Co-morbidity of ASD and ADHD

Dr. Teresa Bunsen, 2018
ADHD Neurodevelopmental disorder:

- Approximately 9.4 percent of U.S. children between the ages of 2 & 17 have been diagnosed with ADHD.
- Average age **7 years old**
- **Presents differently** in boys than girls, leading to more boys being diagnosed.
3 types of ADHD:

- predominantly hyperactive-impulsive
- predominantly inattentive
- combined type --both inattentive and hyperactive-impulsive symptoms, is the most common.
Autism Spectrum Disorders

- Group of complex disorders.
- Affects behavior, development, & communication
- 1 in 68 U.S. children
- 4.5 times more likely to be diagnosed in boys than girls.
Autism spectrum disorder & ADHD are related in several ways.

- ADHD is **not** on the autism spectrum, but share symptoms.
- Having 1 condition increases the likelihood of having the other. (Harstad, 2018)
How are they related?

- DSM-IV: a person couldn’t have autism & ADHD.
- DSM-5 (2013): allows for a person to be diagnosed with both.
- 2014 30-50 % of children with ASD have ADHD
Trouble paying attention: ASD’s language difficulties appears as if child isn’t paying attention to directions. Truth may be he doesn’t understand directions.

Trouble with social interactions: ADHD can affect social skills: avoiding eye contact and invading personal space.
Insure all supports are available:

- Consider all aspects of developmental functioning.
  - language, social skills, attention, behavior, mood, academic skills, social skills, play skills and motor skills.

- Detailed **neuropsychological evaluation** and/or assessment by a health-care provider
Examples:
- Utilizing a clear set routine,
- Demonstrating what to expect,
- Activities with clear beginning/ending,
- Utilizing defined high rate of reinforcement,
- PBIS
big **differences** in recommended therapy:

**ASD**
- Applied Behavior Analysis: improve communication skills’ reduce repetitive behaviors (National Standards Report)

**ADHD**
- Targets improving attention & organization.
- Often paired with **ADHD medication**.
<table>
<thead>
<tr>
<th></th>
<th>ADHD symptoms</th>
<th>Autism symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>being easily distracted</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>frequently jumping from one task to another or quickly growing</td>
<td>✓</td>
<td></td>
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<tr>
<td>bored with tasks</td>
<td></td>
<td></td>
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<tr>
<td>unresponsive to common stimuli</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>difficulty focusing, or concentrating and narrowing attention</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>to one task</td>
<td></td>
<td></td>
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<tr>
<td>intense focus and concentration on a singular item</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>talking nonstop or blurtling things out</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>hyperactivity</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>trouble sitting still</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>interrupting conversations or activities</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>lack of concern or inability to react to other people’s</td>
<td></td>
<td>✓</td>
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<tr>
<td>emotions or feelings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>repetitive movement, such as rocking or twisting</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>avoiding eye contact</td>
<td>✓</td>
<td></td>
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<tr>
<td>withdrawn behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>impaired social interaction</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>delayed developmental milestones</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
Don’t take evidence too far....

- Significant evidence that ASD and ADHD should remain, conceptualized as distinct conditions.

- Genetic influences specific to ASD and ADHD individually.

- Environmental risk factors:
  - smoking during pregnancy (risk factor for ADHD in offspring but not ASD)
  - higher paternal age (risk factor for ASD but not ADHD)

- Most notably, core behavioral signs remain distinct.

(Gabis L et al, Pediatr Neurology 2010;43:300-302)
Confusion in Eligibility Assessments

**ASD: ADOS2**
- Repetitive and stereotypical movements [Modules 1-4]
- Excessive Interest in Specific Activities [Modules 1-4]
- Ability to answer ?’s in interview segment [Module 3]

**ADHD**
- Symptoms scales
- Diagnostic interviews
- Language Assessments
Connecting the circles

ADHD

ASD

Executive Functioning
<table>
<thead>
<tr>
<th><strong>APPLY</strong></th>
<th>DESIRED</th>
<th>DREADED</th>
</tr>
</thead>
</table>
| **APPLY** | Positive Reinforcement | Punishment  
*Failing grades*  
*Note home to parents* |
| **REMOVE** | Negative Punishment  
*Immersion in books results in a loss of opportunity for peer interaction* | Negative Reinforcement |
Reinforcement/Punishment Grid from a Student’s Perspective

<table>
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<tr>
<th>APPLY</th>
<th>DESIRED</th>
<th>DREADED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive Reinforcement</td>
<td>*Attains more time to read <em>The Lord of the Rings</em> by avoiding work &amp; class participation</td>
<td>Punishment</td>
</tr>
<tr>
<td>REMOVE</td>
<td>Negative Punishment</td>
<td>Negative Reinforcement</td>
</tr>
<tr>
<td></td>
<td>*Decreases social stress by avoiding group work &amp; class participation</td>
<td></td>
</tr>
</tbody>
</table>
Problem Behavior
- Off Task
- Out of seat
- Making Noises [humming, “chattering,” constant foot movement]

Triggering Antecedents:
- Working in a group
- Unstructured activities

Desired Behavior
- Staying on task and on topic

Consequence
- Delaying of non-preferred task

Replacement Behavior
- Expression of Wants and Needs
- Ask for help

Escape/Avoidance Behaviors
Attention-Seeking Behaviors

Desired Behavior
Accept Feedback
Accept “No” for an answer
Follow directions and complete his assignment

Problem Behavior
• Off Task
• Ignoring adult interaction
• Making verbal noises

Triggering Antecedents:
• Teacher gives a redirection
• Teacher denies request

Replacement Behavior
• Expression of Wants and Needs
• Asks for help

Consequence
Delays non-preferred task and receives attention from an adult
In conclusion...

- Exciting new longitudinal research suggests that traits characteristic of ASD and ADHD actually influence one another across childhood (Taylor M et al, Psychological Med 2012; Nov 16: online ahead of print)