Children with Autism: Teaching Functional Communication and Reducing Problem Behaviors

11/6/08
Kimberly D. Bellipanni, Ph.D., Will’s Way, LLC
Behavioral Specialist, the University of Southern MS

Speakers

- Kimberly D. Bellipanni, Ph.D.
  - Behavioral Specialist, The Children’s Center for Communication and Development
  - Co-Founder/Co-Director, Will’s Way, LLC
  - Internship/Postdoctoral Training at the Johns Hopkins School of Medicine
  - Doctoral training from the USM School Psychology Program

Class Overview

- Defining Autism Spectrum Disorders
  - Autism Spectrum Disorders & Communication Delays
  - Statistics & Other important information
  - Case Examples
- Functional Communication Teaching Strategies and Topics
- Strategies to Reduce Problem Behaviors
- Video Examples as time allows
Autism Spectrum Disorders

Autism...what is it?

- Autism is a complex neurobiological disorder
- Typically lasts throughout a person’s lifetime.
- Part of a group of disorders known as autism spectrum disorders (ASD).
- Today, 1 in 150 individuals is diagnosed with autism - more prevalent than pediatric cancer, diabetes, and AIDS combined
  - Occurs across all racial, ethnic, and social groups & is 4 times more likely to strike boys than girls.
- Autism impairs a person’s ability to communicate and relate to others.
  - Associated with rigid routines and repetitive behaviors including obsessively arranging objects or following very specific routines.
  - Symptoms can range from very mild to quite severe.

What it’s not..

- There is no definitive, scientific cure for Autism at this time.
- However, there are a variety of medical and therapeutic treatment approaches that will improve the symptoms related to ASD
- Our goals include to increase appropriate communication and socialization while reducing maladaptive behaviors
- Important people included in the treatment of Autism
  - Developmental Pediatricians, Speech & Language Therapists, Special Educators, OT, PT, & BEHAVIORAL THERAPISTS!
Where do vaccines fit in?

- At this time, there are no scientific studies that tell us vaccines are causing Autism. In fact, the most recent studies have said there is no relationship at all.
- What are researchers looking at now?
  - Do some children have a genetic predisposition for Autism?
  - How do vaccines effect those populations?
  - What about other toxins in the environment?
- Preservative thimerosal: this has been removed from vaccines...despite research that has no perfect link
- However, this area continues to be looked at, likely b/c there are still no answers to this day about what's causing a disorder that appears to be increasing steadily.

Vaccines cont...

- According to organizations:
  - the Centers for Disease Control and Prevention,
  - the American Academy of Pediatrics and
  - the World Health Organization,
- there’s just not enough evidence to support the contention that vaccines – specifically thimerosal-containing vaccines – cause children to develop autism.
- Recent studies suggest a strong genetic basis for autism – (up to 20 sets of genes)
- Genetics alone, however, can’t account for all the cases, and so scientists are also looking into possible environmental origins

What we do know....

- Currently, there are no effective means to prevent autism, no fully effective treatments, and no cure.
- Research indicates early intervention in an appropriate educational setting for at least two years during the preschool years can result in significant improvements for many young children with autism spectrum disorders.
- Early and appropriate diagnosis is what leads to those services. We’re doing this at 6 months now!
Important to note

- Parents shouldn’t second guess themselves (ask your Pediatrician, and if still concerned, ask again…)
- Early intervention is critical
- Autism is a SPECTRUM of disorders…not just one disorder.
- Within that spectrum we see a lot of variability and a lot of different behaviors across patients.
- Many important clinicians involved in the treatment of Autism Spectrum Disorders

Autism Spectrum Disorders

- DSM-IV TR Criteria (Diagnostic and Statistical Manual of Mental Disorders Text Revision)
  - Pervasive Developmental Disorder is listed as “category”
  - Symptoms present prior to age 3
  - Qualitative impairments in 3 areas:
    - Communication
    - Socialization
    - Repetitive or Stereotypic Behaviors
  - Pervasive Developmental Disorder:
    - Autism Spectrum Disorder
    - Asperger’s Syndrome
    - Rett’s Disorder
    - Childhood Disintegrative Disorder

Rett’s and CDD

<table>
<thead>
<tr>
<th>Rett’s Disorder</th>
<th>CDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Typical development through the 1st 5 months</td>
<td>- Typical development for at least the first 2 years after birth</td>
</tr>
<tr>
<td>- Deceleration of head growth</td>
<td>- Loss of skills in expressive or receptive language, social skills or adaptive behavior, bowel or bladder control, play, and/or motor skills</td>
</tr>
<tr>
<td>- Loss of purposeful hand skills</td>
<td>- Impairment in social interaction</td>
</tr>
<tr>
<td>- Development of stereotyped hand movements</td>
<td>- Impairments in communication</td>
</tr>
<tr>
<td>- Loss of social engagement</td>
<td>- Restricted, repetitive, and stereotyped patterns of behavior, interests, and activities</td>
</tr>
<tr>
<td>- Appearance of poorly coordinated gait or trunk movements</td>
<td></td>
</tr>
<tr>
<td>- Severely impaired expressive and receptive language development</td>
<td></td>
</tr>
</tbody>
</table>
Autism & Asperger’s Disorder

<table>
<thead>
<tr>
<th>Autism</th>
<th>Asperger’s Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onset prior to age 3 years</td>
<td>Deficits in social interaction</td>
</tr>
<tr>
<td>Impairment in social interaction</td>
<td>Repetitive and stereotyped patterns of behavior</td>
</tr>
<tr>
<td>Impairments in communication</td>
<td>Impairment in social, occupational, or other important areas of functioning.</td>
</tr>
<tr>
<td>Repetitive and stereotyped patterns of behavior</td>
<td>No general delay in language</td>
</tr>
<tr>
<td></td>
<td>No delays in cognitive skills, self-help skills, adaptive behavior, and curiosity about the environment</td>
</tr>
</tbody>
</table>

Autism vs. Asperger’s: What is the difference?

- Children diagnosed with Autism have impairments in 3 areas:
  - Social interaction, communication, and stereotyped behavior
- Children diagnosed with Asperger’s Disorder have impairments in 2 areas:
  - Social interaction and stereotyped behavior
  - No significant language or cognitive delay

Other Communication Problems & Language Delays

- Children may develop language skills slowly or not at all.
- In some children, language skills may develop then gradually disappear.
- Some children may use verbal language but it is not always “functional” or linked with appropriate situations.
- Children with limited verbal communication may rely on gestures, pointing or even tantrums to communicate wants and needs.
- Some children engage in Echolalia or repeating words/phrases that they have just heard.
- Lack of varied, spontaneous make believe play or social imitative play appropriate to developmental level
What about Problem Behaviors?
Observable, Social, & Ritualistic

Problem Behaviors & Autism
- Children with communication difficulties often have some other behavioral problems that must be addressed.
- These behaviors are often seen across multiple environments, including home and community (especially educational environments).
- Children with Autism may present with the following:
  - Aggression
  - Disruption (throwing, screaming, destructive behaviors)
  - Feeding difficulties
  - Sleep Problems
  - Tantrums & Noncompliance
  - Social Skills Deficit
  - Rigid & Ritualistic Behaviors

Socialization Problems
- May show little interest in playing with others or making friends.
- They can be less responsive to nonverbal cues, body language or social cues (e.g., standing too close, eye contact, when to listen, when a conversation is over or not going well, etc.).
- They may have awkward eye contact with others.
- They can engage in inappropriate laughing or speaking out of turn.
- They often have trouble deviating from their own "special interest."
- Lack of social or emotional reciprocity.
Stereotypic and Ritualistic Problems

- Restricted interest in specific topics or objects
- May obsess over “sameness” and adherence to routines
- May engage in disruptive or aggressive behaviors when “preferred” activities are denied or delayed.
- Stereotyped or repetitive motor mannerisms (hand or finger flapping or twisting, or complex whole body movements)
- Persistent preoccupation with parts of objects
- “Thomas the Train” phenomenon

Whys & How’s to treating problem Behaviors Associated with ASD

Functions

- Treatment examples
- Sample Cases

Functions of Problem Behaviors

- Problem behaviors are usually related to 4 main conditions (variants of the conditions may also occur)
  - Escape Function: “I Prefer Not to…”
  - Attention Function: “Hey, look at me!”
  - Tangible Function: “I want my toy!”
  - Alone (Sensory) Function: “I love my musical and light-up toy.”

- Children with communication difficulties typically can’t tell us the function of the behavior.
- However, but they can engage in a behavior that typically gets us what we need!
Methods for Handling Behavioral Problems Associated with ASD

- There are tons of evidence-based studies to suggest behavioral techniques to treat problem behaviors.
  - Antecedent Behaviors: Praise, Time-In, Instruction Delivery Techniques
  - Consequences: Punishments such as Time-Out, etc.
- Increasing appropriate and functional communication is also very much a method for reducing problem behaviors. A variety of therapists/educators help with this also.

Treatment Options

- Behavior Modification
- Communication Skills
- Social Skills Training

Functional Communication

“Functional” is simply referring to the necessary skills for day to day living
- The reason I say, “I am hungry” is b/c I want something to eat.
  - Requests – gain access to something
  - Comments – gain a social reaction
- Communication skills can include – gesture, picture/symbol, sign language, writing, speech
Functional Communication

Therefore, functional communication involves an appropriate communication strategy:
- Not crying, screaming
- Not kicking, hitting, etc.
- Involving the use of appropriate methods of communication:
  - Picture exchange
  - Signs
  - Using our Words!!!
- The best part...We can teach this!

Functional Communication

- Provides the child an alternative way to communicate a specific need or desire:
  - I want ________  I don’t want ________  I need help
  - I need a break  I am hungry
- Often times FCT is used to replace unwanted problem behaviors:
  - Aggression
  - Tantrums
  - Self-Injury
- Does not limit verbal communication or impair acquisition of learning verbal communication
- Training often focuses on the use of verbal phrases.

Functional Communication

- There are many methods for teaching a child to communicate functionally:
  - Verbally
  - Gestures
  - Sign Language
  - Pictures/Symbols
- There is no one right way to teach your child how to communicate:
  - It is best determined by your specific goals and your child’s preferences (which method does he/she use more often when given a choice?)
References

## Behavior Modification
Interventions designed to improve behavior

## Behavioral Treatments
- Structure
  - Visual Schedules
  - Timers
- Reinforcement Charts
- Compliance Training
- Time Out
- Count and Mand
- Three Step Guided Compliance

### Visual Prompts (My first treatment session)
- Picture schedules
- Visual agendas (color cards, daily calendar, etc.)
- Timers
  - Useful for activity structure and to keep you on time.
- Transitions
- Structure of Activities/Day
  - Try to be as consistent as possible
  - It is important to teach "disruptions" when a true disruption is not necessary. Incorporate brief disruptions during certain days to help students adjust to unexpected changes. Actual emergencies, drills, etc. are not the best time to teach a difficult skill.
Behavioral Treatments

- **Reinforcement**
  - Reinforce appropriate behaviors.
  - What do you want the person to be doing?
  - If and when they display that behavior, reinforce it!
  - Use both immediate and long term reinforcers

- **Transitions**
  - How to transition appropriately should be seen as a "behavior" just like communication or aggression.
  - It is necessary to set up scenarios to teach successful transitions.
  - "Practice" transitioning.
  - Give ample warnings using verbal and visual cues along with audible timers.

Compliance Training

- **Eye Contact/Attention**
  - "John, look at me."

- **Proximity**
  - Try to be within 3 to 5 feet of the child. This reduces yelling and makes establishing eye contact possible.

- **Tone of Voice**
  - Use a neutral toned voice and do not yell.

- **Descriptive words**
  - Use adjectives and be very specific about what you want
  - Say, "Hand me the red truck"
  - Not, "Give me that."

Compliance Training

- **Simple, one step directions**
  - This can be modified based on the child’s abilities
  - If you notice compliance decreasing, take a step backward and reduce the steps in the directions.

- **Use Directives (statements) versus Questions**
  - "John, pick up the crayons." Not, "John, will you pick up the crayons?"
  - If it is not an option (getting dressed, cleaning up the toys, brushing teeth, etc) DON'T ask them to do it, tell them.

- **Wait at least 5-10 sec for compliance**
  - This is tough but we ALL need a few moments to process what has been said and take actions to complete the task.

- **Praise for compliance.**
  - "Great job putting the blocks away," or "Great job sitting in your desk."
  - "You were awesome today during our fire drill."
  - "You are doing such a great job transitioning today. I am so proud of you!"
Importance of Praise

- Research suggests that for every negative or re-directive statement given, you should give a minimum of 4 positive, reinforcing statements.
- 4:1 Ratio of Positives to Negatives
- How many of you can say that you practice this both in your homes and in your classrooms?
- Difficult to do, but extremely important.
- How many of you would work in an environment where your boss or principal gave you nothing but negative feedback?
- I am not suggesting that you do away with negative comments, reprimands, or redirections.
- What I am suggesting is that you spend more effort telling the child what he or she is doing correctly rather than what he is doing wrong.

“Count and Mand” (Carbone)

- This procedure is often used to replace whining, crying, or screaming.
- It teaches the child to communicate more appropriately.
- Count and Mand should be used because the child is trying to get something from you... AND you’re willing to allow him to have it.
- DO NOT use this procedure when he/she is tantruming for something you cannot or do not want to give him.
  - For example, if he/she is crying to go outside during lunchtime, naptime or during the night – don’t use this procedure.
  - If he/she is crying because they want a dangerous item – don’t use this procedure.
- If they are crying/whining for something that they CAN NOT have, you will need to use another procedure (timeout, redirection, planned ignoring, etc.).

“Count and Mand” (Carbone)

- Step 1. Tell him to be “quiet” and hold up your hand with fingers down
- Step 2. You should look away at this time, to avoid providing her with attention.
- Step 3. Once a single second of quiet occurs, you can start counting “1, 2, 3” and putting a finger up, and can direct your visual attention towards him.
- Step 4. If the crying, whining begins again, look away, repeat the directive “quiet”.
- Step 5. When she quiets again, you can look at her and start counting again from “1”.
Count and Mand

- **Step 6.** If the child runs off, stop the count and go about your business, don’t follow him.
- **Step 7.** When you reach the count of “5” without whining/crying, you can then immediately help him and gently prompt him to try to communicate appropriately.
  - Encouraging the student to verbalize the request
  - Encouraging the student to use visual prompts or sign language
- **Step 8.** If you can provide the desired item/activity at this time, please do.
- **Step 9.** Increase the count to 10 as she becomes use to the procedure.

Other Important Interventions

- **Guided Compliance:**
  - Exactly what it sounds like...we physically guide the person in participating in the activity that they are refusing to engage in.
  - Easier for activities such as picking up toys, following physical directions---doesn’t really work with having students engage in verbal communication or attending visually

Other interventions

- Spill The Beans
- Time-Out
- Increased Reinforcement, etc.
- Elopement and other Safety Skills Training
- Feeding Interventions
- Sleeping Interventions
- Desensitization for Anxiety provoking situations
  - Dentists, Doctors, Medical Procedures
Social Skills Training

- “Social Skills” is a broad term referring to acts of communication and interpersonal skills between individuals.
- Everyone has deficits in social skills.
  - Do you know someone who has poor conversation skills (never listening, never giving you a turn)?
  - Poor hygiene?
  - Trouble making and meeting new people?
  - Talk too much?
  - Don’t talk enough?
  - Not tactful?

Basic Social Skills

- Following Instructions
- Accepting Criticism
- Accepting the answer “No”
- Staying Calm
- Disagreeing with others
- Asking for help
- Asking Permission
- Getting along with others
- Ignoring Distractions
- Apologizing
- Starting a Conversation
- Giving/Accepting Compliments
- Listening to others
- Being Honest
- Saying Thank You
- Offering to help an adult
- Asking a question
- Introducing yourself
Case Study 1: Billy

5 year-old Down Syndrome
Referred for Classroom Escape Behaviors

- Refusing to look and/or participate in classroom activities such as circle time, repeating words, etc.
- Head placed on his knee or any surrounding object (table, the assistant next to him)
- Problems occurred primarily during circle time and independent seatwork
- Behavior was occurring consistently daily, almost all day
- Interventions in the trial process: Visual Schedule, TO (avoided), however Guided Compliance, Spill the Beans Intervention Used, Reinforcer Assessment also conducted.

Case 2: Snoopy

Baltimore, Rural Setting—Very Rural,
Problems Across Home and Community
Snoopy

- 2 year-old male
- Born with a brain abnormality (MRIs, Doctors told us this)
- Diagnosed with an Autism Spectrum Disorder
- Grandparents were the caregivers
- Problem behaviors: Climbing, very limited communication, anxiety related to transitions and changes in routine, problem behaviors across home & community—but not school
- Interventions: Visual Schedule, Small Step (Sitting in seat for 5 sec-to 30 min); Increasing demands during sits, managing disruptive behaviors (e.g., climbing); eventually generalizing to other settings.

Conclusions and Questions????

Presenters

- Kimberly D. Bellipanni, Ph.D.
  - Wills Way, LLC: A Behavioral Pediatric Psychology Practice; Hattiesburg, MS
  - Behavioral Specialist, The Children’s Center for Communication & Development, USM
  - 601-467-0299; 601-266-5222
  - willswaybehavioral@gmail.com
  - bellipanni@kennedykrieger.org