



OCCUPATIONAL THERAPY PROGRAM, DEPARTMENT OF KINESIOLOGY, UNIVERSITY OF WISCONSIN-MADISON

Introduction

- To reduce unnecessary healthcare spending on preventable hospital readmissions, Centers for Medicare and Medicaid Services (CMS) issued a call for a standardized assessment of cognition and functional ability.
- Current cognitive assessments do not identify patients with mild cognitive impairment that can further impair functional ability. Patients with mild cognitive deficits will exhibit functional deficits in daily activities and are at a higher risk for hospital readmission^{1,3}.
- AOTA believes that the IMPACT Act provides an opportunity for occupational therapists to develop a new measure to identify functional cognition deficits to improve patient outcomes and reduce the risk of hospital readmission.
- Emerging evidence suggests that performance-based tests are more effective than neuropsychological measures in assessing the ability of adults to live independently in the community 4,5 .
- The Menu Task is a performance-based assessment designed to screen for deficits in functional cognition using a familiar activity of a simulated hospital menu. CMS and the RAND Corporation have indicated that a medication management assessment may be a feasible performance-based measure of functional cognition.

Purpose: The purpose of this study was to examine the reliability and construct validity of the Menu Task. Additionally, we sought to compare the construct validity of the Menu Task with two medication management tasks to determine whether the Menu Task is an appropriate screening measure to be used by CMS.

Research Design Methods

Design

True exploratory descriptive design

Participants

100 participants over the age 55 living independently in the community (see Table 1)

Measures

Performance-based measures:

- The Menu Task
- The Performance Assessment of Self-Care Skills (PASS)
- The Medication Organizer task

Traditional neuropsychology measures of cognition:

- Montreal Cognitive Assessment (MoCA)
- Brief Interview of Mental Status (BIMS)
- Trails A
- Trails B

Self-report measure of functional ability:

ADCS (IADL)

Procedures and Analysis

- Descriptive statistics for all participants analyzed and reported.
- Multitrait-multimethod matrix² used to determine construct validity of performance based measures.
- "Impaired" and "Unimpaired" groups established using criterion scores to determine the superior tool to screen for functional cognition.

A Comparison of Performance-Based Measures of Functional Cognition Timothy Marks, OTS, Sarah Maloney, OTS, Adeola Solaru, OTS, & Dorothy Edwards, Ph.D.

Results

Figure 1. The Menu Task Assessment

Menu

Breakfast Eggs with Sausage, Hash Browns and Toast, 1000 calorie Datmeal with Raisins and Nuts, 300 calories 안 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

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



INSTRUCTION SHEE Please read these instructions carefully before startin

 Tell the examiner when you have finished reading these instructions Before you start the menu task tell the examiner whether you will be

THE MENU TASK

- Start the menu task when you are ready and tell the examiner as you
- Tell the examiner when you are finished with the menu task • You may ask guestions before you start the menu task, but after you start do not speak to the examiner until you tell him/her that you are
- 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,
- 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 except for Soda (add 400 calories per soda to calorie count/add no calories if diet soda is selected

Table 1. Participant Demographic Information and Assessment Scores					
nics	N (%)	Mean (SD), Range			
	100	68.59 (9.67), 55-95			
Chronic Health Conditions	100	.69 (.95), 0-5			
	100	16.01 (2.83), 10-26			
	100	8.42 (2.03), 4-12			
Organizer	50	4.26 (.92), 2-5			
ependence Score	50	2.78 (.31), 2-3			
ety Score	50	2.99 (.071), 3-3			
	100	24.14 (3.47), 15-30			
DLs)	100	52.70 (3.55), 38-56			
	100	14.28 (1.30), 9-15			
	100	34.09 (12.61), 13.27-91.22			
	100	96.77 (44.29), 35-233.44			
	69 (69%)				

Demographics	N (%)	Mean (SD), Range
Age	100	68.59 (9.67), 55-95
Number of Chronic Health Conditions	100	.69 (.95), 0-5
Education	100	16.01 (2.83), 10-26
Menu Task	100	8.42 (2.03), 4-12
Medication Organizer	50	4.26 (.92), 2-5
PASS – Independence Score	50	2.78 (.31), 2-3
PASS – Safety Score	50	2.99 (.071), 3-3
MoCA	100	24.14 (3.47), 15-30
ADCS (IADLs)	100	52.70 (3.55), 38-56
BIMS	100	14.28 (1.30), 9-15
Trails A	100	34.09 (12.61), 13.27-91.22
Trails B	100	96.77 (44.29), 35-233.44
Female	69 (69%)	
White	84 (84%)	

Table 2. Multitrait-multimethod Matrix for Performance Based Tests and Paper/Pencil Tests

Methods		Performance Based Tests			
	Traits	Menu Task	PASS	Medication Organizer	
Paper/Pencil Tests	MoCA	.56*	.63*	.43*	
	Trails B	48*	43*	52*	
	ADCS (IADL)	.37*	.31	.22	
	BIMS	.24*	.19*	.62*	
	Trails A	34*	51*	42*	

Note: Bold values indicate a moderate correlation. Values with an asterisk were considered significant at the p < .001 level.

Figure 2. The Association of Being Impaired on the Menu Task with Being Impaired on Traditional **Neuropsychology Tests**



Menu

O Dinner Turkey Burger and Garden Salad, 800 calories asagna, 500 calorie: Grilled Salmon and Wild Rice, 400 calories Southwest Salad, 350 calories Chicken Fried Steak, 1000 calor Fruit Juice (8 ounces) Coffee/Tea (12 ounces) Milk (12 ounces)

ottage Cheese and Vegetable Medley, 400 calories ᅇ

Soda (16 ounces) Diet Soda (16 ounces) Snack 🍯 🌜 Yogurt Cup, 280 calories 😕

Fresh Fruit Selection, 150 calories 💝 Crackers, 200 calories Ice Cream, 500 calories

Jell-O, 100 calories

Conclusions

- independence in daily life.

- the Medication Organizer task.

Implications for Practice

- readmission.

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doi: 10.1111/jgs.14200 multimethod matrix. Psychological Bulletin, 56, 81-105. doi: 10.7326/0003-4819-155-8-201110180-00008 doi:10.1016/j.jpsychires.2005.10.008 68, 335-360.



The Menu Task better identifies functional cognition deficits than the PASS or the Medication Organizer task, perhaps due to the unique measures of inhibition and impulse control; aspects of executive function essential to

The Menu Task is a quick and easy screening tool for impairment in functional cognition. Our results suggest that the Menu Task has moderate construct validity and moderate internal consistency (α =.66)

Individuals impaired on the Menu Task were also impaired on other measures of executive function, indicating that the Menu Task is a sensitive measure in predicting executive function deficits in the context of daily life.

The Menu Task may more accurately identify individuals at risk for hospital readmission within weeks of discharge from subacute care than the PASS or

The ability to easily identify patients who require comprehensive evaluation will allow occupational therapists to provide services to individuals who may have previously gone unrecognized, thus decreasing rates of hospital

Occupational scientists can answer CMS's call for a standardized assessment of functional cognition for patients in subacute care settings.

Occupational therapists' expertise in performance-based assessments uniquely positions occupational therapy as an important contributor to changes in healthcare legislation, ultimately reducing unnecessary spending associated with hospital readmission and optimizing patient outcomes.

References

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