Overview of Evidence-based Social Communication Practices in Autism Spectrum Disorder

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Learning Objectives

• Increase understanding of
  – how social communication is defined.
  – the social communication impairments seen in autism spectrum disorder (ASD).
  – best practices in assessing and treating social communication impairments in ASD.

What is Social Communication?
### Social Communication

- Involves multiple, complex nonverbal and verbal behaviors including......
  - Language & Communication
    - Receptive, Expressive, Speech
  - Social Skills
    - Basic, Relationship, Social
      Understanding/Cognition, and Social Behavior Regulation.
  - Social Competence
    - Use of appropriate language and social skills in context.

### Social Communication & ASD

- Social communication skills vary by age and context.
  - Social ‘rules’ or expectations typically align with the age of the individual and the specific context he/she is participating in.
    - Social competence.

### Social Communication

- Social communication skills by age.
  - Early Childhood
    - Eye contact, compliance, observing others, identifying familiar people, imitating.
  - Childhood
    - Joining in a group, turn-taking, brief reciprocal exchange, pretend play, coping skills.
  - Adolescents/Adulthood
    - Topic maintenance, asking a friend out/dating, self-advocacy skills, managing feelings such as anger, coping, and problem solving.
Social Communication

Implications

- Social communication impairments can have a negative impact on an individual’s well-being and quality of life.
  - Bullying
  - Social isolation and/or rejection
  - Emotional problems
  - Legal problems
  - Less than expected performance outcomes
    - Social competence issue

Social Communication

Impairments in ASD
Impairments

• **Nonverbal** communicative behaviors to regulate social interaction.
  – Poorly integrated nonverbal and verbal communicative behavior.
  – Atypical eye contact and use of gestures.
  – Reduced ability to understand the body language and gestures of others.
  – Limited, restricted facial expression and lack of nonverbal communicative behaviors.

Impairments

• Social-emotional *reciprocity*.
  • Failure to initiate and/or respond to social interaction.
  • Impaired conversational abilities.
  • Reduced sharing of interests, emotions and emotional expressions (affect) with others.

Impairments

• Developing, maintaining, and understanding *relationships*.
  • Difficulty adjusting behavior for different social situations.
  • Difficulties in imaginative play.
  • Difficulty making friends or lack of interest in forming peer relationships.
Associated Impairments

• Language & Speech Impairments.
  – Receptive understanding.
  – Expressive abilities.
  – Communication forms.
• Atypical Speech.
  – Echolalia
  – Prosody abnormalities
  – Pronoun reversal
  – Syntax and phonology

Evidence-based Practice

Overview

Assessment & Evaluation

• Language & Communication
• Social skills
• Social Competence
• Context(s)
• Monitor Progress/Response to intervention

Intervention & Generalization

• Structured/Adult Directed Methods
• Naturalistic/Peer Mediated Methods
• Narrative/Story-based Methods
• Combination Methods

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Overview

• Assessment: Ecological Assessment
  – Describes the individual’s social communication levels and contextual demands=intervention targets.

• Intervention
  – Develops skills for use in various contexts.

• Generalization of Skills
  – Specific supports to assist in applying skills in context.

• Monitoring Progress
  – Periodic assessment to determine if the individual is responding to the intervention.

Assessment

Ecological Assessment

Ecological Assessment

• Evaluates the individual within context to determine what the social demands are and what skills the individual needs to be successful in that context.
• Identifies what areas are in need of intervention.
• Areas to assess
  – Language & Communication*
  – Social Skills
  – Social Competence
Methods of Assessment

<table>
<thead>
<tr>
<th>Method</th>
<th>Assessment Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norm-Referenced</td>
<td>Language &amp; Communication; Social Skills</td>
</tr>
<tr>
<td>Semi-Structured Interview</td>
<td>Social Competence</td>
</tr>
<tr>
<td>FBA</td>
<td>Language &amp; Communication, Social Skills, Social Competence</td>
</tr>
<tr>
<td>Observation</td>
<td>Language &amp; Communication, Social Skills, Social Competence</td>
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<tr>
<td>Rating Scales</td>
<td>Social Skills, Social Competence</td>
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<tr>
<td>Curriculum-Based</td>
<td>Language, Social Skills</td>
</tr>
<tr>
<td>Performance/Criterion-based</td>
<td>Social Skills, Social Competence</td>
</tr>
</tbody>
</table>

Assessment Considerations

- Select measures that are appropriate for the individual you are working with.
- You should consider.....
  - Age
  - Developmental level
  - Language level
  - Communication level
  - ASD symptoms
  - Context(s)

Intervention
Linking Assessment to Intervention

Ecological Assessment → Individual Context ➔ Intervention Plan

Intervention

- Intervention is typically **comprehensive**.
- Involves **multiple steps**.

  - Comprehensive skills training
    - Language levels
    - Communication form
    - Basic Social Skills
    - Social Understanding
    - Perspective Taking

  - Multiple steps
    - Teach skill
    - Apply skill
    - Evaluate response
    - Repeat for additional skills

These steps will often require the use of multiple strategies.

Intervention Objectives

- Goal: improve social competence.
  - Increase attention to & understanding of social communication behavior in self & others.
  - Teach language skills needed for social communication*.
  - Teach social skills.

*These are pre-requisite skills.
Intervention Methods

• There are a wide variety of evidence-based methods.
• Several broad areas:
  – Structured/Adult Directed
  – Naturalistic/Peer Mediated
  – Story-based/Narratives
  – Combination Approaches
• Assessment data will assist with selecting the most appropriate method/methods.

Structured Methods

• Discrete Trial Teaching (DTT).
  – Typically used for teaching vocabulary/language needed for social communication*.
  – Target behavior is objectively defined.
  – Specific error correction methods are used.
  – Multiple learning trials build fluency.
  – High rates of reinforcement to maximize learning.

Structured Methods

• The DTT sequence has 5 steps...
  – Gain the individual’s attention.
  – Deliver the instruction.
  – Wait a few seconds (3 to 5) for a response.
  – Error Correct if an error is made OR Reinforce if the response was correct.
  – Record performance data.
• This sequence is repeated for multiple trials (10 to 20 often) for maximizing learning and fluency in performance.
Structured Methods

• An example of using DTT in social skills intervention…..
  – Skill: Greeting Someone
    • Target Response: ‘Hi’
      – Instructor: “Say, ‘hi’”
      – Jim: ‘hi’
      – Instructor: ‘You said ‘hi’ (and delivers reinforcement).
        » Records data.
        » Repeats learning trial.

Structured Methods

• Direct Instruction
  – Typically used to teach social skills.
  – Explicitly instructs the individual on the skill and when and how to use it.
  – Five steps…..
    • Individual is instructed on the skill.
    • The skill is modeled by the instructor.
    • The individual practices the skill.
    • Error correction and reinforcement are provided to ensure learning.
    • Practice exercises assigned for generalization.
  – Can include social scripts to promote generalization of skills.

Structured Methods

• Video modeling involves watching a videotape of a model (peer/adult) demonstrating a social skill or the individual with ASD demonstrating the skill (with any prompts removed).
  – Used in combination with Direct Instruction, except the video model replaces the live model.
  – Can be used to teach simple as well as more complex social behaviors.
  – Can be used to assist the individual to discriminate between a correct application of a skill and an incorrect application of a skill.
Naturalistic/Peer Mediated Methods

- Capitalize upon naturally occurring opportunities within context to prompt social communication.
- Methods include…
  - Natural Language Paradigm or Pivotal Response Training.
  - Peer Modeling to create opportunities for social communication in the natural context.
    * Peers are trained to provide social skills instruction and coaching for generalization.

Naturalistic/Peer Mediated Methods

- Peer mediated methods involve the use of peers as trainers and/or coaches.
  - Can be individual peers or network of peers.
  - This method can be used for initial teaching and/or for generalization of skills to the natural environment through peer coaches or a formalized Peer Network.
  - Assists with the development of social competence.

Naturalistic/Peer Mediated Methods

- Peers are trained on how to ‘teach’ social skills to an individual with ASD.
  - Peer(s) first observe the individual to familiarize him/herself on the interests and activities of the individual.
  - The direct instruction method is used to train the peer(s) to...
    * Gain individual attention.
    * Instruct on the skill.
    * Model the skill.
    * Coach the individual through the skill.
    * Provide reinforcement for correct use of skill.
Naturalistic/Peer Mediated Methods

• Peers are trained to facilitate the use of social skills during natural interactions (coach).
  – Through adult coaching, peers learn to:
    • establish eye contact and joint attention/joint activity.
    • comment on the individual’s actions.
    • request information or an action from the individual.
    • respond to initiations and extend those to another action that sets the occasion for maintaining the interaction.
    • organize the interaction during various social situations.
  – Adult assistance is faded as the peer(s) develop the facilitation skills.

Naturalistic/Peer Mediated Methods

• Peer Social Networks can be established.
  – Identifying and training a group of volunteer students who would like to learn how to be a social skills coach.
  – Identifying which students will provide support during what part of the day.
  – Informing the student with ASD that there is a peer network set up to assist him/her with using his/her social skills.

Story-based/Narrative Methods

• Describe social context and skills needed for that context.
• Teaches social understanding/cognition.
• May teach perspective taking.
• Methods:
  – Social Stories™
  – Social Skill Stories
Story-based/Narrative Methods

• Social Stories™
  – Increase understanding of social situations.
  • Provides description of a specific social situation: setting, and relevant social cues.
  • Provides information on the perspective of others involved in the situation.
  • Provides guidance on the social skills needed for that situation.

Story-based/Narrative Methods

• Uses the following type of sentences:
  – Descriptive: factual statement describing the situation and the individual’s involved.
  – Perspective: reactions, feelings, and responses of others involved in the situation.
  – Directive: description of the skill that will be needed and when it should be applied.
  – Cooperative: description of what other people’s social behavior will be.
  – Affirmative: express the values or opinions associated with the situation.
  – Control: sentences written by the individual that can assist with using appropriate social behavior.

Example

Having a Conversation

Having a conversation can be fun. I like playing with my friends and being with my family. They like talking to me about things they have done and places they have gone. Sometimes I like to hear about their experiences. My friends and family like it when I ask them about their experiences. I will try to ask my friends and family about their experiences. When I do I will

Make eye contact
Ask them a question
Listen to their answer

When I have learned more about their experiences I will make a comment like "That sounds like it was fun!" or "You must have been scared of that" or some other similar statement that shows my friends and family that I understand their experiences. I will learn a lot by having a conversation with my friends and family.
Story-based/Narrative Methods

• Social Scripts
  – Written (or picture/word format) script that provides the individual with the communication he/she will need for a specific social situation.
  – Comic Strip Conversations is a variation of this method and incorporates the use of simple drawings.
• Scripts are faded as the individual learns the specific communication needed for the situation.

Example Script

**Script 1:**
Caroline: “Hey Vin, how’s it going?”
Vin: “Fine, busy with homework”
Caroline: “You want some help?”

**Script 2:**
Vin: “How was your birthday? What did you do?”
Mark: “Good, we went to Six Flags. It was fun!”

Comic Strip Conversation example:
Combination Methods

• Comprehensive Applied Behavior Analysis (ABA) program models.
  – Multiple methods are used to teach language, communication, and social skills.
  – Specific programming for generalization to promote social competence.

• Verbal Behavior training.
  – Applies ABA methods to teach language and functional communication.

Combination Methods

• Social Communication Emotional Regulation Transactional Support (SCERTS).
  – Multidisciplinary approach that focuses on building competence in social communication and emotional regulation within a family context to support social interaction.

• Cognitive Behavioral Therapy (emerging evidence)
  – Focuses on improving social skills and social competence.
  – May help with decreasing social anxiety.

Considerations

• Many individuals will require supports to assist with generalizing skills across contexts including…
  – Visual supports of social skill steps.
  – Prompt and reinforce procedures.
  – Activity Schedules with embedded social opportunities (Joint Action Routines).
  – Guidelines for using a social skill during a particular social situation (e.g., job interview).
  – Contingency management OR rule-based supports for reinforcing the target skill when used in context.
General Overview of Two Common Training Sequences

Teaching Children and/or Individuals with Intellectual and/or Language Impairment

*Format & Training Sequence*

**Format**
- Comprehensive skills development.
  - Language & Communication* skills
  - Social Skills (imitation & play included)
- Multiple instructional methods
  - Discrete trial and direct instruction for skills instruction.
  - Training typically occurs in sequence.
  - Caregiver training and use of various naturalistic/peer methods are applied for generalization of skills to multiple contexts.
Training Sequence

- **Language**
  - Vocabulary
  - Receptive: respond to name, eye contact, 1-step direction
  - Expressive: requesting
  - Attention to task

- **Imitation Play**
  - Oral-motor imitation
  - Non-verbal gross motor imitation: single, sequences
  - Imitate action with object (toy): single, sequences
  - Peer Play: gross motor, single & multiple steps, play scripts (Play Activity Schedule)

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### Training Sequence

<table>
<thead>
<tr>
<th>Social Skills</th>
<th>Beginning</th>
<th>Progressing</th>
<th>Advanced</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ask question for information</strong></td>
<td>Identify attributes</td>
<td>Labeling &amp; commenting</td>
<td>Finding objects placed out of sight</td>
</tr>
<tr>
<td><strong>Greeting</strong></td>
<td>Answer social questions</td>
<td>Request item/activity from peer</td>
<td>Reciprocate information (simple)</td>
</tr>
<tr>
<td><strong>Turn taking in reciprocal exchange (expanded)</strong></td>
<td>Play skills with peer</td>
<td>Identify emotions in self and other</td>
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<tr>
<td><strong>Identify emotions in self and other</strong></td>
<td>Respond to social initiation</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Respond to social initiation</strong></td>
<td>Ask social questions with scripts</td>
<td></td>
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<tr>
<td><strong>Ask social questions with scripts</strong></td>
<td>Conversation with scripts</td>
<td></td>
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<tr>
<td><strong>Conversation with scripts</strong></td>
<td>Appropriate responses to peer play initiation</td>
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</tr>
</tbody>
</table>

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### Teaching Older Individuals and/or Those without Intellectual and/or Language Impairments

*Format & Training Sequence*
Format

• More variable than for intellectually or language impaired individuals.
  – Comprehensive
  – Targeted
• Assessment data will assist in determining the format.

Training Sequence

Social Skills
  • Basic interaction skills
  • Friendship making skills

Social Understanding/Cognition
  • Relationship skills
  • Perspective taking

Social Competence
  • Social problem-solving
  • Coping skills (anger management, stress management)
  • Self-management: monitor, instruct, and reinforce

Resources

• Rochester Regional Center for Autism Spectrum Disorder (RRCASD).
  – DVD on Teaching Social Skills Using Direct Instruction available on the website.
  – Contact information:
    • Website: www.golisano.urmc.edu/rrcasd-nyautism
    • E-mail: rrcasd@urmc.rochester.edu
    • Tele: 1-855-508-8485
• Autism Speaks: website:
  www.autismspeaks.org
  • This site contains various resources for social communication, social skills and other topics.
Resources

- To learn more about best-practices in social communication for ASD visit the American Speech-Language Hearing Association’s (ASHA) website and review their guidelines.

Resources

- Select language & communication assessment measures.
  - Preschool Language Scale-4th (Zimmerman et al, 2002)
  - Reynell Developmental Language Scales-III (Edwards et al., 1999)
  - Sequenced Inventory of Communicative Development-Revised (Hedrick et al., 1984)
  - Test of Early Language Development (Hresko et al., 1999)

Resources

- Select language & communication assessment measures.
  - Clinical Evaluation of Language Fundamentals-Preschool (Wiig, Semel, & Secord, 2004)
  - Peabody Picture Vocabulary Test-4th (Dunn & Dunn, 2007)
  - MacArthur-Bates Communicative Development Inventories (3rd) (Fenson et al., 2007)
Resources

- Select language & communication assessment measures.
  - Test of Language Development-Primary: 3rd Edition (Newcomer & Hammill, 1997)
  - Test of Language Competence (Wiig & Secord, 1989)
  - Children's Communication Checklist-2 (Bishop, 2006)
  - Comprehensive Assessment of Spoken Language (Carrow-Woolfolk, 1999)

Resources

- Select language & communication assessment measures.
  - Pragmatic Rating Scale (Landa et al., 1992)
  - Test of Pragmatic Language (Phelps-Terasaki & Phelps-Gunn, 1992)
  - Curriculum-based measures (see next slide for some examples).

Resources

- For a wide variety of social skills training resources visit the National Autism Resources website.
- The Skillstreaming series available at:
  - http://www.skillstreaming.com/
- The PEERS curriculum available at:
Resources

- PECS products are available at
  - http://www.pecsproducts.com/catalog/
- For information about developing and using narratives such as Social Stories™ please search the term on any search engine as there are a wide variety of resources available.
- For information about Comic Strip Conversations and sample templates, visit the following website:

Question & Answer

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