|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 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  | 1 |  | 1 |  | 1 |  |  |
| Social inactive  | 2.08 (1.45-2.97) | <0.001 | 2.45 (1.43-4.18) | 0.001 | 1.81 (1.12-2.93) | 0.015 | 0.0.760 |
| Living with others | 1 |  | 1 |  | 1 |  |  |
| Living alone  | 1.12 (0.68-1.87)  | 0.652 | 1.21 (0.47-3.15) | 0.689 | 0.87 (0.47-1.61) | 0.658 | 0.736 |
| Risk of MMSE ≤23 |  |  |  |  |  |  |  |
| Socially active  | 1 |  | 1 |  | 1 |  |  |
| Social inactive  | 1.65 (1.42-1.92) | <0.001 | 1.54 (1.23-1.94) | <0.001 | 1.72 (1.41-2.09) | <0.001 | 0.492 |
| Living with others | 1 |  | 1 |  | 1 |  |  |
| Living alone  | 0.97 (0.78-1.22) | 0.821 | 1.20 (0.80-1.78) | 0.380 | 0.84 (0.64-1.12) | 0.245 | 0.491 |

Supplemental Material 4. Hazard ratio (95% CI) of MMSE≤17, and MMSE 18-≤23 by social activities and living arrangements \*

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