

ONLINE SUPPLEMENTAL MATERIAL:

Simple reaction time

Assesses how quickly a participant responds to a given stimulus. Each participant pressed a blue button with their index finger of their preferred hand, each time a solid square was displayed in the center of a computer screen. This was repeated 50 times, and the mean reaction time (ms) was averaged between trials 11 through 50 (**SRT** score). Consistent with previous studies (1-2), values less than 50 ms or greater than 750ms were dropped from analyses as potential outliers .

Symbol-digit substitution

Participants were asked to pair one of nine different symbols with digits 1 to 9. In the upper half of the computer screen, the key (a grid of paired symbols and digits) was presented, a similar grid was displayed in the lower part of the screen with scrambled symbols (9 in total) that the participant matched with digits using the key. There were five trials with different pairings of symbols with digits on each trial. The first trial was for practice. The mean total latencies (excluding the time to respond to the first item) of the four remaining test trials was calculated as one test score (**SDS-L** score). Another test score consisted of the sum of errors (**SDS-E** score) on the four test trials on items 2 through 9(1-2).

Serial digit learning

Participants were presented with a series of digits that were sequentially displayed on a computer screen. After all the digits were shown, the participants were asked to enter the digits in the same order as presented using the numeric keys on the keyboard. The first

trial was practice. Testing trials of the same eight digit sequence of numbers continued until the criterion of two consecutive correct trials was achieved.

Trials to criterion was recorded, but if the participant was unable to reach criteria by the 8th trial, the number of trials to criterion was recorded as 8. This score was termed serial digit learning-trial to criterion (**SDL-TTC**). The sum of errors over the trials conducted (**SDL-TE**) was also computed. When a participant had fewer than six of the eight digits in the correct position, two points were added to the score; one point was added when either six or seven digits were in the correct position; and zero points were added when all digits were reported correctly(1-2).

Word recall

An interviewer-administered word recall test was given during the Household Adult Questionnaire. The interviewer listed the following words: “apple”, “table” and “penny” and asked the participant to repeat and remember the words. Up to three repetition trials were conducted until the participant named all three correctly. Participants were asked to remember all three words again after an intervening a math test (serial 3’s) (see below). The measure of cognitive performance was the number of words correctly recalled (**WR-CORR**) as well as the number of trials to recall the words (**WR-TRIALS**) (2-3).

Story recall

An interviewer-administered story recall test was given during the examination in the MEC or during the home examination. The interviewer read a brief story to the participants who were asked to recall details about the story. The story was:

“Three children were alone at home and the house caught on fire. A brave fireman managed to climb in a back window and carry them to safety. Aside from minor cuts and

bruises, all were well.” From this story, six ideas were recorded as recounted or not and those were: “three children”, “house on fire”, “fireman climbed in”, “children rescued”, “minor injuries”, “everyone well”. The number of correctly recounted ideas (**SR-CORR**) was used to assess cognitive performance. (2-3)

Math/arithmetic test (Serial 3's)

Participants were asked to subtract \$3 from \$20 and keep subtracting until asked to stop. The total number of incorrectly computed subtractions constituted a measure of poor cognitive performance (**MATH-INC**). (3-4)

Orientation to time test

As part of the Household Adult Questionnaire, orientation to time and space questions were administered. Due to large missing data on orientation to space, orientation to time was used. Participants were asked the date and day of the week. A variable combining both responses (**ORIENT-INC**) was coded as: 0=“both correct”; 1=“One is incorrect” and 2=“Both are incorrect”. (3, 5)

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