

Codebook for 'automated_operation_span.csv'

AgeRisk behavioral measure

1 file containing data for entire sample (N=200 participants)

The data for this task were collected using a pre-programmed E-Prime script (Unsworth et al., 2005). In order to simplify and standardize the analyses given the complexity and sequential nature of the task, the script we used to run the task was set up to provide five summary statistics as part of the output data files for every participant. We provide these five summary statistics for each participant. The summary statistics were obtained according to the following published instructions (Unsworth et al., 2005, p. 501): "At the conclusion of the task, the program reported five scores to the experimenter: Ospan score, total number correct, math errors, speed errors, and accuracy errors. The first, Ospan score, used our traditional absolute scoring method. This was the sum of all perfectly recalled sets. So, for example, if an individual correctly recalled 3 letters in a set size of 3, 4 letters in a set size of 4, and 3 letters in a set size of 5, his or her Ospan score would be 7 (3 4 0). The second score, "total number correct," was the total number of letters recalled in the correct position. Three types of errors were reported: "Math errors" were the total number of task errors, which was then broken down into "speed errors," in which the participant ran out of time in attempting to solve a given math operation, and "accuracy errors", in which the participant solved the math operation incorrectly."

Column label	Description
id	5-character participant study id
ospan_score	Sum of all correctly recalled sets
total_correct	Total number of letters recalled in the correct position
math_errors	Total number of task errors
speed_errors	Component of math_errors, participant ran out of time in attempting to solve a given math operation
accuracy_errors	Component of math_errors, participant solved the math operation incorrectly

Reference

Unsworth, N., Heitz, R. P., Schrock, J. C., & Engle, R. W. (2005). An automated version of the operation span task. *Behaviour Research Methods*, 37(3), 498–505. <https://link.springer.com/content/pdf/10.3758/bf03192720.pdf>

