

Assessing cognition after stroke

Nele Demeyere

Stroke Association

Lord Leonard and Lady Estelle Wolfson Foundation lecturer



Why assess cognition?

Walking and talking

Learning new skills

Interpersonal relationships

Driving, kitchen safety

Progress in rehabilitation

Adapting to new situations

Managing personal finances

Going back to work

...

Screening Cognition

Stroke – specific cognitive problems?

(Post stroke) vascular dementia ?

Mild cognitive impairments?

The picture in clinical practice can be quite muddled.

Which problems are new?

Which problems are stroke specific?

Screening Cognition

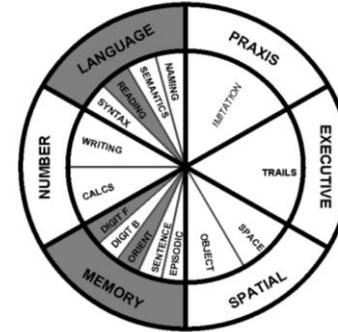
Stroke – specific cognitive problems?

(Post stroke) vascular dementia ?

Mild cognitive impairments?

OVERVIEW - Stroke Specific

OCS Oxford Cognitive Screen



OCS-BRIDGE



Good Clinical Practice

NICE Guideline 162 (June 2013)

NICE National Institute for
Health and Care Excellence

*“Perform a full medical assessment of the person with stroke, **including cognition (attention, memory, spatial awareness, apraxia, perception)**”*

Actual Clinical Practice

No efficient purpose built tool for acute patients:

Long domain specific assessments not practical

Short screens exist, but were made for **dementia**:

MMSE

ACE-R / ACE-III

MOCA

They give a single score (e.g. 24/30)

COGNITION

PASS / **FAIL**

e.g. MoCA

However:

Dementia cognitive profile
 \neq
 Stroke cognitive profile

Still **Pass** / **Fail** cognition

Neglect contaminates tasks

Heavily language dependent

MONTREAL COGNITIVE ASSESSMENT (MOCA)
 Version 7.1 [Original Version] ID: BL-P ____
 Date: ____/____/____

VISUOSPATIAL / EXECUTIVE		Copy cube	Draw CLOCK (Ten past eleven) (3 points)			POINTS		
			[]	[]	[]	___/5		
NAMING					___/3			
MEMORY	Read list of words, subject must repeat them. Do 2 trials, even if 1st trial is successful. Do a recall after 5 minutes.	FACE	VELVET	CHURCH	DAISY	RED	No points	
		1st trial						
		2nd trial						
ATTENTION	Read list of digits (1 digit/ sec.). Subject has to repeat them in the forward order [] 2 1 8 5 4 Subject has to repeat them in the backward order [] 7 4 2						___/2	
	Read list of letters. The subject must tap with his hand at each letter A. No points if ≥ 2 errors [] FBACMNAAJKLBFAKDEAAAJAMOF AAB						___/1	
	Serial 7 subtraction starting at 100 [] 93 [] 86 [] 79 [] 72 [] 65 4 or 5 correct subtractions: 3 pts, 2 or 3 correct: 2 pts, 1 correct: 1 pt, 0 correct: 0 pt						___/3	
LANGUAGE	Repeat : I only know that John is the one to help today. [] The cat always hid under the couch when dogs were in the room. []						___/2	
	Fluency / Name maximum number of words in one minute that begin with the letter F [] ____ (N ≥ 11 words)						___/1	
ABSTRACTION	Similarity between e.g. banana - orange = fruit [] train - bicycle [] watch - ruler						___/2	
DELAYED RECALL	Has to recall words WITH NO CUE	FACE	VELVET	CHURCH	DAISY	RED	Points for UNCUED recall only	___/5
	Category cue	[]	[]	[]	[]	[]		
Optional	Multiple choice cue							
ORIENTATION	[] Date [] Month [] Year [] Day [] Place [] City						___/6	
© Z.Nasreddine MD		www.mocatest.org		Normal $\geq 26 / 30$		TOTAL	___/30	
Administered by: _____						Add 1 point if ≤ 12 yr edu		



OCS
Oxford Cognitive Screen

Glyn Humphreys Nele Demeyere Jane Riddoch Elitsa Slavkova

Short cognitive screening tool

Stroke specific

Aphasia Friendly

Neglect Friendly

OCS

Oxford Cognitive Screen

5 cognitive domains

Language

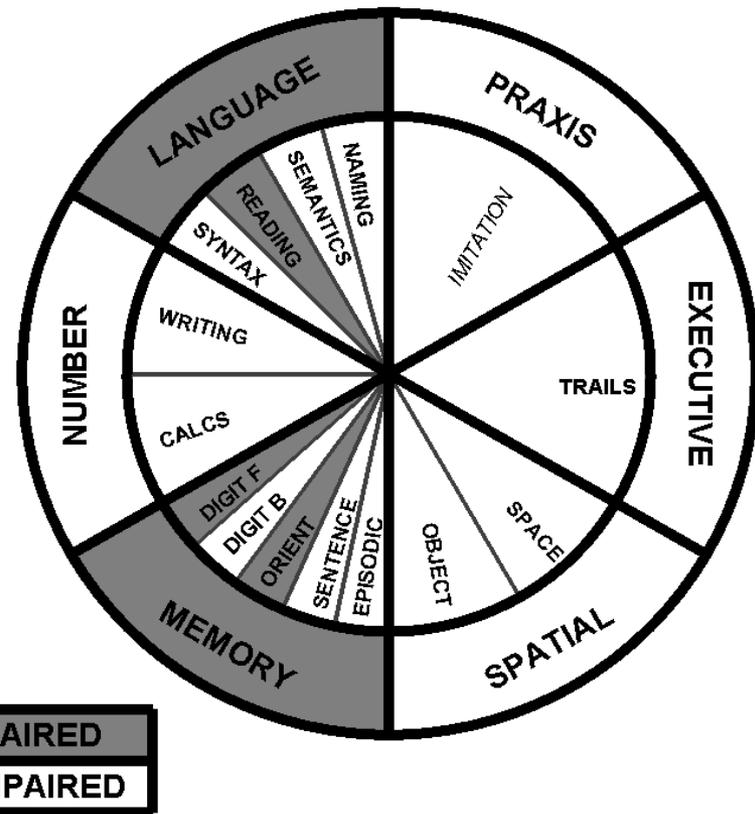
Attention

(spatial & executive)

Number

Memory

Praxis



OCS vs MoCA conclusions

J Neurol

DOI 10.1007/s00415-015-7964-4



CrossMark

ORIGINAL COMMUNICATION

Domain-specific versus generalized cognitive screening in acute stroke

Nele Demeyere¹  · M. J. Riddoch¹ · E. D. Slavkova¹ · K. Jones² · I. Reckless² · P. Mathieson² · G. W. Humphreys¹

OCS **more sensitive** than MoCA

OCS assesses **stroke specific** impairments not assessed in MoCA

OCS **inclusive** for patients with **aphasia & neglect**

OCS provides a **domain overview** instead of PASS / FAIL cognition

OCS in clinical practice

“ **OCS** fills a critical and necessary brief in assessing cognition after stroke (**NICE guidelines**)”

Demeyere et al., Psychological Assessment, 2015

OCS licensed to **209** stroke units.



Detailed assessments

Assessment of Attention



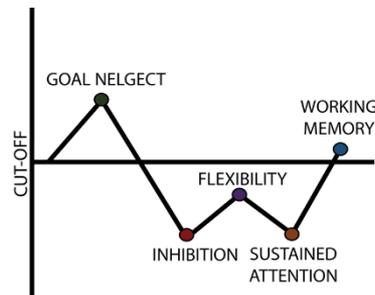
Individualised Diagnostics & Rehabilitation of Attention Disorders

Executive Control

Attentional control mechanisms

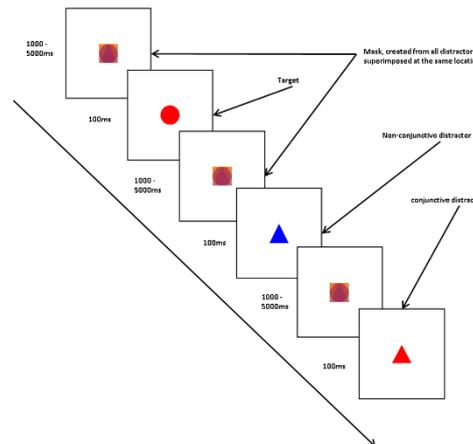


Rachel King



Selective & sustained attention

Temporal dynamics and its behavioural correlates



Nir Shalev

Assessing Cognition ?

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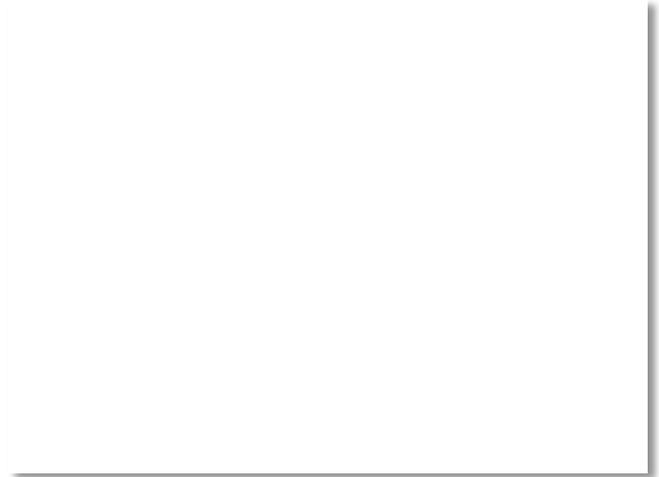
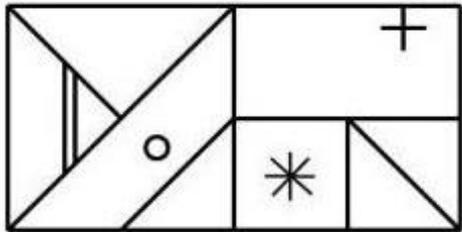
Mild Cognitive Impairments



OCSd
Oxford Cognitive Screen

Mihaela Duta Glyn Humphreys Nele Demeyere

Tablet based sensitive assessments for Mild Cognitive Impairments and Dementia (emphasis on process & strategy)



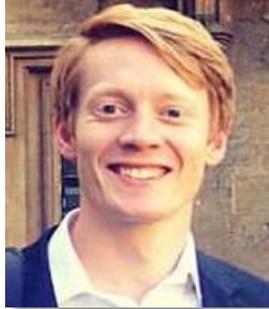
Mental Capacity



Nele Demeyere



Mihaela Duta



Anders Jespersen



Assessing Mental Capacity

Decision making ability after stroke within legal framework of the Mental Capacity Act

(e.g. capacity to decide discharge destination)

Thank you!

