THE DORM

Executive Functioning: Connecting to the Command Center

The Dorm Parent Collective

Objectives

- Learn about executive functioning processes and brain networks disrupted by mental health disorders
- Discuss executive dysfunction & how to support your loved one
- Converse and connect with fellow Dorm parents

Executive Functioning

Mental processes that support planning, decision making, focused attention, working memory, and self-regulation.

Executive functions include abilities to **plan** actions towards objectives, to use information with a **flexible** approach, to **realize consequences** of actions, and to make rational **decisions**

Goal Directed Behavior: staying on task, sequencing, shifting & modifying strategies, using info to guide behavior, & self-monitoring

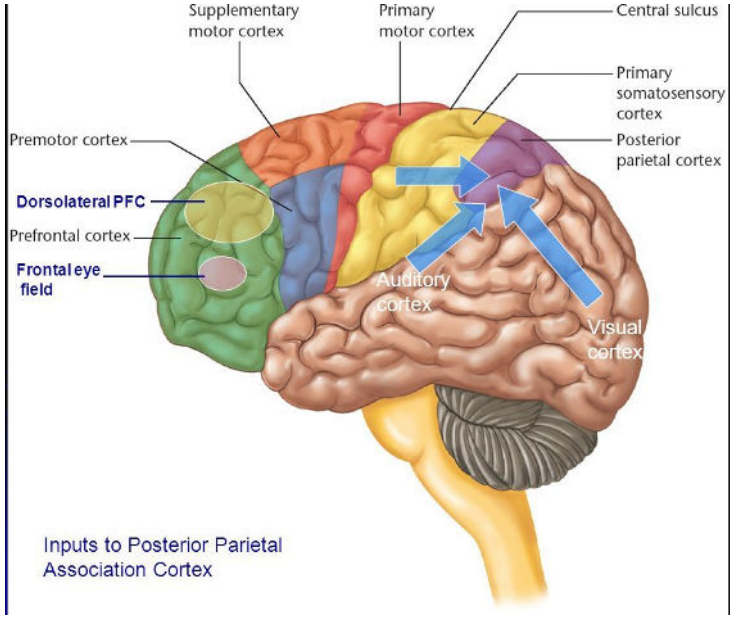
Attention: how your brain limits and focuses on information

- alertness & arousal
- Vigilance: attentiveness/observation
- Selective attention
- Resource required

Organization & Regulation

- Organization: attention, planning, problem solving, sequencing, WM, flexibility, abstract thinking, rules, salience
- Regulation: initiation, emotion regulation, self-control, monitoring, moral reasoning, decision making

Brain Networks Involved



Dorsolateral prefrontal cortex: responsible for general executive functioning like working memory, planning, task switching, inhibition

Frontoparietal = central executive network | includes frontal regions (dlPFC) & posterior parietal cortex

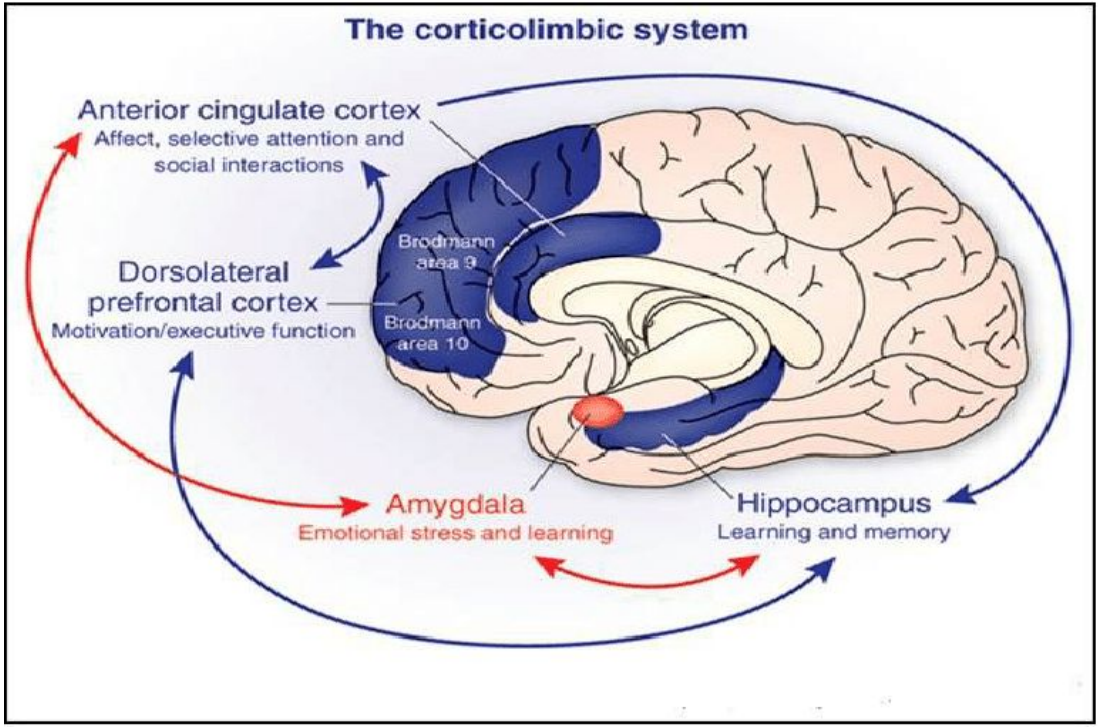
Posterior parietal: planned movements, spatial reasoning, attention; receives sensory information from visual, auditory, and somatosensory systems

Cortical regions involved in **emotion** | Limbic System-process & regulation emotions & memory

- PreFrontal Cortex:
  - orbitofrontal-reward & punishment,
  - ventromedial prefrontal-how does it feel,
  - dorsolateral prefrontal- acting on feelings;
- Parietal lobe: right hemisphere comprehending emotions, spatial processing, facial expressions

Cortical Brain structures involved in **attention**:, parietal lobe, anterior cingulate, and frontal lobe

Brain Networks Involved



Brain Networks Disrupted

3 core brain networks

- **Central executive network:** frontoparietal (dorsal PFC & lateral posterior parietal cortex) system involved in executive functioning

- **Salience network:** anterior insula & dorsal anterior cingulate cortex, role in *salience* (ie. standing out/importance) & reactivity & facilitates access to attention & working memory

- **Default mode network:** posterior cingulate cortex, ventral medial & dorsal medial prefrontal cortex, angular gyrus; known as the neurobiological basis for the self: self-referential processing, interoception, autobio memory retrieval, imaging the future.

Brain Networks Disrupted

ADHD: trouble organizing, planning, focusing, and managing emotions. PFC dysfunction

Depression: impacts to frontal cortical regions, anterior cingulate, & basal ganglia; increased activity to default mode network

Anxiety: amygdala, attention, memory

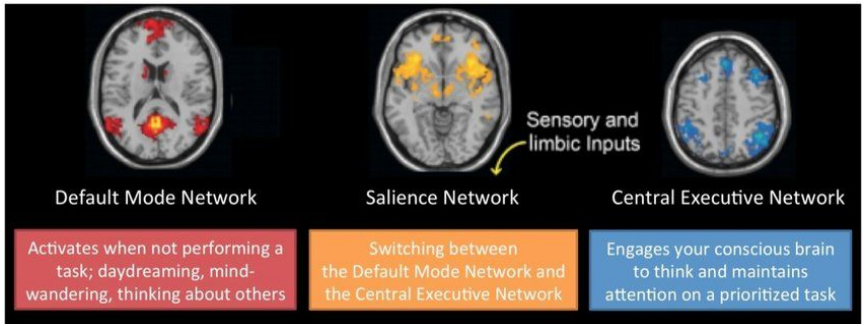
PTSD: amygdala (fear) response; salience sensitivity; decreased CEN connectivity

Borderline Personality Disorder: amygdala & limbic system

Autism: difficulty understanding/processing emotions; cognitive inflexibility

3 core brain networks

- **Central executive network:** executive functioning
- **Salience network:** role in *salience* (ie. standing out/importance) & ; reactivity & facilitates access to attention & working memory
- **Default mode network:** neurobiological basis for the self: self-referential processing, interoception, autobio memory retrieval, imaging the future.



Executive Dysfunction Cluster

People with EF difficulties may experience the following symptoms:

- time blindness, or an inability to plan for and keep in mind future events
- difficulty stringing together actions to meet long-term goals
- trouble organizing materials and setting schedules
- trouble controlling emotions or impulses
- difficulty analyzing or processing information

This is often associated with diagnoses of ADHD, Autism, anxiety disorders, and many others.

Janice Rodden for ADDTitude Magazine

Executive Dysfunction

Types of Executive Function Associated with ADHD

1. **Activation:** organizing tasks and materials, estimating time, getting started
2. **Focus:** finding, sustaining, and shifting attention as needed
3. **Effort**: regulating alertness, sustaining motivation and processing speed
4. **Emotion:** managing frustration and modulating feelings
5. **Memory:** using working memory and accessing recall
6. **Action:** monitoring and regulating physical activity

8 Key Executive Functions

Executive functions are skills everyone uses to organize and act on Information. If your child has executive functioning issues, he may struggle with some or all of the following skills.

Skill	What it means	How it looks
Impulse Control	Impulse control helps your child think before acting.	Kids with week impulse control might blurt out inappropriate things. They're also more likely to engage in risky behavior.
Emotional Control	Emotional control helps your child keep his feelings in check.	Kids with weak emotional control often overreact. They can have trouble dealing with criticism and regrouping when something goes wrong.
Flexible Thinking	Flexible thinking allows your child to adjust to the unexpected.	Kids with "rigid" thinking don't roll with the punches. They might get frustrated if asked to think about something from a different angle.
Working Memory	Working memory helps your child keep key information in mind.	Kids with weak working memory have trouble remembering directions--even if they've taken notes or you've repeated them several times.
Self-Monitoring	Self-monitoring allows your child to evaluate how he's doing.	Kids with weak self-monitoring skills may be surprised by a bad grade or negative feedback.
Planning and Prioritizing	Planning and prioritizing help your child on a goal and e plan to meet it.	Kids with weak planning and prioritizing skills may not know which parts of a project are most important.
Task Initiation	Task initiation helps your child taka action and get started.	Kids who have weak task initiation skills may freeze up because they have no idea where to begin.
Organization	Organization lets your child keep track of things physically and mentally.	Kids with weak organization skills can lose their train of thought--as well as their cell phone and homework.

Important to try not to do these behaviors...

- Name Calling (You're so LAZY!)
- Do the task for them
- Evaluate how simple a task is based on how simple or hard it is for you
- Recognize a more helpful behavior or improvement, but then make a passive comment about your belief that they can continue this behavior successfully
- Compare one person to another or one child to another
- Equate executive functioning with intelligence level

resourcefulmanager

Prioritizing Tasks Worksheet

Use this worksheet to prioritize your tasks or to-do lists. Based on the Eisenhower Decision Matrix, you can easily adapt it to your needs, whether it is for daily or weekly use or longer-range time frames.

Time period _____

	URGENT	NOT URGENT
IMPORTANT	DO IMMEDIATELY	DECIDE: PLAN OR SCHEDULE
NOT IMPORTANT	DELEGATE IF POSSIBLE	DUMP

DATE:

Where Does My Time Go?

- First, record your activities in half-hour increments for an entire day.
- Later, determine whether each activity was a Priority 1, 2, 3, or 4. See the chart below.
- Finally, decide which activities deserve more of your time (Priority 1 & 2) and which deserve less (Priority 3 & 4). Make plans to spend more of your time tomorrow on Priority 1 & 2 activities.

URGENT IMPORTANT 1	NOT URGENT IMPORTANT 2
URGENT NOT IMPORTANT 3	NOT URGENT NOT IMPORTANT 4

RESULTS

Activities that deserve more time:

Activities that deserve less time:

Plan for tomorrow:

SAGE GRAYSON
It's your life...make it sweet!

TIME	ACTIVITY	PRIORITY
5:00 am		
5:30 am		
6:00 am		
6:30 am		
7:00 am		
7:30 am		
8:00 am		
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9:00 am		
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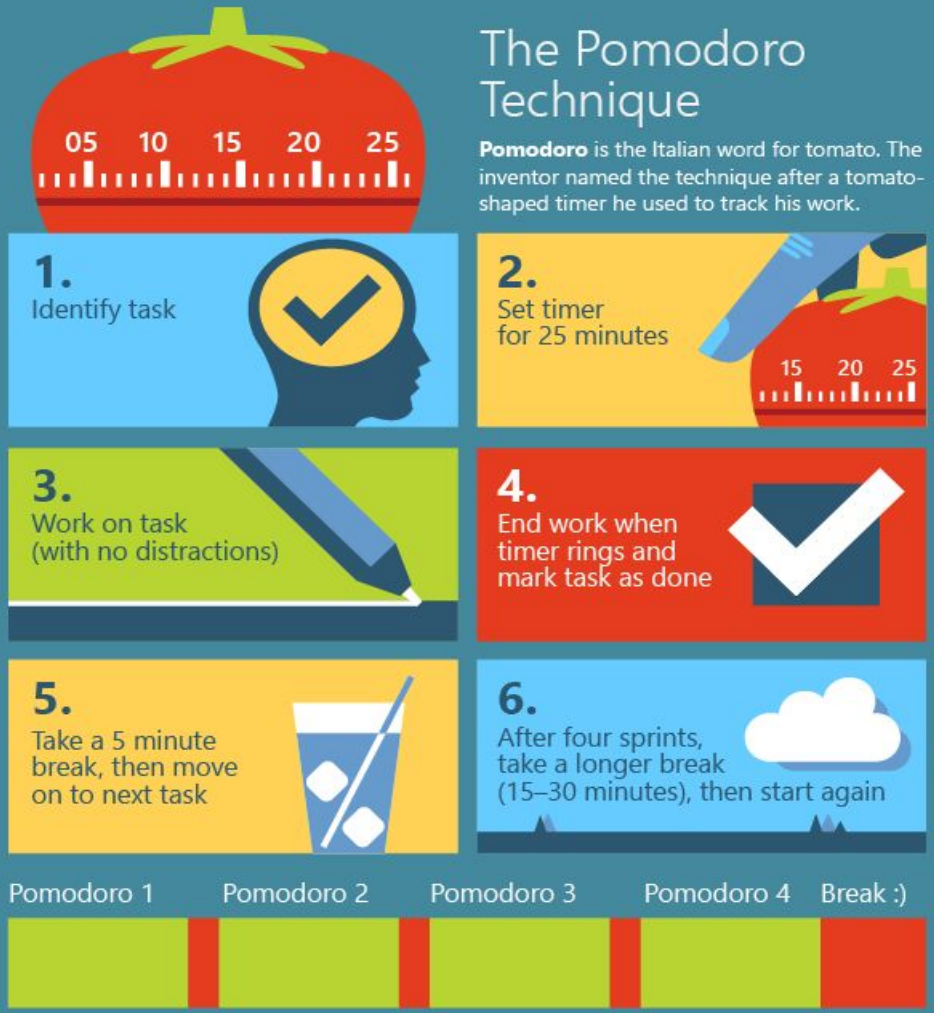

My Morning Routine

FEELING FIT, GROOMED, AND READY TO GO!

Write out the steps for your personal and individualized morning routine:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

My Evening & Bedtime Routine

Brains like routines. Getting ready for bed using the same routine every night allows your brain to settle and calm down and allows for a peaceful and restful night's sleep.

Write out the steps for your personal and individualized evening and bedtime routine:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Apps

iPhone Native Settings - for setting time limit reminders

Pomofocus.io - for listing tasks and working the pomodoro technique

Paprika App - for meal planning and grocery store shopping

Super Better - for "gamifying" daily tasks, like brushing teeth / drinking water / packing a work bag

Finch- self-care pet, personalized exercises to care care of yourself

Tick Tick- to do list, checklist, and task management app

Trello: web-based list making application

Evernote: note taking & task management application

ToDoist: A To-Do List to Organize Your Work & Life

Brick App- device that remove distracting apps and their notifications from your phone

–Individuals can also set up excel or google documents to support task completion, organization, budgeting, etc.

Discussion

- What executive functions does your loved one struggle with?
- Reflect on past challenges: what are some strategies you can use in the future?
- How do you model executive functioning for your loved one?

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