Supplemental Table S1

*Correlations among all study variables*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. |
| 1. Sex | -- |  |  |  |  |  |  |  |  |  |
| 2. Education | -.18\*\* | -- |  |  |  |  |  |  |  |  |
| 3. Age (R4) | .01 | -.06\*\* | -- |  |  |  |  |  |  |  |
| 4. Age (R5) | .01 | -.06\*\* | .98\*\* | -- |  |  |  |  |  |  |
| 5. Age (R6) | .02 | -.09\*\* | .95\* | .95\*\* | -- |  |  |  |  |  |
| 6. Age (R7) | .01 | -.07\*\* | .97\*\* | .96\*\* | .95\*\* | -- |  |  |  |  |
| 7. Purpose (R4) | .06\*\* | .16\*\* | .06\*\* | .06\*\* | .06\*\* | .07\*\* | -- |  |  |  |
| 8. Purpose (R5) | .05\*\* | .20\*\* | .03\* | .02 | .03\* | .04\*\* | .57\*\* | -- |  |  |
| 9. Purpose (R6) | .07\*\* | .20\*\* | .02 | .02 | .01 | .02 | .52\*\* | .62\*\* | -- |  |
| 10. Dementia (R7) | .00 | -.12\*\* | .13\*\* | .13\*\* | .13\*\* | .14\*\* | -.03 | -.06\*\* | -.08\*\* | -- |
| 11. Global cognition (R7) | .10\*\* | .22\*\* | -.26\*\* | -.26\*\* | -.26\*\* | -.26\*\* | .08\*\* | .12\*\* | .14\*\* | -.60\*\* |
| 12. Verbal fluency (R7) | .09\*\* | .23\*\* | -.12\*\* | -.12\*\* | -.13\*\* | -.12\*\* | .09\*\* | .10\*\* | .11\*\* | -.19\*\* |
| 13. Digit ordering (R7) | .05\*\* | .20\*\* | -.15\*\* | -.15\*\* | -.15\*\* | -.16\*\* | .04\* | .07\*\* | .08\*\* | -.28\*\* |
| 14. Numeric reasoning (R7) | -.13\*\* | .33\*\* | -.20\*\* | -.20\*\* | -.22\*\* | -.21\*\* | .04\* | .08\*\* | .08\*\* | -.28\*\* |

*Note*. R=Round.

Supplemental Table S1 Continued

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | 11. | 12. | 13. | 14. |
| 1. Sex |  |  |  |  |
| 2. Education |  |  |  |  |
| 3. Age (R4) |  |  |  |  |
| 4. Age (R5) |  |  |  |  |
| 5. Age (R6) |  |  |  |  |
| 6. Age (R7) |  |  |  |  |
| 7. Purpose (R4) |  |  |  |  |
| 8. Purpose (R5) |  |  |  |  |
| 9. Purpose (R6) |  |  |  |  |
| 10. Dementia (R7) |  |  |  |  |
| 11. Global cognition (R7) | -- |  |  |  |
| 12. Verbal fluency (R7) | .32\*\* | -- |  |  |
| 13. Digit ordering (R7) | .44\*\* | .26\*\* | -- |  |
| 14. Numeric reasoning (R7) | .39\*\* | .23\*\* | .32\*\* | -- |

Supplemental Table S2

*Association Between Purpose in Life at Round 4, Round 5 and Likelihood of Dementia at Round 7 Based on Unimputed Data*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Predictor |  | Round 4 Predictors | | |  | Round 5 Predictors | | |  | Round 6 Predictors | | |
|  |  | OR | 95% CI | *p* |  | OR | 95% CI | *p* |  | OR | 95% CI | *p* |
|  |  | Full Samplea | | | | | | | | | | |
| Age |  | 1.71 | 1.48, 1.98 | <.001 |  | 1.73 | 1.50, 1.99 | <.001 |  | 1.72 | 1.49, 1.98 | <.001 |
| Sex (female) |  | .86 | .69, 1.08 | .197 |  | .87 | .70, 109 | .238 |  | .87 | .70, 1.09 | .231 |
| Education |  | .64 | .56, .73 | <.001 |  | .64 | .56, .74 | <.001 |  | .64 | .56, .74 | <.001 |
| Sample |  | .85 | .65, 1.11 | .239 |  | .81 | .62, 1.06 | .119 |  | .98 | .76, 1.26 | .888 |
| Purpose in life |  | .94 | .84, 1.05 | .290 |  | .84 | .76, .94 | .002 |  | .83 | .74, .92 | <.001 |

*Note*. Round 4 N=4113, n=354 with dementia; Round 5=4229, n=366 with dementia; Round 6 N=4070, n=359 with

Dementia.

Supplemental Table S3

*Association Between Purpose in Life at Round 4, Round 5, and Round 6 and Cognitive Function at Round 7 based on unimputed data*

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Purpose in life |  | TICS | |  | Verbal Fluency | |  | Digit Ordering | |  | Numeric Reasoning | |
|  |  | β | *p* |  | β | *p* |  | β | *p* |  | β | *p* |
|  |  | Full Sample | | | | | | | | | | |
| Round 4 |  | .05 | .001 |  | .06 | <.001 |  | .01 | .516 |  | .01 | .443 |
| Round 5 |  | .07 | <.001 |  | .06 | <.001 |  | .03 | .089 |  | .03 | .039 |
| Round 6 |  | .08 | <.001 |  | .06 | <.001 |  | .04 | .027 |  | .03 | .069 |

Supplemental Table S4

*Interaction Coefficient for Purpose in Life and Age, Sex, and Education on the Cognitive Outcomes*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Purpose in life |  | Dementia | | |  | TICS | |  | Verbal Fluency | |  | Digit Ordering | |  | Numeric Reasoning | |
|  |  | OR | 95% CI | *p* |  | β | *p* |  | β | *p* |  | β | *p* |  | β | *p* |
|  |  | Age Interactions | | | | | | | | | | | | | | |
| Round 4 |  | .88 | .77, 1.01 | .068 |  | -.01 | .639 |  | -.03 | .090 |  | -.01 | .325 |  | .00 | .777 |
| Round 5 |  | .85 | .75, .96 | .012 |  | .01 | .421 |  | -.02 | .335 |  | .01 | .421 |  | .02 | .257 |
| Round 6 |  | .97 | .84, 1.11 | .633 |  | -.01 | .525 |  | -.01 | .511 |  | .01 | .337 |  | .01 | .656 |
|  |  | Sex Interactions | | | | | | | | | | | | | | |
| Round 4 |  | .83 | .66, 1.04 | .103 |  | .07 | .003 |  | .01 | .705 |  | .01 | .785 |  | .04 | .077 |
| Round 5 |  | .98 | .79, 1.22 | .894 |  | .06 | .015 |  | .04 | .145 |  | .03 | .240 |  | .01 | .544 |
| Round 6 |  | .96 | .78, 1.20 | .749 |  | .06 | .007 |  | .04 | .098 |  | .03 | .239 |  | .02 | .290 |
|  |  | Education Interactions | | | | | | | | | | | | | | |
| Round 4 |  | 1.11 | .96, 1.28 | .153 |  | -.03 | .057 |  | .00 | .837 |  | .00 | .855 |  | -.03 | .036 |
| Round 5 |  | 1.06 | .92, 1.22 | .396 |  | -.02 | .282 |  | -.01 | .456 |  | .00 | .785 |  | -.04 | .016 |
| Round 6 |  | 1.04 | .91, 1.20 | .547 |  | -.03 | .046 |  | -.01 | .576 |  | -.02 | .153 |  | -.02 | .106 |

*Note*. Coefficients are odd ratios (OR) with 95% Confidence Intervals (CI) or standardized beta coefficients. All analyses include the main effect of purpose and the focus of the interaction (e.g., age) and the other sociodemographic covariates and sample. Verbal fluency also controls for letter used in the task (F, L). TICS=Telephone Interview for Cognitive Status.