Table S1A: *Fully imputed debt values by country.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| A | **Country** | | | |
|  | % | | |  |
|  | FR | DE | BE | **Total** |
| **Financial debt flag** |  |  |  |  |
| Continuous value reported (no imputations) | 19 | 12 | 13 | 15 |
| Imputed based on a complete bracket information | 2 | 1 | 2 | 2 |
| imputed based on an incomplete bracket information | 0 | 0 | 0 | 0 |
| Fully imputed (no bracket information) | 2 | 1 | 2 | 2 |
| No given debt (set to 0) | 76 | 85 | 83 | 81 |
| Both asset ownership and asset value were imputed | 0 | 1 | 0 | 0 |
| Total | 100 | 100 | 100 | 100 |
| **Housing debt flag** |  |  |  |  |
| Continuous value reported (no imputations) | 8 | 13 | 10 | 10 |
| Imputed based on a complete bracket information | 2 | 2 | 3 | 2 |
| imputed based on an incomplete bracket information | 0 | 0 | 0 | 0 |
| Fully imputed (no bracket information) | 1 | 2 | 2 | 2 |
| No given debt (set to 0) | 88 | 82 | 84 | 85 |
| Both asset ownership and asset value were imputed | 1 | 1 | 1 | 1 |
| Total | 100 | 100 | 100 | 100 |
|  | | | | |

Table S1B: *Fully imputed debt values by wave.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| B | **Survey wave** | | | | | |
|  | **Wave 1** | **Wave 2** | **Wave 4** | **Wave 5** | **Wave 6** | **Total** |
|  | % | % | % | % | % | % |
| **Financial debt flag** |  |  |  |  |  |  |
| Continuous value reported (no imputations) | 13 | 14 | 16 | 15 | 15 | 15 |
| Imputed based on a complete bracket information | 2 | 2 | 2 | 2 | 1 | 2 |
| imputed based on an incomplete bracket information | 0 | 0 | 0 | 0 | 0 | 0 |
| Fully imputed (no bracket information) | 2 | 2 | 2 | 2 | 2 | 2 |
| No given debt (set to 0) | 83 | 82 | 79 | 81 | 82 | 81 |
| Both asset ownership and asset value were imputed | 1 | 0 | 0 | 0 | 0 | 0 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 |
| **Housing debt flag** |  |  |  |  |  |  |
| Continuous value reported (no imputations) | 8 | 9 | 9 | 11 | 11 | 10 |
| Imputed based on a complete bracket information | 2 | 2 | 2 | 2 | 2 | 2 |
| imputed based on an incomplete bracket information | 0 | 0 | 0 | 0 | 0 | 0 |
| Fully imputed (no bracket information) | 2 | 2 | 2 | 1 | 1 | 2 |
| No given debt (set to 0) | 85 | 86 | 85 | 84 | 84 | 85 |
| Both asset ownership and asset value were imputed | 1 | 1 | 1 | 1 | 1 | 1 |
| **Total** | 100 | 100 | 100 | 100 | 100 | 100 |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Table S2. *Number of participants by country* | | | | | | | | | | |
|  | **Women** | | | | | **Men** | | | | |
|  | **France (FR)** | **Germany (DE)** | **Belgium (BE)** | **Total** | **France (FR)** | | **Germany (DE)** | **Belgium (BE)** | **Total** |
|  | N | N | N | N | N | | N | N | N |
| **Participants by number of observations** |  |  |  |  |  | |  |  |  |
| Only 1 Obs. (x-sectional) | 1272 | 1681 | 1661 | 4614 | 1111 | | 1440 | 1489 | 4040 |
| 2 obs. (longitudinal) | 1026 | 2015 | 1266 | 4307 | 829 | | 1865 | 1144 | 3838 |
| 3 obs. (longitudinal | 1254 | 205 | 1048 | 2507 | 979 | | 182 | 843 | 2004 |
| 4 obs. (longitudinal) | 426 | 247 | 362 | 1035 | 316 | | 225 | 300 | 841 |
| 5 obs. (longitudinal) | 375 | 276 | 653 | 1304 | 269 | | 240 | 549 | 1058 |
| **Total number of participants** | 4353 | 4424 | 4990 | 13767 | 3504 | | 3952 | 4325 | 11781 |
| **Observations by wave** |  |  |  |  |  | |  |  |  |
| Wave 1 | 1577 | 1527 | 1898 | 5002 | 1274 | | 1339 | 1675 | 4288 |
| Wave 2 | 1535 | 1319 | 1626 | 4480 | 1206 | | 1158 | 1413 | 3777 |
| Wave 4 | 3027 | 812 | 2670 | 6509 | 2369 | | 711 | 2254 | 5334 |
| Wave 5 | 2416 | 2824 | 2881 | 8121 | 1847 | | 2594 | 2430 | 6871 |
| Wave 6 | 2110 | 2212 | 2975 | 7297 | 1619 | | 2014 | 2479 | 6112 |
| **Total number of observations** | 10665 | 8694 | 12050 | 31409 | 8315 | | 7816 | 10251 | 26382 |

Table S3. *Distribution of changes in the debt variables between two consecutive observations.*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Time 1 (wave t+1) housing debt status** | | | | | | |
|  | None | | Low | | Substantial | Total | |
| **Time 0 (wave t) housing debt status** |  | |  | |  |  | |
| None (n) | 23,427 | | 1,178 | | 1,429 | 26,034 | |
| % | 89.99 | | 4.52 | | 5.49 | 100.00 | |
|  |  | |  | |  |  | |
| Low (n) | 1,585 | | 608 | | 422 | 2,615 | |
| % | 60.61 | | 23.25 | | 16.14 | 100.00 | |
|  |  | |  | |  |  | |
| Substantial (n) | 1,782 | | 657 | | 1,155 | 3,594 | |
| % | 49.58 | | 18.28 | | 32.14 | 100.00 | |
|  |  | |  | |  |  | |
| Total | 26,794 | | 2,443 | | 3,006 | 32,243 | |
|  | 83.10 | | 7.58 | | 9.32 | 100.00 | |
| **Negative change (decreasing debt)** |  |  | |  | | | 12.5 % |
| **Positive change (increasing debt)** |  |  | |  | | | 9.4 % |
| **Stable (no change)** |  |  | |  | | | 78.1 % |
| **Total** |  |  | |  | | | 100 % |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | | | |
|  | **Time 1 (wave t+1) financial debt status** | | | |
|  | None | Low | Substantial | Total |
| **Time 0 (wave t) financial debt status** |  |  |  |  |
| None (n) | 26,718 | 397 | 367 | 27,482 |
| % | 97.22 | 1.44 | 1.34 | 100.00 |
|  |  |  |  |  |
| Low (n) | 1,052 | 803 | 262 | 2,117 |
| % | 49.69 | 37.93 | 12.38 | 100.00 |
|  |  |  |  |  |
| Substantial (n) | 623 | 627 | 1,394 | 2,644 |
| % | 23.56 | 23.71 | 52.72 | 100.00 |
|  |  |  |  |  |
| Total | 28,393 | 1,827 | 2,023 | 32,243 |
|  | 88.06 | 5.67 | 6.27 | 100.00 |
|  |  |  |  |  |
| **Negative change (decreasing debt)** |  |  |  | 7.1 % |
| **Positive change (increasing debt)** |  |  |  | 3.2 % |
| **Stable (no change)** |  |  |  | 89.7 % |
| **Total** |  |  |  | 100 % |

Table S4: *Interaction between the debt measures and monetary debt amount. All participants in the same model*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Women | | Men |  |
|  | B | 95 % CI | B | 95 % CI |
| **Financial debt (within the low category)** |  |  |  |  |
| Amount (/1000 euros) | 0.061\*\*\* | [0.026,0.095] | 0.068\*\*\* | [0.035,0.100] |
| **Financial debt measures: interaction with the monetary amount** |  |  |  |  |
| Low # amount (/1000 euros) | Ref. |  | Ref. |  |
| Substantial # amount (/1000 euros) | -0.057\*\* | [-0.091,-0.022] | -0.066\*\*\* | [-0.099,-0.033] |
| **Financial debt (within the low category)** |  |  |  |  |
| Amount (/1000 euros) | 0.007 | [-0.002,0.016] | 0.004 | [-0.004,0.012] |
| **Housing debt measures: interaction with the category** |  |  |  |  |
| Low debt # amount (/1000 euros) | Ref. |  | Ref. |  |
| Substantial # amount (/1000 euros) | -0.005 | [-0.013,0.004] | -0.003 | [-0.011,0.005] |
| All adjustments |  |  |  |  |
|  |  |  |  |  |

Table S5. *Results from the full interaction model.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (Women) |  | (Men) |  |
|  | EURO-D: Score /0-12 |  | EURO-D: Score /0-12 |  |
| Debendent variable: EURO-D: Score /0-12 |  |  |  |  |
| **Financial debt** |  |  |  |  |
| None | ref. | ref. | ref. | ref. |
| Low financial debt | 0.173\*\* | [0.043,0.302] | 0.200\*\* | [0.073,0.327] |
| Substantial financial debt | 0.134\* | [0.007,0.261] | 0.064 | [-0.054,0.181] |
| None # DE | ref. | ref. | ref. | ref. |
| None # FR | ref. | ref. | ref. | ref. |
| None # BE | ref. | ref. | ref. | ref. |
| Low financial debt # DE | -0.032 | [-0.272,0.208] | -0.047 | [-0.267,0.172] |
| Low financial debt # FR | ref. | ref. | ref. | ref. |
| Low financial debt # BE | 0.110 | [-0.085,0.304] | 0.046 | [-0.145,0.238] |
| Substantial financial debt # DE | 0.251\* | [0.049,0.454] | 0.285\*\* | [0.102,0.468] |
| Substantial financial debt # FR | ref. | ref. | ref. | ref. |
| Substantial financial debt # BE | 0.229\* | [0.044,0.414] | 0.164+ | [-0.004,0.332] |
| **Housing debt** |  |  |  |  |
| None | ref. | ref. | ref. | ref. |
| Low housing debt | 0.089 | [-0.108,0.287] | 0.028 | [-0.140,0.196] |
| Substantial housing debt | 0.282\*\* | [0.074,0.491] | 0.103 | [-0.059,0.265] |
| None # DE | ref. | ref. | ref. | ref. |
| None # FR | ref. | ref. | ref. | ref. |
| None # BE | ref. | ref. | ref. | ref. |
| Low housing debt # DE | 0.062 | [-0.205,0.329] | 0.105 | [-0.132,0.343] |
| Low housing debt # FR | ref. | ref. | ref. | ref. |
| Low housing debt # BE | 0.018 | [-0.233,0.268] | -0.098 | [-0.307,0.110] |
| Substantial housing debt # DE | 0.017 | [-0.238,0.272] | 0.078 | [-0.130,0.285] |
| Substantial housing debt # FR | ref. | ref. | ref. | ref. |
| Substantial housing debt # BE | -0.004 | [-0.276,0.268] | -0.112 | [-0.338,0.114] |
| **Education** |  |  |  |  |
| Pre-primary, primary and lower secondary education | 0.342\*\*\* | [0.178,0.506] | 0.173\* | [0.024,0.322] |
| upper secondary and post-secondary, non-tertiary education | 0.119 | [-0.043,0.281] | 0.128+ | [-0.012,0.269] |
| First and second stage of tertiary education | ref. | ref. | ref. | ref. |
| Pre-primary, primary and lower secondary education # DE | 0.244\* | [0.014,0.475] | 0.175 | [-0.104,0.453] |
| Pre-primary, primary and lower secondary education # FR | ref. | ref. | ref. | ref. |
| Pre-primary, primary and lower secondary education # BE | -0.139 | [-0.347,0.069] | -0.126 | [-0.315,0.062] |
| upper secondary and post-secondary, non-tertiary education # DE | 0.130 | [-0.070,0.331] | 0.006 | [-0.165,0.177] |
| upper secondary and post-secondary, non-tertiary education # FR | ref. | ref. | ref. | ref. |
| upper secondary and post-secondary, non-tertiary education # BE | -0.083 | [-0.294,0.128] | -0.178+ | [-0.367,0.010] |
| First and second stage of tertiary education # DE | ref. | ref. | ref. | ref. |
| First and second stage of tertiary education # FR | ref. | ref. | ref. | ref. |
| First and second stage of tertiary education # BE | ref. | ref. | ref. | ref. |
| **Employment status** |  |  |  |  |
| employed or self-employed | ref. | ref. | ref. | ref. |
| unemployed, permanently sick or disabled | 0.510\*\*\* | [0.285,0.734] | 0.696\*\*\* | [0.444,0.948] |
| retired | 0.056 | [-0.095,0.207] | 0.054 | [-0.103,0.212] |
| homemaker (women) | 0.125 | [-0.057,0.306] |  |  |
| employed or self-employed # DE | ref. | ref. | ref. | ref. |
| employed or self-employed # FR | ref. | ref. | ref. | ref. |
| employed or self-employed # BE | ref. | ref. | ref. | ref. |
| unemployed, permanently sick or disabled # DE | -0.099 | [-0.410,0.211] | -0.054 | [-0.387,0.279] |
| unemployed, permanently sick or disabled # FR | ref. | ref. | ref. | ref. |
| unemployed, permanently sick or disabled # BE | 0.145 | [-0.143,0.433] | 0.098 | [-0.228,0.424] |
| retired # DE | -0.069 | [-0.270,0.133] | 0.052 | [-0.156,0.260] |
| retired # FR | ref. | ref. | ref. | ref. |
| retired # BE | 0.114 | [-0.089,0.317] | -0.051 | [-0.254,0.152] |
| homemaker (women) # DE | -0.017 | [-0.257,0.222] |  |  |
| homemaker (women) # FR | ref. | ref. |  |  |
| homemaker (women) # BE | -0.003 | [-0.238,0.232] |  |  |
| **Wealth** |  |  |  |  |
| Cross wealth (ln) | -0.027+ | [-0.054,0.000] | -0.050\*\*\* | [-0.080,-0.021] |
| DE # Cross wealth (ln) | 0.003 | [-0.030,0.035] | -0.001 | [-0.037,0.035] |
| FR # Cross wealth (ln) | 0.000 | [0.000,0.000] | 0.000 | [0.000,0.000] |
| BE # Cross wealth (ln) | -0.026 | [-0.059,0.006] | -0.032 | [-0.070,0.007] |
| **Age** |  |  |  |  |
| Age | -0.066\*\* | [-0.106,-0.026] | -0.099\*\*\* | [-0.140,-0.057] |
| Age\*Age | 0.000\*\* | [0.000,0.001] | 0.001\*\*\* | [0.000,0.001] |
| DE # Age | 0.004 | [-0.007,0.015] | -0.004 | [-0.015,0.006] |
| FR # Age | ref. | ref. | ref. | ref. |
| BE # Age | -0.006 | [-0.016,0.004] | -0.007 | [-0.017,0.003] |
| **Country** |  |  |  |  |
| DE | -1.209\*\* | [-1.953,-0.464] | -0.594 | [-1.359,0.172] |
| FR | ref. | ref. | ref. | ref. |
| BE | 0.293 | [-0.419,1.004] | 0.576 | [-0.189,1.340] |
| **Marital status** |  |  |  |  |
| married or partnered | ref. | ref. | ref. | ref. |
| divorced, separated or never married | 0.108 | [-0.059,0.274] | 0.225\* | [0.051,0.398] |
| widowed | 0.250\*\* | [0.097,0.402] | 0.470\*\*\* | [0.208,0.731] |
| married or partnered # DE | ref. | ref. | ref. | ref. |
| married or partnered # FR | ref. | ref. | ref. | ref. |
| married or partnered # BE | ref. | ref. | ref. | ref. |
| divorced, separated or never married # DE | -0.007 | [-0.253,0.240] | 0.001 | [-0.246,0.248] |
| divorced, separated or never married # FR | ref. | ref. | ref. | ref. |
| divorced, separated or never married # BE | 0.021 | [-0.207,0.248] | 0.021 | [-0.212,0.254] |
| widowed # DE | 0.083 | [-0.140,0.306] | -0.002 | [-0.361,0.357] |
| widowed # FR | ref. | ref. | ref. | ref. |
| widowed # BE | 0.018 | [-0.199,0.236] | 0.039 | [-0.303,0.381] |
| **Number of household members** |  |  |  |  |
| 2 or less | ref. | ref. | ref. | ref. |
| More than 2 household members | 0.028 | [-0.050,0.107] | 0.061+ | [-0.005,0.128] |
| Tenant | ref. | ref. | ref. | ref. |
| Home owner | -0.134\*\* | [-0.218,-0.050] | -0.038 | [-0.123,0.047] |
| **Wave** |  |  |  |  |
| Wave 1 | ref. | ref. | ref. | ref. |
| Wave 2 | -0.070 | [-0.189,0.050] | -0.177\*\* | [-0.304,-0.050] |
| Wave 4 | 0.137\* | [0.016,0.259] | 0.045 | [-0.080,0.170] |
| Wave 5 | 0.025 | [-0.105,0.155] | -0.036 | [-0.166,0.093] |
| Wave 6 | -0.004 | [-0.139,0.131] | -0.062 | [-0.202,0.078] |
| Wave 1 # DE | ref. | ref. | ref. | ref. |
| Wave 1 # FR | ref. | ref. | ref. | ref. |
| Wave 1 # BE | ref. | ref. | ref. | ref. |
| Wave 2 # DE | 0.062 | [-0.107,0.232] | 0.212\* | [0.046,0.377] |
| Wave 2 # FR | ref. | ref. | ref. | ref. |
| Wave 2 # BE | 0.127 | [-0.034,0.288] | 0.204\* | [0.045,0.364] |
| Wave 4 # DE | 0.263\*\* | [0.075,0.451] | 0.246\*\* | [0.062,0.431] |
| Wave 4 # FR | ref. | ref. | ref. | ref. |
| Wave 4 # BE | 0.020 | [-0.142,0.183] | 0.115 | [-0.046,0.275] |
| Wave 5 # DE | 0.302\*\*\* | [0.128,0.475] | 0.440\*\*\* | [0.272,0.607] |
| Wave 5 # FR | ref. | ref. | ref. | ref. |
| Wave 5 # BE | 0.030 | [-0.139,0.199] | 0.126 | [-0.040,0.291] |
| Wave 6 # DE | 0.242\*\* | [0.059,0.424] | 0.338\*\*\* | [0.160,0.517] |
| Wave 6 # FR | ref. | ref. | ref. | ref. |
| Wave 6 # BE | 0.119 | [-0.056,0.294] | 0.152+ | [-0.023,0.327] |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Morbidity** |  |  |  |  |
| 0 | ref. | ref. | ref. | ref. |
| 1 | 0.425\*\*\* | [0.361,0.489] | 0.296\*\*\* | [0.237,0.354] |
| 2+ | 0.835\*\*\* | [0.760,0.909] | 0.664\*\*\* | [0.592,0.736] |
| **Limitations in daily activities** |  |  |  |  |
| 0 | ref. | ref. | ref. | ref. |
| 1 | 0.526\*\*\* | [0.432,0.620] | 0.696\*\*\* | [0.594,0.797] |
| 2+ | 0.813\*\*\* | [0.673,0.953] | 1.019\*\*\* | [0.843,1.196] |
| **limitations in instrumental daily activities** |  |  |  |  |
| 0 | ref. | ref. | ref. | ref. |
| 1 | 0.785\*\*\* | [0.669,0.901] | 0.731\*\*\* | [0.591,0.871] |
| 2+ | 0.967\*\*\* | [0.799,1.135] | 0.776\*\*\* | [0.571,0.981] |
| **Obese** |  |  |  |  |
| No | ref. | ref. | ref. | ref. |
| Yes | -0.059+ | [-0.126,0.009] | -0.032 | [-0.099,0.034] |
| **Observations** | 31409 |  | 26382 |  |



Figure S1. *Sex interaction with selected socioeconomic variables. Unstandardized coefficients and 95% Confidence Intervals. Results from random intercept model with all adjustments and sex interactions. Household clustered SE.*



Figure S2. *Country specific associations between depressive symptoms and natural logarithm of the debt measures. Unstandardized coefficients and 95% Confidence Intervals. Results from random intercept model with all adjustments and country interactions. Clustered SE.*



Figure S3. *Country differences in the association between depressive symptoms and natural logarithm debt measures. France as a reference country. Results from random intercept model with all adjustments and country interactions. Same model as Figure S1. Clustered SE.*



Figure S4. *Interaction between wealth quartiles (all countries wealth, PPP and CPI adjusted) and dichotomous financial debt status (low or substantial). Predicted values from random intercept model, in which all countries were pooled and fully adjusted. Clustered SE.*