

The Menu Task: A Training Workshop

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Functional Cognition: Assessment

Topical outline:

- Screening using the Menu Task
- Establishing proficiency on the Menu Task

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The Menu Task

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The Menu Task

The Menu task is a performance-based test designed to meet CMS requirements and to screen older adults for deficits in functional cognition:

- Uses a familiar activity (i.e., completion of a simulated menu)
- Constructed based on principles/elements of The Multiple Errands Test
- Principles:
 - Multiple task demands (cognitive load)
 - Decision-making under constraints
 - Self-initiation
 - Suppression of automatic behaviors/response tendencies

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Original Article

Screening to Assessment Pathways in Evaluating Functional Cognition in Older Adults

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1-10

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MoCA

WCPA Scores	Impaired (n=127)			Unimpaired (n=150)			<i>U</i>	η^2
	M,	Md,	(SD)	M,	Md,	(SD)		
Planning time	46.26,	20.00	(97.65)	76.75,	17.00	(191.06)	9,482.50	.00001
Total time	13.88,	12.93	(6.36)	13.12,	11.94	(5.08)	9,045.00	.002
Rules	3.42,	4	(0.89)	4.03,	4	(1.01)	6,009.50**	.111
Strategies	4.37,	4	(1.85)	5.61,	5.5	(1.92)	6,029.50**	.103
Appointments Entered	4.53,	16	(3.88)	16.08,	17	(1.90)	6,992.50**	.059
Accuracy	8.5,	9	(4.47)	12.34,	13	(3.46)	4,492.00**	.210
Efficiency	184.33,	130.82	(178.67)	98.26,	72.64	(84.12)	3,954.50**	.127

Note. M = mean; Md = median; SD = standard deviation; η^2 = eta squared, 0.01 = small, 0.06 = medium, 0.14 = large (Portney, 2020). * $p \leq .05$. **Bonferroni correction, $p \leq .002$.

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Mini-Cog

WCPA Scores	Impaired (n=76)			Unimpaired (n=203)			<i>U</i>	η^2
	M,	Md,	(SD)	M,	Md,	(SD)		
Planning time	49.72,	20.00	(105.70)	67.53,	18.00	(170.49)	7,452.50	.00004
Total time	14.00,	13.38	(6.03)	13.27,	11.97	(5.58)	6,773.50	.006
Rules	3.32,	3	(0.97)	3.90,	4	(0.97)	5,087.00**	.067
Strategies	4.32,	4	(1.95)	5.30,	5	(1.94)	5,177.50**	.058
Appointments Entered	13.93,	16	(4.38)	15.89,	16	(2.22)	5,495.00**	.048
Accuracy	7.31,	7–8	(4.90)	11.77,	13.00	(3.51)	3,502.50**	.169
Efficiency	222.25,	138.81	(227.02)	111.31,	79.80	(92.35)	2,821.00**	.070

Note. M = mean; Md = median; SD = standard deviation; η^2 = eta squared, 0.01 = small, 0.06 = medium, 0.14 = large (Portney, 2020). * $p \leq .05$. **Bonferroni correction, $p \leq .002$.

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Menu Task

WCPA Scores	Impaired (n=94)			Unimpaired (n=183)			<i>U</i>	η^2
	M,	Md,	(SD)	M,	Md,	(SD)		
Planning time	37.12,	20.00	(47.84)	75.95,	18.00,	(187.49)	8,475.00	.00001
Total time	13.63,	11.88	(6.62)	13.38,	12.42	(5.19)	8,415.50	.00003
Rules	3.34,	3	(0.95)	3.96,	4	(0.97)	5,556.50**	.093
Strategies	4.28,	4	(1.89)	5.43,	5	(1.92)	5,848.50**	.071
Appointments Entered	14.41,	16	(4.14)	15.86,	16	(2.20)	6,606.50**	.041
Accuracy	7.78,	9	(4.44)	12.02,	13	(3.61)	3,757.50**	.215
Efficiency	213.31,	133.54	(209.13)	101.46,	77.58	(74.70)	3,570.50**	.091

Note. M = mean; Md = median; SD = standard deviation; η^2 = eta squared, 0.01 = small, 0.06 = medium, 0.14 = large (Portney, 2020). * $p \leq .05$. **Bonferroni correction, $p \leq .002$.

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Comparisons of those where Loss of Set was present or absent on The Menu Task

Measures	Present (n = 41) M (SD)	Absent (n = 14) M (SD)	t (1, 53); p =	d
Functional Cognition				
WCPA Accuracy	10.87 (4.45)	13.71 (2.79)	2.79; .008	.692
PMMT	2.68 (0.41)	2.94 (0.11)	3.61; < .001	.703
Menu Task	8.32 (2.08)	9.57 (1.83)	2.01; .050	.621
Cognitive Screening				
Trail Making				
Test A	52.63 (51.55)	34.95 (11.01)	-1.27; .211	.392
Test B	135.26 (99.28)	102.50 (50.13)	-1.18; .244	.365
MoCA	23.63 (4.52)	25.57 (1.65)	2.33; .024	.483
Self-report IADL				
ADCS-MCI ^a	44.26 (8.46)	51.00 (1.73)	4.07; < .001	.869

Notes. MoCA = Montreal Cognitive Assessment; ADCS-MCI = Alzheimer's Disease Cooperative Study – Activities of Daily Living Inventory Scale - Mild Cognitive Impairment; PMMT = Performance Assessment of Self-Care Skills Medication Management Test; WCPA = Weekly Calendar Planning Activity; d = Cohen's d, 0.2 = small, 0.5 = medium, 0.8 = large (Cohen, 1988). ^aADCS-MCI Loss of Set/Food Preferences as criteria: n Present = 31 n Absent = 7.

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Comparisons of those reporting calories as a predominant selection criteria on the Menu Task

Measures	Present (n = 23) M (SD)	Absent (n = 32) M (SD)	t(1, 53); p =	d
Functional Cognition				
WCPA Accuracy	13.13 (4.44)	10.49 (3.81)	-2.36; .022	.645
PMMT	2.90 (0.19)	2.64 (0.44)	-2.92; .005	.712
Menu Task	9.04 (2.01)	8.34 (2.10)	-1.24; .221	.339
Cognitive Screening				
Trail Making				
Test A	35.49 (11.80)	57.21 (57.29)	2.08; .045	.488
Test B	97.99 (47.52)	147.71 (107.07)	2.33; .024	.569
MoCA	25.57 (2.71)	23.09 (4.57)	-2.32; .025	.633
Self-report IADL				
ADCS-MCI ^a	48.27 (6.08)	43.70 (8.84)	-1.75; .089	.580

Notes. MoCA = Montreal Cognitive Assessment; ADCS-MCI = Alzheimer's Disease Cooperative Study – Activities of Daily Living Inventory Scale - Mild Cognitive Impairment; PMMT = Performance Assessment of Self-Care Skills Medication Management Test; WCPA = Weekly Calendar Planning Activity; d = Cohen's d, 0.2 = small, 0.5 = medium, 0.8 = large (Cohen, 1988). ^aADCS-MCI Loss of Set/Food Preferences as criteria: n Present = 31 n Absent = 7.

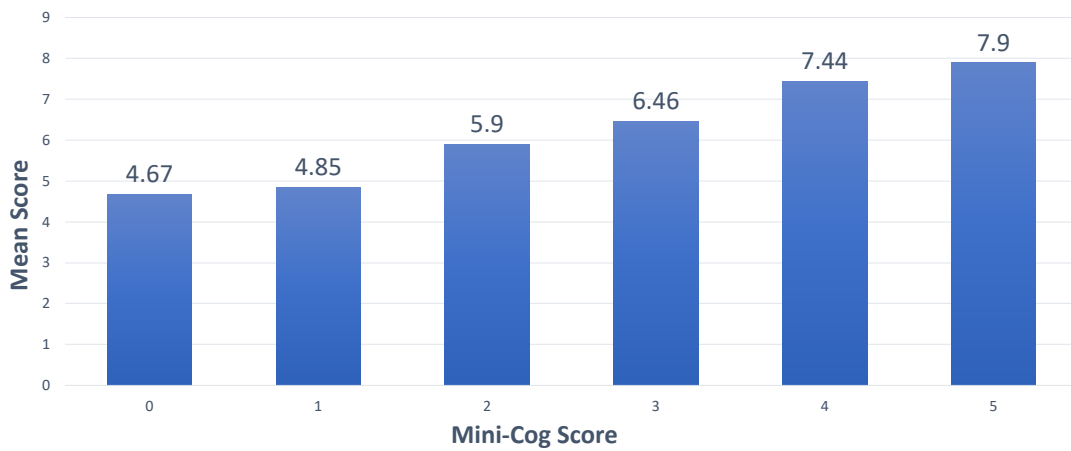
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Acute Care Hospital Study Demographics

	Mean (SD)	Range	
Demographic Characteristics (N=104)			
Age (yrs)	70.75 (12.21)	26-94	
Education (yrs)	13.29 (5.98)	9- 26	
Number of Chronic Diseases	2.86 (1.71)	0-7	
Length of Stay (days)	10.17 (10.06)	1-75	Median -8 days
Mean Time to Administer the MT (minutes)	8.40 (6.22)	1,52-36	Median -7 minutes
	N	%	
Gender			
Male	62	60	
Female	42	40	
Race /Ethnicity			
White	96	92	
Black	5	5	
other	2	3	
Measures	Mean (SD)	Range	% Impaired/Dependent
MT Total Score	6.55 (2.14)	1-11	79.8
Mini-Cog Total Score	2.86 (1.50)	0-5	64.4
AMPAC – Basic Mobility	16.48 (4.69)	6-24	52.0
AMPAC – Daily Activity	17.84 (3.75)	6-24	59.3

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Mean Scores on the the Menu Task by scores on the Mini-Cog

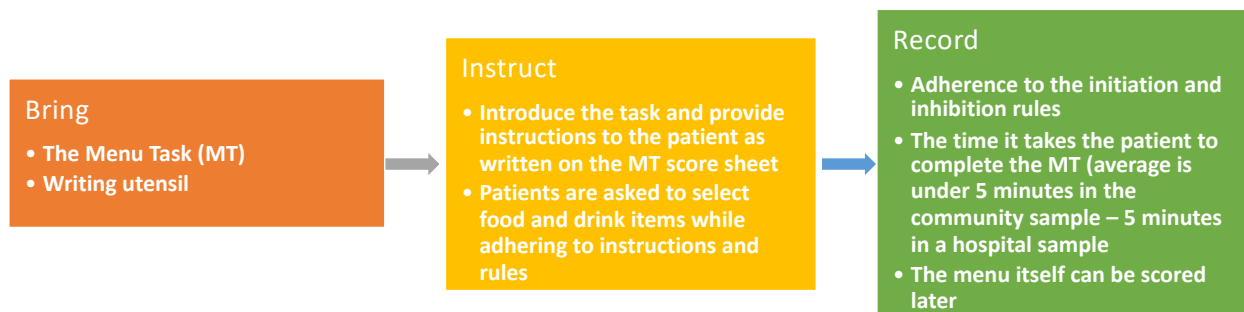


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The Menu Task: Training

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How to Administer The Menu Task



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The Menu Task: Training

- If you would like to participate in the research, please sign the consent form and complete the demographic information sheet
- If you would like to be notified of your results on the training, please provide your email address (you can add this to the consent form – please write it in a way that I will be able to read).
- If you do not want to participate in the research, but would like to be notified of your results please provide me with your email address on the first of your score sheets
- It will take me at least a few weeks to get everyone their scores (so please be patient with me)

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The Menu Task

Extremely Poor	Poor	Fair	Well	Extremely Well
1	2	3	4	5

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Notes on Administration and Scoring of Task Errors

1. Selections are at or below 1800 calorie count

Give one point if the total calorie count for all items selected for breakfast, lunch, dinner, and snacks total 1800 calories or less. Participant may still get credit even if they do not select all required meals and snacks, as long as the total calorie count is 1800 or below.

2. Selections are at or below 58 fluid ounces

Give one point if the total fluid ounce for all beverages selected for breakfast, lunch, and dinner total 58 fluid ounces or less. Participant may still get the credit even if they do not select all required beverages, as long as the total fluid ounce count is 58 or below.

3. Selects two beverages for breakfast and lunch

Give one point if the participant indicates on the menu by circling, marking an "X" by, or any other written method, two beverages for breakfast and two beverages for lunch. The same beverage can be selected twice with written indication (for example: X2, or two check marks). The participant must select items on the menu and may not add items to the menu.

4. Selects one beverage with dinner

Give one point if the participant indicates on the menu by circling, marking an "X" by, or any other written method one beverage for dinner. The participant must select items that are on the menu and may not add items to the menu.


5. Selects one meal item for breakfast, lunch, and dinner

Give one point if the participant selects exactly one meal item for breakfast, one meal item for lunch, and one meal item for dinner. The participant must select items that are on the menu and may not add items to the menu.

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Notes on Administration and Scoring of Task Errors

6. Selects two or more heart healthy choices

Give one point if the participant selects two or more heart healthy choices indicated by  from any category (meals or snacks) on the menu.

7. Selects two snacks

Give one point if the participant indicates the selection of two snacks on the menu by circling, marking an "X" by, or any other written method. The same snack can be selected twice with written indication (for example, X2, or two check marks). The participant must select items that are on the menu and may not add items to the menu.

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Notes on Administration and Scoring of Initiation and Inhibition Errors

8. Tells examiner they have finished reading the instructions

Give one point for verbally indicating to the examiner that the participant has finished reading the instructions by stating "I am done," "I have read them," "Okay," or equivalent.

9. Tells examiner they are starting task

Give one point if the participant verbally indicates starting the task by stating "I am beginning," "Okay," "Ready," or equivalent. If the participant asks if they can start the Menu Task, the examiner should indicate that they can start. As the participant has not yet started the task, they do not lose a point for speaking to the examiner, however they do not score a point for item 9 or item 10. If a participant states they are ready to start, but does not start and needs a prompt to start, they only lose the point for item 10 (see below). Note: for the participant to obtain a point for both 9 and 10, the statements indicating that the instructions have been read and that the participant is starting the task must be distinct.

10. Initiates task without prompting

Give one point if the participant starts the task without being told to do so. The participant does not receive a point if they state that they are ready to start but does not start the Menu Task. NB: If the participant verbally indicates they are ready to start but does not start the Menu Task, the examiner should wait five seconds then indicate that the participant may start the Menu Task (if prompted, no point is given).

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Notes on Administration and Scoring of Initiation and Inhibition Errors

11. Does not speak to examiner during task

Give one point if the participant does not directly speak to the examiner during the Menu Task. Participants may verbalize to his or herself during task performance as long as they do not attempt to communicate with the examiner. If the participant speaks directly to the examiner provide nonverbal cues (e.g., eye gaze, gesture) to redirect the participant to the task, if that is ineffective provide a brief verbal redirection that does not draw attention to the rule sheet (e.g., "Do the best that you can" "Please continue with the Menu Task" "We can talk after you have finished the task").

12. Tells examiner when finished without prompting

Give one point if the participant verbally indicates having finished the Menu Task by stating "I am finished" or equivalent. The participant does not receive a point for this item if they stop performing the Menu Task without any verbal indication of having finished.




Note: Both the Error Score and the answers to the pre and post test questions about how well the participant thinks that they did performing the task are currently used for qualitative analysis only and do not affect the Menu Task score. The examiner they wish to note any discrepancy between the participant's estimate of how well they will do on the Menu Task with their actual performance and their estimate of how well they actually did perform the Menu Task.

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The Menu Task Score Sheet Instructions:

“I am going to ask you to do a task that involves a simulated menu. I am going to ask you to choose food and beverage items for the whole day, following the guidelines on the instruction sheet. Here is a copy of the instruction sheet (*point to the instruction sheet*) which you may refer to throughout the task. Here is a copy of the Menu (*point to the menu*), note that it has two sides (*show the two sides*). You can indicate your choices by circling or checking items. How well do you think that you will perform this task (show scale)? Please read all of the instructions before starting and let me know if you have any questions.”

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Menu	Menu
<p> Breakfast</p> <p>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</p> <p>Fruit Juice (8 ounces) Coffee/Tea (12 ounces) Milk (12 ounces)</p>	<p> Dinner</p> <p>Turkey Burger and Garden Salad, 800 calories 🍏 Lasagna, 500 calories Grilled Salmon and Wild Rice, 400 calories 🍏 Southwest Salad, 350 calories Chicken Fried Steak, 1000 calories</p> <p>Fruit Juice (8 ounces) Coffee/Tea (12 ounces) Milk (12 ounces) Soda (16 ounces) Diet Soda (16 ounces)</p>
<p> Lunch</p> <p>Cilled 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 🍏</p> <p>Fruit Juice (8 ounces) Coffee/Tea (12 ounces) Milk (12 ounces) Soda (16 ounces) Diet Soda (16 ounces)</p>	<p> Afternoon/Evening Snack</p> <p>Yogurt Cup, 280 calories 🍏 Fresh Fruit Selection, 150 calories 🍏 Crackers, 200 calories Ice-cream, 500 calories Jell-O, 100 calories</p>

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The Menu Task Score Sheet Instructions:

"I am going to ask you to do a task that involves a simulated menu. I am going to ask you to choose food and beverage items for the whole day, following the guidelines on the instruction sheet. Here is a copy of the instruction sheet (point to the instruction sheet) that you may refer to throughout the task. Here is a copy of the menu (point to the menu), note that it has two sides (show the two sides). You can indicate your choices by circling or checking items. How well do you think you will perform on this task (show scale)? Please read all of the instructions before starting and let me know if you have any questions."

"How well do you think you will perform this task?"

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
Task Errors (0-7)			
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		
Initiation and Inhibition Errors (0-5):			
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		
Total Score (0-12)			
Time (in seconds)			

After the examiner has recorded the time ask:

"How well do you think you performed this task?"

Extremely Poor Poor Fair Well Extremely Well

"Did you do the task without errors?" Yes/No

If the participants answer is "no" for the above "without errors" question (i.e., the participant indicates that they DID make errors) ask them, "What errors did you make?" Enter a check mark for each self-identified error in the "Error Score" column. Keep instruction sheet available for the participant to see, but do not prompt. Note only those errors recognized spontaneously.

**THE MENU TASK
INSTRUCTION SHEET**

Please read these instructions carefully before starting.

Please follow the menu task completion rules listed below:

- Tell the examiner when you have finished reading these instructions
- Before you start the menu task tell the examiner whether you will be able to do the task without errors
- Start the menu task when you are ready and tell the examiner as you start
- Tell the examiner when you are finished with the menu task
- You may ask questions before you start the menu task, but after you start do not speak to the examiner until you tell him/her that you are finished
- Complete the menu task as quickly and accurately as possible

Menu Selection Instructions:

- Select one meal item for each of the following meals: breakfast, lunch, and dinner
- Select one afternoon and one evening snack
- Select two beverages for breakfast, two beverages for lunch, and one beverage for dinner
- Use pen or pencil to indicate each item you select on the menu. If you select an item more than once indicate the number of times you are selecting it (for example, X2)

Please follow the menu selection rules listed below:

- Select two or more Heart Healthy food items [♥]. Heart Healthy items can be either a snack or a meal
- Do not exceed 1800 total calories for the all the food items selected
- Do not exceed 58 total fluid ounces for all the beverages selected
- Do not count calories for beverages.

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The After Menu Task Interview

Developed specifically for this study is a series of open-ended questions to elicit the strategy selection and the "mental set" adopted by the participant during completion of the Menu Task. The participant is prompted

1. "I want you to think back about the Menu Task" and asked the following:
2. "Can you tell me how you went about doing the Menu Task?"
3. "Did you think about how you were going to do the Menu Task ahead of time?"
4. "How did you decide you were going to get it done?"
5. "How did you make your selections on the Menu Task?"
6. "Were there any challenges or difficulties doing the Menu Task?"

Answers were noted verbatim by the examiner.



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