

INTERVENTIONS TO IMPROVE THINKING SKILLS

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DISCLOSURES

- None



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OBJECTIVES

- Identify 6 interventions to improve thinking
- Identify 6 types of thinking skills
- Review Cogsmart activities

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INTERVENTIONS FOR THINKING ISSUES

Thinking/ Interventions	Medication	Other	Cog Training	Internal Strategies	External Strategies	Environment physical	Environment People
Executive Functioning							
Fluency							
Memory							
Working Memory							
Attn/Prob- Solving							
Stamina/ Alertness							

STAMINA AND ALERTNESS

Medication	Other	Cog Training	Internal	External	Environment – Place	Environment – People
Sleep Pain Alertness Mood	Sleep Naps Breaks Diet Exercis	Time on task	Awareness of fatigue	Timer Reminders	Place to rest Stimulation Convenience	Support



COGSMART-ATTENTION AND CONCENTRATION

- Attention is focusing on something
- Concentration is prolonged or sustained focus
- Both are essential for completing daily activities and underlie successful memory
- Active attending is needed to learn

COGSMART – ATTENTION AND CONCENTRATION TECHNIQUES

- Self-talk during tasks
 - Repeat the steps of the activity to yourself as you complete them
 - Talk to yourself about your progress
 - Helps you remember completing the task : “I am feeding the dog”

Conversational vigilance –paying attention during a conversation

Listen actively

Eliminate distractions

Ask questions

Paraphrase

Eliminate distractions

Ask questions

Paraphrase

COGSMART – ATTENTION AND CONCENTRATION TECHNIQUES

- Preparation
 - Break task into simpler parts
 - Rehearse the steps mentally or write them down
 - Visualize completing the task
- Energy Conservation STEP BACK and conserve energy to avoid fatigue
 - Sleep Enough Be Open to help
 - Take Breaks Avoid interruptions
 - Exercise Cut distractions
 - Pace yourself Keep is simple
- Active Effort

ATTENTION AND PROCESSING SPEED

Medication	Other	Cog Training	Internal	External	Environment - Place	Environment - People
Sleep Pain Attention Mood	Sleep Naps Breaks Diet Exercise Mindful	Time on task Sustained Divided Alternating Speed	Awareness of fatigue Chunking Repeating	Write Record Prepare	Place to rest Stimulation	Support Repeat Write Remind

• 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

• 5, 9, 1, 3, 2, 8, 4

WORKING MEMORY

- Rehearse
- Chunk
- Write it down
- Medication
- Visualize
- Associate - story

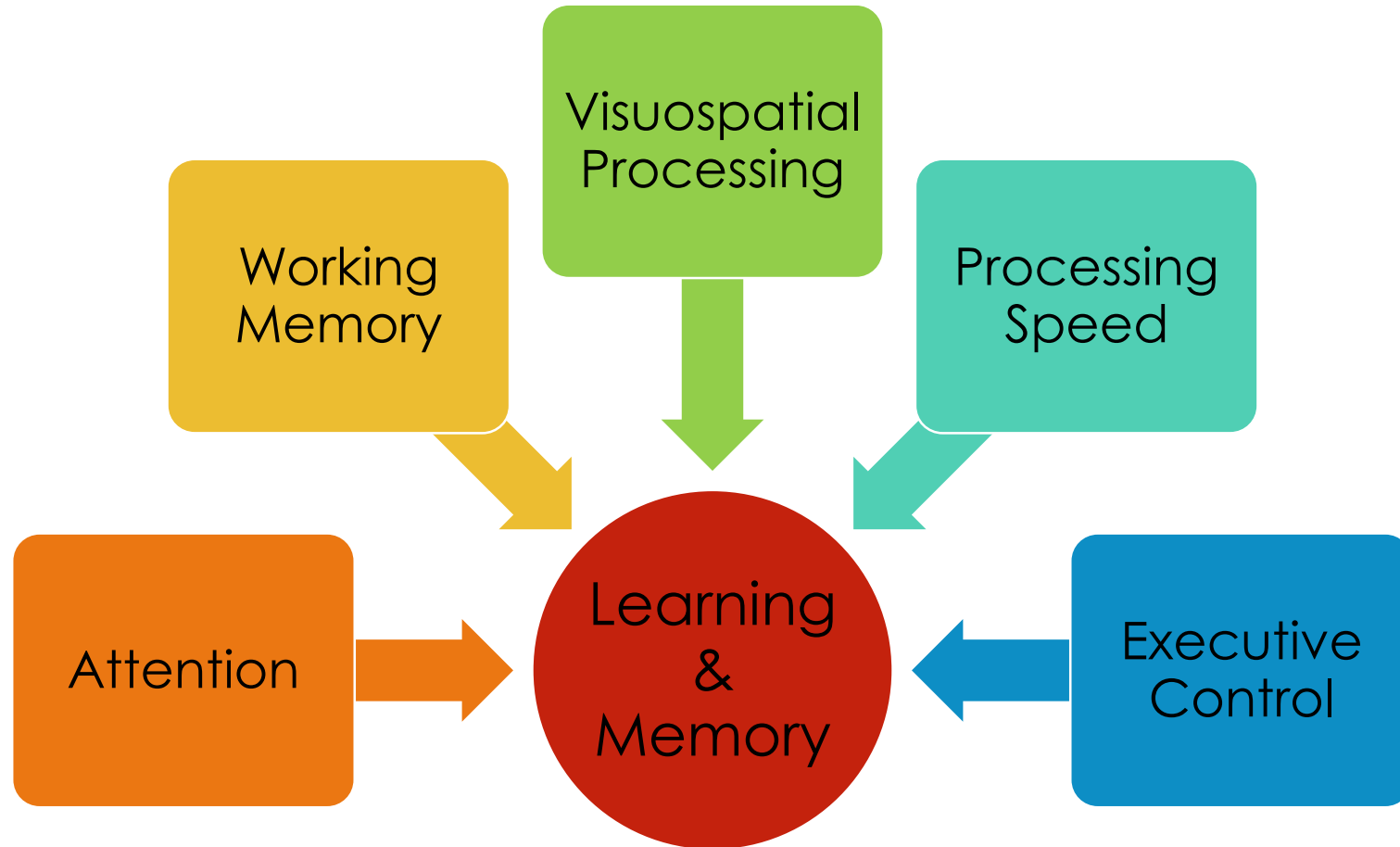
WORKING MEMORY

Medication	Other	Cog Training	Internal	External	Environment – Place	Environment - People
Sleep Pain Attention Mood	Sleep Naps Breaks Diet Exercise Mindful	N- Back Digits Backward	Awareness of fatigue Repeating Remember to Remember	Write Record Prepare Ask to repeat, go slower,	Place to rest Stimulation	Support Repeat Write Remind Slow down

• 1, 2, 3, 4, 5, 6, 7, 8, 9, 10

• 5, 9, 1, 3, 2,

ELEMENTS OF LEARNING AND MEMORY ¹² (CHIARAVALLOTI, 2018)



COGSMART – LEARNING AND MEMORY

- ENCODING > STORAGE > RETRIEVAL
- Info goes in > Info gets stored > Info comes out
- Focus on encoding and storage
- Best learning happens when alert, well rested, attention, and sober
- Write things down
- Association – link new information to old information, focus on similarities and differences
- Chunking
- Categorizing and grouping
- Acronyms
- Rhymes

COGSMART – LEARNING AND MEMORY NEW MEMORY STRATEGIES

- Visual Imagery
- Overlearning

COGSMART – LEARNING AND MEMORY EXTERNAL STRATEGIES

- Calendar/ PDA/ Microsoft Outlook
- Lists/ Notes/ Appointment cards
- Sticky Notes
- Notebook “Can’t miss reminders” (e.g., bag on doorknob)
- Automatic places
- Writing on your hand
- Filing boxes
- Timers/ Alarms
- Watch
- Voicemail messages (call yourself)
- Signs & Landmarks
- Automatic shut-off applications (coffee-maker, iron)
- Pill boxes

COGSMART – LEARNING AND MEMORY RETRIEVAL STRATEGIES

- Relax
- Mental Retracing
- Alphabetic Searching
- Recreating the Context
- Organization
- Automatic places

COGSMART PROSPECTIVE MEMORY STRATEGIES

- The ability to remember to do things in the future
- Calendar
- Alarm
- Linking tasks and using automatic places (place you will see something you need to remember)
- To Do lists (High [today/tomorrow], Medium [within week] and Low priority [within a month]), can put in calendar
- Appointments, Transportation, Work, Errands, Kitchen, Bathroom, Bedroom, Living Room. Paperwork, Household chores, school/learning, phone calls, office

COGSMART – LEARNING AND MEMORY INTERNAL STRATEGIES

- Pay attention (conversational vigilance, task vigilance)
- Self-talk
- Repeat/ Rehearse
- Associate
- Acronyms
- Visualize
- Categorize/ Chunk
- Rhymes

COGSMART SHORT-TERM PROSPECTIVE MEMORY STRATEGIES

- Write a reminder
- Leave your self a message
- Use visual image
- Can't miss reminders
- Talk to yourself about the consequences of forgetting to do something

MEMORY: IMPLICIT & EXPLICIT

Medication	Other	Cog Training	Internal	External	Environment – Place	Environment - People
Sleep Pain Attention Mood Memory	Sleep Naps Breaks Diet Exercise Mindful	Processing speed Working Memory	Awareness of fatigue Repeating Association	Write Record Prepare Ask to repeat, and go slower, Alarms	Place to rest Stimulation Place to write things down	Support Repeat Write Remind Slow down

•Car Bird Apple Tree Cat

COGSMART – PROBLEM SOLVING & COGNITIVE FLEXIBILITY

- 6 step problem solving method
- Define the problem
- Brainstorm solutions to the problem
- Evaluate each solution in terms of ease of implementation, costs, and benefits and likely consequences
- Select a solution to try
- Try the solution
- Evaluate the solution

COGSMART – PROBLEM SOLVING & COGNITIVE FLEXIBILITY

- Strategy Verbalization – self talk
- Hypothesis testing
- Set shifting and set maintenance, determine if strategy working and shift if not working, maintain it if it is working
- Planning to meet goals/deadlines

METACOGNITIVE STRATEGIES (ACRM MANUAL HASKINS ET AL., 2014, P25-38)

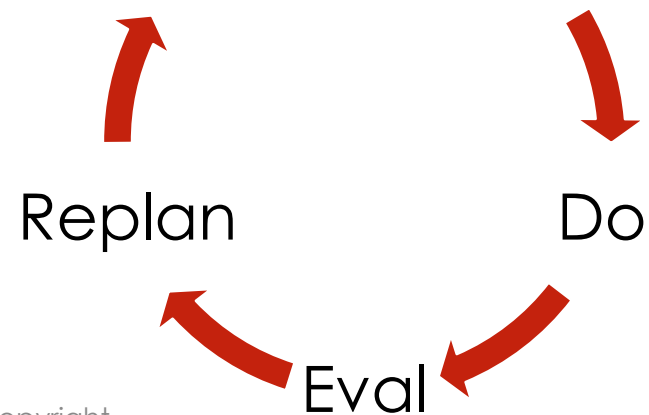
- Self-talk: thinking out loud a strategy such as Go Plan Do review and then move to inner speech
- Formal problem-solving strategies: What is problem, set goals, plan a solution, execute the solution, monitor feedback and make changes as necessary
- Training deficits in awareness: point out behavior, educate on behavior, identify evidence of impairment, managing avoidance and denial, recording frequency of behavior. Predict and Perform procedure, Clarification of Problem, Solution Planning, Executing, Monitoring and Adapting

ACTIVITIES TO WORK ON EXECUTIVE FUNCTIONING

- Tower of London
- Card Games
- Memory Games
- Writing Projects
- Cooking and Baking
- Role-play social interactions

EXECUTIVE FUNCTIONING

Medication	Other	Cog Training	Internal	External	Environment – Place	Environment - People
Sleep Pain Attention Mood Memory Inhibition	Sleep Naps Breaks Diet Exercise Mindful	Planning Doing Assessing Replan Redo Switching	Awareness of fatigue Reminders Redo	Write Record Prepare Plan	Adjust complexity	Support Repeat Write Remind Slow down Assist



RESOURCES

- Cogsmart at <https://s3.amazonaws.com/cogsmart/CogSMART+for+TBI+Manual+September+2010.pdf>
- Other resources
 - Traumatic Brain Injury Survival Guide <http://www.tbiguide.com/index.html>
 - You can view educational videos about TBI at: <http://depts.washington.edu/uwtbi/Education/documentary.htm>
- Cognitive training programs:
 - Brain HQ <https://www.brainhq.com/>
 - Neuropsychonline <https://www.neuropsychonline.com/>,
 - Lumosity <https://www.lumosity.com/>

SHARING, QUESTIONS & ANSWERS

