Supplemental Material 7. Hazard ratio (95% CI) of cognitive decline\* by the combination of social activities and living arrangements stratified by age group and education levels†

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Age < 65 years  |  | Age ≥ 65 years  |  | Interaction |
|  | HR (95% CI) | p-value  | HR (95% CI) | p-value  | p-value  |
| Socially active, living with others (SALO) | 1 |  | 1 |  |  |
| Socially active, living alone (SALA) | 0.76 (0.39-1.48) | 0.419 | 1.01 (0.71-1.44) | 0.945 | 0.331 |
| Socially inactive, living with others (SILO)  | 1.19 (0.92-1.53) | 0.183 | 1.30 (1.04-1.64) | 0.023 | 0.608 |
| Socially inactive, living alone (SILA)  | 1.23 (0.64-2.36) | 0.529 | 1.84 (1.14-2.97) | 0.013 | 0.321 |
|  |  |  |  |  |  |
|  | High education level | Low education level | Interaction |
|  | HR (95% CI) | p-value  | HR (95% CI) | p-value  | p-value  |
| Socially active, living with others (SALO) | 1 |  | 1 |  |  |
| Socially active, living alone (SALA) | 1.04 (0.56-1.93) | 0.900 | 0.93 (0.65-1.32) | 0.684 | 0.852 |
| Socially inactive, living with others (SILO)  | 0.95 (0.66-1.35) | 0.761 | 1.37 (1.13-1.67) | 0.002 | 0.064 |
| Socially inactive, living alone (SILA)  | 0.66 (0.21-2.11) | 0.484 | 1.85 (1.23-2.79) | 0.003 | 0.110 |

\*Definition of cognitive decline: MMSE score decrease ≥4 over 2 years.

†Adjusted for sex, age group, education levels, annual household income, smoking, alcohol consumption, comorbidity, depression.