**Supplemental Material**

**Statistical Analyses**

Global variables that were outlier corrected in both age groups included MAAS, dL, RT\_CV in both tasks, TRI in both tasks, TUT in the CPT; TUT on the Go/No-Go was corrected in older adults only. Local Go/No-Go variables that were outlier corrected in both age groups included Go and No-Go accuracy preceding On-task responses; Go and No-Go accuracy preceding Off-task responses was corrected in older adults only. Local CPT variables that were outlier corrected in both age groups included accuracy and reaction time before both On- and Off-task responses.

A

**Cue**

750 ms

+

X

**Probe**

750 ms

+

AX—Target

**Delay**

 1000 ms/

 5000 ms

**Time**

B

**Cue**

750 ms

+

X

**Probe**

750 ms

+

BX—Nontarget, Target

**Delay**

 1000 ms/

 5000 ms

A

**Cue**

750 ms

+

Y

**Probe**

750 ms

+

AY—Target, Nontarget

**Delay**

 1000 ms/

 5000 ms

**Figure S1**

Continuous Performance Task

Go/No-Go Task

X

**Go Trial**

750 ms

M

M

**Go Trial**

750 ms

X

**Time**

**No-Go Trial**

750 ms

**Go Trial**

750 ms

**Auditory Tone**

Table S1. *Model Summary Information for the Serial Multiple Mediator Model of Age-Group on Go/No-Go RT\_CV.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Consequent |  |  |
|  |  | *M*1 (MAAS) |  | *M*2 (MW) |  | *Y* (dL) |
| Antecedent |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |
| *X* (Age-Group) | *a*1 | 0.29 | 0.11 | .01\*\* | *a*2 | -0.17 | 0.05 | .001\*\* | *c’* | 0.03 | 0.01 | <.001\*\*\* |
| *M1* (MAAS) |  | — | — | — | *d*21 | -0.13 | 0.04 | .003\*\* | *b*1 | -0.01 | 0.01 | .23 |
| *M2* (MW) |  | — | — | — |  | — | — | — | *b*2 | 0.02 | 0.01 | .14 |
| Constant | *iM*1 | 4.15 | 0.09 | < .001\*\*\* | *iM*2 | 1.09 | 0.18 | < .001\*\*\* | *iY* | 0.19 | 0.03 | <.001\*\*\* |
|  |  | *R*2 =0.05, *F*(1, 122) = 6.79, *p* = .01\*\* |  | *R*2 = 0.20, *F*(2, 121) = 17.66, *p* < .001\*\*\* |  | *R*2 = 0.15, *F*(3, 120) = 7.47, *p* < .001\*\*\* |
| Indirect Effects |  | Coeff*.* | *SE* | 95% CI |  |  |  |
| Total |  | -0.01 | 0.00 | [-0.014, -0.001] |  |  |  |
| Age X MAAS | *a*1*b*1  | -0.00 | 0.00 | [-0.008, 0.000] |  |  |  |
| Age X MAAS X MW | *a*1*d*21*b*2 | -0.00 | 0.00 | [-0.003, 0.000] |  |  |  |
| Age X MW | *a*2*b*2 | -0.00 | 0.00 | [-0.011, 0.000] |  |  |  |

*Note.* Total effect (*c*) = 0.03, *t*(122)= 4.05, *p* < .001\*\*\*, 95% CI = 0.014, 0.041

*\*p* < .05, *\*\*p* < .01, *\*\*\*p* < .001*.*

Table S2. *Model Summary Information for the Serial Multiple Mediator Model of Age-Group on CPT d-proactive.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Consequent |  |  |
|  |  | *M*1 (MAAS) |  | *M*2 (MW) |  | *Y* (dL) |
| Antecedent |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |
| *X* (Age-Group) | *a*1 | 0.29 | 0.11 | .01\*\* | *a*2 | -0.18 | 0.04 | <.001\*\*\* | *c’* | 0.58 | 0.64 | .36 |
| *M1* (MAAS) |  | — | — | — | *d*21 | -0.09 | 0.03 | .004\*\* | *b*1 | 0.41 | 0.48 | .40 |
| *M2* (MW) |  | — | — | — |  | — | — | — | *b*2 | 0.80 | 1.23 | .52 |
| Constant | *iM*1 | 4.15 | 0.09 | < .001\*\*\* | *iM*2 | 0.84 | 0.14 | < .001\*\*\* | *iY* | 5.34 | 2.19 | .02\* |
|  |  | *R*2 =0.05, *F*(1, 121) = 6.57, *p* = .01\*\* |  | *R*2 = 0.23, *F*(2, 120) = 19.08, *p* < .001\*\*\* |  | *R*2 = 0.02, *F*(3, 119) = 0.61, *p* = .61 |
| Indirect Effects |  | Coeff*.* | *SE* | 95% CI |  |  |  |
| Total |  | -0.05 | 0.26 | [-0.576, 0.451] |  |  |  |
| Age X MAAS | *a*1*b*1  | 0.12 | 0.15 | [-0.129, 0.509] |  |  |  |
| Age X MAAS X MW | *a*1*d*21*b*2 | -0.02 | 0.04 | [-0.151, 0.028] |  |  |  |
| Age X MW | *a*2*b*2 | -0.15 | 0.22 | [-0.572, 0.289] |  |  |  |

*Note.* Total effect (*c*) = 0.54, *t*(121)= 0.93, *p* = .36, 95% CI = -0.612, 1.685

*\*p* < .05, *\*\*p* < .01, *\*\*\*p* < .001*.*

Table S3. *Model Summary Information for the Serial Multiple Mediator Model of Age-Group on CPT RT\_CV.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | Consequent |  |  |
|  |  | *M*1 (MAAS) |  | *M*2 (MW) |  | *Y* (dL) |
| Antecedent |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |  | Coeff*.* | *SE* | *p* |
| *X* (Age-Group) | *a*1 | 0.29 | 0.11 | .01\*\* | *a*2 | -0.18 | 0.04 | < .001\*\*\* | *c’* | -0.01 | 0.01 | .42 |
| *M1* (MAAS) |  | — | — | — | *d*21 | -0.09 | 0.03 | .004\*\* | *b*1 | -0.01 | 0.01 | .19 |
| *M2* (MW) |  | — | — | — |  | — | — | — | *b*2 | -0.02 | 0.01 | .22 |
| Constant | *iM*1 | 4.15 | 0.09 | < .001\*\*\* | *iM*2 | 0.84 | 0.14 | < .001\*\*\* | *iY* | 0.30 | 0.03 | < .001\*\*\* |
|  |  | *R*2 =0.05, *F*(1, 121) = 6.57, *p* = .01\*\* |  | *R*2 = 0.23, *F*(2, 120) = 19.08, *p* < .001\*\*\* |  | *R*2 = 0.03, *F*(3, 119) = 1.28, *p* = .28 |
| Indirect Effects |  | Coeff*.* | *SE* | 95% CI |  |  |  |
| Total |  | 0.00 | 0.00 | [-0.005, 0.008] |  |  |  |
| Age X MAAS | *a*1*b*1  | -0.00 | 0.00 | [-0.009, 0.000] |  |  |  |
| Age X MAAS X MW | *a*1*d*21*b*2 | 0.00 | 0.00 | [0.000, 0.002] |  |  |  |
| Age X MW | *a*2*b*2 | 0.00 | 0.00 | [-0.002, 0.009] |  |  |  |

*Note.* Total effect (*c*) = -0.01, *t*(121)= -0.82, *p* = .41, 95% CI = -0.020, 0.008

*\*p* < .05, *\*\*p* < .01, *\*\*\*p* < .001.