions and observations.
  - GARS-2 items have been rewritten for clarity and operationally defined in manual.
  - New guidelines for interpreting scales and index.
  - Includes “Instructional Objectives for Children Who Have Autism” to use GARS-2 for developing goals.

Indirect ASD Assessment: ASDS

- The *Asperger Syndrome Diagnostic Scale* (ASDS)



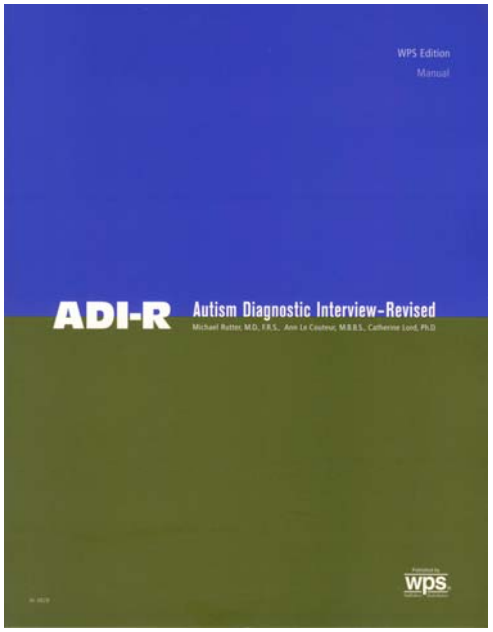


Indirect ASD Assessment: ASDS

- The *Asperger Syndrome Diagnostic Scale* (ASDS)
  - Age range 5-18.
  - 50 yes/no items.
  - 10 to 15 minutes.
  - Normed on 227 persons with Asperger Syndrome, autism, learning disabilities, behavior disorders and ADHD.
  - ASQs are classified on an ordinal scale ranging from “Very Low” to “Very High” probability of Asperger’s Disorder. A score of 90 or above specifies that the child is “Likely” to “Very Likely” to have Asperger’s Disorder.

Indirect ASD Assessment: ADI-R

- 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.



Indirect ASD Assessment: ADI-R

- The *Autism Diagnostic Interview-Revised* (ADI-R)
  - Semi-structured interview
  - Designed to elicit the information needed to diagnose autism.
  - Primary focus is on the three core domains of autism (i.e., language/communication; reciprocal social interactions; and restricted, repetitive, and stereotyped behaviors and interests).
  - Requires a trained interviewer and caregiver familiar with both the developmental history and the current behavior of the child.
  - The individual being assessed must have a developmental level of at least two years.

Indirect ASD Assessment: ADI-R

- The *Autism Diagnostic Interview-Revised* (ADI-R)
  - The 93 items that comprise this measure takes approximately 90 to 150 minutes to administer.
  - Solid psychometric properties.
    - Works very well for differentiation of ASD from nonautistic developmental disorders in clinically referred groups, provided that the mental age is above 2 years.
    - False positives very rare,
    - Reported to work well for the identification of Asperger's Disorder.
      - However, it may not do so as well among children under 4 years of age.
  - According to Klinger and Renner (2000): "The diagnostic interview that yields the most reliable and valid diagnosis of autism is the *ADI–R*" (p. 481).

Direct ASD Assessments: ADOS

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

Direct ASD Assessments: ADOS

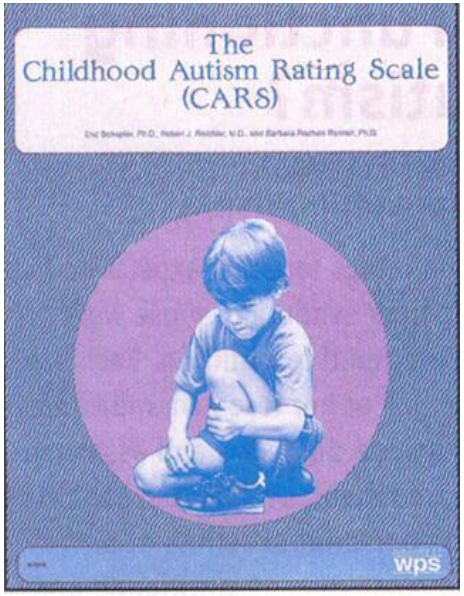
- A standardized, semi-structured, interactive play assessment of social behavior.
  - Uses “planned social occasions” to facilitate observation of the social, communication, and play or imaginative use of material behaviors related to the diagnosis of ASD.
- Consists of four modules.
  - Module 1 for individuals who are preverbal or who speak in single words.
  - Module 2 for those who speak in phrases.
  - Module 3 for children and adolescents with fluent speech.
  - Module 4 for adolescents and adults with fluent speech.

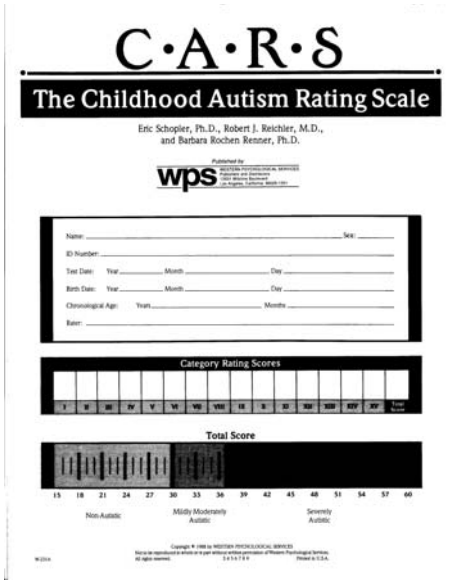
Direct ASD Assessments: ADOS

- Administration requires 30 to 45 minutes.
- Because its primary goal is accurate diagnosis, the authors suggest that it may not be a good measure of treatment effectiveness or developmental growth (especially in the later modules).
- Psychometric data indicates substantial interrater and test-retest reliability for individual items, and excellent interrater reliability within domains and internal consistency.
- Mean test scores were found to consistently differentiate ASD and non-ASD groups.

Direct ASD 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.





Direct ASD Assessments: CARS

- 15-item structured observation tool.
- Items scored on a 4-point scale ranging from 1 (normal) to 4 (severely abnormal).
- In making these ratings the evaluator is asked to compare the child being assessed to others of the same developmental level.
  - Thus, an understanding of developmental expectations for the 15 *CARS* items is essential.
- The sum ratings is used to determine a total score and the severity of autistic behaviors
  - Non-autistic, 15 to 29
  - Mildly-moderately autistic 30-37
  - Severely autistic, 37

Direct ASD Assessments: CARS

- Data can also be obtained from interviews, observations and student record reviews.
- When initially developed it attempted to include diagnostic criteria from a variety of classification systems and it offers no weighting of the 15 scales.
- This may have created some problems for its current use
- Currently includes items that are no longer considered essential for the diagnosis of autism (e.g., taste, smell, and touch response) and may imply to some users of this tool that they are essential to diagnosis (when in fact they are not).
- Psychometrically, the *CARS* has been described as “acceptable,” “good,” and as a “well-constructed rating scale.”

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Special Education Eligibility: Proposed IDEIA Regulations

- IDEIA 2004 Autism Classification
  - P.L. 108-446, Individuals with Disabilities Education Improvement Act (IDEIA), 2004
  - 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
Current California Regulations

- CA Autism Classification
  - Title 5, CCR 3030(g):
    - *A pupil exhibits **any combination** of the following autistic-like behaviors, **to include but not limited to**: (1) an inability to use oral language for appropriate communication; (2) a history of extreme withdrawal or relating to people inappropriately and continued impairment in social interaction from infancy through early childhood; (3) an obsession to maintain sameness; (4) extreme preoccupation with objects or inappropriate use of objects or both; (5) extreme resistance to controls; (6) displays peculiar motoric mannerisms and motility patterns; (7) self-stimulating, ritualistic behavior.*

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.

Presentation Outline

- Introduction
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- Elements of the Diagnostic Evaluation
- Determining Educational Needs and the Appropriate Placement & Services
- Psycho-educational Report Recommendations
- Conclusions

Determining Educational Needs and the Appropriate Placement & Services

- The assessment should *help* the IEP Team:
  - Determine eligibility categories to consider and the primary category impacting educational performance
  - Determine present levels of functioning and, if eligible, areas of unique need (goal areas)
  - Determine appropriate placement(s) in the least restrictive environment(s) to meet needs
  - Determine appropriate strategies, support and/or services (DIS) to meet needs and benefit from educational program.

Determining Educational Needs and the Appropriate Placement & Services

- Stick to the "IEP Process"
  i. Introductions, agenda, parent's rights, sign-in
  ii. Review assessments, present levels & eligibility
  iii. Develop measurable and reasonably calculated goals in all areas of unique need
  iv. Determine appropriate placement(s) in least restrictive environment
  v. Based on goals and placement, determine what specific additional designated instructional services (DIS) are required to address needs, meet goals and make meaningful progress

Determining Educational Needs and the Appropriate Placement & Services

- Addressing All Areas of Unique Need: Considerations for Goals & Objectives
  - Make sure IEP Team has considered all available assessments, information and input
  - Make sure goals are in all areas of need and relate to impact on educational progress
  - Make sure goals are measurable, with an objective and clear baseline & benchmark/goal
  - Make sure goals are reasonably calculated
  - Make sure progress will be monitored

Determining Educational Needs and the Appropriate Placement & Services

- IEP Team Considerations: Placement in Least Restrictive Environment
  - Educational Benefit vs. Mainstreaming Preference
  - *Mark Hartmann v. Loudon County (1997)*. The Court found that mainstreaming or inclusion is secondary to the need to provide a free appropriate education from which the child receives educational benefit

    ". . . the IDEA's mainstreaming provision establishes a presumption, not an inflexible federal mandate. Under its terms, disabled children are to be educated with children who are not handicapped only "to the maximum extent appropriate." 20 U.S.C. § 1412(5)(B). Section 1412(5)(B) explicitly states that mainstreaming is not appropriate "when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily." 20 U.S.C. § 1412(5)(B); see also *Rowley*, 458 U.S. at 181 n.4.

Determining Educational Needs and the Appropriate Placement & Services

- IEP Team Considerations: Placement in Least Restrictive Environment
  - Legal cases related to LRE decisions:
  - In *Roncker v. Walter*
    - " . . . mainstreaming is inappropriate when the handicapped child is a disruptive force in the non-segregated setting."

Determining Educational Needs and the Appropriate Placement & Services

- IEP Team Considerations: Placement in Least Restrictive Environment
  - Legal cases related to LRE decisions:
  - In N.R. v. Kingwood Township (NJ):
    - "Specifically . . a satisfactory IEP must provide "significant learning" and confer "meaningful benefit."
    - "The least restrictive environment is the one that, to the greatest extent possible, satisfactorily educates disabled children together with children who are not disabled, in the same school the disabled child would attend if the child were not disabled."
    - "We have interpreted this mandate to require that a disabled child be placed in the least restrictive environment (hereinafter "LRE") that will provide him with a meaningful educational benefit."

Determining Educational Needs and the Appropriate Placement & Services

- IEP Team Considerations: Placement in Least Restrictive Environment
  - In the case of *Sacramento City Unified School District v. Holland*, the court identified several factors that are critical in analyzing whether a school district is complying with the least restrictive environment mandate. These factors are:
    - Educational benefits available to the student with a disability in a regular classroom, supplemented with appropriate aids and services, as compared with educational benefits of a special education classroom;
    - Nonacademic (i.e., social, language, etc.) benefits of interaction with children who are not disabled;
    - Effect on the teacher and the other children in the classroom of the presence of the student with disabilities in terms of disruptive behavior and/or undue consumption of the teacher's time;
    - Cost of mainstreaming a student with disabilities in a regular education classroom as compared to the cost of placement of the student in a special education classroom.

Determining Educational Needs and the Appropriate Placement & Services

- IEP Team Considerations: Placement in Least Restrictive Environment
  - No standard criteria for inclusion, decisions are made on “case by case” basis considering the individual.
  - *Language Skills*: follows 2-step group directions, communicates needs and desires, answers/asks simple questions, does simple conversational exchanges, etc.
  - *Social Skills*: takes turns, waits quietly, responds to greetings, participates in group activities, imitates peers, initiates play or peer interaction, etc.
  - *Academic Skills*: learns through observation and group instruction, completes seat work independently, raises hand for help, completes (near) grade level curricula, etc.
  - *Behavior Skills*: Responds to delayed contingencies, exhibits disruptive behaviors at near-zero level, etc.

Determining Educational Needs and the Appropriate Placement & Services

- The IEP: Strategies, Support and Designated Instructional Services (DIS)
  - Consider strategies, support and DIS:
    - Do behavior, communication and/or social problems affect functioning in placement and require specific support or strategies within the placement (e.g., AT, BSP, etc.)?
  - Can placement fully address goal(s)? If not, then consider:
    - DIS services/providers (e.g., SLP, OT, SDC, Para, etc.)
    - DIS service delivery (e.g., consult, 1:1, small group, etc.)
    - DIS *specific* frequency and duration of services

Assessment Data

Interviews, observations, & record review should look for symptoms related to the Education Code definition of “autistic-like behaviors”:

1. Communication delays/impairments
2. Social interaction delays/impairments
3. Obsession to maintain sameness
4. Preoccupations with or inappropriate use of objects or items
5. Extreme resistance to controls
6. Peculiar motoric mannerisms/patterns
7. Self-stimulating, ritualistic behaviors

Assessment Data

1. **Inability to use verbal and/or nonverbal language for appropriate communication**
   a) Leads adult by hand to desired object rather than ask for it
   b) Randomly produces vocalizations, jargon, non-sequiturs, etc.
   c) Does not initiate communication
   d) Echolalia (either immediate or delayed mimicking of previously heard phrases, such as from videos, TV shows, commercials)
   e) Communicates affirmation (yes) by literal repetition of question
   f) Pronoun reversals (refers to self as you or he, calls another person)

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

1. **Inability to use verbal and/or nonverbal language for appropriate communication**
   - g) Utterances seem inappropriate to the situation
   - h) Does not ask questions and has difficulty answering "wh" questions
   - i) Odd rhythm or timing (e.g., chunks words together or pauses at inappropriate times)
   - j) Odd inflection or modulation (e.g., sing-song, too loud).

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

2. **A history of extreme withdrawal or relating to people inappropriately and continued impairment in social interaction from infancy through early childhood.**
   a) Does not play with other children
   b) Does not participate in give/take interactions
   c) Flat facial affect
   d) Primarily self-directed (does things on own terms/interests not at other's request)
   e) Lacks personal boundaries

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

2. **A history of extreme withdrawal or relating to people inappropriately and continued impairment in social interaction from infancy through early childhood.**
   - f) No, limited, fleeting or odd eye contact
   - g) Appears to be deaf or in own world
   - h) Misreads social situations or does not understand social rules
   - i) Physically turns away from others when approached or may say, "Go away."

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

3. An obsession to maintain sameness

a) Inflexible/rigid
b) Everything must be "just so“
c) Shows serious distress with changes, such as changes in environment, in routines, in location of self in familiar activities, in placement of familiar objects, in food, clothing, etc.
d) Difficulties with transitions from one activity to the next
e) Must control activities and/or interactions.
f) Demands same rituals or routines (e.g. same book every night, etc)
g) Eats only limited variety of foods

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

4. **Extreme preoccupation with objects or inappropriate use of objects or both.**
   a) Lines up objects, stacks items or puts into unusual patterns
   b) Spins repetitively objects (or parts of objects)
   c) Excessive focus on tiny details or movements of objects
   d) Plays with only one kind of toy/theme (may be an odd interest or focus in mechanical objects like fans, etc.)
   e) Takes everything apart or opens and closes everything
   f) Hordes (often unusual) objects
   g) Excessive unusual fears or no fear for legitimate dangers
   h) Over-attachment to certain objects

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

5. Extreme resistance to controls

a) Frequently refuses to respond, move, or participate when asked (usually tied to interruption of preferred activity or ritual, not mere opposition)

b) Tantrums or cries and cannot be comforted or dissuaded

c) Excessive need to control environment, interaction or activity

d) Self-directed, in own world

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

6. **Peculiar motoric mannerisms and motility patterns (repetitive or stereotyped)**
   a) Flaps arms and/or hands
   b) Gazes at lights or flicks fingers at light sources
   c) Walks or runs on tiptoe
   d) Runs hand along peripheries
   e) Smells or tastes everything
   f) Odd finger, hand or body postures or tensing

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

Assessment Data

7. **Self-stimulating, ritualistic behavior (may overlap with characteristics in #4 when relating to objects or #6 when related to body/motor mannerisms).**
   a) Rocks or spins self or objects
   b) Bangs head or objects or bites or hits self
   c) Goes through specific patterns over and over
   d) Asks same questions repeatedly
   e) Perseverates on certain topics

Adapted from *SONOMA COUNTY ELIGIBILITY CRITERIA (11/1/04)* and other literature on Autism

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Psycho-Educational Report Recommendations

- ***If the student is challenged by social situations, then the following intervention and support recommendations might be appropriate:***

Psycho-Educational Report Recommendations

- Provide interpretation of social situations as indicated. Specifically, the following are suggested:
  - Make use of social stories.™
  - A social story is a short story that explains a specific challenging social situation. The goal is to find out what is happening in a situation and why.

(Gray & White, 2002).

Psycho-Educational Report Recommendations

- The following is an example of a social story:

When Other Students Get Upset

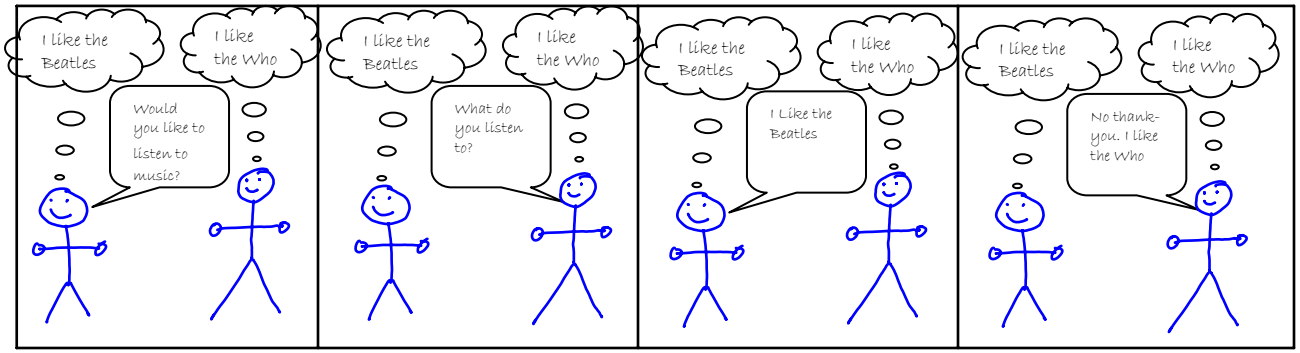
Sometimes other students get upset and cry. When this happens their teacher might try to help them. The teacher might try to help them by talking to them or holding them. This is okay. Sometimes when other students get upset and cry, it makes me upset and angry. I can use words to tell my teacher that I am upset. I can say, "That makes me mad!" or "I'm upset!" It is okay to use words about how I feel. When I get upset I will try to use words about how I feel.

Psycho-Educational Report Recommendations

- For more information about social stories go to
  - http://www.thegraycenter.org/
  - http://www.polyxo.com/socialstories/introduction.html
- A variety of sample stories can be found at
  - http://www.frsd.k12.nj.us/autistic/Social%20Stories/social_stories.htm

Psycho-Educational Report Recommendations

- Use cartooning to illustrate the rules of challenging social situations.
- For example, …



Myles & Simpson, 2001

Psycho-Educational Report Recommendations

- Explain problematic social situations and in doing so let _____ know that there are specific choices to be made and that each choice has a specific consequence. Specific steps in this process are as follows:
  - Help the _____ understand the problematic social situation (i.e., who was involved, what happened, etc.)
  - Facilitate _____'s brainstorming of options for responding to the situation.
  - Help _____ explore the consequences for each option identified.
  - Help _____ identify the response that has the most desirable consequences.
  - Develop and action plan.
  - Practice the response to the problematic social situation by role playing, visualizing, writing a plan or talking it out with a peer.

Myles & Simpson, 2001

Psycho-Educational Report Recommendations

- To address _____ 's difficulty making friends, the following interventions are recommended:
  - Establish structured activities with peers. These activities should have pre-assigned roles that can be practiced.
  - Provide direct instruction on how to approach an individual or group.
  - Provide direct instruction on the skills needed to interact with peers.
  - Structure social opportunities around _____ 's special interests

Psycho-Educational Report Recommendations

- After a challenging social situation conduct a “social autopsy.” Such a conversation involves an examination and inspection of _____ ’s social errors to discover their causes, better understand the consequences of such errors, and to decide what can be done to prevent it from happening again.

Myles & Simpson, 2001

Psycho-Educational Report Recommendations

- Identify specific social conventions that need to be taught and then provide direct instruction. Examples, of social conventions that _____ may need to be taught include the following (**LIST SPECIFIC SOCIAL RULES THAT ASSESSMENT DATA SUGGESTS TO BE PROBLEMATIC. EXAMPLES FOLLOS**):
  - "Do not ask to be invited to someone's party
  - Do not correct someone's grammar when he or she is angry.
  - Never break laws – no matter what your reason.
  - Do not touch someone's hair even if you think it is pretty.
  - Do not ask friends to do things that will get them in trouble.
  - Do not draw violent scenes.
  - Do not sit in a chair that someone else is sitting in – even if it is 'your' chair.
  - Do not tell someone you want to get to know better that he or she has bad breath."

Myles & Simpson, 2001 (p. 8).

Psycho-Educational Report Recommendations

- Make use of _____ 's special interests to develop "power cards" that facilitate understanding of social rules. **(TRY TO LINK THE STUDENTS SPECIAL INTERESTS TO PROBLEMATIC SOCIAL SITUATIONS.)** For example, make use of _____ 's interest in automotive mechanics and provide him/her with the following card that can be placed on his/her desk and/or placed in his/her pocket.

	Automotive mechanics and students both… 1)listen to people when they tell them that something is wrong. 2)ask good questions to make sure they understand the problem. 3)try to solve problems.

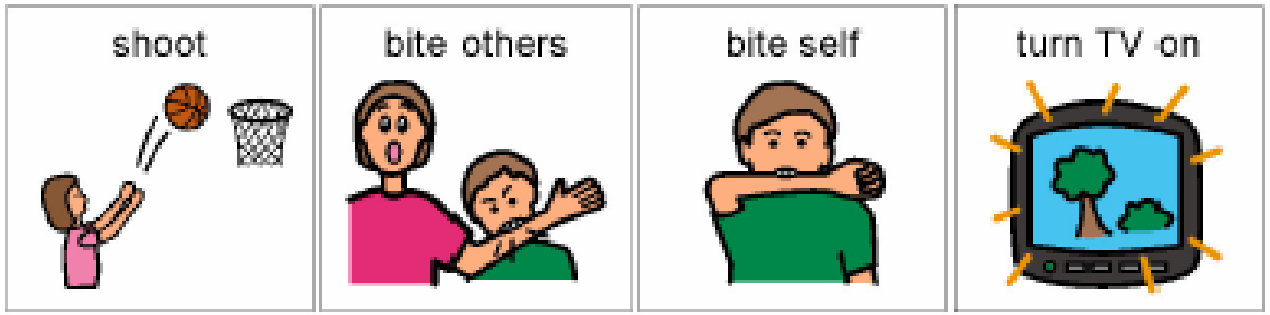
Myles & Simpson, 2001

Psycho-Educational Report Recommendations

- ***If the student has difficulties with expressive language, then the following might be appropriate:***

Psycho-Educational Report Recommendations

- Consider making use of a Picture Exchange Communication System (PECS).
- PECS is a picture based communication system where the student gives a picture or symbol of a desired item in exchange for the item itself.
- The intent of PECS is to assist the student in developing spontaneous communication. The following are examples of PECS symbols:



Frost & Bondy, 1994

Psycho-Educational Report Recommendations

- Sample PECS IEP objectives can be found at www.pecs.com/Brochures/Objectives/IEP%20Objectives%202002.pdf
- PECS pictures and photos can be found at
- www.childrenwithspecialneeds.com/downloads/pecs.html
- Blank PECS image grids, and daily and weekly picture card schedule forms
- www.do2learn.com/picturecards/forms/index.htm

Psycho-Educational Report Recommendations

- For more information about PECS go to
  - http://www.bbbautism.com/pecs_contents.htm
  - http://www.polyxo.com/visualsupport/pecs.html
  - http://www.usd.edu/cd/autism/topicpages/printer/PECS.pdf
  - http://www.nas.org.uk/nas/jsp/polopoly.jsp?d=297&a=3642&view=print
  - http://www.iidc.indiana.edu/irca/communication/WhatisthePEC.html

Psycho-Educational Report Recommendations

- Specific PECS cards should include the following (**AS INDICATED BY ASSESSMENT DATA):**
  - "Break" Cards that assist _____ in communicating when he/she needs to escape a task or situation.
  - "Choice" cards that provide _____ some control by indicating a choice from a prearranged set of possibilities
  - "All done" cards that assist _____ in communicating when he/she is finished with an activity or task.
  - "Turn-taking" cards that can be used to visually represent and mark whose turn it is.
  - "Wait" cards that can be used to visually teach the concept of waiting.
  - "Help" cards that assist in teaching _____ to raise his/her hand to indicate the need for assistance.

Psycho-Educational Report Recommendations

- ***If disruptive behavior problems are present, then following might be appropriate:***

Psycho-Educational Report Recommendations

- Functional behavioral assessment is recommended.

Psycho-Educational Report Recommendations

- Students with autism frequently engage in disruptive behaviors to escape demands and gain or maintain access to perseverative items and activities. Thus, the focus of any functional assessment should include special attention to perseverative behaviors that might serve to obtain desirable sensory stimuli.

Reese et al., 2003

Psycho-Educational Report Recommendations

- Students with autism also frequently engage in disruptive behaviors to escape aversive sensory stimuli. Thus, the focus of any functional assessment should also direct attention to perseverative behaviors that might serve to escape from aversive sensory stimuli.

Reese et al., 2003

Psycho-Educational Report Recommendations

- ***If disruptive behavior problems are present and known to be related to perseverative activities, then following might be appropriate****:*
  - Identify and decrease environmental and/or physiological conditions that are related to perseverative behavior.
  - Determine if the behavior is an attempt to avoid aversive sensory stimulation or a strategy to obtain desirable sensory stimulation.

Reese et al., 2003

Psycho-Educational Report Recommendations

- ***If a student needs predictability (e.g., becomes anxious when new materials/activities are introduced), then the following might be appropriate:***
  - Employ "priming." This involves showing the actual instructional materials that will be used in a lesson the day, evening, or morning before the given classroom activity is going to take place. Priming should be brief (10 to 15 minutes) and built into _____ 's daily schedule and should take place in a relaxing environment.

Myles & Adreon, 2001

Psycho-Educational Report Recommendations

- ***If disruptive behaviors appear to be related to anxiety and/or a desire to avoid aversive sensory stimulation, then the following might be appropriate:***
  - The problem (perseverative) behaviors appear to have a calming or organizing effect and might be related to anxiety. Thus, the following strategies are recommended as they appear to reduce anxiety (and in doing so may decrease the need for the perseverative behaviors):
    - Establish predictable routines
    - Use visual schedules to facilitate coping with change
    - Practice alternative coping behaviors such as relaxation

Reese et al., 2003

Psycho-Educational Report Recommendations

- ***If disruptive behaviors appear to be related to obtaining desirable sensory stimulation, then the following might be appropriate****:*
  - The problem (perseverative) behaviors appear to be positively reinforcing. Thus, the following strategies are recommended:
    - Provide appropriate access to the desired sensory stimulation on a regular basis. Provide instruction on how to appropriately obtain the desired stimuli. This will decrease the need to engage in behaviors that have as their function obtaining the stimuli.
    - Providing contingent access to the desired sensory stimulation may be used as a positive reinforcer for the completion of instructional tasks.

Reese et al., 2003

Psycho-Educational Report Recommendations

- ***If the student has weaknesses in social, language, attention, organizational, transitioning, and auditory processing, then the following might be appropriate:***
  - The instructional program should centers on an _____ 's strengths (TYPICALLY ROTE MEMORY AND VISUAL PROCESSING), special interests, and needs. It may include the following:
    - Visual schedules that depict the student's daily routine
    - Work systems
    - Calendars to help the student understand when regularly scheduled events may occur
    - To facilitate transitions, make use of visual cues that forewarn the student when something is going to end, stop or be all done. This assists in transitions.
    - Place classroom rules in a visual form on the student's desk.

Psycho-Educational Report Recommendations

- ***If a student has reading fluency and/or comprehension difficulties, then the following might be appropriate:***
  - Highlighted text
  - Study guides

Psycho-Educational Report Recommendations

- ***If a student has written expression (e.g., handwriting) difficulties, then the following might be appropriate:***
  - When assessing _____ 's content knowledge allow for verbal, instead of written responses.
  - When completing written assignments allow _____ to use the computer instead of pen or pencil.
  - Multiple-choice tests can be used instead of short answer to assess subject matter knowledge
  - Allow _____ to create projects, rather than producing written reports.

Psycho-Educational Report Recommendations

- ***If a student has difficulty with note taking, then the following might be appropriate:***
  - Provide _____ with a complete outline including the main idea and supporting details.
  - Provide _____ with a skeletal outline that he/she can use to fill in details.

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Contact Information

- Stephen E. Brock, Ph.D., NCSP
  - CSU, Sacramento
  - 916-278-5919
  - brock@csus.edu and http://www.csus.edu/indiv/b/brocks/
- Michael Slone, NCSP
  - Irvine Unified School District
  - michaelslone@yahoo.com
- Clarissa Tuttle, NCSP
  - Natomas Unified School District
  - canzal50@hotmail.com