

Session 5:

Working Memory

Parent Summary: Working Memory

Session Overview

- ◆ Homework review
- ◆ Working Memory
- ◆ Homework assignment

Key Information

- ◆ Working memory is our ability to hold multiple pieces of information in short-term memory, and to use it in some way (e.g., to solve a problem, do a task, work with, or modify the information itself, etc.).
- ◆ It is critical to mental problem-solving, learning, social skills & decision-making.
- ◆ Anything that requires your child to juggle more balls than they can manage is going to be a source of potential problems. For instance, when a child struggles with working memory, they might:
 - ◆ Be easily overwhelmed by too much information and/or too many details and/or show a variety of stress indicators, such as increased ADHD symptoms, avoiding or refusing to do a task, etc.
 - ◆ Struggle to hold more than a few ideas or pieces of information in mind at the same time.
 - ◆ Have difficulty doing complex or multi-step tasks, or learning how to do them, because it requires them to consider too much information, or too many steps, at once.
 - ◆ Frequently lose track of where they are in a task (e.g., what step they're on). This can make tasks take much longer, because they will frequently need to spend time figuring out what they've done and what they still need to do. It can also contribute to oversight errors, because they repeat or forget steps or details.
 - ◆ Struggle to follow more than a few instructions at once.
 - ◆ Have difficulty with mental problem-solving, because they can't hold all of the relevant information in mind in order to solve a problem.
 - ◆ Benefit less from past experiences – i.e., they may not recall past experiences and lessons they have learned when they later find themselves in similar situations. Therefore, they cannot use that information to make better decisions the next time.
 - ◆ Have difficulty sorting ideas. For example, they might struggle to prioritize, sequence, or organize ideas, because they cannot hold all of the ideas in mind in order to arrange them.
 - ◆ Frequently forget important details, because they lose track of them when they are thinking about other details.
 - ◆ Have difficulty coping in group social situations, because each person in the group has verbal and non-verbal cues, needs, ideas, opinions, etc. to consider, which overwhelms the child's working memory resources.
 - ◆ Be incorrectly seen as not putting in enough effort, not being bright or "quick," choosing to not follow directions, being self-centred, etc.
- ◆ Working memory can vary depending on the context and type of information being used. For example, once a skill is automatic, it will require less working memory. Therefore, children will be able to manage more complex tasks if they have had lots of experience and practice and can do it automatically. Some children also have more capacity for certain kinds of information (e.g., meaningful or contextualized vs. rote information, visual or verbal information, etc.). Stress can further reduce working memory, so they may not be able to do many tasks when they are stressed in some way (e.g., fatigued, hungry, cranky), which they can do when they are not stressed.

- ◆ There are many strategies that can help children who struggle with working memory. Some of the major types of strategies include:
 - ◆ Watching for signs of working memory overload, and stepping in with support to reduce demands, when signs are observed.
 - ◆ Adapting working memory demands to your child's level to help prevent overload.
 - ◆ Scaffolding complex or multi-step skills.
 - ◆ The Working Memory worksheet provides a number of specific strategies.

Homework Checklist

- Complete the Working Memory worksheet and pick 1-2 strategies to try with your child this week. Try to do this as soon as possible, so you have time to see how it goes.
- Complete the Working Memory Reflection worksheet. Try to complete this as close to the next session as possible.
- Complete the Sessions 1-2 Review worksheet.
- Print out the activity handout for the next session before the start of the session. Also **bring scissors** to the next session!

Worksheet: Working Memory

Check off helpful strategies, and mark those you would like to try with your child.

Predict and prevent problems

- Watch for situations in which your child predictably struggles and consider whether those situations involve high working memory demands (e.g., mental problem-solving, multiple steps, group situations, unstructured tasks, etc.).
- Work *with* your child to identify specific aspects of complex tasks that are most stressful/difficult.
- Make sure your child's basic needs are met and they are well-regulated.
- Adapt working memory demands to your child's actual level of ability. To lower demands:
 - Chunk tasks into smaller steps.
 - Present steps one at a time, for multi-step tasks (e.g., write each step on a small index card).
 - Provide visual aids (e.g., useable checklists, apps, scratch paper for problem-solving, etc.).
 - Ask for your child to be allowed to have memory aids and other tools to reduce working memory during tests (e.g., calculator, formula sheets, word definitions, etc.).
 - Create structure for unstructured tasks (e.g., cleaning up after themselves).
- Other: _____

Build child's awareness and motivation to work on working memory

- Make sure your child understands what working memory is, and how it impacts them day-to-day life.
- Help your child notice how they feel and react when working memory demands are too high.
- Help them experience the benefits of using strategies.
- Other: _____

Use and teach strategies to improve working memory

- Scaffold multi-step skills, including how to implement strategies.
- Teach your child when and how to:
 - Break larger tasks into smaller chunks.
 - Create and use checklists, including the importance of checking off items.
 - Create and use other visual and/or memory aids (e.g., colour-coding, mnemonics, etc.).
- Provide your child extra practice to learn new routines and multi-step skills.
- Teach your child not to rely on mental problem-solving when working memory demands are high.
- Use familiar context and/or connect new information to previously learned information.
- Help them learn to communicate their working memory needs so they can self-advocate.
- Other: _____

Practice through experimentation and play

- Help your child experiment with and tweak different strategies to fit their particular profile.
- Play family games that require frequent working memory (e.g., SpotIt!, Distraction, Scotland Yard, Labyrinth, Connect 4, Stone Soup, chess, tic-tac-toe, Euchre, Forbidden Island, etc.).
- Other: _____

Support your child in the moment they are struggling with working memory

- Know your child's stress indicators in situations where they struggle with working memory (e.g., giving up, avoiding, irritability, task refusal, not knowing where to start, complaining a task is too hard, etc.).
- Use emotion regulation strategies to help your child re-regulate, then help reduce the working demands of the situation, using the strategies you know work for them.
- Other: _____

Worksheet: Working Memory Reflection

At the end of the week, take some time to reflect on the strategies you decided to try this week.

Strategies I decided to try this week:

Strategy 1:

Strategy 2:

Experiences (what I learned, what helped, obstacles, etc.):

Strategy 1:

Strategy 2:

Next Steps

1. Strategies I will continue to implement:

- Strategy 1
- Strategy 2

2. Tweaks I would like to try:

- Strategy 1: _____
- Strategy 2: _____

3. The strategies I would like to try next are:

Worksheet: Sessions 1-2 Review

Answer the following questions to the best of your knowledge.

SESSION 1 REVIEW

1. The area(s) of executive functioning that have the greatest negative impact on my child is/are:

2. Compared to my child's profile, my executive functioning profile is:

- Very similar
- Somewhat similar (several areas of strength/weakness are different, several are the same)
- Not similar (most areas of strength/weakness are different)

3. A pro and con of our EF compatibility is:

4. My most common ways of responding to problems (i.e., response types) are:

5. The pros/cons of these response types are:

6. The steps of PCPS are:

1.	6.
2.	7.
3.	8.
4.	9.
5.	10.

7. Important information/tips for me to remember when doing PCPS include:

SESSION 2 REVIEW

8. The main differences between self-regulation and self-control are:

9. The part of the brain that my child has access to when they are well-regulated is:

10. Some main ways that part of the brain (from #9) impacts our functioning:

11. The part of the brain that takes over when my child is not well-regulated is:

12. Some ways that part of the brain (from #11) impacts our functioning:

13. Types of internal stressors that impact my child most are:

- | | | |
|---|---|--|
| <input type="checkbox"/> Unmet biological needs | <input type="checkbox"/> Biological/health fluctuations | <input type="checkbox"/> Unmet sensory needs |
| <input type="checkbox"/> Lack of knowledge | <input type="checkbox"/> Health conditions/disabilities | <input type="checkbox"/> Weak skills |

14. Types of external stressors that impact my child most are:

- | | |
|---|---|
| <input type="checkbox"/> Physical environment | <input type="checkbox"/> Demands |
| <input type="checkbox"/> Social/interpersonal context | <input type="checkbox"/> Trauma and/or feeling unsafe |

15. The top 5 specific stressors (from any of the above categories) for my child are:

16. Provide two or more examples of stress indicators in each of the following categories:

Type	Specific Example(s)
Cognitive	<hr/> <hr/>
Emotional	<hr/> <hr/>
Verbal	<hr/> <hr/>
Behavioural	<hr/> <hr/>
Social	<hr/> <hr/>

17. What is the primary goal when responding to your child when they are dysregulated?

18. Provide 2 examples of each of the following types of co-regulating response strategies?

Type	Specific Example(s)
Adapting your verbal responses	
Adapting your non-verbal responses	
Adapt environment to soothe	
Adapt environment to reduce stressors	
Attend to unmet needs	

19. What are two examples of emotion regulation skills to teach your child in the following categories?

Type	Specific Example(s)
Self-care	
Self-awareness	
Emotion literacy	
Coping skills	