**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).

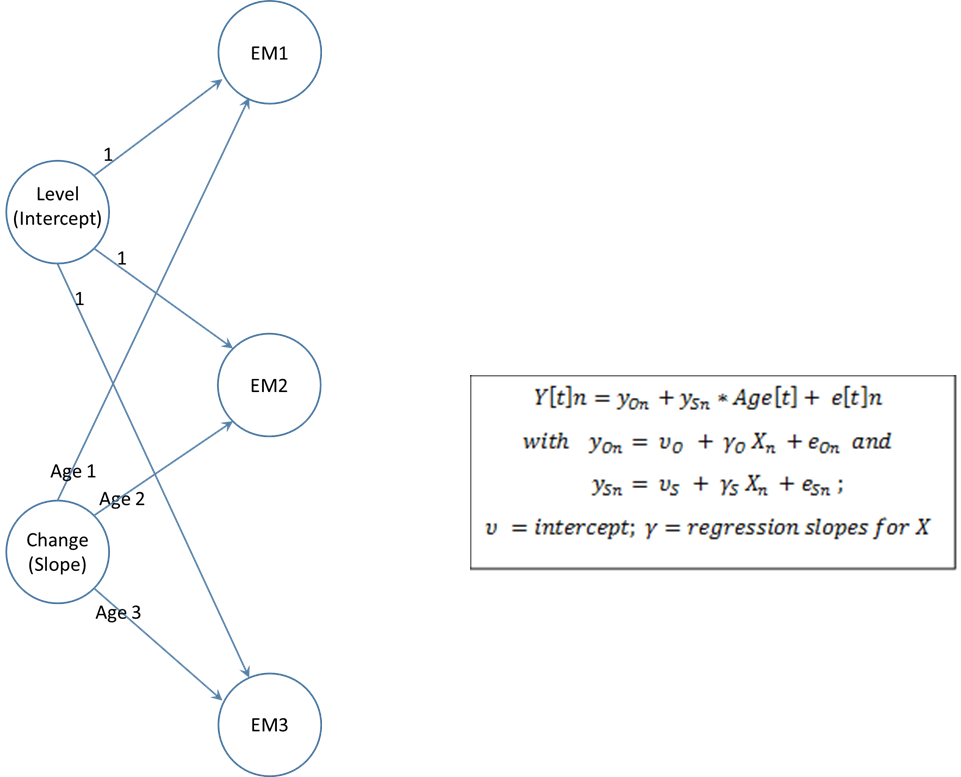
|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Class** | **AIC** | **BIC** | **-2LL** | **Entropy** | **Prob.** | **Prop.** | ***n*** | ***intercept*** | ***slope*** |
| 1 | 5206 | 5230 | 5196 | - | 1 | 1 | 882 | 0.001 | -0.043 |
| 1  2 | 4350 | 4388 | 4334 | 0.78 | 0.92  0.94 | 0.42  0.58 | 366 516 | -0.88  0.58 | -0.047  -0.030 |
| 1\*  2  3 | 3897 | 3950 | 3876 | 0.80 | 0.90  0.90  0.92 | 0.31  0.47  0.22 | 276 415 191 | 0.93  -0.12  -1.34 | -0.026  -0.043  -0.056 |
| 1  2  3  4 | 3535 | 3601 | 3507 | 0.84 | 0.92  0.92  0.87  0.90 | 0.41  0.21  0.27  0.10 | 361  189  240  92 | 0.23  1.12  -0.66  -1.71 | -0.032  -0.024  -0.040  -0.053 |
| 1  2  3  4  5 | 3357 | 3439 | 3323 | 0.85 | 0.85  0.90  0.88  0.92  0.90 | 0.04  0.26  0.24  0.10  0.36 | 37  231  210  90  314 | 1.70  -0.71  0.89  -1.73  0.13 | -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.