Autism and Asperger Syndrome
From Assessment to Treatment

Presented by
Michael D. Powers, Psy.D.

AGENDA

Thursday

9:00  Autism & Asperger Syndrome Basics
- Core deficits
- Theories of causation
- Genetics
- Neuropsychological assets and deficits

10:20  Break

10:35  Diagnosis and Differential Diagnosis

12:00  p.m.  Lunch

1:15  Assessment & Treatment of Social Challenges
- Social skills training
- Group and individual treatment

2:35  Break

2:50  Assessment & Treatment of Communication Challenges
- Skills for home and community participation
- Social communication and conversation skills

4:15  Adjournment

Friday

8:30  Understanding Challenging Behaviors
- Goals of assessment and treatment
- Situations that “set the stage” for behavior

9:50  Break

10:05  Assessment of Challenging Behaviors
- Assessment of behavioral function
- Identifying replacement behaviors

11:30  Lunch

12:45  p.m.  Treatment of Challenging Behavior Strategies for Home, Classroom, and Community
- Integrating treatment planning with social and communication objectives
- Functional communication training
- Developing positive behavioral supports

2:05  Break

2:20  Insuring Treatment Effectiveness
- Evaluation of treatment effectiveness
- Ethical issues in treatment
- Wrap-up and closing comments

3:45  Adjournment

Sponsored by
J&K Seminars, LLC
1861 Wickersham Lane
Lancaster, PA  17603-2327
(800) 801-5415
jk@jkseminars.com
www.jkseminars.com

Michael D. Powers, Psy.D.
2213 Main St
Glastonbury CT 06033-2210
860-430-1762
info@autismct.com
www.autismct.com
Autism and Asperger Syndrome: From Assessment to Treatment

Michael D. Powers, Psy.D.
The Center for Children with Special Needs
Glastonbury, Connecticut
and
Yale Child Study Center
Yale University School of Medicine
New Haven, Connecticut

www.autismtct.com

Asperger Syndrome

- Incidence: 4/10,000 (1/7,000 – 1/10,000)
- Males > females (3:1)
- Most not intellectually disabled
- Specific learning problems observed
- Fascination with letters/numbers
- Precociously in learning to talk
- Co-morbidity: R/O depression, anxiety, OCD

The Genetics of Autism

- Susceptibility regions in the genome
  - Polynomic
  - "Hot genes": 7q31-q33; 3q25-27; 13q14-q22; 15q11-13; Xp22,33
  - Chromosome 7 is best candidate
  - 15 or more genes may be implicated
  - No specific confirmed gene or group of genes

Autism

- Prevalence: ASDs: 1:100
- Autistic Disorder: 1:1,000
  - (4 per 10,000 in 1968)
- No significant social class differences
- 3 – 4 times > in males
- Risk recurrence: 5-10%

Courtesy of Matthew State, MD, PhD,
Fred Volkmar, MD & Ami Klin, PhD,
Yale Child Study Center
Etiology of Autism

- Genetic factors
- Other medical conditions
  - Infectious, structural, chromosomal variations
- CNS pathology
  - Soft signs, seizures, abnormalities evident with brain structure, evident with MRIs and other neuroimaging procedures

Volkmar & Klin, 2005

Clinical Presentation of Autism Spectrum Disorders

- Impairment of social interaction
- Repetitive patterns of activity
- Impairment of communication
- Impairment in responses to sensory stimuli

Impairment of Social Interaction: The Socialization Triad

- Impairment of social imagination and understanding, empathy, and perspective taking
- Impairment of social communication
- Impairment of social recognition

Wing, 1997

Learning Characteristics of Students with Autism

1. Stimulus Overselectivity
2. Problems in Stimulus Control
3. Perseveration
4. Preference for Routines
5. Visual Orientation
Learning Characteristics of Students with Autism

6. Associative Learning
7. Spatial Cognition/Visual Spatial Learning
8. Sequential Learning
9. Sensory Hypo/Hyperreactivity
10. Literality

High Functioning Autism: Clinical Features

- May develop panic-like responses when routines are disturbed
- May be able to converse, but show literal quality to conversational content
- Active-but-odd social style
- PIQ>VIQ or PIQ=VIQ
- Males vastly outnumber females

High Functioning Autism: Clinical Features

- Can be related, but show odd responses to social situations
- May develop communicative speech, but show impairments in symbolic functioning
- May persist in arranging and ordering things

Clinical Presentation of Asperger Syndrome
<table>
<thead>
<tr>
<th>Communication</th>
<th>Communication</th>
</tr>
</thead>
</table>
| • May speak fluently before age 5, but have problems with **pragmatics** (use of language in social contexts), **semantics** (not recognizing multiple meanings), and **prosody** (the pitch, stress, and rhythm of speech). | • Student may have an advanced vocabulary and talk incessantly about a favorite subject  
• Topic shifting may be difficult  
• Difficulty with rules of conversation (eg, interrupting, initiations)  
• Speech may lack variation in pitch, rhythm, stress, or become pedantic/overly formal |
<table>
<thead>
<tr>
<th>Communication</th>
<th>Cognition</th>
</tr>
</thead>
</table>
| • Social communication problems might include unusual body posture, staring, standing too close, poor understanding of facial expressions and gestures | • Average-to-above average intelligence  
• Proficiency with factual knowledge  
• Weaknesses in social cognition, abstract thought, and comprehension (mindblindness)  
• Academic difficulties with reading comprehension, problem solving, organizational skills, concept development, making inferences, judgment/critical thinking  
• Poor cognitive flexibility; difficulty learning from their mistakes, adapting to change and failure |
Motor Issues

- Locomotion
- Balance
- Ball skills
- Manual dexterity
- Graphomotor skills
- Joint laxity
- Rhythm and initiation of movements

Sensory Issues

- Similar to students with autism
- Hyper- and hypo-sensitive responses
- Sensory profile is highly individualized
- Sensory profile may change over time

Arousal and Attentional Issues

- Students may be easily distracted or inattentive
- Diagnosis of ADHD may be considered
- Anxiety and panic may be precipitated by heightened arousal states
- “Fight-flight-fright” responses are not uncommon

Differential Diagnosis:
- Asperger Syndrome & High Functioning Autism
ASDs Are Behaviorally Defined Syndromes

- Diagnostic systems (ADI & ADOS) are valuable when combined with clinical expertise, but only distinguish Autism and PDD:NOS from non-Autism.

ASDs are Developmental Diagnoses

ASD must be viewed developmentally. Sequences of development in children with ASD may include developmental peculiarities: e.g., regressions, spurts, delays, greater variation in transitions from one stage of development to the next.

ASDs Are Often Retrospective Diagnoses

- Developmental history is essential to diagnosis.
- Longitudinal view is also essential.

Differential Diagnosis: AS & HFA

<table>
<thead>
<tr>
<th>Domain</th>
<th>AS</th>
<th>HFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social skills</td>
<td>Poor</td>
<td>Very poor</td>
</tr>
<tr>
<td>Motor skills</td>
<td>Clumsy</td>
<td>Good (early)</td>
</tr>
<tr>
<td>Circumscribed interests</td>
<td>Typical (facts)</td>
<td>Variable (mechanical)</td>
</tr>
<tr>
<td>Family Hx</td>
<td>Usual</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Age at recognition</td>
<td>&gt;24mos.</td>
<td>&lt;24 mos.</td>
</tr>
</tbody>
</table>
**A Developmental Model of AS and HFA**

**Asperger Syndrome**
- Interested in people, but unable to process social cues
- Development inside the realm of social interaction but estranged from it
- Impairment in neuropsychological skills required for processing social stimuli

**Autism**
- Not interested in people
- Development outside the realm of social interaction
- Impairment in basic sociability mechanisms

---

**Differential Diagnosis:**

Asperger Syndrome, Autistic Disorder, PDD:NOS, ADHD, Nonverbal Learning Disability, and Personality Disorders

---

**Asperger Syndrome and ADHD**

In those with ADHD
- Increased social interest
- Inattention vs. over attention to small details
- Social deficits due primarily to impulsive, distractible, or hyperactive behavior or reactions
- Decreased attention and focus improve markedly with psychopharmacologic intervention
- Social cognition, perspective taking, and pragmatic language do not improve markedly with medication for those with AS

---

**Differential DX: AS & HFA**

<table>
<thead>
<tr>
<th>Domain</th>
<th>AS</th>
<th>HFA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive and communication skills</td>
<td>Not discrepant significantly</td>
<td>Significantly discrepant</td>
</tr>
<tr>
<td>Social profile</td>
<td>Interested or aloof or withdrawn</td>
<td>aloof or withdrawn</td>
</tr>
</tbody>
</table>

Adapted from Volkmar, 2003; Powers, 2007
Typically, a child with ADHD does not display extensive problems relating to others, but impulsivity can discourage social relationships and make the child appear to lack empathy.

A highly distractible child with ADHD is more “under-focused” than the ASD child who is more “over-focused.”

Current research in clinical practice supports ASDs as primary, with inattention, distractibility, and impulsivity seen in context of those syndromes.

*NLD profile is a neurocognitive model of AS, but not Autism, suggesting overlap.

Large number of individuals with AS appear to show the NLD profile, but…

Converse does not appear to be true.
**NLD Pathway to Social Dysfunction**

- Insensitivity to the implicit and over-reliance on the literal
- Explicit / literal language as a “lifeline” to social connection
- Fragmented social perception ► Missing the “whole” or context of social situations
- Lack of dissociation between “factual” knowledge and “self-referential” knowledge (or declarative vs. procedural)

Klin, 2003

---

**NLD Assets & Deficits**

**Primary Neuropsychological Assets**
- Auditory Perception
- Simple Motor
- Rote Material

**Primary Neuropsychological Deficits**
- Auditory Attention
- Verbal Attention
- Tactile Perception
- Visual Perception
- Complex Psychomotor
- Novel Material

**Secondary Neuropsychological Assets**
- Auditory Attention
- Verbal Attention

**Secondary Neuropsychological Deficits**
- Tactile Attention
- Visual Attention
- Exploratory Behavior

Rourke, 1989

---

**Tertiary Neuropsychological Assets**
- Auditory Memory
- Verbal Memory

**Tertiary Neuropsychological Deficits**
- Tactile Attention
- Visual Memory
- Concept Formation
- Problem Solving

**Verbal Neuropsychological Assets**
- Phonology
- Verbal Reception
- Verbal Repetition

**Verbal Neuropsychological Deficits**
- Oral-motor Praxis
- Prosody
- Phonology>Semantics
- Content
- Pragmatics
- Function

Rourke, 1989

---

**Academic Assets**
- Graphomotor (Late)
- Word Decoding
- Spelling
- Verbatim Memory

**Academic Deficits**
- Graphomotor (Early)
- Reading Comprehension
- Mechanical Arithmetic
- Mathematics
- Science

**Socioemotional/Adaptive Assets**
- Adaptation to Novelty
- Social Competence
- Emotional Stability
- Activity Level

Rourke, 1989
Asperger Syndrome and NLD

Similar profile of significant social deficits, including problems with social judgment, social perception, and social interactions.

- In NLD, social withdrawal and isolation can increase in adolescence and adulthood
- With NLD, the absence of circumscribed interests and preoccupations
- NLD profile is observed in other disabilities, notably
  - Turner Syndrome, Meningomyelocele, Williams Syndrome
  - NLD profile is often observed in AS, very unlikely in HFA

AS vs. PDD:NOS

- PDD:NOS is a negative or sub-threshold diagnosis
- For AS, social, emotional, communication deficits are more severe than PDD:NOS. Outcomes are poorer for AS
- For AS circumscribed interests, verbosity, motor clumsiness are more pronounced
- IQ more variable in PDD:NOS

PDDs vs. Personality Disorders (Schizotypal or Schizoid Personality Disorders)

Schizoid Personality Disorder: Points of Overlap

- Almost always chooses solitary activities
- Lacks close friends or confidants other than 1st degree relatives
- Emotional coldness
- Detachment or flattened affect

Schizotypal Personality Disorder: Points of Overlap:

- Ideas of reference
- Unusual perceptual experiences
- Behavior or appearance that is odd, eccentric or peculiar
PDDs vs. Personality Disorders (Schizotypal or Schizoid Personality Disorders)

Characteristics noted that are supportive of PDD diagnoses:
- Very early onset
- Restricted patterns of behavior/preoccupations throughout childhood
- Enduring impairments in symbolic and imaginary play, and socialization
- Abnormal nonverbal expression correlates with early developmental disturbances, but schizoid features do not (Tantum, 1988)

Early Dx history should establish:
- Hx of early language delays or deviance (esp. with pragmatics in AS)
- Hx of restricted patterns of behavior
- Hx of narrow interests
- If Hx is significant, PDDs are considered over Personality Disorders

Special Considerations in the Assessment and Diagnosis of Very Young Children, Adolescents and Adults

Diagnosis of Autism in Very Young Children
- Communicative markers may be misleading
- Stereotypies may be absent, having not yet emerged
- Joint attention and shared referencing are compromised, but more stable markers at and after 18 months
- Prior to 18 months, imitation, reciprocity, awareness of others, gaze patterns and the use of others, and bids for engagement with others are implicated
- Quality of engagement with toys and materials has a more limited, patterned range of expression and is difficult to change
Issues that Complicate Diagnosis in Very Young Children

- Communication limitations
- Difficulty regulating sensory input (hyper- and hypo-reactivity)
- Restricted interests
- Difficulties with behavioral regulation (change, transitions, sleep, eating, crowds, etc.)
- Co-morbid conditions (Landau-Kleffner Syndrome, Fragile-X, Tuberous Sclerosis)

Modified Checklist for Autism in Toddlers (M-CHAT)

- 23 items, scored by health professional
- Excellent screening potential
- Scoring criteria: fails 2 or more critical items, OR any 3.
- 6 critical items:
  - Interest in other children?
  - Use of index finger to point, to indicate interest in something?
  - Bring objects to parent, to show something?
  - Imitate parent (eg, making a face)?
  - Respond to name when called?
  - Point at toy across the room, does child look at it?

Robins, Fein, & Barton (2001). *JADD*, 31(2), 131-144

Special Considerations: Adolescence and Adulthood

Diagnosis of ASDs in Adolescence

- Central Issues:
  1. Diagnosis is based on symptoms that vary over time.
  2. Diagnosis is a developmentally-sensitive process.
  3. Both ipsative and normative data contribute to diagnostic accuracy.
Issues that Complicate Diagnosis in Adolescence

1. Cognitive assets and deficits
2. Learning disabilities (including NLD and specific learning disabilities)
3. Profile of stereotypies and circumscribed interests
4. Seizure status
5. Co-morbid psychiatric conditions (depression, anxiety, OCD)
6. Co-morbid genetic conditions (Fra-X: increased behavioral agitation; increased social isolation)

7. Co-morbid medical conditions (Type 1 brittle diabetes/insulin dependent: fluctuating profile of attention, behavioral agitation/lethargy)
8. Negative effects of medications (Ritalin and increased behavioral agitation; lethargy associated with excessive doses of neuroleptics)

Considerations in the Diagnostic Process with Adolescents

- Early history is essential for accurate diagnosis
- A prior diagnosis of ASD makes possible both ipsative and normative comparisons
- Symptomatology often becomes less severe over time
- Increases in aggression and SIB among those most severely impacted by autism (10-20%) is not unusual
- "Typical" ASD adolescent has great behavioral variation, but generally improves in 1 – 2 years

Issues that Complicate Diagnosis in Adolescence

10. Impact of prior educational placements may have exacerbated symptoms:
   a. Low stimulation = increases in stereotypies
   b. Poor instruction = poor performance on cognitive tasks due to limited instructional and stimulus control
   c. Poor communication therapy = increase in challenging behavior and stereotypies
   d. Poor behavioral supports = increases in severe challenging behaviors that compromise the diagnostic process
Considerations in the Diagnostic Process with Adolescents

- Seizures occur in about 30% of those with ASDs before age 30. Those with ID are at greater risk.
- Overall activity level generally decreases for adolescents with ASD, especially those who were very active as children. Lethargy and lack of initiative may be more prominent concerns, but must be counterbalanced with the "normal" developmental progression of symptomatology.
- Symptomatology and cognitive functioning are not independent of one another.

Considerations in the Diagnostic Process with Adolescents

- Social deficits that are more common in adolescents with ASDs include:
  - Odd forms of reciprocity in social exchange
  - Failure to seek physical contact
  - Mindblindness (ToM)
  - Difficulty extracting meaningful rules from social situations

Considerations in the Diagnostic Process with Adolescents

- Misrepresentation of symptomatology by others:
  - Masturbation = sexual aggression
  - Seeking deep pressure/proprioception = masturbation
  - Inappropriate social approaches = predatory behavior
  - Behavioral agitation = anxiety (it may be a response to poor structure)

Remember:

1. Normal adolescence is an oxymoron
2. Developmental discontinuity is the norm
3. Remain flexible in the diagnostic and assessment process, but also vigilant of the nomenclature.
Diagnosis of Adults with ASD

- Functional implications should predominate, supporting service access and providing treatment in areas of need
- Clarification for research or administrative purposes (e.g., SSI)

Enhancing the Accuracy of Diagnosis of Adults

- Early, accurate diagnosis is essential
- Detailed developmental hx and review of records if dx unknown
- Rituals, intense preoccupations and interests are surveyed comprehensively in past and present
- Literality in language use and understanding (idioms, figural speech, etc)
- Egocentrism and cognitive inflexibility
- Behavioral excesses increase in the presence of breakdowns in routine, structure, and predictability

Diagnostic Dilemmas

- Once ASD, always ASD?
- No available longitudinal studies through adulthood of children dx as toddlers
- Where will the PDD:NOS children be as adults...the heterogeneity problem
- First diagnosis in adulthood often precipitated by crisis, life problem, family need

The Expanding Social Competency Issue

- With adults we sometimes find assets such as:
  - Increase in learned social behavior
  - More capable social conversation
  - Academic or vocational competence due to "goodness-of-fit" with life choices
Expanding Social Competency.....

• And continuing deficits such as:
  • Literality and concrete thinking
  • ToM issues
  • Compromised executive functions
  • Rigidity
  • Continuing difficulty with meta-linguistics of conversation (e.g., "reading between the lines")
  • Difficulty shifting attention across modalities

Conclusions

• Diagnostic process requires objectivity, careful analysis of signs and symptoms, knowledge of the context of diagnosis, and developmental sensitivity
• Diagnosis is the first step to providing support, and often the least important for planning functional interventions

Teaching Social Skills to Students with Autism Spectrum Disorders: Assessment, Curriculum Development, Intervention, and Evaluation

Social behavior represents the ability to relate to other people in a reciprocal and mutually reinforcing manner. It requires an ability to adapt behavior to the varying demands of social context.

This material was developed in collaboration with James W. Loomis, PhD, of the Center for Children with Special Needs.
Social Subtypes in ASDs

- Aloof and avoidant
- Eager but incompetent
- Passive

Adapted from Wing (1997)

Take Home Message

- What you teach is what you get
- Social skills must be taught in a way that they can be learned, referencing the learning style of the student
- Begin early
- Providing opportunities for practice is critical
- Social integration is on a continuum
- Develop social behaviors around interests first, then relationships
- Make social skills teaching, and the social activities selected, fun!

The Nature of Social Skills

- Subjective process
- Different from motor or cognitive competence
- Individuals can have a skill deficit or a performance deficit

The Nature of Social Skills (continued)

- Many individual factors impact on social skills: e.g. anxiety, temperament, self-esteem
- Small variations in the performance of social skills can be crucial
- Role and situational factors determine competent social behavior
- There are ongoing developmental changes in social skills
Social Competence: Related Outcomes

- Academic and life skill development
- Functional and emotional independence (including employment and housing)
- “Fitting in” to the community/participating in the community
- Social activity/dating/marriage/reproduction
- Quality of life/satisfaction/mental health

✓ For developmentally disabled children, social competence can be more important than academic skills.

The Impact of Autism on Social Development
### Early Social Deficits

- Decreased saliency and meaningfulness of social stimuli
- Decreased expressive communication skills
- Failure to develop social reciprocity
- Failure to appreciate social contingencies
- Failure to imitate body movements and facial expressions
- Decreased acquisition of socially transmitted knowledge

### Impact Of Social Deficits On Developing Relationships With Others

- Problems developing attachments to significant others
- Unusual patterns of social response
- Limited recognition of emotion in others
- Unusual eye gaze patterns
- Physical withdrawal
- Negativism

### Enduring Problems with Social Development

- Tendency to be perceived as passive or “odd” in interactions with others
- Preference for interacting with adults rather than peers
- Deficiencies in the area of social conversation
- Limited ability to engage in perspective-taking
- Limited mutual or cooperative play
- Problems processing social and affective information

### Influence of Communication Deficits on Social Behavior

- Difficulties signaling intention
- Difficulties determining/conveying messages
- Difficulties initiating/regulating turn-taking
- Difficulties regulating affective expression
- Difficulties adhering to rules governing rhythm, stress, and intonation
Challenges to Social Skill Development

- Innate social orientation/skills
- Modeling
- Learning through experience

Autism: Social Behavior in Childhood

1. Attachment to parents less obvious (e.g. gaze, joint attention)
2. Social aloofness
3. Lack of imitation behaviors
4. Solitary play rather than play with peers
5. Stereotypic and repetitive play rather than creative or imaginary play
6. Little pleasure in peer contact
7. Failures in communication

Opportunities to Practice Social Skills: A Vicious Cycle

Peer Group:
- More Rejection
- Less Satisfaction In Peers

Child with Autism:
- Fewer Opportunities For Practice
- Less Social Motivation/Interest
- More Frustration
- Less Competence

The Problem, in Short:

- People do not always mean what they say, and do not always say what they mean
- Looks can be deceiving (consternation, bemused expressions, and anger)
- Discordance between words and affect have social communicative value to the neurotypical world (sarcasm does have its place)
The Hidden Social Curriculum

These are the implicit things a student should or shouldn’t do in everyday situations. Typical students often understand them; Students with Autism (including HFA and AS) generally don’t.

Includes colloquialisms, style of dress, how to act in specific social situations (crowded hallways, at mall, in restrooms, etc.), making critical judgments in vague social situations.

A Model for Training Social Skills

General Principles

• Social goals are as important as academic and life skills goals
• There is a developmental process going on; we need to teach pivotal skills and eliminate the road blocks
• Start early and be aggressive
• There are three key obstacles to training social skills
  – Lack of desire/motivation
  – Limited opportunities to practice
  – Lack of recognition by the school and community that social goals are valid and important

General Principles-cont’d.

• You can teach a lot if you use good instructional techniques and tailor the approach to the individual
  – Pattern of social challenges
  – Learning profile
  – Strengths/weaknesses
  – Motivation
• Set clear objectives
  – You get what you teach
• Build on strengths
  – Cognitive, social, family, interests, motivations etc.
General Principles-cont’d.

• Generalization and maintenance must be integrated throughout the program
  – They occur through structured practice
  – Maximize opportunities for practice throughout the day
• Home and school efforts should be coordinated
• With every new skill, start with high structure/support and gradually diminish it

General Principles-cont’d.

• Start where the individual is and with what they want
• Minimize stigma related to getting help with social development
• Make it fun!

The Ongoing Process: 5 Components

Assessment

Skill Teaching

Application To Natural Settings

Low Structure Practice Opportunities

High Structure Practice Opportunities

Assessment

A. Determine the next objective
• What social behaviors are potentially dangerous?
• What challenges are most detrimental to social inclusion and participation in social activities?
• What are the key skills needed to take the next step in programming?
• What is possible?/What are reasonable goals for this year relative to the individual’s development?
Assessment

B. What are the child’s strengths and how can we use them?
- Preferred learning modes (e.g. rote verbal learning)
- Social motivation
- Interests and abilities
- Available social networks
- Opportunities for practice

Assessment

C. What are the key supports and skills needed to ensure practice success?

D. What deficits can we teach to and what deficits require compensatory strategies?

Choosing Objectives: The Role of Pivotal Responses

- Certain behaviors are central to wider areas of functioning. By training these “pivotal responses”, other associated skills develop even when they are not specifically targeted for intervention.

- Example: Training social and communication skills to students with ASD leads to many other gains with re: to aggression, task engagement, etc.

Setting Objectives/Priorities

1. Protection----safety
2. Participation---what increases motivation and opportunities for practice
3. Programmatic Progress--what skills are needed to make the step to the next LRE or program
4. Promote Social Development---from awareness to interaction to reciprocal interaction to relationships
Objectives: Protection

- Behaviors that invite abuse or leave the individual vulnerable to teasing, manipulation, or scapegoating
- Behaviors that are aggressive or hurt self or others

Possible Pivotal Responses
1. Identifying safe and not safe peers
2. Communication skills
3. Approach/greeting behaviors

Objectives: Participation

- Behaviors that alienate peers
- Behaviors that make interactions difficult or impossible

Possible Pivotal Responses
1. Motor mannerisms
2. Initiation
3. Eye contact, voice tone etc.

Objectives: Programmatic Progress

- Skills needed to get to the next program- from special education classroom to resource room to mainstream
- From elementary to middle to high school to vocational program
- From home to independent living

Possible Pivotal Responses
1. Asking for help
2. Managing teasing
3. Making a social invitation

Objectives: Promote Social Development

1. Social awareness/ orientation
2. Basic interaction
   - Responding to others
   - Initiating interactions
3. Reciprocal interaction
   - Listening
   - Conversational turn taking
4. Relationship building
   - Sharing feelings
   - Resolving differences
   - Building long term affection

Possible Pivotal Responses
1. Eye contact, social awareness
2. Initiating interactions
3. Listening/conversations skills
4. Understanding feelings, conflict resolution
Criteria for Prioritizing Educational Needs and Goals

1. Independence
2. Participation
3. Functionality
4. Age-Appropriate
5. Longitudinal Value

6. Frequency of Occurrence
7. Opportunity for Instruction
8. Motivation to Student
9. Important to Parents
10. Interaction

Assessing the Functionality of Instructional Objectives

1. Is the skill to be taught useful immediately to the child (or a prerequisite to a behavior/skill that will be immediately useful)?
2. Are the materials used to teach the skill common to the child’s everyday environment?
3. If this skill is acquired, will it decrease the probability that someone else will have to do it for the child in the future?

Identifying Functional Priorities for Social Skills

1. Does this skill represent a critical step in performing a priority activity?
2. Will this skill strengthen peer relationships?
3. Is this skill required in several settings and activities?
4. Will this skill allow the student to advance to a more competent form of social behavior?
5. Does this skill enhance the student’s ability to gain access to future settings?
Creating the Curriculum: *How Do You Choose What to Teach?*

- Established Social Skill Curricula
  - Walker Social Skills Curriculum (Walker)
  - Skillstreaming series (Goldstein, et.al)
  - Navigating the social world (McAfee)
  - Social Skill instruction for HFA and AS (Baker)
  - SOS (Dunn)
- Ecological Assessment for Curriculum Development
- Hidden Social Curriculum

**Examples of Targets for Ecological Assessment**

- *Cafeteria Skills*
- *Hallways*
- *Pedestrian Skills*

**Ecological Inventory**

1. Delineate natural environments
2. Delineate subenvironments
3. Delineate and inventory activities in subenvironments
4. Delineate skills needed for activities
5. Design instructional programs
6. Evaluate the effectiveness of instructional programs

Before you select a target skill for intervention, consider this:

- Is the social behavior problematic or an endearing yet potentially annoying idiosyncrasy?
- The issue is control.
- Social skills teaching is all about providing support *to the internal editor*

Gerhardt, 2003
Skill Teaching

- Many skills need to be actively taught
- Use preferred and multiple learning channels
  - Verbal explanation with pictures
  - Demonstration
  - Role playing/Practice
  - Scripts/social stories
- Can be done 1:1 or in groups, in school or at home
- Established Social Skills curricula provide many teaching objectives and learning activities

Skill Teaching Approaches

1. Social Awareness/Orientation: Discrete trials, 1:1, very small group with activity
2. Basic Interaction: 1:1, small group
3. Reciprocal Interaction: small group
4. Relationship building: small and medium group

Interventions for Skill Teaching

- Discrete Trial Teaching
- Natural Environment Teaching
- Positive Behavior Interventions
- Social Skills Curricula
- Social Stories
- Learning about Feelings
- Social Skills Games

High Structure Practice Opportunities

- Opportunity to practice with coaching, supportive feedback, permission to make mistakes
- Out of the glare of the spotlight of the social group
- Protection from negative feedback from peers and social stigma
- Can be done in social skills groups, at home, in the classroom, or some community settings
Interventions: High Structure Practice Opportunities

- Parent Based Interventions
- Social Skills Group
- Peer Integration Techniques: Circle of Friends/Lunch Bunch/Peer Mentorship

Interventions: Low Structure Practice Opportunities

- Parent Interventions
- Peer integration techniques
- Community/School clubs, teams, activity groups

Application to Natural Settings

- Opportunities to apply new skills in a natural peer context
- Start with more structured situations and then try with less structure; provide enough support to ensure success
- Coaching should still be given before and after as needed
- Should be done in school, at home, and in the community

Low Structure Practice Opportunities

- Structured social situation is provided for practice in a context closer to the natural setting
- Some coaching, positive feedback can be given before, during, and after
- Should be done at school, at home, and in the community
Interventions: Application to Natural Settings

• Parent Based Interventions
• Coaching
• Community/School clubs, teams, activity groups

Generalization and Maintenance: The Final Frontier

Generalization

Generalization is the process by which a behavior acquired in one situation is performed competently in other untrained situations.

Generalization

The ultimate goal of social skill training is for a behavior to generalize across:

• Persons
• Settings
• Social and communication cues
• Time
Generalization

Generalization is a problem for children with ASD because of the increased likelihood of over-selective responding, which is the tendency to respond to restricted and idiosyncratic social and communicative stimuli that are associated with the behavior.

Techniques to Facilitate Generalization

1. **Sequential modification**
   If you want generalization to occur across different stimuli, first you teach the response to the first stimulus, and then the second stimulus, and so on until all the stimuli have control over that behavior. For example, if you wanted the person to learn to respond to all the teachers in a class first you would teach the person to respond to one teacher, and then to another teacher, and then the third teacher.

2. **Training sufficient exemplars**
   This involves training the response to as many examples as possible. If you were to teach a person the label “cookie”, you would use different kinds of cookies during the session (e.g., oreos, fig newtons, oatmeal cookies, etc.). In general, it is good to train the person to respond to at least three different examples.

3. **Programming common stimuli**
   Learning is best promoted in a setting that resembles as closely as possible the conditions under which the social skill will be practiced.
Techniques to Facilitate Generalization

Generalization across time, or *maintenance*
1. Thin schedule of reinforcement
2. Delay reinforcement

Social Skills Training Techniques

The Ongoing Process: 5 Components

- Application to the “Real World”
- Assessment
- Skill Teaching
- Low Structure Practice Opportunities
- High Structure Practice Opportunities

Social Skills Training Interventions

<table>
<thead>
<tr>
<th>Skill Teaching</th>
<th>High Structure Practice</th>
<th>Low Structure Practice</th>
<th>Natural Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>DTI or structured incidental training</td>
<td>Social Skills Curricula</td>
<td>Social Stories</td>
<td>Learning About Feelings</td>
</tr>
<tr>
<td>Peer Integration Techniques</td>
<td>Parent Based Interventions</td>
<td>Social Skills Groups</td>
<td>Coaching</td>
</tr>
</tbody>
</table>
### Social Skills Curricula

**• Comprehensive program**  
**•** Identifies key skills and puts them into a progressive scope and sequence  
**•** Can provide valuable training exercises

### Pros

- Comprehensive
- Organized, easy to follow  
- Good structure  
- Good source of ideas

### Cons

- Not individualized to the child/adolescent  
- Can not take into account unique strengths, needs, processing style  
- Many play to cognitive strengths not present with ASDs

### Curriculum Skills

- Listening  
- Asking for help  
- Offering help to an adult  
- Beginning and ending a conversation  
- Dealing with being left out  
- Reacting to failure  
- Dealing with group pressure

### Prosocial Skills

- Paying attention  
- Social reference  
- Collaboration and working together  
- Improvisation/adapting rules  
- Shared self

---

Skillstreaming, McGinness and Goldstein, 1997

Relationship Development Intervention; Gutstein and Sheely, 2002
Curriculum Skills: Practical Application

- Most curricula contain good instructions
- Chose venue: Individual work, group, club
- Recruit appropriate staff (instructor, aide, speech therapist, OT, social worker, psychologist)
- Work out time and place
- Tailor activities to participants

Social Stories and Comic Strip Conversations

- Target problem behaviors and difficult situations
- Write story including relevant social cues and common responses
- Balance descriptive, perspective, and directive statements
- Use story on a daily basis; fade or change the story when no longer needed

Social Stories/Comic Strip Conversations

- **Pros**
  - Very effective with a range of challenged children/adolescents
  - Targets problem situations and social challenges
  - Teaches to strengths of some with ASDs-rote, verbal, concrete learning

- **Cons**
  - Does not address performance deficits
  - Need child’s buy-in

Social Stories: Practical Application

- Carol Gray books have excellent instructions
- Write social story/comic strip conversations with child
  - Use modality that child can comprehend and create (pictures, words)
  - Encourage child’s active participation in creation
- Routinely read story with child 1-2/day and at key times when it applies.
- Use preventatively, not as consequence
- Use only 1-3 at a time
- Fade them as they are no longer needed and write new ones
- Other scripting techniques are also valuable

See www.thegraycenter.org
Learning about Feelings

- Build social and emotional understanding through the use of vignettes to ask how characters would feel in particular situations (e.g., Teaching Children with Autism to Mind-Read; Mindreading software; Thinking About You, Thinking About Me)
- Teach “mind reading”/social cognition/perspective (e.g., SOS Curriculum; Superflex Curriculum)
- Use facial pictures to help associate feelings and expression
- Develop active learning strategies through the use of a tape diary or other recording to express questions about social experience

Learning about Feelings

- **Pros**
  - Provides cognitive framework so that the child/adolescent can learn
  - Works well with bright and verbal children
  - Builds empathic understanding through cognitive channels-rote verbal memory
- **Cons**
  - Does not address performance deficit
  - Need buy in

Learning about Feelings: Practical Application

- Can be used individually or in group
- It is important to tie it into homework or practice opportunities for generalization
- Go slowly and ensure comprehension

Peer Integration Techniques

- Peer mentorship, Lunch Bunch, Circle of Friends
- Create “artificial” peer support network by scheduling time together, shared activities
- Prepare peers by explaining ASD
- Provide appropriate setting and social demands
- There are various levels of structure
Peer Integration Techniques

- **Pros**
  - Uses natural occurring resources
  - Allows real practice with real peers
  - Builds skills and creates relationships which can last
  - Education/advocacy benefits

- **Cons**
  - Requires administrative support, appropriate peers, and time
  - Labor intensive during the first phase

Peer Integration Techniques: Practical Application

- Get administrative support – regular ed, special ed, building principal: Sell the benefit to all participants
- Design your intervention
  - Identify target peers
  - Level of structure/type of activity
  - When and where
- Recruit typical peers
- Teach typical peers about the disability and their role
- Be sensitive to possible social stigma

Parent Based Interventions

- Hand tailored social activities targeting specific skills
- Providing regular, structured family and peer social activities in the daily routine
- Participating in appropriate clubs, teams, and community activities
- Maintaining a fun social milieu in the home, bringing peers over to the house
- Family therapy based interventions

Parent Based Interventions

- **Pros**
  - Parents know the child best
  - Parents have a lot of time with the child
  - Parents are most committed

- **Cons**
  - Parents can be too close to see the more objective picture
  - Parents do not always have the training skills
  - Parents are busy
Parent Based Interventions: Practical Application

• High level of parent involvement can lead to burn out or role confusion
• Ensure that club facilitators, coaches etc. are able to provide an adequate level of support
• The needs of siblings must be reasonably balanced with the needs of the child

Social Skills Groups

• Combines learning with building real relationships
• Combine discussion with activities and field trips
• Good opportunity for role-playing
• Gear the format and process of the group to the members

Group Based Interventions

• Pros
  – Building actual relationships
  – Availability of peer feedback
  – Can control the content, level of stimulation, and format

• Cons
  – Need a critical mass to begin
  – Member buy-in is essential and can be difficult if group fees stigmatizing
  – Generalization can be tough

Social Skills Group: Practical Application

• Critical mass can be as low as 2
• ideal size is 4-6
• Take into account no-shows
• Schedule: weekly, at least 45 minutes in length
• Use screening interview to assess the member and to explain group rules/objectives
Membership Criteria

- Mixed gender
- Homogeneous developmental/functional level
- Include different diagnoses and typical peers where possible
- Do not include aggressive or acting out SEM students

Advantages of School Based Groups

- Availability of students
- Staff know members social functioning well
- Can more easily identify problem situations and skill deficits
- Generalization is easier to facilitate
- Monitoring outcomes is easier

Key Group Ingredients

- Safety, acceptance, warmth
- Predictability with well modulated stimulation level
- Fun
- Social acceptability
- Varied social demands
- Active leader/facilitator
- Reliance on rote verbal memory

Group Format Components

- Structured Discussion (going around, turn taking)
- Exercises and Role Playing
- Fun Activities
- Generalization (assignments, follow-up, in vivo coaching, consulting with parents)
Role Playing

- Target specific problem situations
- Leader and group members model skills
- Member tries it for him/herself
- Feedback is supportive, always include positives
- Leave with a sense of mastery
- Give assignments and follow up
- Video can be valuable in providing direct feedback

Role Play Feedback

- Eye contact
- Voice tone
- Body language
- Word choice
- Sentence structure
- Conversational turn taking
- Length of utterances
- Ability to change subject with good transition
- Overall social strategies

Coaching

- Observe child in actual situations
- Provide coaching on actual events and in actual situations
- Augment with role playing exercises, other training experiences

Coaching

**Pros**
- No generalization necessary
- Powerful way to build the most valuable skills
- Most accurate assessment of what is going on

**Cons**
- Labor intensive
- Need to get the student’s buy-in
- Risk of social stigmatization
Coaching: Practical Application

- Build relationship slowly, encouraging trust, support, and predictability
- Keep the feedback as positive as possible
- Focus on situations that the individual wants to change
- Be discreet so as to prevent stigma

Where do I go from here?

One final point about social skill training for students with ASDs

- If you can teach the skill, teach it.
- If you cannot teach the skill, adapt it.
- If you cannot adapt the skill, figure out some way around it.
- If you cannot figure out some way around it, teach the neurotypical world to deal with it

Gerhardt, 2003

Developing Social Conversation Skills in Students with Autism Spectrum Disorders
The Impact of Autism on Social-Communicative Development

Some Problems with Communication Observed in Students with ASDs
- Nonverbal
- Echoic speech
- Neologisms
- Prosody, rhythm, pitch may be impaired
- Poor articulation (apraxia in some)
- Instrumental use of language (decreased use of commenting, descriptive language)
- Excessive interests/topic initiation, maintenance, shifting problems
- Errors of presupposition
- Poor regulation of affect with conversational content

Early Social Deficits
- Decreased saliency and meaningfulness of social stimuli
- Decreased expressive communication skills
- Failure to develop social reciprocity
- Failure to appreciate social contingencies
- Failure to imitate body movements and facial expressions
- Decreased acquisition of socially transmitted knowledge

Influence of Communication Deficits on Social Behavior
- Difficulties signaling intention
- Difficulties determining/conveying messages
- Difficulties initiating/regulating turn-taking
- Difficulties regulating affective expression
- Difficulties adhering to rules governing rhythm, stress, and intonation
Communication and social behavior

- Social communication problems might include unusual body posture, staring, standing too close, poor understanding of facial expressions and gestures

Cognition and communication

- Weaknesses in social cognition, abstract thought, and comprehension (mindblindness)
- Poor executive functions (cognitive inflexibility; difficulty learning from past experiences, adapting to change and failure) can lead to a more ego-centric, one-sided social perception, with attendant communication difficulties.

Impact Of Social Deficits On Developing Relationships With Others

- Problems developing attachments to significant others
- Unusual patterns of social response
- Limited recognition of emotion in others
- Unusual eye gaze patterns
- Physical withdrawal
- Negativism

Enduring Problems with Social Development

- Tendency to be perceived as passive or "odd" in interactions with others
- Preference for interacting with adults rather than peers
- Deficiencies in the area of social conversation
- Limited ability to engage in perspective-taking
- Limited mutual or cooperative play
- Problems processing social and affective information
Assessing and Teaching Social Communication Skills: Five Components

- **Content**
  - Developmentally and socially acceptable
  - Starters, extenders, and finishers
  - What’s interesting
  - What’s observable
  - Scripts are OK, at least initially
  - Mapping content in concentric circles: parent, sibling, friend, acquaintance, and stranger topics to consider and to avoid

- **Context**
  - Is this the time and place? How do you know?
  - What are others saying?
  - What are others doing when I talk? Map the cues of boredom, disinterest, revulsion, etc.

- **Process**
  - Literal vs. abstract information or topics
  - Loaded topics *(or, why I avoid talking about...)*
  - Teach the give-and-take
  - Keep it motivating and fun
  - Guide the topic, if necessary

- **Teaching Strategies**
- **Fluency**
Teaching Strategies

• Assess the need to communicate in student’s environment.
• Evaluate the student’s ability and modalities of communication.
• Make it functional; assess the environment for communicative demands and opportunities
• Create the need; make it fun!
• Prompt, shape, fade, reinforce
• Analog naturalistic teaching
• Teach mindreading
• Practice, practice, practice

Fluency

• Generalization is planned
• Sequential teaching strategies can be effective initially, but are slow
• Simultaneous strategies (multiple exemplars, pivotal responses, etc) can be effective, but confusing
• Assess the student, THEN select the strategy

Social Conversation

Problems with social conversation are endemic in students with ASD. Topic maintenance, premature topic-shifting, interjecting non sequiturs, maintaining eye contact and gaze avoidance all are concerns that interfere with social opportunity. Formal instruction in social conversation skills frequently is necessary.

CONVERSATION CHECKLIST

1. Appropriate distance (not too close, not too far)
2. Appropriate body language (e.g., no excessive slouching, grimacing, sprawling, or hopping)
3. Maintains appropriate eye contact when talking with a peer
4. Maintains appropriate eye contact when talking in groups
5. No inappropriate touching
CONVERSATION CHECKLIST

6. Acknowledges statements of other person (nod, smile, etc.)
7. No interrupting or cutting off
8. Listens to what other person says
9. Stays on topic (no abrupt shifts of topic or jumping around)
10. Brings up new topic gracefully
11. Leaves topic behind when conversation has changed topic

12. Is attuned to what other person finds interesting
13. Allows other person to have turns to talk
14. Does not talk over other person
15. Ends conversation gracefully
16. Uses appropriate volume

Adapted from: Leaf & McCauley (1996) A Work in Progress, DRL Press

Teaching Tripwires

- *Age and developmental discontinuity*
- *Communicative competence impacts social conversation and social engagement*
- *Hot topics*

Take Home Message

- What you teach is what you get
- Social conversation skills must be taught in a way that they can be learned, referencing the learning style of the student
- Begin early
- Providing opportunities for practice is critical
- Social conversation is on a continuum
- Develop social conversation skills around interests first, then relationships
- Make social conversation teaching, and the social activities selected, fun!
Understanding the Causes of Challenging Behavior in Individuals with Autism Spectrum Disorders

A Common Experience for Many: Or, Functional Behavior Assessment 101

The Rosenberg Findout

Understanding Behavioral Issues in Individuals with ASD

- ASDs are social learning disabilities. Social misunderstandings contribute significantly to behavior problems.
- Mindblindness and other problems with social cognition are implicated
- Poor executive functions contribute significantly
- Cognitive, social, and behavioral rigidity further compromise performance
- It is absolutely essential that the learning and social environments be assessed before developing any intervention
Forms and Functions of Problem Behavior

• What is problem behavior?
  – Any form of behavior that inhibits or interferes with daily functioning.
• Forms of problem behavior
  – Aggression
  – Property destruction
  – Noncompliance
  – Self-injurious behavior
  – Pica
  – Repetitive behaviors
    • Stereotypy
    • Vocal and motor tics

Basic Assumptions

• Behavior is communication
• Behavior is a function of the interactions between the person and the environment
• Intervention must address variables maintaining the behavior
• Outcomes must be evaluated functionally

Forms and Functions of Problem Behavior

• Global consequences of problem behavior
  1. Social
  2. Educational
  3. Injury
  4. Property destruction
  5. Legal ramifications/Liability
Functions of Behavioral Assessment

- **Predictive**: to provide information that predicts appropriate intervention
- **Formative**: to provide information that informs ongoing intervention planning
- **Summative**: to provide information that summarizes treatment effects

Levels of Behavioral Assessment and Intervention

- Modify the ecology of the target behavior
- Manipulate contingencies controlling the target behavior
- Teach functionally equivalent alternative behaviors to replace the target behavior
- Teach long-term behavior that addresses and satisfies the motivators of the target behavior

Setting Events and Establishing Operations

Setting events are stimuli that interact with existing discriminative stimuli to produce momentary changes in existing response-reinforcer relationships, both positive and negative. Examples include illness, fatigue, pain, changes in schedule, noise level, sleep irregularities, hunger.

Influences on Severe Behavior Problems

From: Durand (1990)
### Behavioral Assessment
- Ecological assessment
- Motivational assessment
- Reinforcer assessment
- Functional assessment and/or analysis

### Ecological Assessment
- Physical environment
- Antecedent-Behavior-Consequent (ABC) conditions
- Learning environment
- Temporal analysis

### Motivational Assessment
- **Positive Reinforcement** (social attention or material reinforcers)
- **Escape/Avoidance of Demands** (negative reinforcement)
- **Reinforcer Loss**
- **Sensory Consequences** (sensory reinforcement or arousal reduction)
- **Respondent (Classical) Conditioning**
- **Organic Factors**

### Reinforcer Assessment
- Assessment of stimulus preferences
- Reinforcers should be common to the natural environment to promote generalization
- Reinforcers must be functional
- Reinforcers should be age-appropriate
**Functional Assessment and Analysis**

Functional assessment/analysis is a process for determining which reinforcers maintain a behavior, and the stimulus conditions and setting events that set the occasion for that behavior. Three strategies are used to gather information: interviews, direct observation, and actual manipulation of variables presumed to control or influence the target behavior.

**What Do We Intend To Discover?**

- What antecedent(s) is occasioning the behavior?
- What consequence is maintaining the behavior?
- Precursors and behavioral chains
- High- and low-probability settings
- Functionally equivalent behavior
- Patterns based on *observable* behavior and events

**Functional Analysis Conditions**

- **Attention**
- **Control**
- **Toy Play**
- **Demand**

**Methods of Functional Assessment/Analysis**

- **Indirect Methods**
  - Anecdotal reports
  - Record review
  - Unstructured interviews
  - Structured interview formats such as the Motivation Assessment Scale, Functional Analysis Interview, Questionnaire About Behavioral Function (QABF), Functional Analysis Screening Tool (FAST)
Methods of Functional Assessment/Analysis

- Descriptive Analyses of Natural Conditions
  - ABC analysis
  - Scatterplots
  - Direct observation and recording with interval or time-sampling procedures

**FAST**
Perceived Antecedent Screening Tool

**Date**
Date

**Time**

**Antecedent (What Happened Before)**
Date — Time

**Behavior (Briefly Describe)**

**Consequence (What You Did)**

**Child's Response To Consequence**

---

**Date — Time**

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Antecedent (What Happened Before)</th>
<th>Behavior (Briefly Describe)</th>
<th>Consequence (What You Did)</th>
<th>Child's Response To Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Date — Time**

- **FAST** is a tool used in behavioral analysis to identify the relationship between behaviors and their antecedents.
- **Antecedent**: Any event or condition that immediately precedes the behavior.
- **Behavior**: A clear description of the behavior and its duration.
- **Consequence**: The response or reaction following the behavior.
- **Child's Response**: The child's reaction to the consequences.
Functional Behavior Assessment/Analysis

- Functional Behavior Assessment (FBA) is the process of gathering information noted above in order to guide treatment planning. It differs from a functional analysis (FA) in that the latter (FA) involves the experimental manipulation of variables or conditions.
- Advantages and disadvantages of functional analysis (FA)
  - Time consuming
  - Reinforcement of potentially dangerous problem behavior
  - Training demands
  - Experimentally confirms/disconfirms hypothesis
  - Demonstrates functional relationships
  - Controlled setting conducive to treatment analysis

Strategies for Changing Challenging Behavior in the Classroom, Home, and Community

Linking Assessment Data to Treatment Planning

Severe Challenging Behavior

Maintained by:
- Positive Reinforcement
- Negative Reinforcement
- Sensory Overload
- Sensory Underload
- Organic Factors
- Negative Social

Treatment is based on Function
(not form)
Teaching alternative, more appropriate, functional skills to replace problem behavior is the real task.

Replacement Skill Instruction

To produce enduring behavior change, we must teach students socially appropriate skills that enabled them to negotiate life's challenges.

What are Replacement Skills?

- Skills that allow the student to:
  - Meet her own needs
  - Communicate his needs
  - Negotiate the environment
  - Regulate her own actions

Why Teach Replacement Skills?

- Decrease dependency on prompts
- Expand competence to negotiate life's challenges
- Increase social appropriateness
- Replace behavior with a more appropriate alternative
Replacement Skills

Replacement skills are just like any other academic skill—they must be taught directly and systematically using a

*Model-Lead-Test-Feedback*

approach to instruction

When Teaching Replacement Skills Consider:

- How will I model the skill?
- When will I provide supported practice opportunities?
- How will I provide feedback and support?
- How will I embed prompts in the environment to help the student use the skill?

General Rules for Intervention

- **Rule 1:** Always address the function of behavior
- **Rule 2:** For every behavior you want to decrease YOU MUST have one to increase (Fair Pair Rule)
- **Rule 3:** Increase engagement in activities through skill building or reinforcement

- **Rule 4:** Behavior management strategies should be fully integrated with communication and social teaching programs
- **Rule 5:** Behavioral excesses and deficits should be evaluated first within the context of the student’s poor organizational skills, understanding of social expectations, arousal and anxiety problems, learning/information processing deficits, or breakdowns in routine, structure, or predictability
Four Components of Intervention and Treatment Planning

1. Treatment plan must teach an alternative, more functional communicative behavior to take the place of the aberrant behavior.

2. Treatment plan must use differential reinforcement procedures to increase behavior that is functionally equivalent and incompatible with the aberrant behavior.

3. Treatment plan must modify antecedent conditions, setting events, or ecological variables that may occasion the challenging behavior.

4. Consequent control procedures must be the least restrictive necessary, must have demonstrated efficacy, and must be socially valid.
From Functional Assessment to Functional Treatment Planning

FUNCTIONAL COMMUNICATION TRAINING

- The Purpose of Functional Communication Training (FCT) is to teach individuals communication behaviors as a replacement for maladaptive behavior.
- Teaching communicative behaviors that are functionally equivalent to maladaptive behaviors results in an increase in the former and a decrease in the latter.


FUNCTIONAL COMMUNICATION TRAINING: COMPONENTS

1. Define the target behavior.
2. Conduct a functional analysis to determine communicative intent.
3. Identify a functionally equivalent communicative response.
4. Identify potential reinforcers.

FUNCTIONAL COMMUNICATION TRAINING: COMPONENTS

5. Identify the communication methods for child’s response
   a. verbal
   b. gestural (sign, picture symbol)
   c. mechanical (tape recorded messages augmentative devices).
FUNCTIONAL COMMUNICATION TRAINING:
COMPONENTS

6. Teach the desired, appropriate communicative alternative in analog and real-life situations. Provide contingent functional outcomes.

7. Evaluate efficacy of procedures systematically, and make modifications as needed.

Functional Communication Training: An Example

Not now, later

If problem behavior is maintained by:
Positive Reinforcement (social attention or material reinforcers)

• Planned ignoring
• Contingent waiting/contingent access
• Time out (from the reinforcing stimulus)
• Direct instruction in, and differential reinforcement of, functionally equivalent alternative (replacement) behavior
• Differential reinforcement of communicative alternatives (Functional Communication Training)

If problem behavior is maintained by:
Escape/avoidance of demands

• Work through the task (extinction)
• Enrich the task environment with reinforcers
• Provide an alternative mode of task presentation
• Pair demand with reinforcer
• Reduce demands of the task (make task easier)
• Provide more potent reinforcers
If problem behavior is maintained by:

**Reinforcer Loss**

- Schedule frequent, predictable access to reinforcer throughout the day
- Teach child to “wait” for reinforcer
- Transition from loss of reinforcer to re-access of the reinforcer is the critical teaching consideration

If problem behavior is maintained by:

**Sensory Consequences: Arousal Reduction**

- Attenuate sensory consequences of the task, or the environment
- Direct instruction in strategies that will mitigate effects of overstimulation (relaxation training, exercise)

If problem behavior is maintained by:

**Sensory Consequences: Automatic Reinforcement**

- Substitute a more appropriate, functionally compatible, sensory reinforcer
- Allow child to earn the sensory reinforcer
- Teach alternative behaviors that will access the same sensory consequence
- Enrich the environment with materials that will provide the preferred sensory consequence

**Designing Responsive Environments:**

**Using Positive Supports**

*Seven Things You Can Do To Increase Instructional Effectiveness And Reduce Behavior Problems*
Strategies To Increase Instructional Effectiveness And Reduce Behavior Problems

1. Increase functional engagement
2. Reinforce effectively
3. Incorporate Functional Communication Training
4. Increase choice-making
5. Modify the environment
6. Maximize use of differential reinforcement
7. Use noncontingent reinforcement as appropriate

Increase Functional Engagement

- Select tasks for the client that are:
  - Interesting
  - Inherently rewarding (if possible)
  - Available frequently
  - Within the client’s capacity
  - Functional and useful

Rules for Reinforcement

- Contingency
- Consistency
- Contiguity

Functional Communication Training

- The Purpose of Functional Communication Training (FCT) is to teach individuals communication behaviors as a replacement for maladaptive behavior.
- Teaching communicative behaviors that are functionally equivalent to maladaptive behaviors results in an increase in the former and a decrease in the latter.

<table>
<thead>
<tr>
<th>Functional Communication Training</th>
<th>Choice Making</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Responses chosen based on assessment results</td>
<td>• A form of communication training</td>
</tr>
<tr>
<td>• Practice communication response when child is not engaged in challenging behavior</td>
<td></td>
</tr>
<tr>
<td>• Provide visual support for communication response (e.g., large red stop sign to use for a break)</td>
<td></td>
</tr>
<tr>
<td>• Response must be honored every time initially</td>
<td>• Choice making involves choosing between 2 <strong>FUNCTIONAL</strong> alternatives</td>
</tr>
<tr>
<td>• Waiting taught after success with initial training</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice Making</th>
<th>Changing the environment where problem behavior occurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Visual supports for choice</td>
<td>• Increase positive interactions – Make it fun, exciting, and approachable</td>
</tr>
<tr>
<td>• Limit choice options</td>
<td></td>
</tr>
<tr>
<td>• Offer choice options that you are willing to accept</td>
<td>• Remove things that lead to behavior</td>
</tr>
<tr>
<td>• With choice comes responsibility – we need to teach choice making</td>
<td></td>
</tr>
<tr>
<td>• Provide more reinforcement for choices that are beneficial to your child</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Escape – Reduce demands or make them easier</td>
</tr>
<tr>
<td></td>
<td>• Attention – provide attention more frequently</td>
</tr>
<tr>
<td></td>
<td>• Gradually build expectations when successful</td>
</tr>
</tbody>
</table>
Differential Reinforcement

• What do we reinforce?
  – Anything but the challenging behavior
  – Alternative behaviors to the challenging behavior
  – Behaviors that are incompatible with the challenging behavior
  – Behaviors that occur at high or low rates

Noncontingent Reinforcement

• Reinforcing on a schedule regardless of behavior (i.e., preferred activity break every 15 minutes)
• Why does this work?
  – Contingency between problem behavior and reinforcement is disrupted
• Considerations
  – Inadvertent reinforcement of challenging behavior

Components of a Treatment Plan that Enhance Effectiveness

• Social validity: the degree to which consumers and stakeholders view the intervention strategies, target behaviors selected, and outcomes achieved as appropriate.

• Empirical validity: whether the intervention will be beneficial to the child's eventual outcome, supporting longitudinal change and the Criterion of Ultimate Functioning (skills needed to function as independently as possible)

Treatment Effectiveness: Evaluation and Troubleshooting
<table>
<thead>
<tr>
<th>Components of a Treatment Plan that Enhance Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>• <strong>Internal validity</strong>: the degree to which behavior change was a function of the intervention</td>
</tr>
<tr>
<td>• <strong>Procedural reliability</strong>: the degree to which the intervention plan was implemented correctly</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Common Treatment Errors:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The Three Cs</em></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• <strong>Consistency</strong>: intervention was implemented inconsistently</td>
</tr>
<tr>
<td>• <strong>Contingency</strong>: consequence was not used contingently</td>
</tr>
<tr>
<td>• <strong>Contiguity</strong>: consequence was not contiguous with the target behavior (did not follow the target behavior immediately)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evaluating the Effectiveness of Decision-Making:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Process and Content Considerations</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Process Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accurate identification of the problem?</td>
</tr>
<tr>
<td>• Relevant constituencies surveyed?</td>
</tr>
<tr>
<td>• Behavior defined operationally?</td>
</tr>
<tr>
<td>• Behavioral function identified through assessment?</td>
</tr>
<tr>
<td>• Functionally equivalent, more acceptable behavior identified?</td>
</tr>
<tr>
<td>• Mitigating variables identified (esp. setting events)?</td>
</tr>
<tr>
<td>• Does the intervention plan teach the student prosocial behavior to replace the problem behavior?</td>
</tr>
<tr>
<td>• Plan reviewed and accepted by team and parents?</td>
</tr>
<tr>
<td>• Training and supervision in implementation of plan accounted for?</td>
</tr>
</tbody>
</table>
Content Considerations and the Evaluation of Treatment Outcomes

- Anecdotal observation (home-school communication logs, incident reports, etc.)
- Comparison of pre-post intervention rates
- Direct observation in naturalistic or analog settings

Ethical Considerations in Treating Severe Challenging Behavior

- Treatment plan should be designed and supervised by a professional with specific competencies in assessment and treatment of severe behavior problems.
- Treatment plan should be reviewed for technical adequacy and appropriateness by experts.
- Treatment should be conducted openly, and effects evaluated rigorously.

Safeguarding Health and Dignity During Treatment

Ethical Considerations in Treating Severe Challenging Behavior

- Informed consent by parent, client, or legal guardian is essential.
- Treatment plan should adhere to the principle of Least Invasive Intervention necessary to achieve positive outcome.
- In cases of most severe behavior (e.g., self-injury that threatens health status), treatment plan should be reviewed by a human rights committee to safeguard client’s rights.
Special Problems in Assessing and Treating Aggression and Self-Injury

- Maintaining safety of person with ASD and others is essential
- Escape/avoidance of aggression is reinforcing to staff/parents (negative reinforcement trap)
- Escape/avoidance of self-injury may (or may not) be reinforcing to person with ASD
- Functional analysis procedures may briefly increase problem behavior during assessment conditions
- If function is not addressed properly, substitution of other undesirable behavior is likely

Special Problems in Assessing and Treating Aggression and Self-Injury

- It is absolutely essential to assess function of the behavior.
- Social validity of target behavior, proposed intervention, and proposed outcomes must be determined
- Objective evaluation of outcomes is essential
- Collateral and unintended effects of treatment must be considered
- Teaching the person with ASD more adaptive and acceptable behaviors that serve the same function as the problem behavior is a necessary part of intervention

The Take Home Message:

Four Essentials for Effective Intervention

- The learner is always right
- Behavioral choreography is the essence of effective intervention with challenging behavior
- Perceptions can be misleading: rely on your knowledge of the individual with ASD and the power of your objectivity
- The only appropriate intervention is a clinically, socially, and educationally effective intervention

Thank You

Questions & Comments
Autism and Asperger Syndrome:  
From Assessment to Treatment  

Michael D. Powers, Psy.D  
May 13-14, 2010  
Lancaster, PA  

Social Teaching Curricula  

Social Stories - The New Social Story Book: Illustrated Edition  
By Carol Gray  
Published by Future Horizons Inc., 2000  
www.fhautism.com  
- Contains 100 Social Stories, designed to teach children on the autism spectrum how to handle situations they will encounter in everyday life that they may not understand. 
- Stories are told in simple language and illustrated. 
- Includes a tutorial on how to write a Social Story, so parents can create one that is designed specifically for their child. 
- Applicable across the lifespan  

Comic Strip Conversations: Illustrated Interactions that Teach Conversation Skills to Students with Autism and Related Disorders  
By Carol Gray  
Published by Future Horizons Inc., 1994  
www.fhautism.com  
- These comic strips contain stick figure drawings of people engaged in conversation, including both dialogue and thoughts. They utilize symbols to represent conversation skills, and colors to represent emotions.
- Children are taught to draw their own Comic Strip Conversations so they can show what they are thinking and feeling about their own social interactions.

- Helps children with autism recognize and identify the emotions and thoughts behind social interactions

- Recommended for higher-functioning children

Plan-Do-Review – Making the Most of Plan-Do-Review: The Teacher’s Idea Book 5

By Nancy Vogel
Published by High/Scope Press, 2001
http://www.highscope.org/
- Designed for children in preschool

- This book emphasizes the Plan-Do-Review process which strengthens initiative and self-reliance in children. It teaches children how to make plans, make changes to those plans, accomplish goals, and contemplate their actions.

- Provides guidelines for how to implement Plan-Do-Review, including strategies, suggestions, sample workshop plans, answers to frequently asked questions, and guidelines for parent involvement.

Teaching Children with Autism to Mind-Read: A Practical Guide for Teachers and Parents

By Patricia Howlin, Simon Baron-Cohen, Dr. Julie Hadwin
Published by J. Wiley & Sons, 1999
www.wiley.com/WileyCDA
- Explores the relationship of "theory of mind" deficits to other areas of children's functioning and describes existing experimental work that has attempted to enhance the skills associated with understanding others' minds.

- Includes practical guidelines for helping children with autism spectrum conditions to improve their understanding of beliefs, emotions and pretense.
• Tackles specific problematic issues including how to interpret facial expressions, how to recognize feelings of anger, sadness, fear and happiness, how feelings are affected by what happens and what is expected to happen, how to see things from another person's perspective, how to understand another person's knowledge and beliefs

• Tasks increase sequentially and child can self-teach

• Designed for special needs teachers, educational and clinical psychologists, speech and language therapists, and caretakers of children with autism spectrum conditions.

• Recommended for early learners up through 2nd/3rd grade

• Not for learners with significant impairments

Mindreading Software : Mind Reading: The Interactive Guide to Emotions, Version 1.3 and Mind Reading Emotions Library (CD-ROM, DVD-ROM)

By Simon Baron-Cohen
Published by Jessica Kingsley Publishers, 2007
http://www.jkp.com/

• Mind Reading has been designed with awareness of the needs of children and adults who may want to improve their ability to recognize emotions in others. It is a resource for parents, teachers, those involved in social skills training and people working in the dramatic arts.

• One can explore over 400 emotions, seeing and hearing each one performed by six different people.

• There are three main sections: Emotions Library, Learning Center and Games Zone. In the Emotions Library, one can study 412 different emotions organized into 24 groups. Six video clips are provided for each emotion showing close-up performances by a wide range of people (old, young, male, female). Six audio clips express the intonation of each emotion. There are definitions and stories for each emotion, a search facility, and a scrapbook where one can create and organize his or her own collections. In the Learning Center, one can improve his or her emotion recognition skills. A variety of lessons and quizzes are provided to present emotions in a systematic way and then to test recognition. The difficulty of some lessons can be adjusted to suit a wide range of ability levels. Collectible rewards are provided to
help motivate users. The Games Zone offers opportunities to have fun with emotions.

- Recommended for a wide range of ages and functional levels

Thinking About You Thinking About Me

By Michelle Garcia Winner
Published by Think Social Publishing (2nd Edition), 2007
www.socialthinking.com

- The book includes Winner's 3 Levels of Social Cognitive Perspective taking review of social cognition and related theories, the 4 Steps of Communication explained and related treatment activities, concrete strategies to help students become aware of the impact their words and actions have on other people's thoughts, emotions and actions, and sample IEP goals and benchmarks

- The Second Edition includes 140 new pages of information, including two new chapters and an updated philosophy throughout. The assessment chapter has been re-written and expanded to include a Social Thinking Dynamic Assessment Protocol®, with more detailed assessment techniques.

- Recommended for early learners up through 2nd/3rd grade

- Not for learners with significant impairments

Reaching Out, Joining In: Teaching Social Skills to Young Children with Autism

By Mary Jane Weiss, Sandra L. Harris
Published by Woodbine House, 2001
Introduces social skills programs to parents of children in preschool through early primary grades.

Based on the authors’ clinical experience using Applied Behavior Analysis (ABA), a proven educational method, to teach social skills at home and school.

This book focuses on four broad topics: play skills, the language of social skills, understanding another person's perspective, functioning in an inclusive classroom.

Helps parents work with their child's strengths to improve social skills. Following the suggestions and exercises in this book, parents can teach children to: pretend-play, use toys appropriately, know when to use conventional responses like "excuse me," tell jokes, recognize that others' feelings and thoughts are different from their own, and initiate social interaction with peers.

Included are tips for using games, modeling, rewards, role play, videos, activity schedules, and social stories to teach social skills and make the learning experience fun for parents and children. Also includes a case study of one real-life family's efforts and successes, and appendices listing resources such as books, games, and activities.

S.O.S.: Social Skills in Our Schools

By Michelle A. Dunn
Contributor Brenda Smith Myles
Published by Autism Asperger Publishing Company, 2005
www.asperger.net

Most schools do not provide social skills intervention through trained therapists to students with pervasive developmental disorders (PDD). Simply exposing children with PDD to typically developing children in school does little to develop their social skills. They do not learn appropriate social interaction by osmosis. The widely tested S.O.S. program addresses this issue head-on.

Operating on a school-wide basis, the S.O.S. program consists of four major components that come together to increase the social skills of children with PDD as well as create tolerance and fairness among typical children: Pull-out social skills lessons for children with PDD,
social skills lessons in the classroom for all children, peer mentoring and parent information.

- Recommended for higher-functioning primary school students

**The Walker Social Skills Curriculum: The ACCEPTS Program, Curriculum Guide and The Walker Social Skills Curriculum: The ACCESS Complete Program**

By Hill M. Walker  
Published by Pro-Ed, 1983  
[www.proedinc.com/customer/default.aspx](http://www.proedinc.com/customer/default.aspx)

- **ACCEPTS** is a complete curriculum for teaching classroom and peer-to-peer social skills to children with or without disabilities in Grades K through 6. The curriculum, designed for use by regular and special education teachers, cognitively teaches social skills as subject matter content. The program can be taught in one-to-one, small-group, or large-group instructional formats.

- **ACCEPTS** includes a nine-step instructional procedure based on the principles of direct instruction; scripts that teach critically important teacher-child behavioral competencies and peer-to-peer social skills; and behavioral management procedures.

- Highlighted skills:
  
  - Classroom Skills - Listening to the Teacher, When the Teacher Asks You to Do Something, Doing Your Best Work, and Following Classroom Rules
  
  - Basic Interaction Skills - Eye Contact, Using the Right Voice, Starting, Listening, Answering, Making Sense, Taking Turns, Questions, and Continuing
  
  - Getting Along Skills - Using Polite Words, Sharing, Following Rules, Assisting Others, and Touching the Right Way
  
  - Making Friends Skills - Good Grooming, Smiling, Complimenting, and Friendship Making
  
  - Coping Skills - When Someone Says No, When You Express Anger, When Someone Teases You, When Someone Tries to
Hurt You, When Someone Asks You To Do Something You Can't Do, and When Things Don't Go Right

- ACCESS is a complete curriculum for teaching effective social skills to students at middle and high school levels. The program teaches peer-to-peer skills, skills for relating to adults, and self-management skills. The ACCESS curriculum, which is designed for use by both regular and special education teachers, may be taught in one-to-one, small-group, or large-group instruction formats.

- ACCESS contains teaching scripts for 30 social skills identified by secondary teachers and students as critical for social competence; an eight-step instructional procedure; student study guide containing role-play scripts, discrimination exercises, and student report forms for contracted practice; and suggestions for grouping of students as well as motivational, behavior management, and generalization strategies.

- Highlighted skills:
  - Relating to Peers — Listening, Greeting Others, Joining In, Having Conversations, Borrowing, Offering Assistance, Complimenting, Showing a Sense of Humor, Making and Keeping Friends, Interacting with the Opposite Sex, Negotiating, Being Left Out, Handling Group Pressures, Expressing Anger, and Coping with Aggression
  - Relating to Adults — Getting an Adult’s Attention, Disagreeing with Adults, Responding to Requests, Doing Quality Work, Working Independently, Developing Good Work Habits, Following Classroom Rules, and Developing Good Study Habits
  - Relating to Yourself — Taking Pride in Your Appearance, Being Organized, Using Self-Control, Doing What You Agree To Do, Accepting the Consequences of Your Actions, Coping With Being Upset or Depressed, Feeling Good About Yourself

- Complete ACCESS Program includes one each of Curriculum Manual and Student Study Guide (1988)

- Overall, these two programs recommended for a range of students, preschool-high school
SSIS (Social Skills Improvement System) Rating Scales

By Frank M. Gresham and Stephen N. Elliott
Published by Pearson Assessments
www.pearsonassessments.com

- The SSIS (Social Skills Improvement System) Rating Scales enables targeted assessment of individuals and small groups to help evaluate social skills, problem behaviors, and academic competence. Teacher, parent and student forms help provide a comprehensive picture across school, home, and community settings.

- Designed to replace the SSRS Social Skills Rating System, this revised tool includes updated norms, improved psychometric properties, and new subscales.

- Measures:
  - Social Skills: Communication, Cooperation, Assertion, Responsibility, Empathy, Engagement, Self-Control
  - Competing Problem Behaviors: Externalizing, Bullying, Hyperactivity/Inattention, Internalizing, Autism Spectrum
  - Academic Competence: Reading Achievement, Math Achievement, Motivation to Learn

- Designed for a wide range of functioning
- Recommend for a range of students, preschool-high school

Social Skills Training for Children and Adolescents with Asperger Syndrome and Social-Communication Problems

By Jed E. Baker, Brenda Smith Myles
Published by Autism Asperger Publishing Company, 2003
www.asperger.net/

- A comprehensive social skills program. Deals with issues such as learning how long one can look at somebody without being accused of staring; how to shift topics, despite one's desire to stick with that all-consuming special interest; how to say no to peer pressure; dealing with a sensitive topic.
After brief introductory chapters on skills to target, instructional strategies, behavior management, and promoting generalization, the book describes 70 of the skills that most commonly cause difficulty for individuals with autism spectrum disorders and social-communications problems.

The presentation of each skill consists of a reproducible skill handout, as well as activity sheets listing ways teachers and parents can demonstrate, practice, and reinforce the skill in the classroom and at home.

A concluding chapter on promoting peer acceptance offers sensitivity training programs for both students of various age groups and school staff.

This is recommended for students of all ages.

Gray’s Guide to Bullying

Published in the final issue of Carol Gray’s periodical, The Jenison Autism Journal (previously titled The Morning News).
By Carol Gray
Published by Jenison Public Schools, 2004
http://www.thegraycenter.org/

- Includes all three parts and workbook
- The first article reviews some of the ways bullying has changed over the years. It also discusses why children with autism or Asperger’s tend to be targets for bullying attempts, and it dispels several myths about bullying that has inhibited our ability to control it.
- The second article presents ten specific strategies that teachers and parents can implement to bully-proof schools and neighborhoods for children with autism. Gray suggests several games that allow children to reveal information about being bullied.
- The last article provides helpful tips regarding what children can say and do in the moment of a bullying attempt.
- Recommended for students who are at risk for social victimization
Navigating the Social World: A Curriculum for Individuals with Asperger’s Syndrome, High Functioning Autism, and Related Disorders

By Jeanette L. McAfee
Published by Future Horizons Inc., 2002
www.fhautism.com/

- Addresses the most urgent problems facing those with Asperger’s Syndrome, high-functioning autism, and related disorders.

- Section One helps the student recognize, label, and express different emotions, as well as monitor and prevent stress. Section Two covers communication and social skills, including conversations and manners. Section Three delves into abstract thinking skills, and Section Four covers behavioral issues and possible problems.

- Offers a definitive program with forms, exercises, and guides for the student. Tasks are broken down into small steps, repeated until they are mastered, then generalized.

- Presents significant educational guidance and supportive assistance to caregivers and teachers.

- Recommended for students who are at risk for social victimization