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Introduction to Autism

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Today’s objectives

- Identify two core features of autism spectrum disorders

- Describe the impact of the features of autism on daily living skills

- Identify tools for screening and evaluating individuals for autism spectrum disorders
What is Autism?

- Spectrum disorder
- Brain – based developmental disorder
- Life long
- Evident during first three years of life
- Symptoms range from mild to severe

Autism Prevalence

- 1 in 6 children have a developmental disability (ranging from speech impairment to serious developmental disabilities)
- 1 in 68 children have a diagnosis of autism (In 2007, 1 in 150 children; 172% increase in 1990’s)
- Distributed throughout the world in all races, nationalities, and social classes
- More common than pediatric cancer, diabetes, and AIDS combined.

(Center for Disease Control and Prevention, 2016)
Identified Prevalence of Autism Spectrum Disorder
ADDM Network 2000 – 2012
Combining Data from All Sites

<table>
<thead>
<tr>
<th>Surveillance Year</th>
<th>Birth Year</th>
<th>Number of ADDM Sites Reporting</th>
<th>Prevalence per 1,000 Children (Rings)</th>
<th>This is about 1 in X children...</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>1992</td>
<td>6</td>
<td>6.7 (4.1 - 9.9)</td>
<td>1 in 150</td>
</tr>
<tr>
<td>2002</td>
<td>1994</td>
<td>14</td>
<td>5.6 (3.3 - 10.4)</td>
<td>1 in 150</td>
</tr>
<tr>
<td>2004</td>
<td>1996</td>
<td>8</td>
<td>3.0 (4.4 - 9.5)</td>
<td>1 in 125</td>
</tr>
<tr>
<td>2006</td>
<td>1998</td>
<td>11</td>
<td>3.0 (4.2 - 11.1)</td>
<td>1 in 120</td>
</tr>
<tr>
<td>2008</td>
<td>2000</td>
<td>14</td>
<td>11.3 (4.8 - 31.2)</td>
<td>1 in 88</td>
</tr>
<tr>
<td>2010</td>
<td>2002</td>
<td>11</td>
<td>14.7 (7.7 - 25.9)</td>
<td>1 in 66</td>
</tr>
<tr>
<td>2012</td>
<td>2004</td>
<td>11</td>
<td>14.6 (8.2 - 24.6)</td>
<td>1 in 66</td>
</tr>
</tbody>
</table>

Risk Factors

- 36-95% of identical twins, non-identical 0-31%
- Parents with autism, 2-18%
- More likely in people with down syndrome, fragile X, tuberous sclerosis, or other chromosomal disorders
- Approx 44% have average to above average IQ
- Older parents
- Low birth weight
(CDC, 2016)
Diagnosis

- Age two can be reliable
- Most diagnosed after age 4
- Most parents notice developmental problem before their child’s first birthday

https://www.cdc.gov/ncbddd/autism/data.html

Cost

- Estimate between 11.5-60.9 billion
- Average 4,110-6200 per year
- Annual medicaid cost $10,709 per child
- Behavioral interventions $40,000-60,000 per child

(CDC, 2016)
Why the increase?

- Increased awareness
- More screening tools
- Changes in how ASD is defined
- However, still does not account for all of the increase

What does this tell us?

- You are much more likely to encounter an individual with autism now than 10 years ago!
- It takes a village – we all have to know how to support individuals with autism.
Red Flags

- Not responding to name by 12 months
- Not pointing
- Avoiding eye contact
- Delayed speech
- Upset by minor changes
- Obsessive interests
- Flap hands
- Unusual reactions to sensory

(CDC, 2016)

Screening

- American Academy of Pediatrics recommends
  - 18 months
  - 24 months

(CDC, 2016)
Identification of Autism

- No biological markers

- Diagnosis based on behavior and history
  - Parent interview
  - Play/conversation based assessment
  - Input from others familiar with child

- Assessment tools should tap social and communication delays
  - ADOS (Autism Diagnostic Observation Schedule)

Screening tools

- Developmental:
  - Ages and Stages (ASQ)
  - Communication and Symbolic Behavior Scale (CSBS)
  - Parents Evaluation of Developmental Status (PEDS)

- Autism specific
  - Modified Checklist for Autism in Toddlers (MCHAT)
  - Screening Tool for Autism in Toddlers and young Children (STAT)
Diagnostic Tools

- Autism Diagnosis Interview- Revised (ADI-R)
- Autism Diagnostic Observation Schedule – Generic (ADOS-G)
- Childhood Autism Rating Scale (CARS)
- Guillian Autism Rating Scale- Second Edition (GARS-2)

Two systems used to identify autism

- Clinical (Diagnosis)
  - Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5)
  - Given by a licensed professional (e.g., psychologist, physician)

- Educational (Categorical label)
  Based on the Individuals with Disabilities Education Act (IDEA)
  - Autism (all subtypes fit into autism category including Asperger Syndrome)
  - Students DO NOT have to have a clinical diagnosis to qualify for school services or a categorical label
**Similarities of DSM-5 and IDEA**

- Both definitions include symptoms in the areas of social interactions, nonverbal communication, repetitive activities, stereotyped movements, resistance to change, and unusual sensory responses

- Both definitions indicate that symptoms need not be apparent before age 3

- Both definitions use a broad “umbrella” classification

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**Changes in Clinical Diagnosis**

- Autism Classification changed with the DSM-5

- No longer identifying students as having Asperger’s or PDD-NOS

- Single Classification of Autism Spectrum Disorder (ASD)
IDEA Definition of Autism

A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child’s educational performance. Other characteristics often associated with autism are:

- engagement in repetitive activities and stereotyped movements
- resistance to environmental change or change in daily routines, and
- unusual responses to sensory experiences

A child can be identified as having autism after age 3 if the criteria are satisfied. Autism does not apply if a child’s educational performance is adversely affected primarily because the child has an emotional disturbance.

Adversely Affects Educational Performance

- An adverse effect is a harmful or unfavorable influence.

Educational performance includes both: academic areas (reading, math, communication, etc.) and non-academic areas (daily life activities, mobility, pre-vocational and vocational skills, social adaptation, self-help skills, etc.).

- Consideration of all facets of the student’s condition that adversely affect educational performance involves determining any harmful or unfavorable influences that the disability has on the student’s academic or daily life activities.
Characteristics of ASD

- Reciprocal Social Interactions
  - Poor eye contact
  - Limited range of facial expressions
  - Failure to develop peer relationships
  - Failure to share enjoyment with others
  - Lack of social reciprocity

Characteristics of ASD, continued

- Language and Communication
  - Delayed or atypical language development
  - Difficulty initiating or sustaining conversation
  - Stereotyped and/or repetitive use of language
  - Lack of pretend play
Characteristics, continued

- Restricted, Repetitive, Stereotyped Behavior
  - Circumscribed interests
  - Rigid adherence to routines and rituals
  - Stereotyped and repetitive motor mannerisms
  - Preoccupation with parts of objects

What do these behaviors look like?

- Difficulty with change & transitions
- Limited or inconsistent interaction with others
- Easily frustrated
- Insistence on doing things a specific way
- Trouble imitating others & learning by observation
Other impacts on daily function

- Concrete and literal thinking
- Attentional issues
- Discrepancies in learning
- Difficulty generalizing

Common Strengths

- Rote Memory
- Learn best through routine & practice
- Straightforward, honest, objective
- Areas of interest
- Visual processing
"There is no single behavior that is always typical of autism and no behavior that would automatically exclude an individual child from a diagnosis of autism”


“Education, both directly of children and of parents and teachers is currently the primary form of treatment for Autism Spectrum Disorders”

(National Research Council, 2001)
Ten things every individual with autism wishes you knew

1. Every student with autism is unique
"As Temple Grandin says, 'See the person, Not the label.'"
2. Individuals with autism often have an area of special interest (reinforcer)

Special Interests

- Individuals with autism might not be driven by social expectations
- Critical to use things that motivate them (you don’t decide, they do)
- Use their special interests and/or reinforcers to help teach them new skills and behaviors
- Structure and plan the process for using their special interests
- Teach them how to transition away from special interests
- Use their special interests to teach them other things/activities they might enjoy (the more variety the better)
What is positive reinforcement?

- Presentation of a reinforcer after individual performs a behavior/skill
- Tangible
- Social

Am I just bribing my student?

- Difference between bribery and positive reinforcement
  - All about the timing!

<table>
<thead>
<tr>
<th>Bribery</th>
<th>Positive reinforcement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student working at desk, student gets out of seat, falls on floor.</td>
<td>When student working at desk, teacher gives the student the ipad and says I like the way you are working.</td>
</tr>
<tr>
<td>Teacher states, if you get back to your desk you can have the ipad.</td>
<td></td>
</tr>
<tr>
<td>During circle time, student gets up and starts running around, teacher</td>
<td>During circle time, when student sitting, teacher gives him a piece of candy, before he has a chance to get up and run around.</td>
</tr>
<tr>
<td>tells him to sit and she immediately gives him a piece of candy, cycle</td>
<td></td>
</tr>
<tr>
<td>continues.</td>
<td></td>
</tr>
</tbody>
</table>
Positive Reinforcement Tips

- Age-appropriate
- Specific
- Clear expectations
- Given immediately after target behavior
- Vary – the more the better!

Positive Reinforcement Tips

- Fade
- 50% Rule
- Use visuals to show when they gain access (reward board/token system)
- Consistent across team
- Better to err on side of over than under reinforcing
Token Reward System

- Visual to show student when they gain access to reinforcement
- Keeps us accountable
- Helps with transitioning away from reinforcer
- Helps to fade reinforcement
3. Individuals with autism often have difficulty communicating their wants and needs.

Functional Communication

- Can they accurately communicate their wants and needs?

- Verbal, gestures, pictures, devices

- Is the lack of communication causing challenging behavior?

- Critical that the team focus on teaching functional communication across the students day
### Behavior versus Functional Communication

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Functional communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child tears up worksheet when it gets difficult.</td>
<td>Teach child how to give you a help card or raise hand for help.</td>
</tr>
<tr>
<td>When child wants to play with another student, he takes the toy from the student and runs around the room.</td>
<td>Teach child how to tap student on shoulder and wait for other student to give the toy to student.</td>
</tr>
<tr>
<td>When child needs a break from classroom, he throws himself down on the floor until somebody takes him into the hallway.</td>
<td>When you see the child starting to get anxious, help the child give you a card or gesture that indicates break, and take the child out for a break.</td>
</tr>
</tbody>
</table>

4. Individuals with autism need us to understand the “why” behind their challenging behavior.
Challenging Behavior

- Behind every behavior is a positive need
- What is the student trying to communicate?
  - Escape from an activity?
  - Gain attention?
  - Gain a desired item?
  - Get away from attention?
- How else can he/she communicate this need?
- How can we modify the environment to prevent the challenging behavior?
Questions to ask about behavior?

- What happens before?
- What happens after?
- What stops the behavior?
- What makes it worse?
- When do they not have challenging behavior?

- In order to change behavior, we need to change the environment.

5. Individuals with autism need structure and predictability
Schedules

- Teach independence
- Decrease anxiety
- Help with transitions

But, my son has his schedule memorized! He doesn’t need a schedule!
Schedules

- Object, photo or symbol of daily activities
- Mini schedules
- Schedules for routines
1. iPad
2. Picture game
3. iPad
4. Cards
5. iPad

First
Math

Then
iPad
Routines & Procedures

- Procedures – how teachers want things done in the classroom

- Routines – what students do without prompting or supervision

- Must teach the routines and procedures (similar to academic content)
Teaching Tips

- Use visuals
- Break it down into small, teachable steps
- Help them get it right from the beginning
- Practice, practice, practice
- Reward!

Teaching Break Time
Why do individuals with autism need a break?

- Difficulty self-regulating

- Stress and anxiety with daily activities

- Can lead to challenging behavior and difficulty participating in classroom activities.

Tips for break time

- Break versus reward

- Area in the classroom/home

- Teach and practice with student

- Communicating break
6. Individuals with autism can have difficulty understanding verbal instructions

Giving verbal instruction
- Add visuals!
- Choices
- Simple instructions (1-2 steps)
- Avoid “can” and “will”
- Instruction versus feedback
### Examples

<table>
<thead>
<tr>
<th>Instead of this</th>
<th>Do this</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s time for circle time, you need to come sit crisis cross and get ready to sing a song with the group. I know how much you love the songs we sing at group.</td>
<td>First sit in circle, then we will sing a song.</td>
</tr>
<tr>
<td>You need to find something to play with. You can play with the blocks, books, home living. I don’t care what you play with, but you cannot run around the room.</td>
<td>Do you want to play with the blocks or books first (while using a picture of the items)?</td>
</tr>
<tr>
<td>Will you please come sit and work at the table with me? If you sit and work with me, then you can have the ipad.</td>
<td>First sit, then ipad (while using the reinforcer board).</td>
</tr>
</tbody>
</table>

7. Individuals with autism have difficulty with social skills and relationships
Social Communication

- Theory of Mind
- Executive Functioning

Theory of Mind

- Putting yourself in someone else’s shoes
- Ability to understand that other people have their own thoughts, ideas, opinions
- Enables a person to figure out behavior or make inferences regarding other's behavior
Executive Functioning

- The ability to do all it takes to keep your mind on what you are doing in order to accomplish a task.
- Ex: take notes in class, knowing what information to pay attention to during lecture, organizing materials, planning day.

First question to ask about social skills?
Is it a skill deficit or lack of motivation?
Skill Deficit

- Identify the skills to teach (social skills checklists)
- Break down into small steps (think math formula)
- Practice in 1:1 situation
- Practice in natural setting
- Use visuals
- Use peers

Motivation

- Reinforce the student when using the social skill
- Reinforce more frequently in the beginning and fade
- Use a token reward system
- Higher reinforcement when student initiates on own in natural environments
- As student is more successful, the social interactions will become the motivation
8. Simplify difficult activities and help with organization

Organizational Tools

- Taking notes
- Organizing backpack/locker/desk
- Visuals for writing assignments
Cornell Notes

- Main Idea
- Key
- Question (after notes are completed)

- Key words & ideas
- Important dates/people/places
- Repeated/Stressed Info
- Ideas/brainstorming written on board/overhead projector
- Info from textbook/stories
- Diagrams & Pictures
- Formulas

Summary of your notes in your own words

Organizing Desk
Modifications

- Break into small, teachable steps
- Use a visual
- Help with difficult steps – No fail learning!

9. Individuals with autism need to be around their peers.
Inclusion

- “Offering the same activities to everyone, while providing support and services to accommodate people’s differences” Autism Speaks

- Promotes the sense of welcoming environment for all, where differences are valued and learning opportunities are accessible to all, in every classroom.

Tips for inclusion

- Education, education education!
  - Administrators
  - Teachers
  - Assistants
  - All staff in school!
  - Peers
  - Parents
  - Community
- Be prepared
- Have a plan — entire team
- Better shorter and successful, than push to failure
- High reinforcement!
- Get peers involved
10. Individuals with autism and their families need to be supported by the community

Community Inclusion

- It takes a village!

- Including in community – encourage families to keep trying!

- Safety
Safety

- Preventative
- Teaching
- Awareness

www.nationalautismassociation.org
Summary

- Increased prevalence
- Each student is unique
- Include students with autism (with support)
- It takes a village (safety and community inclusion)

Questions?

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References


