**Supplementary material**

1)

**Min-max algorithm**

Min-max algorithm to rescale psychological distress (SCL5) from 5-20 scale to 0-10 scale:

SCL5, rescaled=((10 - 0)/(20 - 5))\*(SCL5 - 20) + 10

2)

**Model specification**

The analyses can be specified as in the equation (1)

Where

= , i.e. score for respectively life satisfaction, loneliness and psychological distress for individual *i* at time *t* (*minus* score pre\_COVID-19 (, where t=mid-2020, late-2020 and p=pre-COVID-19.

Hence, is the outcome variable for subject i at measurement occasion t, is a time indicator for the measurement occasion, is measured changed in social contact for individual i at occasion t, are other time varying predictor variables, are other predictor variables that does not change with time, is unobserved individual random effect and is the individual random error term.

3)

**Covariates**

Sexi: male, female (reference)

Partnerit: single, non-cohabiting partner, married or cohabiting (reference)

Educationi: tertiary, secondary, primary (reference)

Employmentit: unemployed, temporarily laid off, employed (reference), pupil/student, other

Working from home officeit: yes, no (reference)

Participated in in organised leisure activities pre-COVID-19i: weekly (reference), 1-3 times a month, less often, never

Table S1 Results from the linear mixed (multilevel) change score regressions for life satisfaction, loneliness, and psychological distress, adjusted and unadjusted for covariates for age group < 30 yearsa).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Life satisfactionb) | | Loneliness | | Psychological distress | |
|  | Unadj. | Adjusted | Unadj | Adjusted | Unadj | Adjusted |
|  |  |  |  |  |  |  |
| Social contact=Less (ref.=More/Unchanged) | 0.17 | 0.16 | 0.68\*\*\* | 0.74\*\*\* | 0.33\*\* | 0.32\* |
|  | (0.11) | (0.11) | (0.17) | (0.16) | (0.13) | (0.13) |
| Time=Late-2020 (ref.=Mid-2020) | 0.40\*\*\* | 0.38\*\*\* | 0.88\*\*\* | 0.93\*\*\* | 0.66\*\*\* | 0.67\*\*\* |
|  | (0.11) | (0.11) | (0.16) | (0.17) | (0.12) | (0.12) |
| Interaction: Less social contact • Late-2020 | 0.20 | 0.24 | -0.25 | -0.23 | 0.041 | 0.070 |
|  | (0.16) | (0.16) | (0.23) | (0.23) | (0.17) | (0.17) |
| Sex=Male (ref.=Female) |  | -0.084 |  | -0.13 |  | 0.028 |
|  |  | (0.11) |  | (0.16) |  | (0.12) |
| Partner=Non-cohab. partner (ref.=Married/Cohab.) |  | -0.058 |  | 0.56\*\* |  | 0.23 |
|  |  | (0.14) |  | (0.21) |  | (0.16) |
| Partner=Single (ref.= Married/Cohab.) |  | 0.11 |  | 0.92\*\*\* |  | 0.088 |
|  |  | (0.11) |  | (0.16) |  | (0.12) |
| Education=Medium (ref.=Low) |  | -0.45\* |  | -0.12 |  | -0.26 |
|  |  | (0.19) |  | (0.28) |  | (0.22) |
| Education=High (ref.=Low) |  | -0.13 |  | -0.097 |  | 0.086 |
|  |  | (0.20) |  | (0.29) |  | (0.22) |
| Employment=Temp.laid off (ref.=Employed) |  | 0.76\*\* |  | 0.44 |  | 0.58 |
|  |  | (0.26) |  | (0.39) |  | (0.29) |
| Employment=Unemployed (ref.=Employed) |  | 0.61\* |  | 0.47 |  | 0.030 |
|  |  | (0.25) |  | (0.37) |  | (0.29) |
| Employment=Pupil/Student (ref.=Employed) |  | 0.20 |  | 0.10 |  | 0.32\*\* |
|  |  | (0.11) |  | (0.16) |  | (0.12) |
| Employment=Other (ref.=Employed) |  | 0.043 |  | -0.22 |  | -0.055 |
|  |  | (0.18) |  | (0.27) |  | (0.21) |
| Home office=Yes (ref.=No) |  | -0.13 |  | 0.37 |  | 0.041 |
|  |  | (0.14) |  | (0.21) |  | (0.16) |
| Leisure activities=1-3 times a month (ref.=Weekly) |  | 0.13 |  | -0.84\*\* |  | 0.020 |
|  |  | (0.18) |  | (0.27) |  | (0.20) |
| Leisure activities=Less often (ref.=Weekly) |  | 0.25 |  | 0.085 |  | 0.025 |
|  |  | (0.14) |  | (0.20) |  | (0.16) |
| Leisure activities=Never (ref.=Weekly) |  | -0.27\* |  | -0.25 |  | -0.077 |
|  |  | (0.13) |  | (0.20) |  | (0.15) |
| Constant | -0.042 | 0.14 | -0.47\*\*\* | -0.75\* | -0.62\*\*\* | -0.71\*\* |
|  | (0.083) | (0.23) | (0.12) | (0.34) | (0.093) | (0.26) |
|  |  |  |  |  |  |  |
| Observations | 1,980 | 1,976 | 1,962 | 1,958 | 1,955 | 1,950 |
| Number of groups | 1,433 | 1,429 | 1,422 | 1,418 | 1,415 | 1,410 |
|  |  |  |  |  |  |  |
| Test Less +Less•Late-2020=0 (p-value) | 0.002 | 0.001 | 0.018 | 0.005 | 0.006 | 0.005 |
|  |  |  |  |  |  |  |
| AIC | 8195.892 | 8160.896 | 9655.199 | 9604.623 | 8526.053 | 8501.373 |
| BIC | 8229.437 | 8267.083 | 9688.69 | 9710.637 | 8559.522 | 8607.309 |
| Notes: a) Regression coefficients with standard error in parenthesis below coefficient, \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. b) The original scale of life satisfaction is reversed in the analyses. | | | | | | |

Table S2 Results from the linear mixed (multilevel) change score regressions for life satisfaction, loneliness, and psychological distress, adjusted and unadjusted for covariates for age group 30-49 yearsa).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Life satisfactionb) | | | Loneliness | | | Psychological distress | | |
|  | Unadj. | Adjusted | | Unadj | Adjusted | | Unadj | | Adjusted |
|  |  |  | |  |  | |  | |  |
| Social contact=Less (ref.=More/Unchanged) | 0.087 | 0.071 | | 0.25\*\* | 0.24\*\* | | 0.18\*\* | | 0.16\*\* |
|  | (0.053) | (0.053) | | (0.078) | (0.078) | | (0.054) | | (0.054) |
| Time=Late-2020 (ref.=Mid-2020) | 0.26\*\*\* | 0.28\*\*\* | | 0.41\*\*\* | 0.42\*\*\* | | 0.42\*\*\* | | 0.42\*\*\* |
|  | (0.054) | (0.054) | | (0.079) | (0.080) | | (0.054) | | (0.055) |
| Interaction: Less social contact • Late-2020 | 0.29\*\*\* | 0.29\*\*\* | | 0.22\* | 0.23\* | | 0.16\* | | 0.16\* |
|  | (0.071) | (0.071) | | (0.10) | (0.10) | | (0.072) | | (0.072) |
| Sex=Male (ref.=Female) |  | -0.14\*\* | |  | 0.047 | |  | | -0.12\* |
|  |  | (0.050) | |  | (0.073) | |  | | (0.051) |
| Partner=Non-cohab. partner (ref.=Married/Cohab.) |  | -0.25\* | |  | -0.016 | |  | | -0.27\* |
|  |  | (0.11) | |  | (0.16) | |  | | (0.11) |
| Partner=Single (ref.= Married/Cohab.) |  | 0.019 | |  | 0.56\*\*\* | |  | | 0.088 |
|  |  | (0.065) | |  | (0.096) | |  | | (0.067) |
| Education=Medium (ref.=Low) |  | -0.050 | |  | 0.077 | |  | | 0.14 |
|  |  | (0.10) | |  | (0.15) | |  | | (0.11) |
| Education=High (ref.=Low) |  | 0.0085 | |  | 0.095 | |  | | 0.18 |
|  |  | (0.10) | |  | (0.15) | |  | | (0.11) |
| Employment=Temp.laid off (ref.=Employed) |  | 0.67\*\*\* | |  | 0.33 | |  | | 0.56\*\*\* |
|  |  | (0.13) | |  | (0.20) | |  | | (0.14) |
| Employment=Unemployed (ref.=Employed) |  | 0.68\*\*\* | |  | 0.079 | |  | | 0.41\* |
|  |  | (0.17) | |  | (0.24) | |  | | (0.17) |
| Employment=Pupil/Student (ref.=Employed) |  | -0.12 | |  | 0.43\* | |  | | -0.15 |
|  |  | (0.14) | |  | (0.20) | |  | | (0.14) |
| Employment=Other (ref.=Employed) |  | -0.47\*\*\* | |  | -0.27\* | |  | | -0.29\*\*\* |
|  |  | (0.072) | |  | (0.11) | |  | | (0.074) |
| Home office=Yes (ref.=No) |  | 0.023 | |  | 0.069 | |  | | 0.0090 |
|  |  | (0.054) | |  | (0.080) | |  | | (0.055) |
| Leisure activities=1-3 times a month (ref.=Weekly) |  | -0.00046 | |  | -0.19 | |  | | 0.12 |
|  |  | (0.072) | |  | (0.11) | |  | | (0.074) |
| Leisure activities=Less often (ref.=Weekly) |  | -0.084 | |  | 0.020 | |  | | -0.037 |
|  |  | (0.061) | |  | (0.089) | |  | | (0.063) |
| Leisure activities=Never (ref.=Weekly) |  | -0.24\*\*\* | |  | -0.28\*\* | |  | | -0.065 |
|  |  | (0.069) | |  | (0.10) | |  | | (0.072) |
| Constant | -0.15\*\*\* | 0.030 | | -0.47\*\*\* | -0.58\*\*\* | | -0.47\*\*\* | | -0.55\*\*\* |
|  | (0.044) | (0.11) | | (0.064) | (0.17) | | (0.045) | | (0.12) |
|  |  |  | |  |  | |  | |  |
| Observations | 7,008 | 6,979 | | 6,884 | 6,858 | | 6,924 | | 6,895 |
| Number of groups | 4,489 | 4,472 | | 4,434 | 4,419 | | 4,441 | | 4,424 |
|  |  |  | |  |  | |  | |  |
| Test Less +Less•Late-2020=0 (p-value) | <0.001 | <0.001 | | <0.001 | <0.001 | | <0.001 | | <0.001 |
|  |  |  | |  |  | |  | |  |
| AIC | 26891.56 | 26688.24 | | 31566.45 | 31383.92 | | 26755.98 | | 26595.55 |
| BIC | 26932.69 | 26818.4 | | 31607.47 | 31513.75 | | 26797.03 | | 26725.48 |
| Notes: a) Regression coefficients with standard error in parenthesis below coefficient, \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. b) The original scale of life satisfaction is reversed in the analyses. | | | | | | | | | |
|  | | |  | | |  | |  | |

Table S3 Results from the linear mixed (multilevel) change score regressions for life satisfaction, loneliness, and psychological distress, adjusted and unadjusted for covariates for age group 50-64 yearsa).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Life satisfactionb) | | Loneliness | | Psychological distress | |
|  | Unadj. | Adjusted | Unadj | Adjusted | Unadj | Adjusted |
|  |  |  |  |  |  |  |
| Social contact=Less (ref.=More/Unchanged) | 0.12\* | 0.092 | 0.21\*\* | 0.23\*\* | 0.13\*\* | 0.10\* |
|  | (0.049) | (0.049) | (0.072) | (0.073) | (0.040) | (0.041) |
| Time=Late-2020 (ref.=Mid-2020) | 0.39\*\*\* | 0.40\*\*\* | 0.52\*\*\* | 0.50\*\*\* | 0.35\*\*\* | 0.37\*\*\* |
|  | (0.048) | (0.048) | (0.070) | (0.070) | (0.039) | (0.039) |
| Interaction: Less social contact • Late-2020 | 0.27\*\*\* | 0.28\*\*\* | 0.24\*\* | 0.24\* | 0.17\*\*\* | 0.18\*\*\* |
|  | (0.064) | (0.064) | (0.094) | (0.094) | (0.052) | (0.052) |
| Sex=Male (ref.=Female) |  | -0.19\*\*\* |  | -0.050 |  | -0.11\*\* |
|  |  | (0.044) |  | (0.067) |  | (0.040) |
| Partner=Non-cohab. partner (ref.=Married/Cohab.) |  | -0.31\*\*\* |  | -0.18 |  | -0.12 |
|  |  | (0.089) |  | (0.14) |  | (0.079) |
| Partner=Single (ref.= Married/Cohab.) |  | -0.19\*\*\* |  | 0.38\*\*\* |  | -0.11\* |
|  |  | (0.056) |  | (0.086) |  | (0.051) |
| Education=Medium (ref.=Low) |  | -0.10 |  | -0.085 |  | 0.051 |
|  |  | (0.070) |  | (0.11) |  | (0.064) |
| Education=High (ref.=Low) |  | -0.083 |  | -0.11 |  | 0.073 |
|  |  | (0.070) |  | (0.11) |  | (0.063) |
| Employment=Temp.laid off (ref.=Employed) |  | 0.96\*\*\* |  | 0.25 |  | 0.70\*\*\* |
|  |  | (0.15) |  | (0.23) |  | (0.13) |
| Employment=Unemployed (ref.=Employed) |  | 0.12 |  | 0.37 |  | -0.14 |
|  |  | (0.19) |  | (0.29) |  | (0.16) |
| Employment=Pupil/Student (ref.=Employed) |  | -0.34 |  | 0.29 |  | 0.39 |
|  |  | (0.44) |  | (0.65) |  | (0.38) |
| Employment=Other (ref.=Employed) |  | -0.13\*\* |  | -0.0073 |  | -0.12\*\* |
|  |  | (0.048) |  | (0.074) |  | (0.043) |
| Home office=Yes (ref.=No) |  | -0.0093 |  | -0.13 |  | 0.076 |
|  |  | (0.052) |  | (0.077) |  | (0.044) |
| Leisure activities=1-3 times a month (ref.=Weekly) |  | 0.059 |  | -0.0061 |  | 0.072 |
|  |  | (0.068) |  | (0.10) |  | (0.062) |
| Leisure activities=Less often (ref.=Weekly) |  | -0.0024 |  | -0.19\* |  | -0.0068 |
|  |  | (0.055) |  | (0.085) |  | (0.050) |
| Leisure activities=Never (ref.=Weekly) |  | -0.18\*\* |  | -0.20\* |  | -0.14\* |
|  |  | (0.062) |  | (0.094) |  | (0.056) |
| Constant | -0.12\*\* | 0.17 | -0.30\*\*\* | -0.12 | -0.41\*\*\* | -0.35\*\*\* |
|  | (0.040) | (0.086) | (0.060) | (0.13) | (0.034) | (0.077) |
|  |  |  |  |  |  |  |
| Observations | 8,439 | 8,385 | 8,140 | 8,088 | 8,323 | 8,267 |
| Number of groups | 5,060 | 5,036 | 4,977 | 4,954 | 4,996 | 4,974 |
|  |  |  |  |  |  |  |
| Test Less +Less•Late-2020=0 (p-value) | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
|  |  |  |  |  |  |  |
| AIC | 32007.23 | 31715.21 | 37144.09 | 36880.39 | 28849.57 | 28616.27 |
| BIC | 32049.48 | 31848.86 | 37186.12 | 37013.36 | 28891.73 | 28749.65 |
| Notes: a) Regression coefficients with standard error in parenthesis below coefficient, \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. b) The original scale of life satisfaction is reversed in the analyses. | | | | | | |

Table S4 Results from the linear mixed (multilevel) change score regressions for life satisfaction, loneliness, and psychological distress, adjusted and unadjusted for covariates for age group 65+ yearsa).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Life satisfactionb) | | Loneliness | | Psychological distress | |
|  | Unadj. | Adjusted | Unadj | Adjusted | Unadj | Adjusted |
|  |  |  |  |  |  |  |
| Social contact=Less (ref.=More/Unchanged) | 0.073 | 0.041 | 0.18\* | 0.18\* | 0.039 | 0.031 |
|  | (0.058) | (0.059) | (0.090) | (0.091) | (0.045) | (0.046) |
| Time=Late-2020 (ref.=Mid-2020) | 0.37\*\*\* | 0.37\*\*\* | 0.56\*\*\* | 0.55\*\*\* | 0.31\*\*\* | 0.32\*\*\* |
|  | (0.054) | (0.054) | (0.084) | (0.084) | (0.041) | (0.042) |
| Interaction: Less social contact • Late-2020 | 0.36\*\*\* | 0.36\*\*\* | 0.23\* | 0.25\* | 0.20\*\*\* | 0.20\*\*\* |
|  | (0.076) | (0.076) | (0.12) | (0.12) | (0.058) | (0.059) |
| Sex=Male (ref.=Female) |  | -0.33\*\*\* |  | -0.13 |  | -0.18\*\*\* |
|  |  | (0.055) |  | (0.082) |  | (0.044) |
| Partner=Non-cohab. partner (ref.=Married/Cohab.) |  | -0.035 |  | 0.083 |  | -0.077 |
|  |  | (0.12) |  | (0.18) |  | (0.093) |
| Partner=Single (ref.= Married/Cohab.) |  | -0.10 |  | 0.45\*\*\* |  | 0.091 |
|  |  | (0.067) |  | (0.10) |  | (0.054) |
| Education=Medium (ref.=Low) |  | -0.041 |  | -0.021 |  | 0.037 |
|  |  | (0.076) |  | (0.12) |  | (0.060) |
| Education=High (ref.=Low) |  | 0.0029 |  | -0.048 |  | 0.070 |
|  |  | (0.072) |  | (0.11) |  | (0.058) |
| Employment=Temp.laid off (ref.=Employed) |  | 0.83 |  | -0.47 |  | 0.86\* |
|  |  | (0.49) |  | (0.73) |  | (0.38) |
| Employment=Unemployed (ref.=Employed) |  | -0.089 |  | 0.91 |  | 1.77\*\*\* |
|  |  | (0.65) |  | (0.97) |  | (0.50) |
| Employment=Pupil/Student (ref.=Employed) |  | -1.87 |  | - |  | 1.30 |
|  |  | (1.40) |  | - |  | (1.08) |
| Employment=Other (ref.=Employed) |  | -0.032 |  | 0.082 |  | 0.14 |
|  |  | (0.089) |  | (0.13) |  | (0.071) |
| Home office=Yes (ref.=No) |  | -0.051 |  | 0.051 |  | 0.42\*\*\* |
|  |  | (0.15) |  | (0.22) |  | (0.12) |
| Leisure activities=1-3 times a month (ref.=Weekly) |  | -0.081 |  | 0.15 |  | 0.053 |
|  |  | (0.078) |  | (0.12) |  | (0.063) |
| Leisure activities=Less often (ref.=Weekly) |  | -0.084 |  | -0.10 |  | 0.000091 |
|  |  | (0.068) |  | (0.10) |  | (0.054) |
| Leisure activities=Never (ref.=Weekly) |  | -0.22\*\* |  | -0.053 |  | -0.0024 |
|  |  | (0.076) |  | (0.11) |  | (0.061) |
| Constant | 0.056 | 0.41\*\* | -0.048 | -0.095 | -0.19\*\*\* | -0.29\*\* |
|  | (0.048) | (0.13) | (0.073) | (0.19) | (0.037) | (0.100) |
|  |  |  |  |  |  |  |
| Observations | 5,211 | 5,134 | 4,798 | 4,737 | 5,168 | 5,094 |
| Number of groups | 3,083 | 3,049 | 2,942 | 2,908 | 3,061 | 3,030 |
|  |  |  |  |  |  |  |
| Test Less +Less•Late-2020=0 (p-value) | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
|  |  |  |  |  |  |  |
| AIC | 19249.63 | 18931.91 | 21329.15 | 21033.82 | 16527.61 | 16251.23 |
| BIC | 19288.99 | 19056.24 | 21368.01 | 21150.16 | 16566.92 | 16375.41 |
| Notes: a) Regression coefficients with standard error in parenthesis below coefficient, \*\*\* p<0.001, \*\* p<0.01, \* p<0.05. b) The original scale of life satisfaction is reversed in the analyses. | | | | | | |