

Corsi test

Created by Krisztina Peres

2013. June 28.

Experiment software: PsychoPy

Estimated running time: 2-5 minutes

Reference for the original experiment:

Vandierendonck, A., Kemps, E., Fastame, M. C., & Szmalec, A. (2004). Working memory components of the Corsi blocks task. *British journal of psychology* (London, England : 1953), 95(Pt 1), 57–79. doi:10.1348/000712604322779460

Theoretical background

The Corsi block test assesses the capacity of the visual-spatial sketchpad within the working memory. The screen shows nine irregularly placed blocks. At the beginning of the experiment, a sequence is played: the blocks of that sequence are lit up one by one. The participant is required to reproduce the order of those block by pointing to the blocks in the correct order. When participants reproduced sequence correctly, the sequence length increased with one block on the next trial. When they failed to reproduce the sequence, the sequence length decreased with one block. The score is the maximum reproduced sequence-length.

According to Baddeley's memory model, working memory contains two types of components: an executive control and specific buffers (e.g. visuo-spatial sketchpad, phonological loop) (Baddeley, 2002). The Corsi test supposed to challenge the visuo-spatial sketchpad, because this type of buffer is responsible for temporarily maintaining and manipulating visuospatial information. Results of Corsi test is supposed to give information about one's visual span (Baddeley, 2002).

Procedure

The present demonstration of the Corsi test is based on the experiment of Vandierendonck, Kemps, Fastame, & Szmalec (2004). In the experiment, a sequence is presented by lighting up the blocks one by one. Each block is lit up for 1 second, the inter-item interval is 500 ms. The first sequence consists of five blocks. When participants reproduce sequence correctly, by clicking the blocks in the correct order, the sequence length is increased with one block on the next trial. When they failed to reproduce the sequence, the sequence length is decreased with one block. The minimum sequence length is two blocks, the maximum is nine. Score of the experiment is the maximum sequence length, which a participant fulfilled correctly.

Expected results

It is expected that with greater memory load (more block to remember) the performance will be

poorer.

References

- Baddeley, A. D. (2002). Is Working Memory Still Working? *European Psychologist*, 7(2), 85–97. doi:10.1027//1016-9040.7.2.85
- Vandierendonck, A., Kemps, E., Fastame, M. C., & Szmalec, A. (2004). Working memory components of the Corsi blocks task. *British journal of psychology (London, England : 1953)*, 95(Pt 1), 57–79. doi:10.1348/000712604322779460

This work is licensed under a [Creative Commons Attribution-ShareAlike 3.0 Unported License](https://creativecommons.org/licenses/by-sa/3.0/).