**Supplements**

**Supplement 1. Flow diagram of the NAKO cohort study**

****

**Supplement 2. Frequency of missing data**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |
|   | Missing |   | Complete |
|   | n | % |   | n | % |
| Self-reported PA change scores (COVID-19 survey) | 0 | 0 |   | 152,421 | 100 |
| Following PA guidelines (COVID-19 survey) |   |   |   |   |   |
|  Before COVID-19 restrictions | 4,436 | 2.9 |   | 147,985 | 97.1 |
|  With the onset of the restrictions | 5,385 | 3.5 |   | 147,036 | 96.5 |
| GPAQ (baseline survey) | 1,969 | 1.3 |   | 150,452 | 98.7 |
| Age (COVID-19 survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Sex (baseline survey) | 4 | 0.0 |   | 152,408 | 100.0 |
| Education (baseline survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Migrant background (baseline survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Altered working condition (COVID-19 survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Self-rated health (COVID-19 survey) | 736 | 0.5 |   | 151,685 | 99.5 |
| Changes in self-rated health (COVID-19 survey) | 716 | 0.5 |   | 151,705 | 99.5 |
| Anxiety (COVID-19 survey) | 492 | 0.3 |   | 151,929 | 99.7 |
| Depression (baseline survey) | 549 | 0.4 |   | 151,872 | 99.6 |
| Depression (COVID-19 survey) | 549 | 0.4 |   | 151,872 | 99.6 |
| Household with children (COVID-19 survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Feeling of loneliness (COVID-19 survey) | 352 | 0.2 |   | 152,069 | 99.8 |
| Member of a sports club (COVID-19 survey) | 9 | 0.0 |   | 152,412 | 100.0 |
| Living alone | 9 | 0.0 |   | 152,412 | 100.0 |
| Notes. n = number of respondents; GPAQ= Global physical activity questionnaire;  |

**Supplement 3. Changes in sedentary behavior and physical activity domains**



**Supplement 4. Interaction between age and the development of depressive symptoms on the change of physical activity and sedentary behavior at the onset of the COVID-19 restrictions**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   | Sports |   |  At work |   | Transport |   | Recreation |   | Sedentary behavior |   | Household |
|   | β | 95%-CI  |   | β | 95%-CI  |   | β |  95%-CI |   | β |  95%-CI |   | β |  95%-CI |   | β | 95%-CI  |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Age | -0.05 | (-.054 | -.042 | ) |   | 0.04 | (.037 | .048 | ) |   | 0.00 | (-.009 | .003 | ) |   | -0.03 | (-.033 | -.02  | ) |   | -0.07 | (-.073 | -.062 | ) |   | -0.08 | (-.081 | -.069 | ) |
| Δ depression (T2-T1) | -0.06 | (-.065 | -.053 | ) |   | -0.09 | (-.092 | -.08  | ) |   | -0.07 | (-.076 | -.064 | ) |   | -0.07 | (-.081 | -.069 | ) |   | 0.06 | (.058 | .07  | ) |   | -0.02 | (-.024 | -.012 | ) |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Interaction  | 0.00 | (-.006 | .004 | ) |   | 0.00 | (-.004 | .005 | ) |   | 0.00 | (-.001 | .009 | ) |   | 0.00 | (-.004 | .006 | ) |   | -0.02 | (-.027 | -.017 | ) |   | 0.00 | (-.008 | .002 | ) |
| Age \* Δ depression (T2-T1) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Notes. *N* = 152,421; values of changes in sedentary behavior and all physical activity domains ranged from -2 to 2; additionally, adjusted for education, altered working conditions, self-rated health, anxiety, depression at baseline, living alone, feeling of loneliness, member of a sports club, physical activity at baseline, high regional number of COVID-19-cases, month of interview |