

Supplementary Table 1. Trajectory of cognitive function among participants by living arrangement on 2012-2020 KLoSA data (n=3,049)

| Latent variable | Intercept | | Slope | | Quadratic | | Model fit | | | | |
|-------------------|------------------------|-------|------------------------|-------|----------------------|-------|-----------|----------|-------|-------|-------|
| | Mean (<i>P</i>) | SE | Mean (<i>P</i>) | SE | Mean (<i>P</i>) | SE | χ^2 | <i>P</i> | CFI | TLI | RMSEA |
| Overall | | | | | | | | | | | |
| No growth | 23.426 (<0.001) | 0.093 | | | | | 1,199.889 | <0.001 | 0.854 | 0.887 | 0.173 |
| Linear | 24.559 (<0.001) | 0.092 | -0.693 (<0.001) | 0.026 | | | 68.903 | <0.001 | 0.993 | 0.993 | 0.044 |
| Quadratic | 24.535 (<0.001) | 0.095 | -0.651 (<0.001) | 0.072 | -0.009 (0.615) | 0.018 | 16.997 | 0.009 | 0.999 | 0.998 | 0.025 |
| Living alone | | | | | | | | | | | |
| No growth | 22.091 (<0.001) | 0.238 | | | | | 224.553 | <0.001 | 0.839 | 0.876 | 0.180 |
| Linear | 23.450 (<0.001) | 0.233 | -0.785 (<0.001) | 0.068 | | | 18.562 | 0.046 | 0.993 | 0.993 | 0.041 |
| Quadratic | 23.510 (<0.001) | 0.243 | -0.880 (<0.001) | 0.190 | 0.026 (0.572) | 0.046 | 7.966 | 0.241 | 0.999 | 0.998 | 0.026 |
| Living with other | | | | | | | | | | | |
| No growth | 23.688 (<0.001) | 0.100 | | | | | 980.694 | <0.001 | 0.856 | 0.889 | 0.171 |
| Linear | 24.774 (<0.001) | 0.100 | -0.673 (<0.001) | 0.028 | | | 63.485 | <0.001 | 0.992 | 0.992 | 0.046 |
| Quadratic | 24.739 (<0.001) | 0.102 | -0.606 (<0.001) | 0.078 | -0.015 (0.428) | 0.019 | 15.630 | 0.016 | 0.999 | 0.998 | 0.025 |

Abbreviations: CFI, comparative fit index; KLoSA, Korean mini mental state examination; RMSEA, root mean square error of approximation; SE, standard error; TLI, Tucker-Lewis index.