

Data Documentation

for the data file (ANT-data.csv) for

Verissimo, Verhaeghen, Goldman, Weinstein, and Ullman (2021)
'Evidence that aging yields improvements as well as declines across attention and executive functions'

Data exclusions

The data file (ANT-data.csv) contains the data from 734 participants, subsequent to various participant and trial exclusions (reported in detail in the paper and in the accompanying Reporting Summary).

Specifically, of the 948 participants who were given the Attention Network Test (ANT), we excluded:

- 92 participants owing to: participant identifier coding errors, not performing the full task, or a diagnosis of a neurological, psychiatric, learning, cognitive, or other brain-related disorder;
- 122 participants with very low accuracy on the ANT (lower than 50%); note that our main analyses were conducted on participants with at least 75% task accuracy (154 participants excluded), but we also report a sensitivity analysis that was conducted with a more lenient inclusion criterion of at least 50% task accuracy, and thus the additional data are also included in the data file;
- Trials with timeouts, presses of inappropriate response box buttons, and extremely fast responses (below 100ms).

This dataset enables anyone with access to the analysis script (ANT-analysis-script.R) to conduct all of the analyses reported in the paper, including all sensitivity analyses.

Description of columns (fields)

Participant_ID: Unique identifier for each participant. These identifiers have been anonymized.

Accuracy: Indicates whether the response was correct or incorrect. It has a value of 1 for a correct response and value of 0 for an incorrect response.

AccuracyAtLeast75: Indicates whether the participant had at least 75% correct responses in the entire ANT task (1=yes, 0=no). This is calculated over all responses (including timeouts), that is, out of a total of 96 trials.

AccuracyAtLeast90: Indicates whether the participant had at least 90% correct responses in the entire ANT task (1=yes, 0=no). This is calculated over all responses (including timeouts), that is, out of a total of 96 trials.

Age: Age of participant (in years).

Sex: Sex of participant ("Male" or "Female").

Education: Number of years of education of participant.

Trial: Each item's position in the task for each participant.

Cue: Cue type ("CENTRAL", "NOCUE", "SPATIAL", "DOUBLE").

Flanker: Flanker type ("CONGRUENT", "INCONGRUENT").

RT: Response time of the (first) response given in a trial, that is, the time between the onset of the presentation of the target and the button press (in milliseconds). The value is NA if the response is incorrect (that is, if Accuracy = 0).

Visual_Acuity: Visual acuity of the participant, as a Snellen fraction (1=20/20 vision); obtained in the 2006 SEBAS collection wave.