**Supplemental material**

Table 1. Cross-sectional analysis of health and quality of life – full sample

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.08 | -0.13, -0.03 | -0.09 | -0.21, 0.02 |
| Frailty | -1.61 | -1.74, -1.48 | -1.68 | -2.04, -1.31 |
| Age | 0.06 | 0.04, 0.07 | 0.06 | 0.04, 0.07 |
| Education | 0.09 | 0.06, 0.12 | 0.09 | 0.06, 0.12 |
| Social vulnerability | -3.16 | -3.32, -3.00 | -3.17 | -3.33, -3.01 |
| Sex | 1.05 | 0.80, 1.29 | 1.01 | 0.77, 1.26 |
| Retired | -0.65 | -0.97, -0.32 | -0.65 | -1.04, -0.26 |
| Unemployed | -1.52 | -2.14, -0.89 | -1.47 | -2.12, -0.81 |
| Permanently sick or disabled | -0.10 | -0.84, 0.65 | 0.45 | -0.55, 1.45 |
| Homemaker | -1.27 | -1.66, -0.87 | -1.10 | -1.54, -0.67 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | 0.00 | -0.01, 0.00 |
| Education |  |  | 0.00 | -0.01, 0.01 |
| Social vulnerability |  |  | 0.01 | -0.04, 0.07 |
| Sex |  |  | 0.03 | -0.07, 0.13 |
| Retired |  |  | 0.03 | -0.11, 0.17 |
| Unemployed |  |  | -0.24 | -0.52, 0.05 |
| Permanently sick or disabled |  |  | 0.03 | -0.25, 0.32 |
| Homemaker |  |  | -0.07 | -0.23, 0.09 |
| **Frailty by** |  |  |  |  |
| Age |  |  | 0.01 | 0.00, 0.03 |
| Education |  |  | 0.01 | -0.02, 0.04 |
| Social vulnerability |  |  | 0.00 | -0.12, 0.13 |
| Sex |  |  | 0.20 | -0.05, 0.45 |
| Retired |  |  | -0.07 | -0.48, 0.34 |
| Unemployed |  |  | 0.48 | -0.25, 1.21 |
| Permanently sick or disabled |  |  | -0.43 | -1.06, 0.20 |
| Homemaker |  |  | -0.28 | -0.74, 0.18 |

Note: Male is the reference category for sex and employed is the reference category for retired, unemployed, permanently sick or disable, and homemaker.

Table 2. Cross-sectional analysis of health and quality of life – employed group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.09 | -0.19, 0.01 | -0.10 | -0.22, 0.02 |
| Frailty | -1.65 | -2.00, -1.30 | -2.07 | -2.57, -1.58 |
| Age | 0.04 | 0.00, 0.08 | 0.03 | -0.02, 0.07 |
| Education | 0.04 | -0.01, 0.09 | 0.06 | 0.00, 0.11 |
| Social vulnerability | -3.20 | -3.55, -2.86 | -3.23 | -3.56, -2.90 |
| Sex | 0.81 | 0.42, 1.20 | 0.76 | 0.37, 1.15 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | 0.01 | -0.01, 0.03 |
| Education |  |  | -0.01 | -0.03, 0.01 |
| Social vulnerability |  |  | 0.02 | -0.15, 0.18 |
| Sex |  |  | -0.01 | -0.20, 0.18 |
| **Frailty by** |  |  |  |  |
| Age |  |  | 0.05 | -0.01, 0.11 |
| Education |  |  | -0.03 | -0.11, 0.05 |
| Social vulnerability |  |  | -0.01 | -0.41, 0.38 |
| Sex |  |  | 0.70 | 0.05, 1.36 |

Note: Male is the reference category for sex.

Table 3. Cross-sectional analysis of health and quality of life – retired group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.05 | -0.12, 0.03 | -0.08 | -0.18, 0.01 |
| Frailty | -1.62 | -1.80, -1.45 | -1.70 | -1.93, -1.47 |
| Age | 0.06 | 0.04, 0.09 | 0.06 | 0.04, 0.08 |
| Education | 0.14 | 0.10, 0.18 | 0.13 | 0.09, 0.17 |
| Social vulnerability | -2.90 | -3.12, -2.68 | -2.90 | -3.12, -2.68 |
| Sex | 1.10 | 0.76, 1.44 | 1.07 | 0.73, 1.40 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | 0.00 | -0.01, 0.00 |
| Education |  |  | 0.01 | -0.01, 0.02 |
| Social vulnerability |  |  | 0.02 | -0.06, 0.09 |
| Sex |  |  | 0.06 | -0.07, 0.19 |
| **Frailty by** |  |  |  |  |
| Age |  |  | 0.02 | 0.00, 0.03 |
| Education |  |  | 0.02 | -0.01, 0.06 |
| Social vulnerability |  |  | -0.04 | -0.20, 0.13 |
| Sex |  |  | 0.15 | -0.17, 0.46 |

Note: Male is the reference category for sex.

Table 4. Cross-sectional analysis of health and quality of life – unemployed group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.25 | -0.54, 0.05 | -0.21 | -0.56, 0.14 |
| Frailty | -0.98 | -1.68, -0.27 | -1.09 | -1.99, -0.18 |
| Age | 0.04 | -0.09, 0.18 | 0.06 | -0.07, 0.20 |
| Education | 0.05 | -0.10, 0.19 | 0.04 | -0.11, 0.19 |
| Social vulnerability | -3.96 | -4.69, -3.22 | -3.87 | -4.58, -3.17 |
| Sex | 1.20 | 0.02, 2.38 | 1.23 | 0.07,2.38 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | -0.01 | -0.07, 0.05 |
| Education |  |  | 0.01 | -0.05, 0.07 |
| Social vulnerability |  |  | -0.15 | -0.44, 0.14 |
| Sex |  |  | 0.03 | -0.51, 0.57 |
| **Frailty by** |  |  |  |  |
| Age |  |  | -0.03 | -0.18, 0.12 |
| Education |  |  | 0.04 | -0.12, 0.19 |
| Social vulnerability |  |  | 0.18 | -0.68, 1.03 |
| Sex |  |  | 0.02 | -1.31, 1.35 |

Note: Male is the reference category for sex.

Table 5. Cross-sectional analysis of health and quality of life – permanently sick or disabled group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.01 | -0.29, 0.28 | 0.03 | -0.37, 0.43 |
| Frailty | -1.85 | -2.43, -1.27 | -1.81 | -2.62, -1.00 |
| Age | 0.00 | -0.10, 0.09 | 0.02 | -0.11, 0.16 |
| Education | 0.03 | -0.13, 0.20 | 0.05 | -0.11, 0.20 |
| Social vulnerability | -3.31 | -3.94, -2.68 | -3.47 | -4.12, -2.81 |
| Sex | 0.98 | -0.39, 2.34 | 0.97 | -0.40, 2.35 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | -0.03 | -0.05, 0.00 |
| Education |  |  | -0.01 | -0.07, 0.04 |
| Social vulnerability |  |  | 0.21 | 0.01, 0.41 |
| Sex |  |  | -0.16 | -0.64, 0.32 |
| **Frailty by** |  |  |  |  |
| Age |  |  | 0.05 | 0.01, 0.10 |
| Education |  |  | 0.06 | -0.03, 0.15 |
| Social vulnerability |  |  | 0.03 | -0.32, 0.39 |
| Sex |  |  | -0.26 | -1.23, 0.70 |

Note: Male is the reference category for sex.

Table 6. Cross-sectional analysis of health and quality of life – homaker group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment | -0.15 | -0.26, -0.03 | -0.41 | -1.23, 0.41 |
| Frailty | -1.60 | -1.85, -1.35 | -1.06 | -2.18, 0.06 |
| Age | 0.06 | 0.03, 0.09 | 0.06 | 0.03, 0.09 |
| Education | 0.00 | -0.08, 0.09 | 0.01 | -0.07, 0.09 |
| Social vulnerability | -3.75 | -4.13, -3.37 | -3.73 | -4.11, -3.34 |
| Sex | 3.11 | 1.02, 5.20 | 2.92 | 0.92, 4.92 |
| **Cognitive impairment by** |  |  |  |  |
| Age |  |  | 0.00 | -0.01, 0.01 |
| Education |  |  | -0.02 | -0.05, 0.01 |
| Social vulnerability |  |  | -0.05 | -0.19, 0.08 |
| Sex |  |  | 0.26 | -0.57, 1.09 |
| **Frailty by** |  |  |  |  |
| Age |  |  | 0.01 | -0.02, 0.03 |
| Education |  |  | -0.06 | -0.13, 0.01 |
| Social vulnerability |  |  | 0.00 | -0.25, 0.26 |
| Sex |  |  | -0.69 | -1.84, 0.46 |

Note: Male is the reference category for sex.

Table 7. Change in health health and quality of life – full sample

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | -0.25 | -0.33, -0.18 | -0.10 | -0.28, 0.08 |
| Frailty change | -2.17 | -2.36, -1.98 | -2.67 | -3.22, -2.13 |
| Baseline cognitive impairment | -0.23 | -0.31, -0.16 | -0.22 | -0.30, -0.14 |
| Baseline frailty | -1.85 | -2.04, -1.66 | -1.83 | -2.01, -1.65 |
| Baseline quality of life | 0.32 | 0.29, 0.35 | 0.32 | 0.29, 0.35 |
| Age | 0.04 | 0.02, 0.06 | 0.04 | 0.02, 0.06 |
| Education | 0.09 | 0.06, 0.13 | 0.09 | 0.06, 0.13 |
| Social vulnerability | -0.66 | -0.88, -0.45 | -0.68 | -0.89, -0.46 |
| Sex | 0.50 | 0.19, 0.80 | 0.46 | 0.16, 0.76 |
| Retired | 0.01 | -0.39, 0.42 | 0.01 | -0.39, 0.41 |
| Unemployed | -1.19 | -2.22, -0.16 | -1.38 | -2.32, -0.43 |
| Permanently sick or disabled | 0.50 | -0.37, 1.36 | 0.55 | -0.36, 1.45 |
| Homemaker | -0.47 | -0.96, 0.03 | -0.45 | -0.94, 0.03 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | 0.01 | -0.03, 0.34 |
| Age |  |  | 0.00 | -0.01, 0.01 |
| Education |  |  | 0.02 | 0.00, 0.03 |
| Social vulnerability |  |  | -0.01 | -0.09, 0.08 |
| Sex |  |  | -0.01 | -0.15, 0.12 |
| Retired |  |  | -0.21 | -0.42, -0.01 |
| Unemployed |  |  | -0.42 | -0.82, -0.01 |
| Permanently sick or disabled |  |  | 0.05 | -0.33, 0.42 |
| Homemaker |  |  | 0.02 | -0.22, 0.27 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | 0.18 | 0.03, 0.34 |
| Age |  |  | 0.00 | -0.02, 0.02 |
| Education |  |  | 0.04 | 0.00, 0.09 |
| Social vulnerability |  |  | -0.01 | -0.24, 0.22 |
| Sex |  |  | 0.24 | -0.15, 0.63 |
| Retired |  |  | 0.29 | -0.34, 0.92 |
| Unemployed |  |  | 0.77 | -0.44, 1.98 |
| Permanently sick or disabled |  |  | 0.22 | -0.61, 1.06 |
| Homemaker |  |  | 0.40 | -0.30, 1.10 |

Note: Male is the reference category for sex and employed is the reference category for retired, unemployed, permanently sick or disable, and homemaker.

Table 8. Change in health health and quality of life – employed group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | -0.08 | -0.23, 0.07 | 0.00 | -0.20, 0.20 |
| Frailty change | -2.27 | -2.75, -1.80 | -2.43 | -3.08, -1.77 |
| Baseline cognitive impairment | -0.13 | -0.29, 0.03 | -0.12 | -0.28, 0.04 |
| Baseline frailty | -1.54 | -1.98, -1.10 | -1.58 | -2.03, -1.14 |
| Baseline quality of life | 0.36 | 0.30, 0.43 | 0.36 | 0.30, 0.42 |
| Age | 0.03 | -0.05, 0.10 | 0.03 | -0.04, 0.10 |
| Education | 0.06 | -0.01, 0.13 | 0.06 | 0.00, 0.13 |
| Social vulnerability | -0.47 | -0.83, -0.10 | -0.50 | -0.86, -0.14 |
| Sex | 0.23 | -0.29, 0.74 | 0.19 | -0.31, 0.69 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | -0.01 | -0.07, 0.06 |
| Age |  |  | -0.05 | -0.09, 0.00 |
| Education |  |  | 0.01 | -0.02, 0.05 |
| Social vulnerability |  |  | -0.02 | -0.14, 0.11 |
| Sex |  |  | -0.19 | -0.44, 0.06 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | -0.02 | -0.42, 0.38 |
| Age |  |  | 0.13 | 0.01, 0.25 |
| Education |  |  | 0.12 | 0.03, 0.20 |
| Social vulnerability |  |  | -0.16 | -0.54, 0.22 |
| Sex |  |  | 0.92 | 0.11, 1.73 |

Note: Male is the reference category for sex

Table 9. Change in health health and quality of life – retired group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | -0.33 | -0.43, -0.23 | -0.36 | -0.48, -0.24 |
| Frailty change | -2.24 | -2.49, -1.99 | -2.36 | -2.69, -2.03 |
| Baseline cognitive impairment | -0.24 | -0.35, -0.13 | -0.24 | -0.34, -0.13 |
| Baseline frailty | -1.96 | -2.22, -1.71 | -1.93 | -2.16, -1.69 |
| Baseline quality of life | 0.31 | 0.27, 0.35 | 0.31 | 0.27, 0.35 |
| Age | 0.06 | 0.03, 0.08 | 0.05 | 0.03, 0.08 |
| Education | 0.09 | 0.04, 0.14 | 0.09 | 0.04, 0.14 |
| Social vulnerability | -0.75 | -1.06, -0.45 | -0.77 | -1.07, -0.47 |
| Sex | 0.54 | 0.15, 0.93 | 0.50 | 0.11, 0.89 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | 0.00 | -0.04, 0.04 |
| Age |  |  | 0.00 | -0.01,0.01 |
| Education |  |  | 0.01 | -0.01, 0.03 |
| Social vulnerability |  |  | -0.03 | -0.15, 0.10 |
| Sex |  |  | 0.10 | -0.17, 0.26 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | 0.24 | 0.04, 0.43 |
| Age |  |  | 0.00 | -0.03, 0.03 |
| Education |  |  | 0.05 | 0.00, 0.10 |
| Social vulnerability |  |  | 0.11 | -0.15, 0.37 |
| Sex |  |  | -0.03 | -0.49, 0.44 |

Note: Male is the reference category for sex

Table 10. Change in health health and quality of life – unemployed group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | -0.42 | -0.86, 0.01 | -0.32 | -0.82, 0.19 |
| Frailty change | -2.29 | -3.59, -0.99 | -4.27 | -5.69, -2.84 |
| Baseline cognitive impairment | 0.00 | -0.48, 0.48 | -0.01 | -0.51, 0.48 |
| Baseline frailty | -2.42 | -3.51, -1.33 | -2.58 | -3.73, -1.44 |
| Baseline quality of life | 0.23 | 0.05, 0.40 | 0.27 | 0.11, 0.44 |
| Age | 0.09 | -0.18, 0.36 | 0.21 | -0.07, 0.48 |
| Education | 0.03 | -0.19, 0.26 | 0.08 | -0.11, 0.27 |
| Social vulnerability | -0.97 | -2.07, 0.12 | -0.88 | -1.94, 0.19 |
| Sex | 2.68 | 0.77, 4.59 | 2.17 | 0.43, 3.90 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | 0.08 | -0.09, 0.26 |
| Age |  |  | 0.04 | -0.05, 0.14 |
| Education |  |  | 0.02 | -0.05, 0.10 |
| Social vulnerability |  |  | 0.18 | -0.25, 0.61 |
| Sex |  |  | -0.28 | -1.01, 0.46 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | 0.53 | -0.24, 1.31 |
| Age |  |  | -0.13 | -0.38, 0.11 |
| Education |  |  | -0.27 | -0.48, -0.06 |
| Social vulnerability |  |  | 0.30 | -0.72, 1.33 |
| Sex |  |  | 3.44 | 1.79, 5.10 |

Note: Male is the reference category for sex

Table 11. Change in health health and quality of life – permanently sick or disabled group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | 0.11 | -0.25, 0.47 | 0.15 | -0.30, 0.60 |
| Frailty change | -2.16 | -2.95, -1.37 | -1.93 | -3.09, -0.77 |
| Baseline cognitive impairment | 0.05 | -0.30, 0.39 | 0.09 | -0.26, 0.44 |
| Baseline frailty | -1.76 | -2.56, -0.95 | -1.94 | -2.67, -1.21 |
| Baseline quality of life | 0.33 | 0.18, 0.48 | 0.31 | 0.17, 0.45 |
| Age | -0.01 | -0.12, 0.11 | -0.05 | -0.17, 0.07 |
| Education | 0.36 | 0.13, 0.59 | 0.34 | 0.11, 0.56 |
| Social vulnerability | -0.12 | -1.04, 0.79 | -0.18 | -1.17, 0.82 |
| Sex | 1.02 | -0.46, 2.50 | 1.52 | -0.03, 3.06 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | 0.06 | -0.06, 0.19 |
| Age |  |  | -0.06 | -0.12, -0.01 |
| Education |  |  | -0.01 | -0.10,0.09 |
| Social vulnerability |  |  | 0.00 | -0.40, 0.40 |
| Sex |  |  | -0.25 | -0.88, 0.38 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | -0.03 | -0.48, 0.43 |
| Age |  |  | 0.07 | -0.02, 0.16 |
| Education |  |  | 0.13 | -0.03, 0.30 |
| Social vulnerability |  |  | 0.34 | -0.36, 1.03 |
| Sex |  |  | -0.44 | -1.91, 1.02 |

Note: Male is the reference category for sex.

Table 12. Change in health health and quality of life – homemaker group

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | | Model 2 | |
|  | b | 95% CI | b | 95% CI |
| Cognitive impairment change | -0.16 | -0.37, 0.04 | -0.42 | -0.84, -0.01 |
| Frailty change | -1.88 | -2.24, -1.52 | -2.58 | -3.98, -1.17 |
| Baseline cognitive impairment | -0.32 | -0.48, -0.17 | -0.33 | -0.48, -0.18 |
| Baseline frailty | -1.55 | -1.93, -1.16 | -1.61 | -1.97, -1.25 |
| Baseline quality of life | 0.32 | 0.26, 0.39 | 0.33 | 0.26, 0.39 |
| Age | 0.03 | -0.03, 0.08 | 0.03 | -0.01, 0.08 |
| Education | 0.12 | 0.02, 0.22 | 0.12 | 0.03, 0.22 |
| Social vulnerability | -0.72 | -1.19, -0.25 | -0.70 | -1.16, -0.23 |
| Sex | -0.50 | -1.72, 0.72 | -0.65 | -1.82, 0.51 |
| **Cognitive impairment change by** |  |  |  |  |
| Baseline cognitive impairment |  |  | 0.02 | -0.05, 0.09 |
| Age |  |  | 0.02 | 0.00, 0.04 |
| Education |  |  | 0.03 | -0.02, 0.07 |
| Social vulnerability |  |  | -0.04 | -0.21, 0.13 |
| Sex |  |  | 0.23 | -0.23, 0.68 |
| **Frailty change by** |  |  |  |  |
| Baseline frailty |  |  | 0.06 | -0.22, 0.34 |
| Age |  |  | -0.01 | -0.05, 0.03 |
| Education |  |  | 0.01 | -0.09, 0.11 |
| Social vulnerability |  |  | 0.21 | -0.27, 0.69 |
| Sex |  |  | 0.63 | -0.83, 2.09 |

Note: Male is the reference category for sex.