ADHD + Autism Spectrum = Executive Functioning Problems X 2: Meeting the Challenge

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Today we will talk about:

I. Co-occurrence of Attention Deficit/Hyperactivity Disorder (ADHD) and Autism Spectrum Disorder (ASD)
   A. Overlap of symptoms
   B. Why is the diagnosis important?

II. Brief Discussion of Executive Functioning
    A. Definitions
    B. Patterns of development in individuals with ADHD and ASD

III. What can we do to help?
    A. General principles of intervention
    B. Building flexibility
    C. Supporting organization and working memory
When symptoms co-occur...

ADHD

Executive Dysfunction X 2

Autism
What is executive functioning?

- Executive functions are the mental processes that serve a *supervisory* role in our own thinking and behavior.

- The executive functions work together to *direct and coordinate* our efforts to achieve a goal.

From Cooper-Kahn and Foster, Boosting Executive Skills in The Classroom, 2013.
A Good CEO

- Creates a master plan
- Coordinates resources
- Reacts effectively to changes and challenges
- Monitors progress on short-term and long-term goals
- Adjusts course, as necessary, to keep the company on mission
Executive Skills

Meta-Cognitive Skills

• Planning and Organization
• Working Memory
• Initiation
• Task Monitoring

Emotional Regulation

• Self Monitoring
• Inhibition
• Emotional control
• Shifting

There are predictable developmental surges in the executive functions; expectations at home and school are designed to keep pace with typical development.
Developmental differences

- Executive functioning difficulties are linked to differences in brain structure and brain function.
- EF profiles vary between and within the groups of individuals diagnosed with ADHD and ASD, and any aspect of EF can be affected. However, there are some documented group trends.
EF and Autism Spectrum Disorders

- Individuals with ASD seem to consistently show impairments in response inhibition and spatial working memory. Importantly, there appears to be improvement in voluntary response inhibition over time. (Luna et al, 2007)

- Enduring problems: initiating a cognitive plan and maintaining information on line over time (Luna et al, 2007)
ASD + ADHD = EDF X 2

- Executive functioning difficulties in individuals with autistic traits plus ADHD tend to be more generalized and more pervasive than in individuals with ADHD only.

- Looking at functional behavior, the most common areas of difficulties are flexibility (emotional regulation) and organization.
Meeting the Challenge
4 Rules for Intervention to Build Executive Skills

1. Successful intervention always involves a two-pronged approach. Focus on support in the short term and on building competency over the long term.

2. Building habits and routines is the cornerstone of any intervention plan.

3. Adhere to the principle of successive approximations.

4. Focus on executive thinking, not just executive skills.
General recommendations for creating a supportive environment

- Offer clear, explicit and specific expectations
- Actively prepare the child so he knows what to expect and how to manage upcoming situations
- Use guided practice as long as necessary
- Avoid power struggles
- Use more praise than correction
- Build in routines and allow for harmless rituals
- Be sensitive to sensory issues
Problem Solving Approach

Assess: Consider the executive skills of the child, assess executive demands of the task or setting, and consider the fit.

- Is there a gap?
- What skills does the child need to bridge that gap?

Plan

- Can you simplify the task and/or reduce competing demands?
- How can you provide extra support until the child can handle the situation independently?
- How can you help the child build the necessary skills for the long term?
Building flexibility

Categories of Strategies

1. Interventions before the problem gets overwhelming
2. Strategies for self-calming and regaining self-control—rituals and re-booting skills (Example: becoming a turtle)
3. Gaining skills in self monitoring (Example: How full is your container?)
4. Preparing students for uncomfortable situations

Adapted from Silverman & Weinfeld, 2007.
Intervene before the problem gets overwhelming & teach self-monitoring

**TEACHER/PARENT INITIATED**

Learn the student’s signs that he is becoming overwhelmed and initiate calming strategies.

Tie behaviors to internal feeling states.

Predict trouble spots.

**CHILD INITIATED**

Teach the child how to recognize her own signs and praise attempts to initiate calming strategies.

Coach the child to consider what is driving a behavior.

Preview the day with the child and coach him to look for trouble spots.
Strategies for self-calming and regaining self-control

- Create calming rituals at school and at home and use these at transition points during the day (soft music, yoga or other calming movement)

- Prompt self-calming routines or initiate techniques such as deep breathing or moving to a low-arousal area

- Teach more specific strategies to children who need more (e.g. finger-breathing, become a turtle, go under a chair)

- Allow idiosyncratic self-soothing strategies, such as access to a favorite toy or person (example: rubbing Mom’s belly)
Preparing students for uncomfortable situations (1)

Help the child to narrow her focus:

• Change the nature of the task (eg. Offer a transitional job such as carrying the equipment basket out to the playground)

• Highlight specific features of the task (eg. You’re going to stay next to me while we walk to the bus. We will take our seats and then you can take out your drawing things and draw during the bus ride.)
Preparing students for uncomfortable situations (2)

Structure the situation:

• Preview the process, step-by-step, to remove uncertainty ("Here is what will happen...")

• Minimize micro-decisions
Teach the child about her own temperament

- Help the child understand her own responses.
- Label the emotional experience. (“This is one of those times when you will probably have your New Situation Jitters.”)
- What will you do when...? What can you do to help yourself?
Addressing social deficits to create more expected behavior

Social Rules Approach (See Myles, Trautman, and Schelvan (2004), The Hidden Curriculum)

- Focuses on what is expected in specific situations
- Teaches by concrete rules

Social thinking approach (See Winner, M.G. resources): for students with good language and cognitive ability who have weak social intelligence.

- Focuses on how the individual’s social understanding and behavior are different from neurotypical individuals
- Teaches why is it important to behave in expected ways
- Teaches skills that develop social awareness and improve ability to behave in expected ways
Superflex takes on the Unthinkables!

Superflex helps a citizen be a more flexible thinker, which allows the person to better control his or her brain and change how he or she thinks. He helps a citizen think about how to act and behave to keep others (and himself/herself) feeling good. He helps a citizen be a better problem-solver by thinking of many different solutions to one problem. He helps a citizen notice when an Unthinkable is becoming more active in his brain and then quickly comes up with a strategy to defeat the Unthinkable.

- **Kool Brain**: I make people get stuck on their ideas.
- **Glassman**: I make people have huge upset reactions.
- **P.C.E.**: I make people overly competitive.
- **Mean Jean**: I get people to act mean and bossy.
- **Space Invader**: I get people to invade other’s personal space.
- **One-Sided Sid**: I get people to only talk about themselves.
- **Was Funy Once**: I get people to use humor at the wrong time, the wrong place or with the wrong person.
- **Brain Eater**: I distract people.
- **Body Snatcher**: I move people’s bodies from the group.
- **Every Hungry**: I give people too much energy.
- **Topic Twistermeister**: I make people jump off topic.
- **Worry Wall**: I make people worry too much.
- **Un-Wonderer**: I don’t like people to socialy wonder about others.
- **Grump Grumpemeister**: I put people in grumpy moods.

www.socialthinking.com

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General Principles for Intervention to Improve Organization

- Create routines and templates to build habits
- Highlight the planning process
- Relieve the burden on working memory
Classroom routines

- Entry Routines
- Transition Routines
- Instructional Routines
- Routines for Projects and Studying for Tests
Highlight the planning process

- Help kids think about how they will reach the goal
- Teach them that the first step in any multi-step project is always to make a plan
Think aloud...
### Student Planner

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday * Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td>Ø</td>
<td>Read Chap. 2</td>
<td>PREP GRAPHIC</td>
<td>DUE</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Math</strong></td>
<td>✓ Pg. 47 # 1-10 odd</td>
<td>Bring eg. of an equation Study</td>
<td>Study</td>
<td>Study</td>
<td>TEST</td>
<td></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td></td>
<td>Bring a cup of dirt!</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies</strong></td>
<td>✓ Read article</td>
<td>✓ Journal response</td>
<td></td>
<td>Grandma's birthday</td>
<td>* THURSDAY NOTE</td>
<td></td>
</tr>
</tbody>
</table>
School and home strategies

- Teach challenging tasks with familiar material, and teach challenging content using familiar formats.
- Break down tasks into component parts and provide a rubric to guide student work.
- Monitor progress. What has the child produced?
- Expect the child to need hands-on guidance and practice much longer than other children.
Use visual maps for brainstorming, planning and organizing. These can be done by hand or with computer software (Inspiration©, Kidspiration©, MindJet MindManager©). Expect to prompt the student to use the technology until it becomes habitual.
Relieve the burden on working memory

What is the message that you want the child to take away?

• Simplify your language

• Highlight the most important points
To compensate for weak working memory

1. Build automaticity

2. Start the lesson (or home task) with a warm-up
More tips to reduce the burden on working memory

3. **Teach the use of concrete storage systems** that create an external “scratch pad.”

4. **Accommodate difficulties with note-taking.** (Offer an outline with space for bullet points; allow apps that allow note-taking on screen.)

5. **Take advantage of technology to automatically transfer information** (Google docs, iCloud, etc.)
References and Resources


References and Resources (continued)


