Supplemental Material 5. Hazard ratio (95% CI) of MMSE ≤17, and MMSE 18-≤23 by the combination of social activities and living arrangements \*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Total |  | Men |  | Women |  | Interaction |
|  | HR (95% CI) | p-value | HR (95% CI) | p-value | HR (95% CI) | p-value | p-value |
| Risk of MMSE ≤17 |  |  |  |  |  |  |  |
| Socially active, living with others (SALO) | 1 |  | 1 |  | 1 |  |  |
| Socially active, living alone (SALA) | 1.08 (0.55-2.10) | 0.830 | 1.41 (0.42-4.76) | 0.584 | 0.82 (0.37-1.83) | 0.626 | 0.0.809 |
| Socially inactive, living with others (SILO) | 2.01 (1.36-2.97) | <0.001 | 2.50 (1.42-4.39) | 0.002 | 1.76 (1.02-3.02) | 0.041 | 0.675 |
| Socially inactive, living alone (SILA) | 2.74 (1.32-5.71) | 0.007 | 3.06 (0.69-13.63) | 0.142 | 1.65 (0.69-3.97) | 0.264 | 0.706 |
| Risk of MMSE ≤23 |  |  |  |  |  |  |  |
| Socially active, living with others (SALO) | 1 |  | 1 |  | 1 |  |  |
| Socially active, living alone (SALA) | 1.47 (0.93-2.32) | 0.102 | 1.47 (0.93-2.32) | 0.102 | 0.70 (0.49-1.01) | 0.054 | 0.008 |
| Socially inactive, living with others (SILO) | 1.63 (1.28-2.07) | <0.001 | 1.63 (1.28-2.07) | <0.001 | 1.58 (1.28-1.97) | <0.001 | 0.957 |
| Socially inactive, living alone (SILA) | 1.22 (0.56-2.63) | 0.620 | 1.22 (0.56-2.62) | 0.620 | 1.87 (1.26-2.79) | 0.002 | 0.506 |

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