

# Using Cognitive Approaches to Influence Occupational Performance

Western Regional Occupational Therapy Spring Symposium 2023



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Sunday, March 3, 2023  
8:30-10:00am

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## Objectives

01

Summarize the theoretical constructs to cognitive approaches within a rehabilitation framework

02

Distinguish varied cognitive approaches to occupational performance and

03

Implement a cognitive approach as a treatment modality within a physical disability context.

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## Occupational Therapy Practice Framework (4<sup>th</sup> ed.)

Occupations	Contexts	Performance Patterns	Performance Skills	Client Factors
Activities of daily living (ADLs) Instrumental activities of daily living (IADLs) Health management Rest and sleep Education Work Play Leisure Social participation	Environmental factors Personal factors	Habits Routines Roles Rituals	Motor skills Process skills Social interaction skills	Values, beliefs, and spirituality Body functions Body structures

(OTA, 2020, p.7)

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## Rehabilitation Framework

“Set of interventions designed to optimize functioning and reduce disability in individuals with health conditions in interaction with their environment”

(World Health Organization, 2023).

- Considers the individual’s goals
- Multidisciplinary

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## Functional Cognition

“How an individual uses and integrates thinking and processing skills to accomplish everyday activities in clinical and community environments”  
(Giles, 2017, p.2).

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## Addressing Occupation Through Cognition

Contextual importance to occupation

Face – Velvet – Church - Daisy - Red



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Cognitive Approaches	Dual Task
	Motor Imagery
	Task Specific
	Motivational

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## Dual-Task

Involves individuals completing a cognitive task performance while performing a motor action (Pang et al. 2018).



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## Dual-Task

Recruitment of greater cerebral resources

Higher memory scores  
Higher attention speed  
(Zavoronkova et 2012)



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## Dual-Task

Other Ideas:

Texting a message while receiving alternative instructions (auditory)

Mentally rehearsing:

shopping list while walking

listing medication while doing arm exercises

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## Motor Imagery

Motor imagery encourages a client to isolate a particular movement, by “evoking all associated sensations (e.g. muscle tensions, visual aspects) and including cognitive aspects like the order and timing of a movement sequence” (Ladda et al. 2021, p. 1).



Retrieved from Helen Hays Hospital

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## Motor Imagery

Maintain sensorimotor activation  
 Ongoing stimulation during sleep  
 Dosage: 5 times/day, 15 minutes each  
 (Debarnot et al., 2021)



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## Motor Imagery

Dosage: 10 motor trials



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## Task-Specific

Cognitive Orientation to daily Occupational Performance (CO-OP) is a task-specific approach that allows the client to select a desired goal-directed activity to facilitate performance.

Transfer of performance  
(Houldin et al. 2017)



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## CO-OP

Participation perception found approach meaningful (Zera & Brodecki, 2022) and better overall recovery over time (Wolf et al. 2016).



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## Task-Specific: CO-OP

<b>Goal</b>	What activity does the client want to do? Provide context and meaning
<b>Plan</b>	What is the client's plan/strategy?
<b>Do</b>	Trial the client's plan/strategy
<b>Check</b>	Client's satisfaction with the performance

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# Motivational

Enhanced Medical Rehabilitation (EMR)  
 - Manualized approach  
 - OT/PT  
 - Consider patient factors

(Lenze et al. 2019)



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**Table 1. Enhanced Medical Rehabilitation Tools<sup>a</sup>**

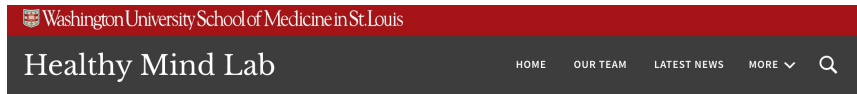
Tool	Description	Guidelines for Use	Objective
<b>Patient Engagement Tools</b>			
Personal goals interview	Card sort of pictures of common activities older adults enjoy	Therapist instructs patient to sort cards into activities that are most important to them (vs less important)	Determine individualized goals to personalize therapy and increase patient's motivation
Therapy tracker	Individualized patient brochure of goals, activities, and progress	Therapist records patient priority goals and activities needed to reach those goals with each patient; patient-friendly progress charts are developed by the therapist on the therapy tracker; the therapy tracker is shown to patient before and after therapy activities	Visually depict how each activity performed in a therapy session relates to a patient's goal
Effort card	A card with a rating and description of effort levels from 1 (easy...I could be working much harder) to 5 (too hard... this is too hard for me)	Throughout treatment sessions, therapist asks patient to assess their effort; therapist provides positive reinforcement for achieving high effort and connects effort to achievement of personal goals	Visually demonstrate to the patient how much effort they are using and when they need to work harder, guiding the therapist in providing feedback to the patient and linking the patient's effort toward reaching their personal goals
Home photograph guide	A small brochure that becomes individualized to each patient's potential discharge environment	Significant others or family members compile and attach key photographs of the patient's home (eg, number and depth of stairs, bed height, bathroom setup)	Ensure that the activities worked on in therapy directly transfer to the patient's home or discharge environment
<b>Therapist Adherence Tools</b>			
Training	There are 5 formal training sessions with didactic and interactive methods. Training materials include a training manual and slide set.	The training summarizes all procedures and gives examples through interactive cases	Train and ensure high therapist adherence to EMR protocol and techniques
Coaching feedback form	A standardized checklist for the expert EMR coach is used to assess EMR techniques during an observed session and provide timely feedback to the therapist	Expert EMR therapist coach shadows with therapists in training and provides direct and timely feedback	Maintain high adherence to EMR techniques
Before, during, and after checklist	A standardized checklist is devoted to prompting the therapist to carry out the EMR steps and build self-awareness of the use of the EMR techniques	While the therapist is learning EMR, the checklist can be self-administered to help facilitate learning and follow through of the techniques (eg, how to respond to patient distress with empathy)	Help therapists attain and maintain high adherence to EMR techniques

Abbreviation: EMR, enhanced medical rehabilitation.

<sup>a</sup> Tools and training are available at <https://healthymind.wustl.edu/items/enhanced-medical-rehabilitation/>.<sup>35</sup>

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<https://healthymind.wustl.edu/items/enhanced-medical-rehabilitation/>



## Enhanced Medical Rehabilitation

Our research has shown that outcomes will improve through more intense and engaging therapy. We have developed Enhanced Medical Rehabilitation, a new approach designed to encourage patients to more intensely engage in physical and occupational therapy.



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# Paper-Based Assessment Tools

Easy & Simple

Provide a Starting Point

Recognized & Used Broadly

Best used for identification of clients at-risk


Known d/c (Edwards et al. 2019)

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### MINI MENTAL STATE EXAMINATION (MMSE)

Name: \_\_\_\_\_  
 DOB: \_\_\_\_\_  
 Hospital Number: \_\_\_\_\_

One point for each answer

	DATE:			
<b>ORIENTATION</b>				
Year Season Month Date Time	___/___/___	___/___	___/___	___/___
Country Town District Hospital Ward/Floor	___/___	___/___	___/___	___/___
<b>REGISTRATION</b>				
Examiner names three objects (e.g. apple, table, penny) and asks the patient to repeat (1 point for each correct. THEN the patient learns the 3 names repeating until correct).	___/3	___/3	___/3	___/3
<b>ATTENTION AND CALCULATION</b>				
Subtract 7 from 100, then repeat from result. Continue five times: 100, 93, 86, 79, 72. (Alternative: spell "WORLD" backwards: DLROW).	___/5	___/5	___/5	___/5
<b>RECALL</b>				
Ask for the names of the three objects learned earlier.	___/3	___/3	___/3	___/3
<b>LANGUAGE</b>				
Name two objects (e.g. pen, watch).	___/2	___/2	___/2	___/2
Repeat "No ifs, ands, or buts".	___/1	___/1	___/1	___/1
Give a three-stage command. Score 1 for each stage. (e.g. "Place index finger of right hand on your nose and then on your left ear").	___/3	___/3	___/3	___/3
Ask the patient to read and obey a written command on a piece of paper. The written instruction is: "Close your eyes".	___/1	___/1	___/1	___/1
Ask the patient to write a sentence. Score 1 if it is sensible and has a subject and a verb.	___/1	___/1	___/1	___/1
<b>COPYING:</b> Ask the patient to copy a pair of intersecting pentagons				
	___/1	___/1	___/1	___/1
<b>TOTAL:</b>	___/30	___/30	___/30	___/30

**MMSE scoring**  
 24-30: no cognitive impairment  
 18-23: mild cognitive impairment  
 0-17: severe cognitive impairment

### VAMC SLUMS EXAMINATION

Questions about this assessment tool? E-mail [aging@slu.edu](mailto:aging@slu.edu)

Name \_\_\_\_\_ Age \_\_\_\_\_  
 Is the patient alert? \_\_\_\_\_ Level of education \_\_\_\_\_

___/1 ___/1 ___/1 ___/3 ___/3 ___/5 ___/2 ___/4 ___/2	1. What day of the week is it? 2. What is the year? 3. What state are we in? 4. Please remember these five objects. I will ask you what they are later. Apple Pen Tie House Car 5. You have \$100 and you go to the store and buy a dozen apples for \$3 and a tricycle for \$20. 1. How much did you spend? 2. How much do you have left? 6. Please name as many animals as you can in one minute. 0 0-4 animals 1 5-9 animals 2 10-14 animals 3 15+ animals 7. What were the five objects I asked you to remember? 1 point for each one correct. 8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24. 0 87 1 648 1 8537 9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock. 2. Hour markers okay 2. Time correct 10. Please place an X in the triangle. 1. Which of the above figures is largest?
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# Performance-Based Assessments

Contextually Relevant

Client Behavior During Performance  
Tolerance  
Strategies Used

Creation of an "End Product"



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## Weekly Calendar Planning Activity (Toglia, 2015) Cognitive Performance Test (Burns, 2018)

Language Senior Assessment Calendar 2016/17

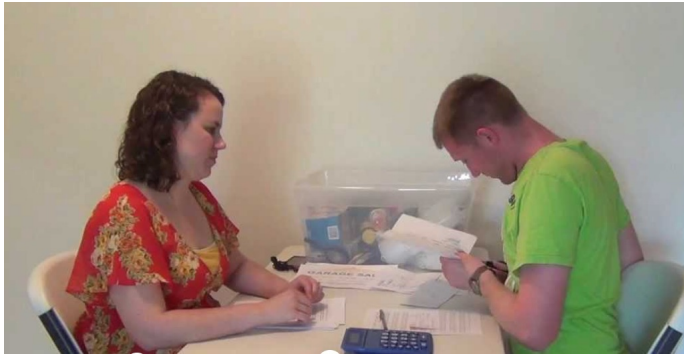
Week no.	at	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	EVENTS
1	18/16						
2	25/16	INSET	Pyglio Return			Unit 1 - False Place 1 (National 2/High)	
3	02/17					Unit 1 - False Place 2 (High)	
4	09/17						NO Observation Meeting (Custom 1 Learning Pending 0.4)
5	16/17						High Observation Meeting (Custom 1 Learning Pending 0.4)
6	23/17						
7	30/17						
8	06/18						
9	13/18						
10	20/18						
11	27/18						
12	04/19						
13	11/19						
14	18/19						
15	25/19						
16	02/20						
17	09/20						
18	16/20						
19	23/20						
20	30/20						
21	06/21						
22	13/21						
23	20/21						
24	27/21						
25	04/22						
26	11/22						
27	18/22						
28	25/22						
29	01/23						
30	08/23						
31	15/23						
32	22/23						
33	29/23						
34	05/24						
35	12/24						
36	19/24						
37	26/24						
38	02/25						
39	09/25						
40	16/25						
41	23/25						
42	30/25						
43	06/26						
44	13/26						
45	20/26						
46	27/26						
47	03/27						
48	10/27						
49	17/27						
50	24/27						
51	31/27						
52	07/28						
53	14/28						
54	21/28						
55	28/28						



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# Executive Functional Performance Test

(Baum et al. 2013)



- EFPT – Enhanced
- Cooking
  - Medication Management
  - Bill Pay
  - Telephone Use

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# Menu Task

(Edwards et al., 2018)

## Cutoff Score 6 = impairment

(Al-heizen et al. 2018)

**Menu**

**Breakfast**

- 2 Eggs with Sausage, Hash Browns and Toast, 1000 calories
- Oatmeal with Raisins and Nuts, 300 calories
- Corned Beef Hash and Eggs, 1000 calories
- Waffles and Syrup, 800 calories
- Fresh Fruit Selection, 200 calories

Fruit Juice (8 ounces)    Coffee/Tea (12 ounces)    Milk (12 ounces)

**Lunch**

- Grilled Chicken Salad, 800 calories
- Hamburger and French Fries, 1200 calories
- Southwest Salad, 350 calories
- Chicken Fried Steak, 1000 calories
- Cottage Cheese and Vegetable Medley, 400 calories

Fruit Juice (8 ounces)    Coffee/Tea (12 ounces)    Milk (12 ounces)  
Diet Soda (16 ounces)

Extremely Poor     Poor     Fair     Well     Extremely Well

	Scoring (Give one point for each item completed correctly. Give zero points for incorrect items)	Performance Score	Error Score
<b>Task Errors (0-7)</b>			
1.	Selections are at or below 1800 calories		
2.	Selections are at or below 58 fluid ounces		
3.	Selects two beverages with breakfast and lunch		
4.	Selects one beverage with dinner		
5.	Selects one meal item each for breakfast, lunch, and dinner		
6.	Selects two or more heart healthy choices		
7.	Selects two snacks		
<b>Initiation and Inhibition Errors (0-5):</b>			
8.	Tells examiner when finished reading instructions		
9.	Tells examiner when starting the task		
10.	Initiates task without prompting		
11.	Does not speak to examiner during task		
12.	Tells examiner when finished without prompting		
<b>Total Score (0-12)</b>			
<b>Time (in seconds)</b>			

After the examiner has recorded the time ask:

Menu Task form Edwards, 2019

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# Thank you

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