

CORSI BLOCKS

Description of the Instrument:

- Children are asked to point to a series of blocks that are arranged in an irregular order on a board as indicated by the examiner. Children are first asked to repeat the pattern exactly as the examiner did (i.e., forwards) then they are asked to reverse the pattern given by the examiner (i.e., backwards). The task begins with two blocks and difficulty increases by asking children to repeat increasingly longer block patterns. The child gets two attempts at each pattern length and continues until a child responds incorrectly on two consecutive trials on for a given pattern length. Backward span is typically conceptualized as a measure of working memory, while forward span is conceptualized as a measure of short-term memory.



Base Reference/Primary Citation:

Berch, D. B., Krikorian, R., & Huha, E. M. (1998). The corsi block-tapping task: Methodological and theoretical considerations. *Brain and Cognition*, 38, 317-338.

Corsi, P. M. (1972). Human memory and the medial temporal regions of the brain. *Dissertation Abstract International*, 34(02), 891B.

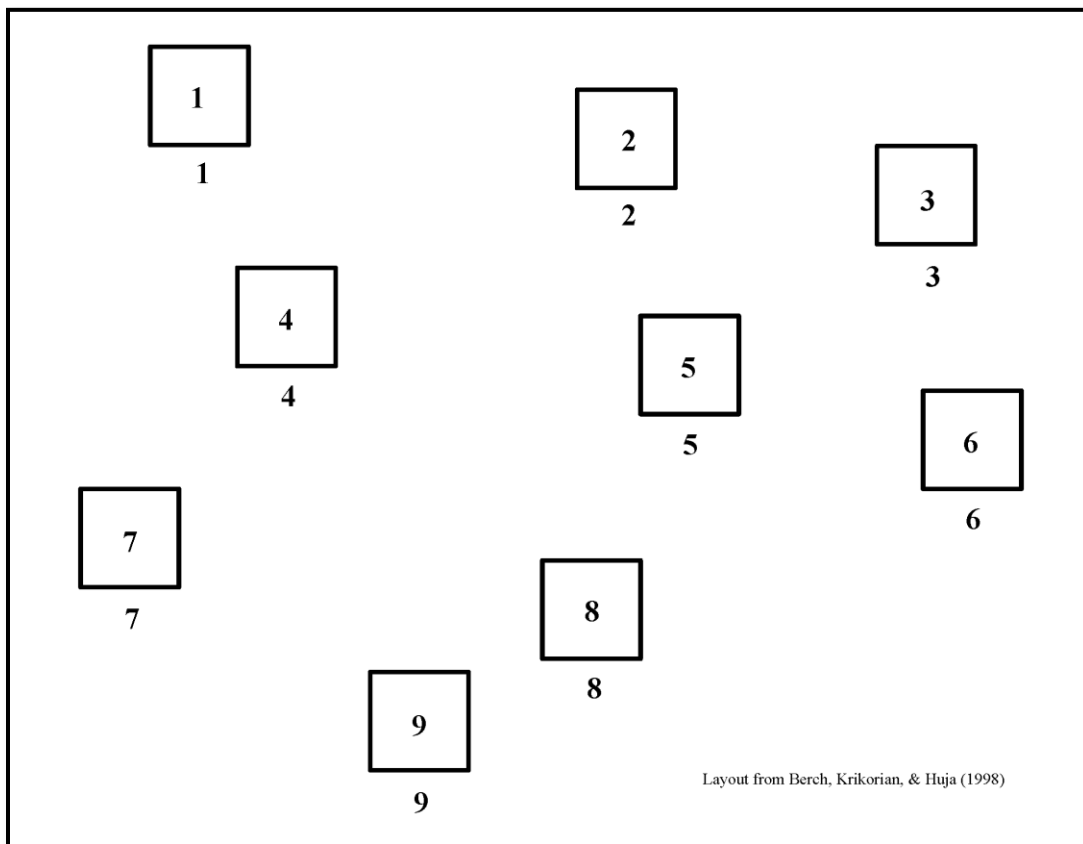
Farrell Pagulayan, K., Busch, R. M., Medina, K. L., Bartok, J. A., & Krikorian, R. (2006). Developmental Normative Data for the Corsi Block-Tapping Task. *Journal of Clinical and Experimental Neuropsychology*, 28(6), 1043-1052. doi: 10.1080/13803390500350977

CORSI BLOCKS MATERIALS

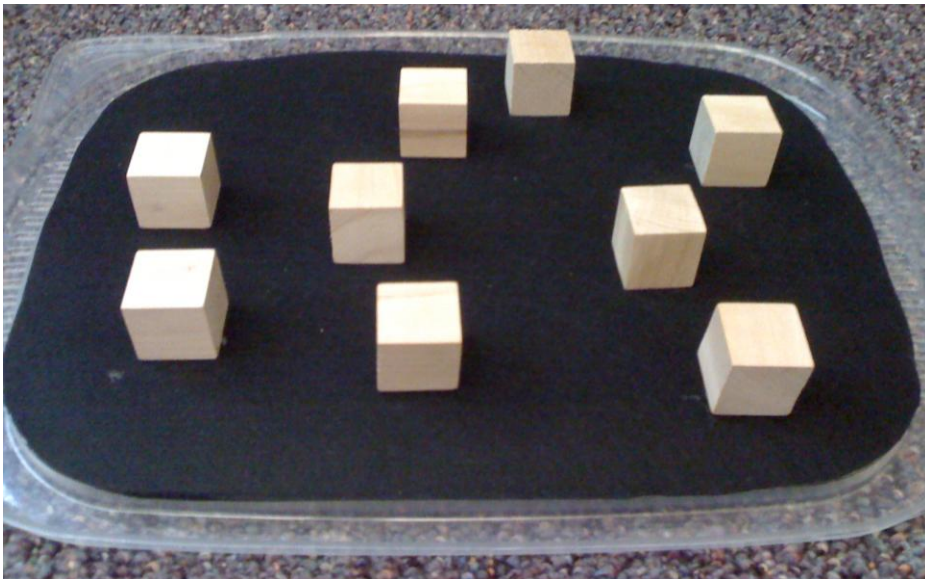
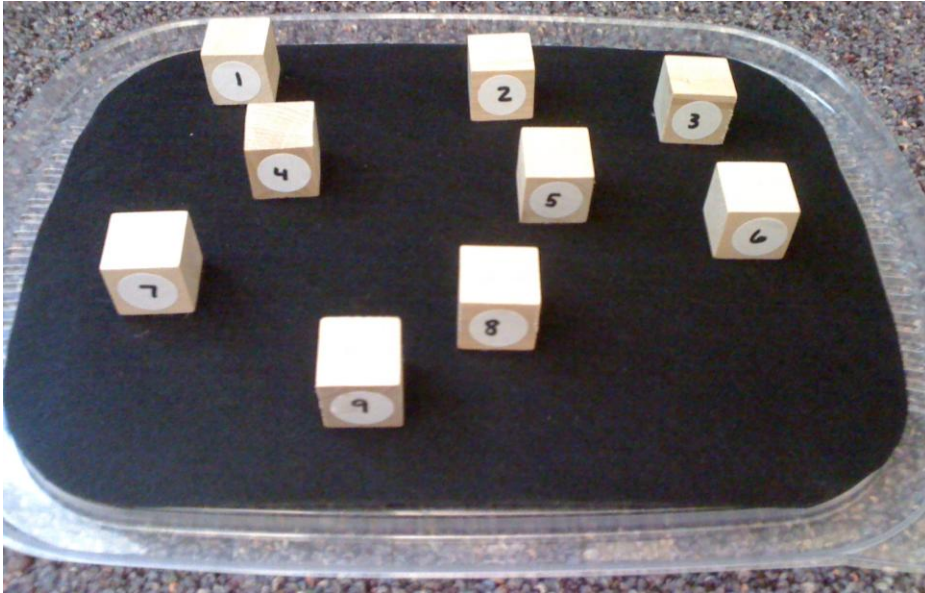
The Corsi apparatus is comprised of nine 1 in. wooden cubes/block affixed to a 9 X 11 in. board. In particular, for our study a plastic 9 X 11 X 2 in. plastic storage container was used to protect in order to protect the apparatus. The blocks were affixed to the lid of the container and bottom of the container was used to cover the wooden blocks.



The nine blocks are arranged in an irregular order based on the original standard display developed by Corsi (1972) as illustrated by Berch et al., (1998).



One side of the blocks is labeled with the numbers 1 through 9 (i.e., assessors view) while the opposite side of the block remains unmarked (child's view).



CORSI BLOCKS SCRIPT

Have the child sit across a table, facing you. Place the board with the nine blocks on the table in front of the child. The numbers on the blocks are facing you. Make sure that the board is close enough to the child so he/she can easily touch each block without having to stretch (i.e., front of board is within four inches of side of table).

Let's see if you can do what I do and touch the same block. [point to **block # 6** with your index finger]. If child copies correctly: **Good, try this one** [point to **block # 4** with your index finger]. If child is correct move to practice 1.

If child does not copy correctly, repeat pointing to both single blocks and then move to the practice items.

Note: if child does not touch center of block, in practice you can demonstrate and tell child to touch the center of the box.

Practice 1:

Now, let's see if you can do what I do. If I touch here [point to **block #7** with your index finger] **and here** [point to **block #3** with your index finger], **can you touch the same blocks?** If child is correct move to practice 2.

If the child is **incorrect** (or does not respond): **Remember, you are to touch the same blocks I do. Okay? Let's try that again. If I touch here** [point to **block #7**] **and here** [point to **block #3**]; **can you touch the same blocks?** If the child is still incorrect, repeat one time and move to the next practice trial.

Practice 2:

Let's try another one, if I touch here [point to **block #9** with your index finger] **and here** [point to **block #5** with your index finger]; **can you touch the same blocks?**

If the child is **incorrect** (or does not respond): **Remember, you are to do the same things I do. Okay? Let's try that again. If I touch here** [point to **block #9**] **and here** [point to **block #5**], **can you touch the same blocks?** If the child is still incorrect, if child is incorrect repeat one more time and then move to Forward Assessment 1.

If the child is **correct** (or after all practice trials are exhausted): **Alright, let's try some more.** Present the child with Assessment 1 (see below). Present each of the forward span blocks to be recalled in the series one at a time, at the rate of one block per second. Always point to the block with your index finger.

- If the child successfully completes an item in Trial 1, proceed to the next item.
- If the child fails an item in Trial 1, then use the item from Trial 2 which has the same item number as Trial 1. This allows the child another opportunity to successfully complete an item.
- If the child completes the item from Trial 2, proceed with the next item number in Trial 1.
- If the child fails an item from Trial 2 of Assessment 1, go on to the first item of Assessment 2.
- Self-Correct is scored as correct

Assessment 1 (Forward Series)

Length	Trial 1		Trial 2
2	5-8		4-9
3	6-9-2		5-8-3
4	3-8-1-4		6-1-8-5
5	4-1-6-9-2		9-4-1-8-3
6	5-2-9-6-1-4		8-5-2-9-4-6
7	8-6-3-4-2-9-1		5-3-8-2-1-9-6
8	3-6-1-8-4-2-7-5		7-9-1-3-5-4-6-2
9	1-4-7-5-8-3-2-9-6		9-1-6-8-2-7-4-5-3

After completing Assessment 1 (forward) say the following: **Remember, you are to do the same thing I do** and continue to assessment 2.

Assessment 2 (Forward Series)

Length	Trial 1		Trial 2
2	6-1		2-5
3	2-7-4		4-3-9
4	4-3-9-6		1-7-6-8
5	5-2-1-7-4		8-5-9-3-2
6	9-3-1-7-5-4		4-7-6-2-1-3
7	1-2-4-8-3-5-9		7-9-4-3-2-5-8
8	4-8-3-7-1-2-6-5		3-5-7-6-9-4-8-1
9	8-4-2-7-9-1-5-6-3		6-8-1-7-4-5-3-2-9

After completing the two forward series, proceed to the two backward series with the following directions.

“Now, let’s play a silly game. We are going play the backwards game. When I touch the blocks, you are going to be silly and touch them in the opposite way I did. Let me show you. If I touch **here** [point to **block #3** with your index finger] **and here** [point to **block #7** with your index finger], **I want you to touch here** [point to **block #7** with your index finger] **and here** [point to **block #3** with your index finger]. **Okay?**

Practice 1: (score first response)

Now it’s your turn to play the silly game. Let’s try another one. If I touch **here** [point to **block #8** with your index finger] **and here** [point to **block #1** with your index finger], **what do you do?**

If the child is **incorrect** (or does not respond): **Remember, you are to touch the blocks backwards from what I did. If I touch here** [point to **block #3** with your index finger] **and here** [point to **block #7** with your index finger], **I want you to touch here** [point to **block #7** with your index finger] **and here** [point to **block #3** with your index finger].

Okay? Let’s try that again. If I touch here [point to **block #8**] **and here** [point to **block #1**], **what do you do?** If the child is still incorrect repeat the procedure with the practice item 1 more time. If child is **incorrect** after all practice trials, still move onto Assessment 3.

If the child is **correct** (or after all practice trials are exhausted): **Alright, let’s try some more.** Present the child with Assessment 3.

- Present each of the backwards block recall in the series one at a time, at the rate of one block per second. Always point to the block with your index finger.
- If the child successfully completes an item in Trial 1, proceed to the next item.
- If the child fails an item in Trial 1, then use the item from Trial 2 which has the same item number as Trial 1. This allows the child another opportunity to successfully complete an item.
- If the child completes the item from Trial 2, proceed with the next item number in Trial 1.
- If the child fails an item from Trial 2 of Assessment 3, go on to the first item of Assessment 4.

Assessment 3 (Backward Series)

Length	Trial 1	Trial 2
2	9-6	4-1
3	1-8-3	2-5-8
4	5-2-4-9	6-1-8-3
5	1-6-3-8-5	6-9-5-2-8
6	4-9-6-2-1-5	3-8-1-6-2-9

After completing Assessment 3 (backward) say the following: **Remember, you are to touch the blocks backwards from what I did** and continue to assessment 2.

Assessment 4 (Backward Series)

Length	Trial 1	Trial 2
2	6-2	1-5
3	3-7-4	7-3-2
4	9-1-6-4	8-5-2-6
5	7-3-5-8-2	4-7-1-9-5
6	5-9-4-6-8-3	1-8-2-6-3-9

CORSI BLOCK RECORD FORM

Child <input style="width: 80%;" type="text"/>	Date <input style="width: 80%;" type="text"/>	Assessor <input style="width: 80%;" type="text"/>	
Assessment 1 (Forward Series)			
Trial 1	Trial 2		
Pract 1 7, 3 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pract 1 7, 3 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Pract 2 9, 5 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pract 2 9, 5 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 1 5, 8 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 1 4,9 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 2 6, 9, 2 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 2 5,8,3 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 3 3,8,1,4 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 3 6,1,8,5 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 4 4,1,6,9,2 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 4 9,4,1,8,3 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Assessment 2 (Forward Series)			
Trial 1	Trial 2		
Item 1 6,1 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 1 2,5 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 2 2,7,4 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 2 4,3,9 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 3 4,3,9,6 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 3 1,7,6,8 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 4 5,2,1,7,4 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 4 8,5,9,3,2 <input style="width: 40%;" type="text"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Assessment 3 (Backward Series)			
Trial 1	Trial 2		
Pract 1 8,1 <input style="width: 40%;" type="text"/> 1,8 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Pract 1 8,1 <input style="width: 40%;" type="text"/> 1,8 <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 1 9,6 <input style="width: 40%;" type="text"/> 6,9 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 1 4,1 <input style="width: 40%;" type="text"/> 1,4 <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 2 1,8,3 <input style="width: 40%;" type="text"/> 3,8,1 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 2 2,5,8 <input style="width: 40%;" type="text"/> 8,5,2 <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Assessment 4 (Backward Series)			
Trial 1	Trial 2		
Item 1 6,2 <input style="width: 40%;" type="text"/> 2,6 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 1 1,5 <input style="width: 40%;" type="text"/> 5,1 <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 2 3,7,4 <input style="width: 40%;" type="text"/> 4,7,3 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 2 7,3,2 <input style="width: 40%;" type="text"/> 2,3,7 <input type="radio"/> <input type="radio"/> <input type="radio"/>		
Item 3 9,1,6,4 <input style="width: 40%;" type="text"/> 4,6,1,9 <input type="radio"/> <input type="radio"/> <input type="radio"/>	Item 3 8,5,2,6 <input style="width: 40%;" type="text"/> 6,2,5,8 <input type="radio"/> <input type="radio"/> <input type="radio"/>		

CORSI BLOCK SCORING

Each item is scored as follows:

0 = Incorrect response

1 = Correct response

For each item/attempt, the child's response is also recorded.

Final Score:

The task is scored as the largest pattern span that the child is able to reproduce. The maximum score possible is 9 for forward span and 7 for backward span.