





BDST

First, I'm going to ask a few questions about animals.	Points		6. What animals did I ask you about before we talked about the lion and the rabbit? (only rate the first 6 answers)
	Pr.	recall	
1. What is the name of the animal with the long trunk? It's a very big animal and it can „trumpet“ using its trunk.			Did I ask about a hippo, an elephant or a rhino?
2. What is the name of the animal with the very long neck? This animal lives in Africa and has a yellow-brownish pattern.			Did I ask about a leopard, a giraffe or a parrot?
3. What is the name of the animal which gives its name to a crosswalk with white and black stripes? It is an animal that looks like a striped horse.			Did I ask about a zebra, a tiger or a monkey?
4. What is the name of the bear that lives in very cold regions with ice? Simply put together the words "bear" and "polar" in the correct order.			Did I ask about a penguin, a seal or a polar bear?
5. Which animal are people more afraid of: a lion or a rabbit? Why? (dangerous, carnivore etc.)			
Please watch carefully [administrator draws a symbol with her/his index finger] and then try to draw the following shapes in the air (award 2 points if the first attempt and 1 point if the second attempt is correct)			12. What figures did we draw in the air before we talked about big cities?
7. 			One shape was round.
8. 			One shape looked like a peak.
9. 			One shape looked like a letter.
10. 			One shape looked like a number.
11. Please name as many big cities in [add name of your country] or in the world as you can think of! You have 1 minute to do so			1 point is awarded for each 3 cities (8 points for 24 or more cities)
[note enumerated cities here]			
“Please watch carefully and then try tapping the same pattern”. (Speed 2 Hz= 2 beats per second). If the pattern is reproduced correctly, 2 points are awarded. If not, the pattern is given again by the administrator (“I’ll tap the pattern again.... Please try again now”). If the pattern is now reproduced correctly, 1 point is awarded. B=both hands, L=left hand; R=right hand			
13. R-L-R-L-R-L-R-L		14. L-R-R-L-R-R-L-R-R-L-R-R (R-L-L-R-L-L etc. is also considered correct)	
15. B-L-B-R-B-L-B-R-B-L-B-R (B-R-B-L etc. is also considered correct)		16. B-L-R-B-R-L-B-L-R-B-R-L (B-R-L-B-L-R etc. is also considered correct)	

name:	
date of birth:	
date of testing:	
years of education:	

cognitive domains	score (max)	z-score
total (questions 1 to 16)	(50)	
semantic memory (questions 1 to 5)	(10)	
verbal memory (question 6)	(8)	
visual construction (questions 7 to 10)	(8)	
verbal fluency (question 11) Caution: The absolute number of cities named is decisive for the z-value!	(8)	
visual memory (question 12)	(8)	
cognitive flexibility (questions 13 to 16)	(8)	

Hints regarding administration and scoring:

Questions 1 to 4:

Award 2 points each, if first question (e.g.: “*What is the name of the animal with the long trunk?*”) was answered correctly. Otherwise, give the additional hint, (e.g.: “*It's a very big animal that can 'trumpet' using its trunk*”). If the answer is now correct, award 1 point. In any case, name the animal you are looking for again: “*(Right.) The elephant was asked for*”.

Question 5:

Award 1 point for each correct answer.

Question 6:

For each animal that was remembered correctly (elephant, giraffe, zebra, polar bear), 2 points are given. For each animal that could NOT be remembered, give the three options. If the correct animal is selected, 1 point is awarded.

Questions 7 to 10:

If the shape is drawn correctly by the participant (shape can be clearly recognized, regardless if a mirror image is drawn or not) 2 points are awarded. If not, repeat the shape. If the shape is now drawn correctly, award 1 point.

Question 11:

Larger cities ($\geq 50\,000$ inhabitants) are counted. If the client chooses cities from only your county, point out that cities abroad are also counted. 1 point is awarded for each 3 cities (8 points for 24 or more cities). (Example: 7 cities \rightarrow 2 points, 14 cities \rightarrow 4 points etc.)

Question 12:

See question 6 above: For each shape that was remembered correctly without any hint, 2 points are awarded. Give hints for the remaining shapes that could not be remembered, (e.g.: “*one shape looked like a letter*”). If the correct shape then is drawn, one point is awarded.

Questions 13 through 16:

If a tapping pattern was given 0 points, do not administer the following tapping patterns. (Example: Client has been awarded 2 points for the first, 1 point for the second and no points for the third tapping pattern. The fourth tapping pattern will not be administered then).

Interpretation of the total score:

- < 38 : Possible dementia syndrome
- < 41 : Possible mild cognitive impairment (MCI). In this case, however, the „MCI-score“ (sum of the scores for "visual-spatial memory" and "cognitive flexibility") is more sensitive. Suspected MCI for MCI-scores < 11 .

Normative sample (n=136 participants without cognitive impairment) from Trapp et al. 2020, submitted)

	Task	women	men
		mean (standard deviation)	
age < 75	semantic memory	9.78 (0.51)	
	verbal memory	7.12 (0.77)	
	visual construction	7.72 (0.64)	
	verbal fluency	19.06 (6.55)	
	visual memory	7.18 (1.21)	
	cognitive flexibility	5.74 (1.66)	
age >= 75	semantic memory	9.75 (0.68)	
	verbal memory	7.00 (0.90)	
	visual construction	7.65 (0.57)	
	verbal fluency	17.62 (5.05)	20.32 (6.10)
	visual memory	6.87 (1.13)	
	cognitive flexibility	5.23 (1.47)	

“Years of education” (<=12 j vs. > 12 j) is without influence on the test results.
 Gender differences were found for the verbal fluency task only (men >= 75j score higher than women >= 75j, $t_{(84)}=2.21$, $p=.030$).