**Supplementary Material**

**Modifiable Risk Factors Discriminate Memory Trajectories in Non-Demented Aging: Precision Factors and Targets for Promoting Healthier Brain Aging and Preventing Dementia?**

**Supplementary Table 1.**

Goodness of fit indexes for episodic memory model confirmatory factor analyses and latent growth models

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | **AIC** | **BIC** | **χ2** | **df** | ***p*** | **RMSEA** | **CFI** | **SRMR** |
| **CFA for One Factor Model: Invariance Testing** |
| Configural | 43454.5 | 43684.1 | 83.0 | 42 | <0.001 | 0.033 (0.023-0.044) | 0.99 | 0.032 |
| Metric | 43497.7 | 43684.2 | 144.2 | 51 | <0.001 | 0.046 (0.037-0.054) | 0.98 | 0.055 |
| Scaler | 43796.7 | 43945.0 | 459.2 | 59 | <0.001 | 0.088 (0.080-0.095) | 0.90 | 0.120 |
| Partial Scalera | 43609.6 | 43786.5 | 260.1 | 53 | <0.001 | 0.067 (0.059-0.075) | 0.95 | 0.093 |
|  |
| **Model** | **AIC** | **BIC** | **-2LL** | ***D*** | **Δdf** | ***p*** |
| Fixed Intercept | 5529.8 | 5549.0 | 5521.8 | - | - | - |
| Random Intercept | 3046.4 | 3070.4 | 3036.4 | 2485.4 | 1 | <0.001 |
| Random Intercept, Fixed Slope | 2879.8 | 2908.5 | 2867.8 | 168.6 | 1 | <0.001 |
| Random Intercept, Random Slopeb | 2543.8 | 2582.1 | 2527.8 | 340.0 | 2 | <0.001 |

*Note.* a Best fitting model where only Word recall 1 was scalar invariant;χ2 *D*=116.0, *p*<0.001; ΔCFI=0.03; ΔRMSEA=0.02. b Best fitting model compared to the more restricted previous model.

**Supplementary Table 2.**

Goodness of fit indexes for episodic memory latent class growth analysis (LCGA).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Class** | **AIC** | **BIC** | **-2LL** | **Entropy** | **Prob.** | **Prop.** | ***n*** | ***intercept*** | ***slope*** |
| 1 | 5206 | 5230 | 5196 | - | 1 | 1 | 882 | 0.001 | -0.043 |
| 12 | 4350 | 4388 | 4334 | 0.78 | 0.920.94 | 0.420.58 | 366 516 | -0.880.58 | -0.047-0.030 |
| 1\*23 | 3897 | 3950 | 3876 | 0.80 | 0.900.900.92 | 0.310.470.22 | 276 415 191 | 0.93-0.12-1.34 | -0.026-0.043-0.056 |
| 1234 | 3535 | 3601 | 3507 | 0.84 | 0.920.920.870.90 | 0.410.210.270.10 | 36118924092 | 0.231.12-0.66-1.71 | -0.032-0.024-0.040-0.053 |
| 12345 | 3357 | 3439 | 3323 | 0.85 | 0.850.900.880.920.90 | 0.040.260.240.100.36 | 3723121090314 | 1.70-0.710.89-1.730.13 | -0.013-0.040-0.016-0.053-0.030 |

AIC, Akaike information criteria; BIC, Bayesian information criteria; -2LL, -2 log likelihood; Prob., probability of latent class membership; Prop., proportion for the latent classes based on estimate model. \*Best fitting model based on good fit indexes, cell sizes, and *a priori* hypothesis.

**Supplementary Table 3.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Stable memory | Normal memory | Declining memory | Total Sample |
| Young-old  |  |  |  |  |
| Baseline (*n*) | 145 | 204 | 86 | 435 |
| Age at baseline *M* (*SD*) | 63.9 (5.2) | 64.5 (5.2) | 63.5 (5.2) | 64.1 (5.2) |
| Wave 2 (*n*) | 129 | 143 | 48 | 320 |
| Wave 3 (*n*) | 1155 | 122 | 47 | 284 |
| Old-old |  |  |  |  |
|  Baseline (*n*) | 131 | 211 | 105 | 447 |
| Age at baseline *M* (*SD*) | 78.5 (4.1) | 79.0 (4.3) | 79.3 (5.3) | 78.9 (4.5) |
| Wave 2 (*n*) | 93 | 140 | 64 | 304 |
| Wave 3 (*n*) | 67 | 72 | 26 | 169 |
| Total (*n*) | 276 | 415 | 191 | 882 |

Distribution of Young-old and Old-old adults across class membership



**Supplementary Figure 1.** Latent growth model of episodic memory (EM) confirmed a best fit model of random intercept, random slope. This model was used in the latent class growth analyses to identify subgroups within the population of normally aging older adults.