OT role in Cog Assessment

Occupational therapists focus on functional cognition, or cognition that is necessary within the scope of performing his/her roles, daily occupations within the contexts performed.

OTs may then only need to focus on assessing metacognition and strategy use in occupational performance.

You may not need to assess cognitive skills unless you need to differentiate an underlying skill (e.g., sustained vs. divided attention)

Different cognitive rehab intervention methods…

Adaptations/Modification of tasks and environment

Technology to support cognitive performance

Task-Specific Training (vanishing cues, errorless learning, spaced retrieval)

Compensation

Retraining/Remediati-on of Impairments

Cognitive Strategy Training & Training in Self-awareness (metacogn-itive training)

The Functional Approach

ADAPTATION by others	TASK-SPECIFIC TRAINING	METACOGNITIVE (person led compensation)
No awareness	No awareness	Awareness required
No learning	Low-level task-s-pecific learning	Learning and generalization
	No generalization	

Emphasis on changing task performance or environment rather than underlying skill

Task specific Training

	Metaco gnition	Strategy Use	Population
Task Specific Training (e.g STOMP)	Mild-Max Cues	Minimal	Mild-Mod dementia, Mod-Severe CVA, Mod-Severe TBI, Parkinson's w/cog imp, Cancer

Environmental Modification

Alter properties of the environment

Rice cooker stays plugged in--

Remove distracters (TV, clutter, people, use IPOD with headphones)

Grab bars, ramps

Re-arrange work areas (pots lower)

Add light for improved vision

Pictures to locate rooms (toilet)

**Imbed all of the environmental mods into sequencing for task-o-riented training.

Planning the Intervention: Supportive strategies

Based on the performance we see and individual consideration of HOW they wanted to do tasks, we determine if they needed any of the following **ECT strategies to support task-oriented training**:

1. **E**nvironmental modifications

2. **C**ognitive strategies

3. **T**ask modification

Planning the Intervention: Natural tools

Rice cooker

Rice, butter and salt

Wooden spoon

Kitchen

** this is examples from the following video: https://www.youtube.c-om/watch?v=9iXPHhfk_7E

Planning the Intervention:Task Steps

Where do people get dressed?

Who is in the room when they do?

What time of day?

Is the TV or radio on?

Planning the Intervention:Task Steps (cont)

What goes on first?

*Develop a list of steps for doing the task in a way that supports the **habits and routines** of the occupation as well as the social, temporal and physical context in which the occupation is performed.

EVALUATION: Caregiver-Rated Performance

	Performance Score	Satisfaction with Performance
1. Operate Rice cooker	1	1
2. Put of shirt	5	5
3. Take bus to and from market	5	1

**Canadian Occupational Performance Measure (COPM): semi-structured interview tool for prioritizing goal areas of functional performance; caregiver reports performance on each task on a scale of 1-10 (1=worst, 10=best). (Law et al, 1990)

Evaluation: Choosing Fam & Client-centered Goals

Choose goals that matter the most and potentially change **the quality of someone's life** if better at this skill.

Make-up vs. cooking?

If client unable to identify goals, caregivers assisted.

Goals must be tasks that they did previously (procedural memory) and must have an obvious start and end point.

Maintenance of therapeutic relationship

Evaluation	Planning	Implementation
Individualized goal planning:	Real-life tasks broke down into practice-able steps.	Training is structured through motor learning principles: repetitive, blocked practice frequent verbal praise errorless learning contextually-appropriate environment with real life tools.

Maintenance of therapeutic relationship (cont)

Examiner and caregiver rating of performance	Compensatory modifications built into practice sequences: environmental modification, cognitive strategies, task modification .

(Ciro et al, 2014)

Spaced Retrieval

Recalling info repetitively over gradually longer time intervals (30 sec, 1 min, 2 min, 4, min, 8 min, etc.)

Often used for recall of specific facts, small chunks of info

If retrieval is successful, length is increased

Can be used to learn small amounts of information, facts, used external aids or recall information

Can be combined with errorless learning

Implementation of Training

Training is structured through motor learning principles:

Repetitive, blocked practice

High dose

Errorless learning

Frequent verbal praise

Within a contextually-appropriate environment with real-life tools

Revise the Sequencing List with ECT Built-In

Deficits in remembering steps of task

Plug in rice cooker (or it stays plugged in)

Measure and fill with rice, water, ingredients (if measuring is an issue, you can have pre-poured amounts of rice and ingredients in a baggy in refrigerator)

Push "on" button.

Alarms sounds when ready to eat. (If not alarm, set kitchen timer as one of the steps).

Revise the Sequencing List with ECT Built-In

Deficits in remembering steps of task

Plug in rice cooker (or it stays plugged in)

Measure and fill with rice, water, ingredients (if measuring is an issue, you can have pre-poured amounts of rice and ingredients in a baggy in refrigerator)

Push "on" button.

Revise the Sequencing List with ECT Built-In (cont)

Alarms sounds when ready to eat. (If not alarm, set kitchen timer as one of the steps).

Revise the Sequencing List with ECT Built-In

Deficits in remembering steps of task

Plug in rice cooker (or it stays plugged in)

Measure and fill with rice, water, ingredients (if measuring is an issue, you can have pre-poured amounts of rice and ingredients in a baggy in refrigerator)

Push “on” button.

Alarms sounds when ready to eat. (If not alarm, set kitchen timer as one of the steps).

Task Modification

Alter properties of the task

1. Sit down to take a bath	4. Simplify activity (rice, water in the pot—she turns on)
3. Use assistive technology for a task (pill reminder system)	5. Use pre-set microwave settings
3. Shower in the morning vs. evening	.

Cognitive Strategies

External: external aids to cue to task	**Internal: conscious mental strategies to improve performance**
Sequencing lists (how to cook rice	Search for information from left to right.
Alarms	Check work against a list.
Timers	
Day planner (mild)	

**Imbed all of these strategies into sequencing for task-oriented training

Vanishing Cues

The goal is to reduce cues over time as the person learns the task-specific methods unique to them

Adaptions

	Metacognition	**Strategy Use**	**Population**
Adaptions: Environmental Modification to Support OP	Total Cues	None	Severe dementia, chronic severe stroke, TBI not responsive to training; late stages of Parkinson's

By the time we are done with this section, **you will be able to choose an occupation-based Intervention** based on Metacognition and Strategy use

Types of Adaptations

Change how the task is performed

Change task goals or expectations

Modify task demands

Modify physical environment

Modify social environment or the cues/interactions with others

Adaptation Considerations

Who is doing the adapting?

Are the adaptations fixed or do they require ongoing implementation?

Are they confined to a particular environment (people)?

How does it minimize demand on the impairment?

Are they generic or specific to deficits or symptoms?- Task or task-specific problems

Not specifically on test

Adaptation requires care partner collaboration…

Produces quick results

Simplifies task

May be compensatory if the client (not care partner) implements the adaptations once it is presented to them

Determine who is doing the adaptation

Does not require awareness (of the client), requires consistency

Coaching Care Partners to Support FC

RECAPS Memory Strategies in Dementia

Tailored Activity Program (TAPs)

Care of Older Persons in their Environment (COPE)

*FC= functional cognition

Metacognitive

	Metacognition	Strategy Use	Population
Metacognition (e.g. MultiContext Approach)	None-Maximal	Good-Minimal (goal is good strategy use)	Any Diagnosis
Metacognitive (e.g. CO-OP)	None-Mild Cues	Good	MCI, MS, Mild-mod CVA, mild TBI/concussion, CancerMild-Mod dementia Mod-Severe CVA

Metacognitive Strategy Training: Key Elements

1. Focus on structured methods and/or strategies for managing multiple steps activities

2. Self-monitoring, self regulation, awareness or self-management, and problem solving

Variation in Strategies

Task-specific vs. General strategies

Goal management vs. Self-awareness

Guidance and prompts vs. Explicit strategy instruction

CO-OP

Relationship between ability and performance can be modified by strategies.

Two types of strategies: Global & Domain Specific

CO-OP

Client-centered, performance-based, problem-solving approach that enables skill acquisition through a process of strategy use and guided discovery.

1. Client-chosen goals	
2. Dynamic Performance Analysis	(Observe motivation, task knowledge, and capability)
3. Cognitive Strategy Use	
4. Guided Discovery	
5. Intervention	Phase 1: Prep; Phase 2: Acquisition; Phase 3: Verify

Strategies that improve performance

Global Strategy (Metacognitive)	Domain Specific Strategy
1. Goal	Look to the left
2. Plan	Large handled spoon
3. Do	Use a calendar or alarm
4. Check	Task sequence list

Intervention Process

Phase 1: Prep (Goal)	Phase 2: Acquisition (Plan/Do)	Plan 3: Verification
Orient client/family to CO-OP process	- Start practice or teach performance; Patient problem solves strategies or is coached to strategy; Ask person to consider strategy effectiveness	Verify that the goal has been met
Identify Goals-COPM Observe baseline performance	Review Goal-Plan-Do-Check	Re-administer COPM
	Encourage others to help with transfer/-generalization of strategies to other activities	Probe for generalization

Focus is NOT on the task itself but on...

1. Recognizing cognitive errors across functional tasks
2. Enhancing self-awareness of task methods and self-monitoring skills
3. Increasing strategy generation and effectiveness to manage cognitive error across functional activities

MC Approach Helps Clients Learn...

The same error patterns are interfering with success across different activities and situations

How similar methods can controls errors across situations

MC Approach: Key Elements

1. **Focus on cognitive strategies**
2. **Activities structured to promote transfer and generalization**
3. **Metacognitive Framework**
4. Functional Treatment Activities
5. Therapeutic support focused on building self-efficacy
6. Goal setting and revision

What if we change to a similar activity?

Some error pattern likely to emerge

Same strategy would likely be effective

Must be an activity with similar characteristic (grocery list, following recipe) (all require working memory)

Strategy Use Across Situation

Requires Variability

Consistent practice

Metacognitive skills (e.g. executive function)

Cognitive Performance Error Patterns

Must be observed across activities of situation...

- Misses important details
- Loses track within an activity
- Performs task steps in wrong order
- Omits steps, information, or items
- Gets side-tracked
- Repeat actions, steps, or thoughts
- Incomplete steps or information
- Jumps into an activity without pre-planning

Strategy Types:

External Strategies	Internal Strategies	Structured Activity Framework or Goal Management Strategies	Emotional Self regulation strategies
- Use a list to simplify directions or to ensure all items for a task have been gathered	- Verbal or visual rehearsal	- Stop, Plan, Review	
-Use of cue signs/-labels	- verbal self talk-talking through each step	- Keep it simple, split, and remove (KISSR)	
- Talking aloud during task performance	- Mental practice	- Goal, plan, predict, do and review	
	- Implem-entation intentions (if-then)	- Goal, plan, do, check (CO-OP)	

Mental/Verbal Rehearsal is Most Useful for..

- small bits of info
- facts
- temporary storage
- focusing and concentrating

Interprofessional Strategy

Find a common goal

Major limiting component is working memory