

The Value of Enhancing Your Clinical Practice through Use of Standardized Cognitive Screening tools... And the Secrets to Using them

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In today's Webinar we will...

- o Look at what Cognitive Screening IS (and what it's not)
- o Identify commonly used Cognitive Screens
- o Demystify what the terms “Objective”, “Standardized”, “NORMS”, “Validity” really mean (not just the statistical stuff)
- o Demonstrate these points using a case example

Cognitive Screening vs. Assessment

- Cognitive Tools are typically divided into Screening vs. Assessment tools
- Each tool is identified with a level of user qualifications
- Screening tools typically fall into the category that most clinicians can use without fear of “going beyond their scope of practice”
- Screening tools are **Not diagnostic**: they identify if something is “suspicious”, suggesting more info is needed

The Mammogram Analogy



- A Breast cancer screen (Mammogram) determines if **there is something suspicious** in the breast tissue.
- The Mammogram **DOES NOT RESULT** in a **DIAGNOSIS** of Breast Cancer
- An **Abnormal** Mammogram result identifies the need to **investigate further...**
- Just like a cognitive screen suggests a **potential cognitive issue** that needs further inquiry

Reasons for Cognitive Screening

- o **Classify** a level of ability/performance
- o **Identify** a change in abilities over time
- o **Evaluate** whether an **intervention** is having an effect on cognition
- o **Determine eligibility** for (pharmacological) intervention

Common Screening tools in Dementia

- o MMSE
 - o MoCA
 - o KSCAr ^{+drive}
-
- o Provide an OVERALL summary score of a person's cognitive status
 - o You can't meaningfully parse bits and pieces at a level beyond that for which the test was designed and draw conclusions

Key elements of Standardized Cognitive Screening

- Objective
- Standardized (administration and scoring)
- Normative-Based (NORMS)
- Valid

Objective Delivery means..



The person who looks just like the mean neighbour who wouldn't give your ball back...



Or, who looks like your Auntie Ruth

YOUR BIASES won't influence the obtained scores

You Minimize the effect of BIASES by Using:



1. A **standardized** Administration and scoring of the tool
2. Applying appropriate **Normative Data**
3. **Valid** tools

Standardized Administration Means...

- **Reading** all of the questions using the **Exact Wording** given on the test or in the manual. (No short-cuts or word substitutions)
- **Timing** items with specified time limits/duration carefully and accurately



Practical Example...

Read the **EXACT** Instructions!

- MoCA Alternating Trail Making: "Please draw a line going from a number to a letter in ascending order. Begin here [point to (1)] and draw a line from 1 then to A then to 2 and so on. End here [point to (E)]."
- "connect the numbers and letters in order, going from 1 to A to 2 to B, and so on" IS NOT ACCEPTABLE

Practical TIMING Examples



- o MoCA Fluency – 60 seconds
- o E.g, KSCAr^{+Drive} Word Recall: (Present each word for 2 seconds.) **“PLEASE READ ALOUD EACH WORD THAT I SHOW YOU.”** DO NOT TELL THE SUBJECT TO TRY AND REMEMBER THEM.
- o On MoCA or KSCAr Digit repetition, **practice repeating digits at an accurate pace of 1 digit/second** and don’t “chunk” the numbers

What's the big deal about Standardization Anyway?

- Cognitive Screening is a kind of **Mental Measurement**
- To get **Accurate** results, you need to **Administer** the tool in the **same way**, according to the **specified instructions**
- **Follow the Scoring Guidelines** (often in the Manual) carefully when deciding item scores

Consider buying a pair of
expensive dress shoes...





Using Normative Data Corrects for Common sources of Statistical Error

o Age

o Education



Using Appropriate Norms means:

- o Use age corrections if given in the NORMS
- o Use Education corrections if given in the NORMS
- o Make sure your NORMS are CURRENT
- o When there are various NORMS available, state which set of NORMS you are using

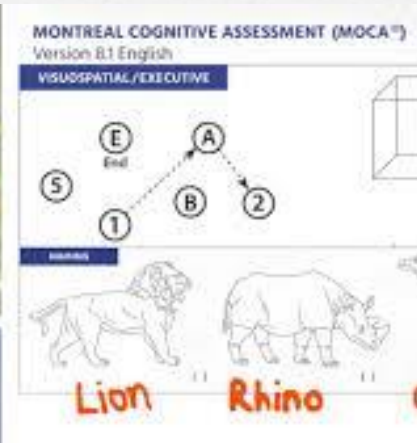
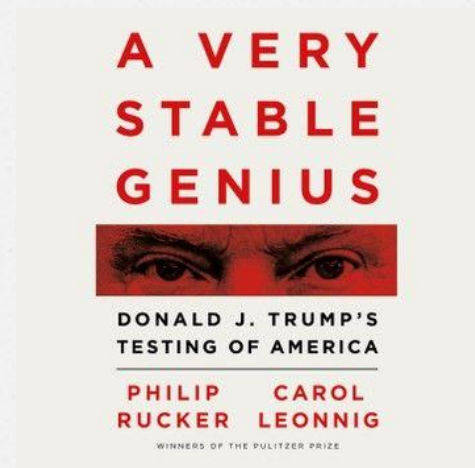
- o You can only use the NORMS if you have a STANDARDIZED ADMINISTRATION

Using Valid Cognitive Screens

A tool is only **VALID** if you **use** it to
measure **WHAT IT WAS DESIGNED TO**
MEASURE

The Perfect “TRUMP” example...

- o The MoCA is NOT a measure of Intelligence!!
(It is a screen for Mild Cognitive Impairment!)



- o And screening tools DO NOT DIAGNOSE!

What were the most commonly used tools designed for?

- **MMSE**: originally an EMERG tool, not specifically designed for dementia, but has become a standard screen for dementia; misses most early cases
- **MoCA**: designed for mild cognitive impairment/early dementia
- **KSCAr^{drive}** : Early Dementia – Moderate Dementia (while a person can still be tested with paper and pencil)

CASE STUDY



Mrs. Pauline McCog

- o Pauline McCog is a retired Sears sales clerk who is currently staying in a respite bed in a local retirement home. She suffers a hearing loss, has Chronic Fatigue syndrome and significant Rheumatoid Arthritis that makes caring for herself difficult since her husband was hospitalized with a heart attack and bypass surgery 3 weeks ago.
- o At the Retirement Home, Pauline doesn't reliably come down for meals, and at night, when her pain is particularly severe, staff hear her sobbing and calling out "oh mother, mother".
- o **Your MMSE Score is 25** (the cutoff score to suspect possible Dementia is 24).

Question 1

(select the BEST Answer)

Does Pauline McCog's score of 25 mean everything is fine?

- a) YES
- b) NO
- c) We need more information
- d) The 25th is Christmas, so Santa will MAKE it alright!

MMSE Question 2

To interpret the MMSE score correctly, you also need to know:

- a) Her AGE
- b) Her Education Level
- c) If she could hear all of the questions correctly
- d) All of the above

Median MMSE scores corrected for AGE and EDUCATION

	Age													
Education	18-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>84
4th grade	22	25	25	23	23	23	23	22	23	22	22	21	20	19
8th grade	27	27	26	26	27	26	27	26	26	26	25	25	25	23
High School	29	29	29	28	28	28	28	28	28	28	27	27	25	26
College	29	29	29	29	29	29	29	29	29	29	28	28	27	27

(SOURCE: Tufts New England Medical Centre)

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(SOURCE: Tufts New England Medical Centre)

Pauline McCog's MoCA Question 1

On the CLOCK, Pauline was unfortunately sitting in a room facing a clock and briefly glanced over as soon as the question was read, but not after that. Do you:

- a) Consider the item spoiled and not score it (and not compute a total score)
- b) Score it as you normally would because it was only a quick glance
- c) Score it as you would because she was so sweet and apologized for looking at the clock

Pauline McCog's MoCA Question 2

On the DELAYED MEMORY task, Pauline says “Chapel” instead of the word “Church”. Do you:

- a) Give her the point because it is a close synonym for the word “church”
- b) Not give her the point because she provided a word that was not part of the test
- c) Check the manual to see if there are any “acceptable responses” provided

Key takeaway points

- o Cognitive Screening is an IMPORTANT FIRST LINE of detection when impaired cognition is suspected. It is NOT DIAGNOSTIC
- o Administering any tool according to the STANDARDIZED Instructions is critical – no substitutions, no simplifications.
- o Applying the correct NORMS is the way you get an ACCURATE INTERPRETATION of the work you put into doing the screening

YOU are IMPORTANT...

- o In cognitive screening and all of the other crucial functions and roles you have.
- o You have been important every day of your career
- o You are even MORE IMPORTANT now, in COVID world. You're likely feeling the strain, but please feel the love, the respect and the interconnection with those around you.
- o Take care of YOU... we need you, and are grateful for you.

Thank you!

QUESTIONS?

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