

# Function Junction: Understanding Executive Function in Children 0-5

Lorri Bauer, MS Behavior Specialist &  
Kristen Eberly, LCSW EC Mental Health Therapist  
KidSTART, Rady Children's Hospital San Diego



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## Session Objectives:

- 1) The participant will explore a model to address executive functioning using an evidence-informed curriculum for a concurrent parent education and child-focused therapy group.
- 2) The participant will be able to describe behaviors associated with executive functioning in toddlers and preschool-aged children.
- 3) The participant will be able to select appropriate therapeutic techniques to improve executive functioning skills in families with toddlers and preschool-aged children showing early signs of executive dysfunction.



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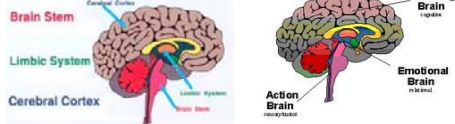
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## What is Executive Functioning?

The Large Scale Structure of the Brain



- A group of mental processes that allow us to get tasks done and function in daily life that include:
  - Setting goals
  - Planning
  - Organizing
  - Controlling our emotions
  - Paying attention to important details
  - Managing our behaviors and emotions in differing situations

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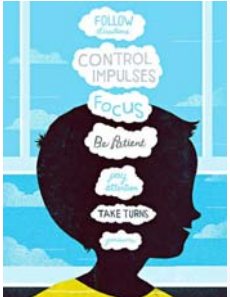
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**Executive Functioning Skills:**

1. Inhibition
2. Attention/Focus
3. Shifting/Flexibility
4. Planning
5. Organization
6. Working Memory
7. Emotional Control
8. Self-Regulation



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**Executive functioning affects children across settings:**

- **Home setting:**
  - Recalling and completing daily routines
    - e.g., morning and bedtime routines
  - Transitioning between activities (preferred to non-preferred activities)
    - e.g., cleaning up toys to come to a meal
  - Tantrums when denied access to items or activities
    - e.g., when told "no" or need to wait
- **Preschool and childcare settings:**
  - Maintaining attention and seating during circle time
    - e.g., constant body movements, fidgeting, touching peers
  - Respecting personal space of peers
    - e.g., touching/bumping peers when in line or circle
- **Community settings:**
  - Running away from caregiver in stores or park,
  - not following safety rules
    - e.g., hand-holding, staying with family
  - trouble remembering and following rules during sports
  - grabbing or touching items that are off-limits



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Rady Children's Hospital - San Diego



**Function Junction**

A parent education and child-focused therapy group to improve executive function skills in preschool children.

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### Participants include:



- Typically 4-5 years old
- At least average cognitive functioning and language comprehension
- A clinical diagnosis that impacts executive functioning skills, such as:
  - Attention-Deficit Hyperactivity Disorder (ADHD),
  - Autism Spectrum Disorders (ASD),
  - Learning Disorders,
  - Tourette's Disorder,
  - Sleep Disorders,
  - Epilepsy,
  - Mood Disorders,
  - Fetal Alcohol Spectrum Disorders (FAS/FASD),
  - Oppositional-Defiant Disorder (ODD),
  - Post-Traumatic Stress Disorder (PTSD),
  - rare syndromes and chromosomal abnormalities.
- Caregivers attending with children have included biological parents, adoptive parents, foster parents, relative caregivers/guardians, and nannies.

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### Developmental and Mental Health approach:

- Parents/caregivers benefit from both developmental and mental health services.
- Often experience increased stress, isolation, and difficulties within the parent/caregiver-child relationship.
- Parents/caregivers can receive support to:
  - Increase reflective capacity towards behaviors and challenges
  - Reframe behaviors and areas of need
    - Bad/manipulative vs. missing skills
  - Increase attunement
  - Increase parent/caregiver confidence



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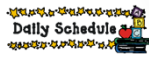
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### Typical Child Group Session:

- Line up using feet visual cues on floor:**
  - Goal: Practice inhibition skills
- Circle time/story time activities:**
  - Goal: Promote speech and language skill development
- Gross motor activity:**
  - Goal: Regulation through movement
- Fine motor activity:**
  - Goal: Promote fine motor skills (writing, pencil grip, hand strength, cutting)
- Sensory activity:**
  - Goal: Promote self-regulation skills by meeting sensory needs
- Snack time:**
  - Goal: Social engagement
- Stickers and transition out of session:**
  - Goal: Promote smooth transition back to caregiver

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### Typical parent group session:

- 1. Check-in and review homework**
  - Goal: provide support, validate experiences, build community
- 2. Presentation of executive functioning information/skills**
  - Goal: increase knowledge and understanding of child's needs
- 3. Activity/Video of skill**
  - Goal: expand knowledge of provide resources for activities for home
- 4. Join children's group**
  - Goal: practice activity/skill to build confidence
- 5. Return to parent room and discuss activity and implementation**
  - Goal: reflect, provide support, discuss how to generalize
- 6. Review handout**
  - Goal: provide homework to practice at home
- 7. Return to treatment rooms for children**
  - Goal: reunite with children after separation



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### Importance of Dyadic Activities:

- Allow the parent/caregiver to participate in hands-on practice
  - Increases comfort and confidence and generalization
- Promotes the parent/caregiver-child relationship
  - Opportunities for successes within the relationship
  - Parents/Caregivers and children learn together
- Provides parent/caregivers with concrete knowledge and experiential learning to:
  - support parenting confidence
  - increase understanding of the child's areas of need



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### Therapeutic Techniques:

- Techniques for increasing predictability and control:
  - Verbal or visual prompts or reminders of expectations prior to starting activity, often in question format
  - Picture schedule for session and consistent use of session routines
- Techniques for using visual cues:
  - Picture schedule for session
  - Visual "recipe" for snack, sequenced gross motor activity, fine motor craft activity
  - Waiting feet cards to define space for waiting to begin group
  - Colored circles to mark spot to sit for circle or stand for gross motor activity
- Techniques for timing and transitions:
  - Visual or auditory timers
  - Verbal warning of upcoming change
  - "First..Then.." statements
  - Count back to change (e.g., "Sensory bin is closing in 5, 4, 3, 2, 1, hands up!")
  - Wondering statements and dramatic whisper prompts for social interactions



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## Techniques Continued:



- Techniques for developing social and emotional awareness and skills:
  - Narration of emotions and validation of feelings, use of "Zones" language for emotional/sensory states
  - Encouragement statements to build self-efficacy and esteem
  - Narrating and noticing social cues from peers
- Techniques using sensory strategies for self-regulation and calming:
  - "Waiting hands" squeezes, chair push-ups while waiting for a turn, regulation helpers (e.g., chair bands, glitter bottles, pin wheels, no-spill bubbles, weighted lap pads), structured movement breaks
- Techniques for environmental control and structure to increase compliance and probability of success:
  - Consistent verbal and physical scaffolding
  - Cube chairs for defining personal space and help maintaining seating
  - Hand-over-hand assistance for completion



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## Examples of therapeutic techniques in group activities:

- Line up on feet visual cues on floor:** Inhibition, Shifting/Flexibility
  - Techniques: Visual cues, routine, modeling, verbal prompts and reminders as needed
- Circle time activity:** Working Memory, Self-Regulation, Planning
  - Technique: Visual cues, sequencing, wondering statements
- Gross motor activity:** Planning, Self-Regulation, Inhibition
  - Technique: Visual cues, sequencing of obstacle courses, sensory strategies
- Fine motor activity:** Shifting/Flexibility, Attention/Focus
  - Techniques: Visual cues of stations, verbal timed warnings, scaffolding
- Sensory activity:** Self-Regulation, Emotional Control
  - Techniques: Sensory strategies, noticing peer cues, dramatic whisper
- Snack time:** Planning, Shifting/Flexibility, Inhibition
  - Techniques: Verbal prompts, narration, dramatic whisper first/then
- Stickers and transition out of session:** Inhibition, Shifting/Flexibility
  - Techniques: Verbal prompts, first/then statements, timed warnings

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## Let's Practice!

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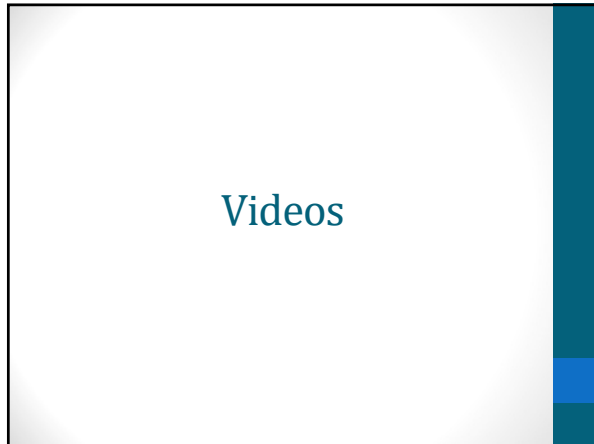
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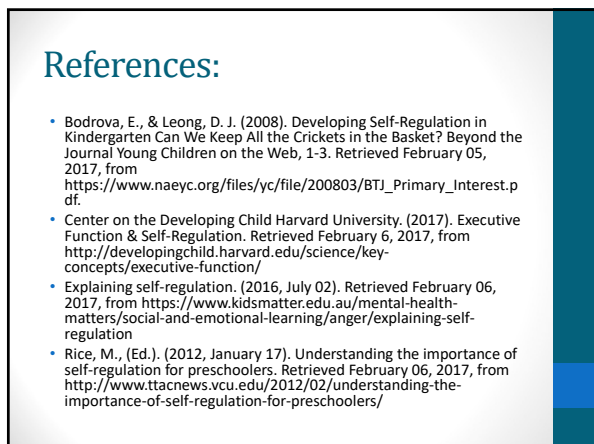
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