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August 6, 2015

GETTING UNSTUCK AND ON TARGET:
PRACTICAL SOLUTIONS FOR BUILDING
EXECUTIVE FUNCTION SKILLS

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Associate Professors, Pediatrics
GW Medical School
Center for Autism Spectrum Disorders
Children’s National Medical Center

Disclosures and Contact Info

• We both receive royalties for sale of Unstuck manuals and LK also receives royalties for sales of BRIEF forms.

• Email is the easiest way to reach us:
  – lanthony@childrensnational.org
  – lkenwort@childrensnational.org
Learning Objectives

• Recognize executive functioning weaknesses in your children or clients and distinguish among different executive functioning (EF) skills
• Apply specific techniques to support improvement in EF at home, in treatment, or at school
• Summarize the research results examining the effectiveness of an EF intervention

GOAL: Increase your understanding of executive functions and how to enhance them

PLAN
1. Identify the problem: Poor outcome
2. Define Executive Functions (EF) and why they matter
3. Understand & accommodate specific EF deficits
   a. Flexibility
   b. Organization/Integration
   c. Planning/Working Memory
4. Teach flexibility, organization & planning skills
**Adult Outcome in HFASD**

- 46% of children with ASD have IQ in the average range
- Despite average intelligence, adult outcome remains poor (Henninger & Taylor, 2012; Howlin et al., 2004; Howlin & Moss, 2012; Shattuck et al., 2012; Roux et al., 2013).
  - Underemployed, underpaid, socially excluded,
  - Poor adaptive skills, dependent on parents (88%)
  - Even when compared to other developmental disabilities

- Over 25% of the young adults without ID have no daytime activities of any kind (Taylor & Mailick Seltzer, 2010)

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**GOAL: Increase your understanding of executive functions and how to enhance them**

**PLAN**

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What is Executive Function?

Executive Dysfunction (Teuber, 1964): “The curious dissociation between knowing & doing”

**EF problems in ASD relate to:**

- **Learning**
- **Adaptive daily living skills** (Lopata et al, 2012, Gilotty et al, 2002)
- **Family stress** (Lounds, 2007)
- **Adult outcomes** (Hume et al, 2009)
Adaptive Skills by Age Group
(ASD n=421; Mean IQ =103)

Mean Domain Scores in Each Age Group

Adaptive Skills by Age Group
(ASD n=327)

Mean Domain Scores in Each Age Group
Parent Report Executive Function Problems by Age Group (ASD n=185)

Rosenthal et al. 2013; Neuropsychology

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Diagnosis ➔ EF ➔ Co-Morbidities (ASD n=70, ADHD n=55)

EF relates to autism sx and supports social learning

- Joint attention: “early developing self-organizing facility” (Mundy, 2003)
- Prolonged visual fixation in infants later dx’d with ASD, coincides with emergence of ASD behaviors (Zwaigenbaum et al, 2005)
- EF predicts change in ToM (independent of age, language, NVIQ) (Pellicano, 2010)
- Indirect “trickle-down” effect of EF training on TOM performance (Fisher and Happé 2005) and social skills (Kenworthy & Anthony et al, 2013)

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<table>
<thead>
<tr>
<th>Looks Like Won’t…</th>
<th>Could be Can’t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oppositional, Stubborn</td>
<td>Difficulty shifting, Avoiding overload</td>
</tr>
<tr>
<td>Can do it if he wants to</td>
<td>Difficulty shifting, Lack of salience</td>
</tr>
<tr>
<td>Self Centered</td>
<td>Impaired social cognition, Poor self monitoring</td>
</tr>
<tr>
<td>Won’t put good ideas on paper</td>
<td>Poor fine motor, Disorganization</td>
</tr>
<tr>
<td>Sloppy, erratic</td>
<td>Poor self monitoring, Overloaded</td>
</tr>
<tr>
<td>Won’t control outbursts</td>
<td>Overloaded, Disinhibition</td>
</tr>
<tr>
<td>Doesn’t care what others think</td>
<td>Impaired social cognition, Poor self monitoring</td>
</tr>
</tbody>
</table>
GOAL: Increase your understanding of executive functions and how to enhance them

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1. Identify the problem: Poor outcome ✔
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Unstuck Philosophy: Accommodate, then Remediate

Neural Diversity is a civil right...
Unstuck Philosophy: Accommodate, then Remediate

Overwhelmed people can’t learn
- Predictability and structure
- Make Big Picture Explicit
- Talk Less, Write More
- Avoid Overload
- Can’t vs Won’t
- Keep it Positive

What is Executive Function?

Cognitive Regulation
- Initiate
- Plan & Working Memory
- Organize/Integrate
- Monitor

Behavior Regulation
- Inhibit
- Self-Monitor

Emotion Regulation
- Flexibility
- Emotional Control
Most Common EF Challenges in ASD

Flexibility

– Transitioning from one activity to another
– Changes in routine
– Violations of expectations
– Seeing more than one way of doing things
– Easy to get stuck

(Rumsey, 1985; Hill, 2004; Kenworthy et al, 2008)
“Asperger’s is like a vise on your brain. And each unexpected event is like another turn on the vise...it just keeps building until you feel like you’re going to explode. Sometimes when you explode, it comes out the wrong way.”

- A young student with ASD

What does cognitive inflexibility look like in school and at home?

Can’t or Won’t?
• Accept feedback
• Accept different opinions, ideas
• Handle frustration
• Start something they don’t want to do
• Stop meltdowns
• Stop doing something even they have been told to stop
• Avoid shutting down when something is challenging
• Stop correcting people
• Let other kids take the lead when playing
Inflexibility Risks and Accommodations

Difficulty with violations of expectations
- Schedules, Routines, Predict change, Flexible Adult

Rigid interpretations of rules
- Respect need for clear, explicit expectations, Flexible Adult

Overwhelming intense feelings
- Breaks, Downtime, Safe Address, Flexible Adult

Problems Negotiating
- Compromise, Explicit Etiquette Rules, Flexible Adult

Repetitive Behaviors/Intense Interests
- Decide where they can/can’t happen, agree on a sign

Accommodations: Inflexibility

Inflexibility is adaptive. It limits unexpected, overloading events.

- **Overload is dangerous**: It leads to anxiety, impulsivity, inappropriate behavior
- **Overload creates profound risk** in context of social isolation, teasing and bullying
- **In a mine field it is wise to use caution**

Respect
- Routines that don’t interfere
- Deep datasets
- Expertise in areas of interest
- Persistence
- Reliability
What is Executive Function?

**Cognitive Regulation**
- Initiate
- Plan & Working Memory
- Organize/Integrate
- Monitor

**Behavior Regulation**
- Inhibit
- Self-Monitor

**Emotion Regulation**
- Flexibility
- Emotional Control

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**Most Common EF Challenges in ASD**

**Flexibility**
- Transitioning from one activity to another
- Changes in routine
- Violations of expectations
- Seeing more than one way of doing things
- Easy to get stuck  
  (Rumsey, 1985; Hill, 2004; Kenworthy et al, 2008)

**Planning/Organization**
- Knowing how to accomplish a goal
- Prioritizing
- Identifying main idea and organizing thinking
- Can’t see the forest for the trees  
What do organization/integration deficits look like in school and at home?

Can’t, or Won’t?
• Gets stuck on details
• Get good ideas onto paper
• Stop dominating a classroom discussion
• Let go of a small mistake or inconsistency
• Behave in unstructured groups
• Set a goal
• Learn from mistakes
• Write a well organized paragraph
• Draw meaning from a reading assignment
• Know what to study for on a test
Missing the big picture risks

– **Lack of generalization**: “My daughter can peel a potato but she can’t peel a sweet potato because they are not the same thing.”
– **Lack of awareness** that a problem exists
– **Difficulty knowing what is important**: “Recently, my son lost his backpack on his bike ride home. To fix the problem, he called 911. Fortunately, the police officer understood.”
– **Difficulty anticipating** obstacles
– Dealing with failure

Accommodations for Disorganization

• Emphasis on goals
• Safe Address
• Teach to strength: explicit short rules, recipes, checklists and routines.
• Put new information in familiar context.
• Explicitly review inferences, nuances.
• Predict decline in abilities as size of group increases.
• Study guides, closed format tests
• Writing rubrics
Break it Down

John has a book I want

Hit John, take book

Ask John for a turn

Time out-Miss TV time

Look at book, give it back, get TV time

Was this what I wanted?

Was this what I wanted?

Detail Processor Strengths

- Patience for details
- Respect, follow, use rules
- Good with recipes, checklists and routines
- Powerful computer related thinking
- Classification strengths
- Painstaking attention to detail—Sherlock Holmes Mastery of detailed datasets
- Large Vocabulary
What is Executive Function?

- **Cognitive Regulation**
  - Initiate
  - Working Memory & Planning
  - Organize/Integrate
  - Monitor

- **Behavior Regulation**
  - Inhibit
  - Self-Monitor

- **Emotion Regulation**
  - Flexibility
  - Emotional Control

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What is Executive Function?
The Importance of Inner Speech

Social context

Language

Self directed speech

Self regulation

Executive control

(Luria, 1961)

Articulatory Suppression and Planning

Poor planning/Inner Speech/Working Memory Looks Like: Won’t follow directions, work independently

- Talk Less, Write More: White Boards
- Use technology for tracking tasks, calendar, writing
- Communication: e-mail, texting
- Notes
- Computer-based curricula
- Socratic method

Overload: Looks like anxiety, impulsivity, meltdowns
Brenda Smith Myles: AS and Difficult Moments
### Comparing Student EF Behaviors to Inclusion Teacher Behaviors and Classroom Supports

<table>
<thead>
<tr>
<th>Teacher Behavior</th>
<th>Follows Rules</th>
<th>Transitions</th>
<th>Not Stuck</th>
<th>Not Negative</th>
<th>Participates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher Praise</td>
<td>.211**</td>
<td>.345***</td>
<td>.248**</td>
<td>.149</td>
<td>.347***</td>
</tr>
<tr>
<td>Teacher Priming</td>
<td>.148</td>
<td>.167</td>
<td>.073</td>
<td>-.027</td>
<td>.258***</td>
</tr>
<tr>
<td>Teacher Flexible</td>
<td>.289***</td>
<td>.391***</td>
<td>.259***</td>
<td>.122</td>
<td>.430***</td>
</tr>
</tbody>
</table>

*p<.01  **p<.005  ***p<.001

The most important accommodations of them all: **Be Flexible and Keep it Positive!!**

**Emotions are Contagious ...and Flexibility is too**

Reinforcement Breaks the Cycle

- Child mad
- You’re mad
- Child Madder
- You’re madder

- Correction or command
- Praise
- Praise
- Praise
- Praise

---

7/28/2015
Find your people:
What do these people have in common?

- Tim Page, Pulitzer prize winner
- Vernon Smith, noble laureate
- Satoshi Tajiri, creator of Pokémon
- Matt Savage, “Mozart of jazz”
- Daryl Hannah, actor
- Michelangelo
- Thomas Jefferson
- Jesse Eisenberg
- Mozart
- Orson Wells
- Charles Darwin
- Glenn Gould
- Gregor Mendel
- Carl Sagan
- Marie Curie
- Einstein

Debbie Fein: What Leads to Optimal Outcome?

- A few children w/ASD can reach *typical* levels of social functioning with no residual symptoms
- Earlier intervention and more ABA (Orinstein et al, JDev Behav Pediatr, 2014)
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PLAN

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Unstuck Team

Ivymount Model Asperger Program/Take2 Summer Camp
- Katie Alexander
- Lynn Cannon
- Monica Werner

Children’s National Center for Autism Spectrum Disorders
- Laura Anthony
- Lauren Kenworthy
- John Strang
- Cara Pugliese

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Teaching Executive Function Skills
OR… bridging the dissociation between knowing and doing

The Challenge:
• A student with ASD: "My biggest problem in college has been executive functioning. I’m not organized, I’m late with everything and I don’t know how to get started. My school did a great job of including me in school, but why didn’t anyone teach me this EF stuff?"
• EF skills are hard to generalize (Ylvisaker et al., 2003)

The Strategy:
• Embed teaching in the real world: school & home
• Show, model and coach

- Consistency across settings
- Coach
  - Make Implicit Explicit
  - Scaffold-fade-generalize
- Teach and use key scripts and words
  - Checklists
  - Cues
  - White Boards
- Teach by doing
  - Humor, rewards
  - Collaborate with child
- Make it fun!
  - White Boards
  - Coach
http://www.bianys.org/learnet

Unstuck and On Target

#1 Foundational Skills
#2 What is Flexibility
#3 How to be Flexible
#4 Why be Flexible
#5 Your Goals: Getting what you want
#6 Flexible, Goal-Directed Futures

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Feelings Target & Feelings Chain

The Story of Silly Putty (Plan A/Plan B)
Photo credits to Maurice Tome
http://schoolwithinschool.org/look-forward-to-succeeding/
The Story of Silly Putty

James Wright, an inventor, wanted to invent a substitute for rubber...

The Story of Silly Putty

He created a rubber-like substance, however, it could not be used for tires or boots...
The Story of Silly Putty

A few years later, an inventor named Peter Hodgson found the substance and thought it could do a lot of neat things...
Teaching: Why Be Flexible

- Advantages of physical flexibility
- The “facts” of life
- What to do when what I want is impossible
- Pie charts: getting part of I want is better than getting nothing at all

Teach How to Be Flexible: Self-Regulatory Scripts

- Avoid too much talking
- Refer to the big picture
- Build an alliance— you’re collaborating!
- Need to be practiced
How to be Flexible: Words and Scripts

Flexible
• Great job being flexible

Unstuck
• I'm getting stuck on ___, how can I get unstuck?

Compromise
• Let's compromise so we both get some of what we want

Plan A/Plan B
• What is our plan?
• What is our Plan B?
Flexibility Scripts

Big Deal/Little Deal

- How can we make this big deal into a little deal?

Choice/No Choice

- Is this a no choice situation?

Handling the Unexpected

- What will change?
- What will stay the same?
- Why is the change happening?

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Ylvisaker & Feeny, 1998; Feeny & Ylvisaker, 2008

Modeling Flexibility Scripts

- **Accidents**: After a child spills something at the dining table, you could say, “at first when that spilled and was starting to drip on me, I felt like it was a really Big Deal, but then I realized I could make it a Little Deal by mopping it up and you helped clean it up. Now I feel much better. Thanks.”

- **On a play date or at recess**: When a child wants to play Legos, but his or her friend wants to play a board game: “How can you be flexible and still reach your goal of having fun with your friend?” “Can you compromise and play a board game first and then Legos? Then you will both get what you want in the end, which is better than not getting what you want at all.”

- **Unpopular Chores**: If you got a parking ticket: “Oh, how I wish paying this parking ticket was a choice situation...”
**GPDC script** (goal, why, plan, do, check)

<table>
<thead>
<tr>
<th>Goal</th>
<th>To have fun at recess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why</td>
<td>Recess is my free time</td>
</tr>
<tr>
<td>Plan A</td>
<td>Ask Johnny if he wants to play soccer</td>
</tr>
<tr>
<td>Plan B</td>
<td>(If J says, “no”) Ask Melissa to play soccer</td>
</tr>
<tr>
<td>Plan C</td>
<td>Swing on the swings</td>
</tr>
<tr>
<td>Do</td>
<td>Follow my plans</td>
</tr>
<tr>
<td>Check</td>
<td>Did I meet my goal?</td>
</tr>
<tr>
<td></td>
<td>Which plan worked?</td>
</tr>
<tr>
<td></td>
<td>Would I do it the same or different next time?</td>
</tr>
</tbody>
</table>

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   b. Organization/Integration ✔
   c. Planning/Working Memory ✔
4. Teach flexibility, organization & planning skills
Plan A/Plan B
22 classroom
Big picture thinking
Compromise
Increasing power in
Setting goals
Delayed

Teens with ASD
An Executive Function (EF) Intervention for

WTH
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•

On Target for Life (©Strang et al.)
An Executive Function (EF) Intervention for Teens with ASD

• Middle School adaptation of *Unstuck and On Target*
• 22 classroom lessons targeting:
  – Flexibility
    • Plan A/Plan B
    • Compromise
  – Planning
    • Increasing power in your life
    • Setting goals
    • Big picture thinking
    • Delayed gratification
On Target for Life

Teaching techniques:

OTL is structured around a series of engaging group planning events to increase motivation for planning:

- Make a personal goal and develop a plan for achieving it
- Plan a larger group event, staying motivated, focused and efficient
- Compromise to choose and plan a group event
- Evaluate and fix the plan for a poorly planned party, and then enjoy the party

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<th>Keeping Your Eyes on the Prize</th>
</tr>
</thead>
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<tr>
<td>Power</td>
<td>Keeping Your Eyes on the Big Picture</td>
</tr>
<tr>
<td>Being Flexible = More Power</td>
<td>Efficiency – Eyes on the Clock</td>
</tr>
<tr>
<td>How to Help Others Be Flexible</td>
<td>Using All of the Skills to Plan</td>
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<tr>
<td>Putting a Plan on Trial</td>
<td>The Long-Term Goal – 3rd Group Event</td>
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<td>The Plan B Party</td>
<td>Learning From Our Experiences</td>
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<tr>
<td>Compromising a Win-Win</td>
<td>Making It Real – Using Skills Outside Group</td>
</tr>
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<td>When to Compromise</td>
<td>Personal Goal – Making a Plan</td>
</tr>
<tr>
<td>Planning an Event with Compromise</td>
<td>Self-Reflection</td>
</tr>
<tr>
<td>Celebration Day – Trying Out Our Plan</td>
<td>Graduation – Using Skills in the Real World</td>
</tr>
</tbody>
</table>
On Target for Life

Teaching techniques:

**Scripts and Vocabulary** – simple and meaningful words and phrases used in many contexts to teach and generalize skills:

- “How to increase power in my life?”
- “That’s an interesting detail. How long should we get stuck on it?”
- “What is the big picture?”
- “When and how to compromise”
- “Eyes on the prize”
- “Making it real!” (using the skills in my life)

On Target for Life

Organizing visuals:

- Flexibility
  - Plan A/B
  - Compromise
- Big Picture
  - Stuck on a detail?
  - Goal-Why-Plan-Check

APPROVAL BOOSTERS

Be Respectful and Think about others

POWER

Choices
Goals
Rewards

Power Equation Visual
4 Ways to Compromise

<table>
<thead>
<tr>
<th>EACH GET PART</th>
<th>COMBINE IDEAS</th>
<th>TAKE TURNS</th>
<th>SOMETHING DIFFERENT YOU BOTH LIKE</th>
</tr>
</thead>
</table>

"Let's get pizza"  "How about hot dogs?"

Compromise (Flexible Futures, High school-Transition age, ©Pugliese)

<table>
<thead>
<tr>
<th>With Yourself/ Two Goals</th>
<th>With Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>When I want to play a computer game but I have to do my homework.</td>
<td>With sister when she acts stuck and doesn’t want to share her electronics.</td>
</tr>
</tbody>
</table>
GOAL: Have fun hanging out with your friend.

You love video games. You just got a new video game for your birthday, and you can’t wait to show it to your friends. Ethan is coming over to hang out. Ethan usually likes to play basketball or Chess, but you are really excited to show him the game, and want to spend the whole time he is at your house playing it. As soon as Ethan walks through the door, you pull out the video game and ask him if he wants to play. Ethan pauses, frowns, and says, “Not right now, I was hoping we could finish our Chess game.”

<table>
<thead>
<tr>
<th>What’s your Plan A?</th>
<th>How important is it to you?</th>
<th>How important is this to ______?</th>
<th>What’s your Plan B?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 (Little Deal: I don’t really care)</td>
<td>0 (He doesn’t really care)</td>
<td>Compromise</td>
</tr>
<tr>
<td></td>
<td>1 (I care a bit)</td>
<td>1 (He cares a bit)</td>
<td>Let it go</td>
</tr>
<tr>
<td></td>
<td>2 (I care a lot)</td>
<td>2 (He cares a lot)</td>
<td>Stick to Your Idea</td>
</tr>
</tbody>
</table>

- Think about what you know.
- Think about what was said.
- Think about what you’ve seen.

1. What’s your Plan A? How important is it to you?
2. How important is this to ______? Think about what you know. Think about what was said. Think about what you’ve seen.
3. What’s your Plan B?

Power Loss

- Stuck thinking & feeling
- Stuck on a detail
- Not Caring When You Upset Others
- Zoning out
- Being negative
- Being Rigid
- Jumping into your Plan without the Big Picture
- Forgetting or Giving up on the Goal

Power Boosters

- Flexible thinking & feeling
- Big picture thinking
- Boosting Your Approval
- Actively Listening
- Supporting Others
- Compromising
- Checking Your Plan for Dangers
- Being persistent

Eyes off the Prize: 1 2 3 4 5 6 7 8 9 10

Eyes on the Prize
Time use on an average weekday for full-time university and college students

- Traveling (1.4 hours)
- Other (2.4 hours)
- Sleeping (8.6 hours)
- Leisure and sports (4.0 hours)
- Working and related activities (2.5 hours)
- Educational activities (3.3 hours)
- Eating and drinking (1.0 hour)
- Grooming (0.6 hour)

Total = 24.0 hours

NOTE: Data include individuals, ages 15 to 49, who were enrolled full time at a university or college. Data include non-holiday weekdays and are averages for 2009 -13.

Danger Pie or Balanced Pie?

- Sleeping
- Leisure: Games/TV/Social Media
- Leisure: Exercise
- Grooming
- Work

Create Your Plan

Put Your Plan A into Action
Put Your Plan B/C/D into Action
Continue to work on Big Picture

Not interested in goal

Thinking about goal

Creating Your Plan

Put Your Plan A into Action
Put Your Plan B/C/D into Action
Continue to work on Big Picture

Goal:

Plan:
1.
2.
3.
4.
5.

Why:

Stuck?

Check:
The goose that lays the golden egg: Motivation

What Motivates Us?
Daniel Pink

- Autonomy
- Mastery
- Purpose

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PLAN
1. Define Executive Functions (EF) and why they matter ✔
2. Understand & accommodate specific EF deficits ✔
3. Teach flexibility, organization & planning skills ✔

PLAN B?
Do you want to see the data showing that Unstuck works?
Unstuck Trial:
Participant Demographics
Kenworthy & Anthony et al., 2014

<table>
<thead>
<tr>
<th></th>
<th>Unstuck (n=47)</th>
<th>Social Skills (n=20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>87%</td>
<td>90%</td>
</tr>
<tr>
<td>White</td>
<td>70%</td>
<td>55%</td>
</tr>
<tr>
<td>On Psychotropic Medication</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>Age</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td>9.49(1.00)</td>
<td>9.58(1.10)</td>
</tr>
<tr>
<td>Mother’ s education</td>
<td>1.91(0.88)</td>
<td>1.95(0.76)</td>
</tr>
<tr>
<td>Father’ s education</td>
<td>2.04(1.12)</td>
<td>1.95(0.91)</td>
</tr>
<tr>
<td>WASI FSIQ</td>
<td>108.80(18.52)</td>
<td>107.63(17.20)</td>
</tr>
<tr>
<td>ADOS Social+Comm</td>
<td>11.64(3.76)</td>
<td>12.00(4.39)</td>
</tr>
<tr>
<td>ADOS Stereotyped Beh</td>
<td>1.98(1.71)</td>
<td>1.90(1.33)</td>
</tr>
</tbody>
</table>

WASI Block Design
Higher Score = Better Performance

Cohen's $d=0.65$
Kenworthy & Anthony et al., 2014
Challenge Task Flexibility
(Lower scores = fewer problems)

7 Interference Questions, e.g.
1. How often do difficulties with flexibility come up?
2. How much do difficulties with flexibility interfere with or disrupt everyday activities?
Conclusions

• Unstuck = SS for social skills

• Unstuck > SS for flexibility, problem solving, and transitioning, negativity and following rules in class

• Unstuck > SS real world planning/organization

• 1 year after Unstuck, gains were sustained in:
  • Flexibility
  • Planning (lab task, not parent report)
  • On task behavior at school

Anecdotal evidence

- Parent: “This has been a life changing experience for my daughter”

- Teacher: “One student had three meltdowns per day, and UOT reduced her outbursts to two occurrences in one quarter”

- Parent: “UOT was a lifesaver for us this year!”
Project Overview: The Method

• Sample
  – Two hundred 3rd – 5th graders (100 with ASD and 100 with ADHD), will be chosen from two school systems that have agreed to participate and currently use CBM.
  – The Partnering School Systems
    • DC KIPP Charter Schools
    • Fairfax County School System
      – Both systems have had previous relationships with project staff, have demonstrated a commitment to their students with special needs, evidence a value of family/parent engagement and have adequate number of children with ASD and ADHD to support the study. Both systems include a preponderance of low income families.

GOAL: Increase your understanding of executive functions and how to teach them

PLAN
1. Define Executive Functions (EF) and why they matter
2. Understand & accommodate specific EF deficits
3. Teach flexibility, organization & planning skills

PLAN B?
Do you want to see more about our adaptation processes?
PARENT TRAININGS AND ADAPTATION

Parent Involvement in Interventions: Unstuck and On Target (UOT)

- Parent manual

- Weekly parent handouts
  - Session summary
  - Tips for reinforcing skills at home

- 4 parent trainings (60 minutes each)
  - Program Overview
  - Flexibility Scripts and Vocabulary
  - Planning & Coping Skills
  - Avoiding Distraction and Emotion Regulation
Planned Adaptations for Low Income Families

- User friendly texts with lots of visuals and shorter descriptions
- Real-world examples (not “picking up your dry cleaning”)
- Diverse photos and names used throughout
- Time for practice built into training sessions
- Parent check-ins with a family navigator
- Training sessions scheduled at convenient times with childcare provided
Algunos ejemplos de cómo utilizar "acuerdo"

Jugando con Amigos

Cuando un niño quiere jugar fútbol, pero su amigo quiere jugar con Legos, usted podría decir: "¿Te puede llegar a un acuerdo para jugar fútbol y luego Legos? De esta manera, todos dos pueden llegar a lo que quieren en el final, que es mejor que no conseguir lo que quieren en absoluto.

Cuando un niño no quiere hacer algo

Se podría decir: " Pareces atrapado. Mi Plan A era que limpie la casa y ayude a cocinar la cena para que tu abuela esta noche. ¿Podemos llegar a un acuerdo?" (¿Qué te parece si yo cocino y tú limpías?)

Escribe su propio ejemplo: Si su hijo/a quiere un regalo de cumpleaños que está fuera de su presupuesto

Usted podría decir: "..."

Do you remember Michael from the beginning of this chapter, who has meltdowns when things don't go his way?
Here are some ways that the mother and grandmother can use this chapter to help him be more flexible.

Michael is going to go to a restaurant today. His mother knows that they have enough time to do and don't have enough time to eat at the restaurant, and she knows that Michael loves their French fires. She says, "Michael, I know your Plan A is to eat at the restaurant, but this is an unexpected situation -- we have to go to the store. What is your Plan B? Maybe we can get some take out fries and eat them while we do errands? You can be flexible, you have done it before."

Michael is thinking for his cousins and he is starting to get upset that his younger cousin is playing with his action figures. His grandmother says, "Michael, are you stuck? Is it a Big Deal or a Little Deal that Ayden is playing with your toys? A Big Deal? Okay, how can we turn it into a Little Deal? You want to give him just one action figure to play with? That is a great compromise. Good job being flexible!"

SUMMARY
In this chapter, you learned...
- What is flexible thinking?
- Why is flexible thinking important?
- The key vocabulary for improving flexible thinking includes:
  - "Be Flexible"
  - "Stuck and Unstuck"
  - "Plan A / Plan B"
  - "Compromise"
  - "Big Deal / Little Deal"
  - "Choice / No Choice"
- How to make being flexible fun.

Unstuck and On Target Home Practice 10

Your child had their tenth session of Unstuck and On Target today.

D/4

Session Summary: Your child learned about the difference between a Big Deal and a Little Deal today. In group. A Big Deal is a large problem. It takes a long time to fix and usually takes a lot of people to solve. A Little Deal is something that is a small problem. It can be fixed quickly, and doesn't take many people to solve.

What you can try at home:
1. Keep in mind that whether or not something is a Big Deal is very personal.
   - For example, it might be a Big Deal to you for the family to go to church together. But it is a Little Deal. For your child. So maybe it is the other way around.
   - Maybe it is a Big Deal for your child that they are always on time, but you feel like being 5 minutes late is a Little Deal. Or maybe it is the other way around.
2. Don't tell your child something is not a Big Deal. Instead, try wording something like this:
   - "If you think something feels like a Big Deal, I'll help you figure out how to move it into a Little Deal."
   - "If you have a Big Deal problem, you can always ask for help. We all need help with a Big Deal."
3. Practice with your child for asking for help with a Big Deal, or for being able to recognize when something is a Little Deal.
   - "If it's a Big Deal or a Little Deal, let's figure out what to ask for help."

Children's National
The Reality about Those Adaptations

Challenges
- Recruitment issues (need for adaptive design)
- Parent check-ins difficult
- Coordination between home and school

Successes
- Involvement of school interventionists
- High attendance rate
- Parents who attend the trainings are deeply engaged in change

Planned Adaptations for Latino families
- Translation of all materials into Spanish
  - Joint efforts by bilingual team (1 native Spanish speaker and 2 native English speakers)
  - Additional teaching around “difficult to translate” words and concepts
- Use of “charla” model
  - PowerPoints used as handouts, rather than projected
  - Emphasis on sharing of parenting experiences
The Reality

Challenges
• Low attendance
• Weekend and fill-in work schedules
• Finding meeting sites with easy access to public transit
• Resistance to participation from fathers

Successes
• Enabling parent connections
• Building maternal confidence
• High enthusiasm from engaged parents

The Flexibility Project, Year 1: Preliminary Results
Classroom teachers saw improvements in a range of behaviors after students completed either PATSS or Unstuck, like:

On the graphs above, lower scores on the SKAMP indicate fewer teacher-reported behavioral challenges.
The Flexibility Project, Year 1: Preliminary Results
Classroom Observations (N=37)

- More classroom participation
- Less negative
- Less likely to become stuck

Resources

- Join the CASD Chat email list autism@cnmc.org
- Autism Internet Modules http://www.autisminternetmodules.org
- Evidence-based practices briefs http://autismpdc.fpg.unc.edu/content/briefs
- Association for Science in Autism Treatment www.asatonline.org
Books on Supporting and Teaching Executive Function

- *Solving Executive Function Challenges: Simple Ways to Get Kids with Autism Unstuck and on Target* Kenworthy et al (2014)
- *The Incredible Flexible You & Superflex* Michelle Garcia Winner
- *Smart by Scattered* Dawson & Guare (2009)
- *Late Lost and Unprepared* Cooper-Kahn & Dietzel (2008)