**Supplemental Material**

# **S.1 Sample Selection**

Figure S.1: Sample Selection Hypotheses 1 & 2

Figure S.2: Sample Selection Hypothesis 3

# **S.2 Descriptive Statistics**



Figure S.3: Average standardized values of informal care at the federal state level (Measure: Children should accommodate their parents if they cannot take care for themselves any longer)



Figure S.4: Average standardized values of informal care at the federal state level (Measure: Children should arrange their work so as to be able to care for their sick parents)

Table S.1: Descriptive statistics for respondents who are included in the empirical analysis of hypothesis 3

|  |  |  |
| --- | --- | --- |
|  | Child | Parent needing long-term care |
| Children providing long-term care to parent |  | 46.35% |
| Frequency of household help from children to parent |  |  |
| * Never
 |  | 23.47% |
| * Seldom
 |  | 15.81% |
| * Sometimes
 |  | 23.83% |
| * Often
 |  | 20.96% |
| * Very often
 |  | 15.93% |
| Male | 43.17% | 45.63% |
| Mean age (in years) | 32.75 | 63.08 |
| Marital status |  |  |
| * Single
 | 50.06% | 3.36% |
| * Married
 | 41.79% | 71.10% |
| * Divorced/Widowed
 | 8.15% | 25.54% |
| Number of minor children  |  |  |
| * No children
 | 46.97% |  |
| * One child
 | 18.71% |  |
| * Two children
 | 24.39% |  |
| * Three or more children
 | 9.94% |  |
| Educational attainment |  |  |
| * Enrolled in high school
 | 5.15% |  |
| * No degree or lower schooling degree
 | 21.78% | 55.94% |
| * Intermediate schooling degree
 | 32.09% | 26.57% |
| * Upper schooling degree
 | 40.98% | 17.48% |
| Employment status |  |  |
| * Full-time employed
 | 36.32% |  |
| * Part-time employed
 | 15.43% |  |
| * Other work |
 | 14.53% |  |
| * Unemployed
 | 6.74% |  |
| * Non-working
 | 9.86% |  |
| * Education/Vocational training
 | 17.12% |  |
| Religious affiliation |  |  |
| * Roman Catholic
 | 29.25% |  |
| * German Protestant
 | 33.89% |  |
| * Other
 | 9.79% |  |
| * No confession
 | 27.06% |  |
| Self-rated poor health | 18.17% |  |
| Net household income (in Euros) |  |  |
| * <1,500
 | 18.94% |  |
| * ≥1,500; <2,500
 | 22.55% |  |
| * ≥2,500; <3,500
 | 22.42% |  |
| * ≥3,500; <4,500
 | 12.37% |  |
| * ≥4,500
 | 10.95% |  |
| * No response
 | 12.76% |  |
| Country of birth |  |  |
| * Federal Republic of Germany
 | 74.74% |  |
| * German Democratic Republic
 | 13.66% |  |
| * Europe
 | 6.19% |  |
| * Americas
 | 0.39% |  |
| * Asia
 | 4.64% |  |
| * Africa
 | 0.39% |  |
| Distance between parent and child |  |  |
| * Lives in same household
 |  | 21.63% |
| * Less than 10 minutes
 |  | 27.28% |
| * More than 10 minutes, less than 1 hour
 |  | 28.37% |
| * More than one hour
 |  | 22.72% |
| Number of individuals | 776 | 835 |

Notes: Observations refer to the wave when the child or parent are first observed in the sample. The number of observations for parents is larger than for children because the father may need long-term care in one wave and the mother in another wave.

# **S.3 Full regression results**

Table S.2: Association between children's and their parents' filial norms

|  |  |  |
| --- | --- | --- |
|  | (A) Child’s filial norms | (B) Child’s filial norms |
|  | (Accommodate parents) | (Arrange work to care for parents) |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|  |  |  |  |  |  |  |  |  |
|  | ***(A) Children should accommodate their parents if they cannot take care for themselves any longer*** |
| Mother’s filial norms | 0.156\*\*\* | 0.146\*\*\* | 0.130\*\*\* | 0.156\*\*\* |  |  |  |  |
|  | (0.0270) | (0.0264) | (0.0273) | (0.0258) |  |  |  |  |
| Father’s filial norms | 0.0912\*\*\* | 0.0900\*\*\* | 0.0789\*\*\* |  |  |  |  |  |
|  | (0.0270) | (0.0263) | (0.0273) |  |  |  |  |  |
|  | ***(B) Children should arrange their work so as to be able to care for their sick parents*** |
| Mother’s filial norms |  |  |  |  | 0.114\*\*\* | 0.109\*\*\* | 0.0830\*\*\* | 0.0982\*\*\* |
|  |  |  |  |  | (0.0272) | (0.0263) | (0.0271) | (0.0255) |
| Father’s filial norms |  |  |  |  | 0.0502\* | 0.0622\*\* | 0.0445\* |  |
|  |  |  |  |  | (0.0272) | (0.0263) | (0.0268) |  |
|  |  | ***Control variables*** |  |
| Male child |  | 0.0113 | -0.00243 | 0.00265 |  | 0.214\*\*\* | 0.190\*\*\* | 0.186\*\*\* |
|  |  | (0.0485) | (0.0500) | (0.0501) |  | (0.0486) | (0.0496) | (0.0496) |
| Child’s age |  | -0.0197\*\*\* | -0.0295\*\*\* | -0.0303\*\*\* |  | -0.0227\*\*\* | -0.0261\*\*\* | -0.0259\*\*\* |
|  |  | (0.00567) | (0.00728) | (0.00729) |  | (0.00568) | (0.00721) | (0.00721) |
| Mother’s age |  | -0.00277 | 0.00503 | 0.00558 |  | -0.0125 | -0.00421 | -0.00428 |
|  |  | (0.00782) | (0.00826) | (0.00828) |  | (0.00782) | (0.00818) | (0.00819) |
| Father’s age |  | -0.00750 | -0.00903 | -0.00869 |  | 0.00307 | 0.00169 | 0.00205 |
|  |  | (0.00658) | (0.00683) | (0.00685) |  | (0.00660) | (0.00678) | (0.00678) |
|  |  | ***Additional control variables*** |  |
| Child’s education |  |  |  |  |  |  |  |  |
| * Enrolled in high school
 |  |  | 0.0665 | 0.0492 |  |  | -0.159 | -0.164\* |
|  |  |  | (0.100) | (0.100) |  |  | (0.0992) | (0.0992) |
| * No degree, lower schooling degree
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * Intermediate schooling degree
 |  |  | 0.129 | 0.115 |  |  | -0.365\*\*\* | -0.371\*\*\* |
|  |  |  | (0.102) | (0.102) |  |  | (0.101) | (0.101) |
| * Upper schooling degree
 |  |  | 0.0822 | 0.0647 |  |  | -0.284\*\*\* | -0.295\*\*\* |
|  |  |  | (0.110) | (0.110) |  |  | (0.109) | (0.108) |
| Mother’s education |  |  |  |  |  |  |  |  |
| * No degree, lower schooling degree
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * Intermediate schooling degree
 |  |  | -0.241 | -0.257 |  |  | 0.235 | 0.233 |
|  |  |  | (0.525) | (0.526) |  |  | (0.520) | (0.520) |
| * Upper schooling degree
 |  |  | -0.370 | -0.384 |  |  | 0.692 | 0.688 |
|  |  |  | (0.529) | (0.531) |  |  | (0.525) | (0.525) |
|  |  |  |  |  |  |  |  |  |
| Father’s education |  |  |  |  |  |  |  |  |
| * No degree, lower schooling degree
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * Intermediate schooling degree
 |  |  | 0.193 | 0.209 |  |  | -0.122 | -0.119 |
|  |  |  | (0.524) | (0.525) |  |  | (0.519) | (0.519) |
| * Upper schooling degree
 |  |  | 0.285 | 0.288 |  |  | -0.722 | -0.721 |
|  |  |  | (0.525) | (0.527) |  |  | (0.521) | (0.521) |
| Child’s religious affiliation |  |  |  |  |  |  |  |  |
| * Roman Catholic
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Protestant
 |  |  | -0.0838 | -0.0872 |  |  | -0.0822 | -0.0852 |
|  |  |  | (0.110) | (0.110) |  |  | (0.109) | (0.109) |
| * Other
 |  |  | 0.0880 | 0.0664 |  |  | 0.107 | 0.0979 |
|  |  |  | (0.237) | (0.237) |  |  | (0.235) | (0.235) |
| * No confession
 |  |  | -0.0360 | -0.0505 |  |  | 0.0147 | 0.00942 |
|  |  |  | (0.116) | (0.117) |  |  | (0.115) | (0.115) |
| Mother’s religious affiliation |  |  |  |  |  |  |  |  |
| * Roman Catholic
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Protestant
 |  |  | 0.147 | 0.148 |  |  | 0.0986 | 0.102 |
|  |  |  | (0.0980) | (0.0982) |  |  | (0.0971) | (0.0971) |
| * Other
 |  |  | 0.0956 | 0.101 |  |  | -0.324 | -0.318 |
|  |  |  | (0.225) | (0.226) |  |  | (0.223) | (0.223) |
| * No confession
 |  |  | 0.180 | 0.181 |  |  | -0.0401 | -0.0381 |
|  |  |  | (0.117) | (0.117) |  |  | (0.115) | (0.115) |
| Father’s religious affiliation |  |  |  |  |  |  |  |  |
| * Roman Catholic
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Protestant
 |  |  | -0.0845 | -0.0858 |  |  | -0.0411 | -0.0451 |
|  |  |  | (0.0840) | (0.0843) |  |  | (0.0833) | (0.0833) |
| * Other
 |  |  | -0.119 | -0.0987 |  |  | 0.446\*\* | 0.444\*\* |
|  |  |  | (0.203) | (0.203) |  |  | (0.201) | (0.201) |
| * No confession
 |  |  | -0.201\*\* | -0.213\*\* |  |  | -0.0950 | -0.1000 |
|  |  |  | (0.0949) | (0.0950) |  |  | (0.0940) | (0.0940) |
| Child’s poor self-rated health |  |  | -0.0177 | -0.0264 |  |  | -0.114 | -0.111 |
|  |  |  | (0.0797) | (0.0799) |  |  | (0.0789) | (0.0790) |
| Mother’s poor self-rated health |  |  | -0.00775 | -0.0148 |  |  | -0.0488 | -0.0534 |
|  |  |  | (0.0720) | (0.0722) |  |  | (0.0713) | (0.0713) |
| Father’s poor self-rated health |  |  | 0.0300 | 0.0366 |  |  | 0.146\*\* | 0.148\*\* |
|  |  |  | (0.0732) | (0.0733) |  |  | (0.0724) | (0.0724) |
| Child’s net household income (in Euros) |  |  |  |  |  |  |  |  |
| * ≥0; <1,500
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * ≥1,500; <2,500
 |  |  | -0.0141 | -0.0146 |  |  | -0.191\* | -0.190\* |
|  |  |  | (0.113) | (0.114) |  |  | (0.112) | (0.112) |
| * ≥2,500; <3,500
 |  |  | 0.0534 | 0.0508 |  |  | -0.153 | -0.150 |
|  |  |  | (0.110) | (0.110) |  |  | (0.109) | (0.109) |
| * ≥3.500; <4,500
 |  |  | -0.123 | -0.112 |  |  | -0.126 | -0.123 |
|  |  |  | (0.120) | (0.120) |  |  | (0.119) | (0.119) |
| * ≥4,500
 |  |  | 0.00112 | 0.00823 |  |  | -0.294\*\* | -0.295\*\* |
|  |  |  | (0.122) | (0.122) |  |  | (0.121) | (0.121) |
| * No data
 |  |  | 0.0340 | 0.0370 |  |  | -0.157 | -0.155 |
|  |  |  | (0.112) | (0.112) |  |  | (0.110) | (0.110) |
| Mother’s net household income (in Euros) |  |  |  |  |  |  |  |  |
| * ≥0; <1,500
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * ≥1,500; <2,500
 |  |  | -0.120 | -0.120 |  |  | -0.250\*\* | -0.249\*\* |
|  |  |  | (0.110) | (0.111) |  |  | (0.109) | (0.109) |
| * ≥2,500; <3,500
 |  |  | 0.0840 | 0.0942 |  |  | -0.0868 | -0.0831 |
|  |  |  | (0.115) | (0.115) |  |  | (0.114) | (0.114) |
| * ≥3.500; <4,500
 |  |  | -0.0277 | -0.0110 |  |  | -0.161 | -0.156 |
|  |  |  | (0.128) | (0.128) |  |  | (0.127) | (0.127) |
| * ≥4,500
 |  |  | -0.0963 | -0.0941 |  |  | -0.0108 | -0.0129 |
|  |  |  | (0.139) | (0.139) |  |  | (0.138) | (0.138) |
| * No data
 |  |  | 0.109 | 0.114 |  |  | -0.200\* | -0.191 |
|  |  |  | (0.120) | (0.121) |  |  | (0.119) | (0.119) |
| Father’s net household income (in Euros) |  |  |  |  |  |  |  |  |
| * ≥0; <1,500
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * ≥1,500; <2,500
 |  |  | 0.119 | 0.110 |  |  | 0.226\*\* | 0.218\* |
|  |  |  | (0.115) | (0.115) |  |  | (0.114) | (0.114) |
| * ≥2,500; <3,500
 |  |  | -0.0647 | -0.0841 |  |  | 0.0713 | 0.0642 |
|  |  |  | (0.126) | (0.126) |  |  | (0.124) | (0.124) |
| * ≥3.500; <4,500
 |  |  | 0.0115 | -0.0185 |  |  | 0.111 | 0.0995 |
|  |  |  | (0.136) | (0.135) |  |  | (0.134) | (0.134) |
| * ≥4,500
 |  |  | -0.0211 | -0.0376 |  |  | -0.103 | -0.107 |
|  |  |  | (0.144) | (0.144) |  |  | (0.143) | (0.143) |
| * No data
 |  |  | 0.0278 | 0.0177 |  |  | 0.235\* | 0.224\* |
|  |  |  | (0.136) | (0.136) |  |  | (0.135) | (0.135) |
| Child’s country of birth |  |  |  |  |  |  |  |  |
| * Federal Republic of Germany
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Democratic Republic
 |  |  | 0.129 | 0.111 |  |  | 0.0994 | 0.0920 |
|  |  |  | (0.118) | (0.118) |  |  | (0.117) | (0.117) |
| * Europe
 |  |  | 0.429\* | 0.429\* |  |  | 0.375 | 0.393\* |
|  |  |  | (0.232) | (0.232) |  |  | (0.231) | (0.231) |
| * Americas
 |  |  | 0.316 | 0.322 |  |  | 0.252 | 0.273 |
|  |  |  | (0.471) | (0.472) |  |  | (0.467) | (0.467) |
| * Asia
 |  |  | 0.569\* | 0.582\*\* |  |  | 0.669\*\* | 0.675\*\* |
|  |  |  | (0.294) | (0.295) |  |  | (0.292) | (0.292) |
| * Africa
 |  |  | 1.511 | 1.529 |  |  | -0.0783 | -0.0473 |
|  |  |  | (1.001) | (1.004) |  |  | (0.992) | (0.992) |
| Mother’s country of birth |  |  |  |  |  |  |  |  |
| * Federal Republic of Germany
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Democratic Republic
 |  |  | -0.0370 | -0.0285 |  |  | 0.102 | 0.102 |
|  |  |  | (0.201) | (0.201) |  |  | (0.199) | (0.199) |
| * Europe
 |  |  | 0.145 | 0.154 |  |  | -0.117 | -0.114 |
|  |  |  | (0.145) | (0.145) |  |  | (0.143) | (0.143) |
| * Americas
 |  |  | 0.131 | 0.147 |  |  | 0.431 | 0.436 |
|  |  |  | (0.453) | (0.454) |  |  | (0.449) | (0.449) |
| * Asia
 |  |  | -0.00450 | 0.0327 |  |  | 0.0392 | 0.0586 |
|  |  |  | (0.253) | (0.253) |  |  | (0.250) | (0.250) |
| * Africa
 |  |  | 0.512 | 0.548 |  |  | 0.848 | 0.804 |
|  |  |  | (0.580) | (0.581) |  |  | (0.575) | (0.575) |
| * Other/unknown
 |  |  | -0.491 | -0.489 |  |  | -0.400 | -0.419 |
|  |  |  | (0.523) | (0.524) |  |  | (0.518) | (0.518) |
| Father’s country of birth |  |  |  |  |  |  |  |  |
| * Federal Republic of Germany
 |  |  | Reference | Reference |  |  | Reference | Reference |
| * German Democratic Republic
 |  |  | -0.0172 | -0.0102 |  |  | -0.264 | -0.261 |
|  |  |  | (0.203) | (0.204) |  |  | (0.202) | (0.202) |
| * Europe
 |  |  | -0.175 | -0.173 |  |  | -0.0716 | -0.0718 |
|  |  |  | (0.144) | (0.144) |  |  | (0.143) | (0.143) |
| * Americas
 |  |  | -0.705\* | -0.687\* |  |  | -0.0540 | -0.0325 |
|  |  |  | (0.378) | (0.378) |  |  | (0.374) | (0.374) |
| * Asia
 |  |  | 0.0696 | 0.0619 |  |  | -0.133 | -0.122 |
|  |  |  | (0.231) | (0.232) |  |  | (0.229) | (0.229) |
| * Africa
 |  |  | 0.364 | 0.234 |  |  | 0.594 | 0.573 |
|  |  |  | (0.986) | (0.987) |  |  | (0.976) | (0.976) |
| * Other/unknown
 |  |  | 0.498 | 0.510 |  |  | 0.408 | 0.431 |
|  |  |  | (0.456) | (0.457) |  |  | (0.452) | (0.452) |
| Federal state fixed effects |  |  | ✓ | ✓ |  |  | ✓ | ✓ |
| Number of observations | 1550 | 1550 | 1550 | 1550 | 1550 | 1550 | 1550 | 1550 |
| Adjusted R² | 0.042 | 0.092 | 0.090 | 0.085 | 0.019 | 0.088 | 0.107 | 0.106 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. Standard errors are in parentheses. A constant is included. All variables that capture filial norms are standardized. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.3: Association between children's filial norms and their caregiving behavior if a parent needs long-term care

|  |  |  |
| --- | --- | --- |
|  | (A) Probability that child provides help with activities of daily living to a parent needing long-term care | (B) Probability that child provides household help to a parent needing long-term care |
|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
|  |  |  |  |  |  |  |  |  |
|  | ***(A) Children should accommodate their parents if they cannot take care for themselves any longer*** |
| Child’s filial norms | 0.0671\*\*\* | 0.0512\*\*\* |  |  | 0.0654\*\*\* | 0.0526\*\*\* |  |  |
|  | (0.0179) | (0.0179) |  |  | (0.0161) | (0.0161) |  |  |
|  |  |  |  |  |  |  |  |  |
|  | ***(B) Children should arrange their work so as to be able to care for their sick parents*** |
| Child’s filial norms |  |  | 0.0644\*\*\* | 0.0481\*\*\* |  |  | 0.0552\*\*\* | 0.0380\*\* |
|  |  |  | (0.0170) | (0.0174) |  |  | (0.0163) | (0.0156) |
|  |  |  |  |  |  |  |  |  |
|  |  | ***Control variables*** |  |
| Male child |  | -0.0983\*\*\* |  | -0.103\*\*\* |  | -0.0383 |  | -0.0396 |
|  |  | (0.0334) |  | (0.0333) |  | (0.0311) |  | (0.0315) |
| Child’s age |  | -0.00937\*\*\* |  | -0.00954\*\*\* |  | -0.00732\*\*\* |  | -0.00770\*\*\* |
|  |  | (0.00239) |  | (0.00235) |  | (0.00234) |  | (0.00231) |
|  |  |  |  |  |  |  |  |  |
|  |  | ***Additional control variables*** |  |
| Child’s education |  |  |  |  |  |  |  |  |
| * Enrolled in high school
 |  | 0.0864 |  | 0.0895 |  | 0.0254 |  | 0.0296 |
|  |  | (0.0772) |  | (0.0771) |  | (0.0907) |  | (0.0907) |
| * No degree, lower schooling degree
 |  | Reference |  | Reference |  | Reference |  | Reference |
| * Intermediate schooling degree
 |  | -0.0182 |  | -0.00682 |  | 0.0120 |  | 0.0219 |
|  |  | (0.0478) |  | (0.0474) |  | (0.0454) |  | (0.0452) |
| * Upper schooling degree
 |  | -0.0767 |  | -0.0737 |  | -0.0765\* |  | -0.0748 |
|  |  | (0.0484) |  | (0.0479) |  | (0.0460) |  | (0.0460) |
| Child’s religious affiliation |  |  |  |  |  |  |  |  |
| * Roman Catholic
 |  | Reference |  | Reference |  | Reference |  | Reference |
| * German Protestant
 |  | 0.0149 |  | 0.0180 |  | 0.0154 |  | 0.0176 |
|  |  | (0.0454) |  | (0.0456) |  | (0.0437) |  | (0.0440) |
| * Other
 |  | 0.0184 |  | 0.0208 |  | -0.0112 |  | -0.00597 |
|  |  | (0.0657) |  | (0.0642) |  | (0.0645) |  | (0.0639) |
| * No confession
 |  | -0.0760 |  | -0.0752 |  | -0.0476 |  | -0.0502 |
|  |  | (0.0518) |  | (0.0521) |  | (0.0496) |  | (0.0501) |
|  |  |  |  |  |  |  |  |  |
| Child’s poor self-rated health |  | -0.103\*\*\* |  | -0.0992\*\*\* |  | -0.0856\*\* |  | -0.0800\*\* |
|  |  | (0.0371) |  | (0.0371) |  | (0.0368) |  | (0.0368) |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Child’s net household income (in Euros) |  |  |  |  |  |  |  |  |
| * ≥0; <1,500
 |  | Reference |  | Reference |  | Reference |  | Reference |
| * ≥1,500; <2,500
 |  | -0.0777\* |  | -0.0817\* |  | -0.0184 |  | -0.0235 |
|  |  | (0.0462) |  | (0.0470) |  | (0.0492) |  | (0.0497) |
| * ≥2,500; <3,500
 |  | -0.0834\* |  | -0.0742 |  | -0.0365 |  | -0.0300 |
|  |  | (0.0479) |  | (0.0487) |  | (0.0508) |  | (0.0514) |
| * ≥3.500; <4,500
 |  | 0.00766 |  | 0.00452 |  | -0.0179 |  | -0.0240 |
|  |  | (0.0568) |  | (0.0572) |  | (0.0569) |  | (0.0577) |
| * ≥4,500
 |  | -0.0609 |  | -0.0676 |  | -0.0818 |  | -0.0907 |
|  |  | (0.0602) |  | (0.0609) |  | (0.0591) |  | (0.0599) |
| * No data
 |  | 0.0158 |  | 0.0138 |  | -0.0431 |  | -0.0458 |
|  |  | (0.0528) |  | (0.0535) |  | (0.0581) |  | (0.0588) |
| Child’s country of birth |  |  |  |  |  |  |  |  |
| * Federal Republic of Germany
 |  | Reference |  | Reference |  | Reference |  | Reference |
| * German Democratic Republic
 |  | -0.104\* |  | -0.108\* |  | -0.0761 |  | -0.0799 |
|  |  | (0.0569) |  | (0.0564) |  | (0.0581) |  | (0.0583) |
| * Turkey
 |  | -0.0967 |  | -0.0996 |  | -0.0959 |  | -0.0913 |
|  |  | (0.0657) |  | (0.0653) |  | (0.0755) |  | (0.0745) |
| * Russia
 |  | -0.371\*\*\* |  | -0.371\*\*\* |  | -0.267\*\*\* |  | -0.270\*\*\* |
|  |  | (0.0592) |  | (0.0589) |  | (0.0529) |  | (0.0455) |
| * Poland
 |  | 0.0938 |  | 0.0854 |  | 0.170\* |  | 0.167\*\* |
|  |  | (0.0892) |  | (0.0833) |  | (0.0884) |  | (0.0847) |
| * Other
 |  | -0.471\*\*\* |  | -0.427\*\*\* |  | -0.459\*\*\* |  | -0.409\*\*\* |
|  |  | (0.0872) |  | (0.0788) |  | (0.0857) |  | (0.0932) |
| Regional fixed effects |  | ✓ |  | ✓ |  | ✓ |  | ✓ |
| Number of observations | 1,175 | 1,175 | 1,175 | 1,175 | 1,175 | 1,175 | 1,175 | 1,175 |
| Adjusted R² | 0.022 | 0.098 | 0.020 | 0.097 | 0.027 | 0.081 | 0.021 | 0.076 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. We pooled observations from waves 2, 4, 6, and 8. A constant and wave fixed effects are included in all regressions. Standard errors are in parentheses and clustered at the child-parent level. All variables that capture filial norms are standardized. All variables, with the exception of filial norms and time-invariant variables, were measured in the wave in which the parent needed long-term care. Filial norms were obtained from the second wave. Regional fixed effects are captured via the state (*Bundesland*) and the settlement structure. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

# **S.4 Sensitivity Analyses**

Table S.4: Association between children's filial norms and average filial norms in the local environment including only children who live in a local environment with at least 50 observations

|  |  |  |
| --- | --- | --- |
|  | 1. Child’s filial norms
 | 1. Child’s filial norms
 |
|  | (Accommodate parents) | (Arrange work to care for parents) |
|  | (1) | (2) | (3) | (4) |
|  |  |  |  |  |
| *(A) Children should accommodate their parents if they cannot take care for themselves any longer* |
| Mother’s filial norms | 0.128\*\*\* | 0.122\*\*\* |  |  |
|  | (0.0303) | (0.0303) |  |  |
| Father’s filial norms | 0.116\*\*\* | 0.112\*\*\* |  |  |
|  | (0.0300) | (0.0301) |  |  |
| Average filial norms |  | 0.408\*\* |  |  |
| in local environment |  | (0.184) |  |  |
| *(B) Children should arrange their work so as to be able to care for their sick parents* |
| Mother’s filial norms |  |  | 0.107\*\*\* | 0.103\*\*\* |
|  |  |  | (0.0306) | (0.0308) |
| Father’s filial norms |  |  | 0.0783\*\*\* | 0.0759\*\* |
|  |  |  | (0.0301) | (0.0304) |
| Average filial norms |  |  |  | 0.159 |
| in local environment |  |  |  | (0.212) |
|  | ***Control variables*** |
| Male child | -0.0155 | -0.0107 | 0.221\*\*\* | 0.228\*\*\* |
|  | (0.0557) | (0.0558) | (0.0559) | (0.0562) |
| Child’s age | -0.0191\*\*\* | -0.0199\*\*\* | -0.0237\*\*\* | -0.0254\*\*\* |
|  | (0.00656) | (0.00661) | (0.00658) | (0.00665) |
| Mother’s age | -0.000914 | -0.000461 | -0.00703 | -0.00411 |
|  | (0.00880) | (0.00885) | (0.00883) | (0.00892) |
| Father’s age | -0.0118 | -0.0108 | -0.00220 | -0.00315 |
|  | (0.00738) | (0.00738) | (0.00745) | (0.00750) |
| Regional indicators |  | ✓ |  | ✓ |
| Number of observations | 1147 | 1147 | 1176 | 1176 |
| Adjusted R² | 0.102 | 0.107 | 0.092 | 0.092 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. Standard errors are in parentheses. A constant is included. All variables that capture filial norms are standardized. Regional indicators include the number of nursing home places and the number of outpatient LTC services for older adults, gross domestic product per capita, and the size of the community. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.5: Collaboration on survey responses (regressions only include children who do not live with their parents)

|  |  |  |
| --- | --- | --- |
|  | (A) Child’s filial norms | (B) Child’s filial norms |
|  | (Accommodate parents) | (Arrange work to care for parents) |
|  | (1) | (2) | (3) | (4) | (5) | (6) |
|  |  |  |  |  |  |  |
| *(A) Children should accommodate their parents if they cannot take care for themselves any longer* |
| Mother’s filial norms | 0.212\*\*\* | 0.212\*\*\* | 0.204\*\*\* |  |  |  |
|  | (0.0485) | (0.0481) | (0.0530) |  |  |  |
| Father’s filial norms | 0.120\*\* | 0.120\*\* | 0.130\*\* |  |  |  |
|  | (0.0480) | (0.0476) | (0.0523) |  |  |  |
| *(B) Children should arrange their work so as to be able to care for their sick parents* |
| Mother’s filial norms |  |  |  | 0.167\*\*\* | 0.171\*\*\* | 0.170\*\*\* |
|  |  |  |  | (0.0507) | (0.0498) | (0.0535) |
| Father’s filial norms |  |  |  | 0.0604 | 0.0721 | 0.0547 |
|  |  |  |  | (0.0483) | (0.0476) | (0.0492) |
|  | ***Control variables*** |
| Male child |  | 0.0887 | 0.0830 |  | 0.227\*\* | 0.200\*\* |
|  |  | (0.0917) | (0.101) |  | (0.0892) | (0.0953) |
| Child’s age |  | -0.0281\*\* | -0.0216 |  | -0.0461\*\*\* | -0.0382\*\* |
|  |  | (0.0128) | (0.0158) |  | (0.0125) | (0.0149) |
| Mother’s age |  | 0.00594 | 0.0258 |  | 0.0194 | 0.0181 |
|  |  | (0.0155) | (0.0174) |  | (0.0151) | (0.0164) |
| Father’s age |  | -0.00918 | -0.0221 |  | -0.000370 | -0.00101 |
|  |  | (0.0135) | (0.0151) |  | (0.0131) | (0.0142) |
| Additional control variables |  |  | ✓ |  |  | ✓ |
| Federal state fixed effects |  |  | ✓ |  |  | ✓ |
| Number of observations | 486 | 486 | 486 | 486 | 486 | 486 |
| Adjusted R² | 0.081 | 0.104 | 0.094 | 0.036 | 0.071 | 0.126 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. Standard errors are in parentheses. A constant is included. All variables that capture filial norms are standardized. Additional control variables include educational attainment (for child, mother, and father), religious affiliation (for child, mother, and father), self-rated poor health (for child, mother, and father), net household income (for child, mother, and father), and country of birth (for child, mother, and father). \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.6: Selection into regions (regressions only include children from the 1991-1993 cohort who live with their parents)

|  |  |  |
| --- | --- | --- |
|  | 1. Child’s filial norms
 | 1. Child’s filial norms
 |
|  | (Accommodate parents) | (Arrange work to care for parents) |
|  | (1) | (2) | (3) | (4) |
|  |  |  |  |  |
| *(A) Children should accommodate their parents if they cannot take care for themselves any longer* |
| Mother’s filial norms | 0.0935\*\*\* | 0.0920\*\* |  |  |
|  | (0.0359) | (0.0360) |  |  |
| Father’s filial norms | 0.0576 | 0.0520 |  |  |
|  | (0.0358) | (0.0359) |  |  |
| Average filial norms |  | 0.0646 |  |  |
| in local environment |  | (0.223) |  |  |
| *(B) Children should arrange their work so as to be able to care for their sick parents* |
| Mother’s filial norms |  |  | 0.106\*\*\* | 0.0968\*\*\* |
|  |  |  | (0.0362) | (0.0362) |
| Father’s filial norms |  |  | 0.0732\*\* | 0.0715\* |
|  |  |  | (0.0364) | (0.0366) |
| Average filial norms |  |  |  | 0.281 |
| in local environment |  |  |  | (0.246) |
|  | ***Control variables*** |
| Male child | -0.0694 | -0.0684 | 0.204\*\*\* | 0.215\*\*\* |
|  | (0.0641) | (0.0645) | (0.0671) | (0.0673) |
| Child’s age | 0.0137 | 0.0165 | 0.0135 | 0.0216 |
|  | (0.0360) | (0.0363) | (0.0377) | (0.0380) |
| Mother’s age | -0.00469 | -0.00173 | -0.0234\*\* | -0.0192\* |
|  | (0.0101) | (0.0102) | (0.0105) | (0.0106) |
| Father’s age | -0.0137 | -0.0146\* | -0.00155 | -0.00392 |
|  | (0.00839) | (0.00841) | (0.00881) | (0.00884) |
| Regional indicators |  | ✓ |  | ✓ |
| Number of observations | 798 | 798 | 804 | 804 |
| Adjusted R² | 0.021 | 0.023 | 0.041 | 0.049 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. Standard errors are in parentheses. A constant is included. All variables that capture filial norms are standardized. Regional indicators include the number of nursing home places and the number of outpatient LTC services for older adults, gross domestic product per capita, and the size of the community. Note that only children with at least 40 observations in the local environment are included. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.7: Association between children's filial norms and their caregiving behavior if a parent needs long-term care

|  |  |  |
| --- | --- | --- |
|  | (A) Probability that child provides help with activities of daily livings to a parent needing long-term care | (B) Probability that child provides household help to a parent needing long-term care |
|  | Aged <40 | Aged <40 | Aged ≥40 | Aged ≥40 | Aged <40 | Aged <40 | Aged ≥40 | Aged ≥40 |
|  |  |  |  |  |  |  |  |  |
|  | ***(A) Children should accommodate their parents if they cannot take care for themselves any longer*** |
| Child’s filial norms | 0.0449\*\* |  | 0.0531\* |  | 0.0397\* |  | 0.0717\*\*\* |  |
| (0.0216) |  | (0.0294) |  | (0.0208) |  | (0.0254) |  |
|  |  |  |  |  |  |  |  |  |
|  | ***(B) Children should arrange their work so as to be able to care for their sick parents*** |
| Child’s filial norms |  | 0.0433\*\* |  | 0.0440 |  | 0.0283 |  | 0.0501\* |
|  | (0.0196) |  | (0.0306) |  | (0.0199) |  | (0.0260) |
|  |  |  |  |  |  |  |  |  |
|  |  | ***Control variables*** |  |
| Male child | -0.125\*\*\* | -0.129\*\*\* | -0.00574 | -0.0102 | -0.0614 | -0.0629 | 0.0319 | 0.0295 |
|  | (0.0386) | (0.0385) | (0.0567) | (0.0571) | (0.0395) | (0.0400) | (0.0457) | (0.0471) |
| Child’s age | -0.00813\*\* | -0.00836\*\*\* | 0.00721 | 0.00567 | -0.00842\*\*\* | -0.00882\*\*\* | -0.0103 | -0.0115 |
|  | (0.00316) | (0.00313) | (0.0329) | (0.0334) | (0.00319) | (0.00317) | (0.0300) | (0.0306) |
| Additional control variables | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Federal state fixed effects | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Number of observations | 755 | 755 | 420 | 420 | 755 | 755 | 420 | 420 |
| Adjusted R² | 0.085 | 0.084 | 0.049 | 0.046 | 0.046 | 0.042 | 0.099 | 0.088 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. We pooled observations from waves 2, 4, 6, and 8. A constant and wave fixed effects are included in all regressions. Standard errors are in parentheses and clustered at the child-parent level. All variables that capture filial norms are standardized. Additional control variables include children’s educational attainment, religious affiliation, self-rated poor health, net household income, and country of birth. All variables, with the exception of filial norms and time-invariant variables, were measured in the wave in which the parent needed long-term care. Filial norms were obtained from the second wave. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.8: Association between children's filial norms and their caregiving behavior if a parent needs long-term care with filial norms measured in the wave in which a parent needs long-term care

|  |  |  |
| --- | --- | --- |
|  | (A) Probability that child provides help with activities of daily living to a parent needing long-term care | (B) Probability that child provides household help to a parent needing long-term care |
|  | (1) | (2) | (3) | (4) |
|  |  |  |  |  |
| *(B) Children should arrange their work so as to be able to care for their sick parents* |
| Child’s filial norms | 0.0647\*\*\* | 0.0425\*\*\* | 0.0602\*\*\* | 0.0390\*\* |
|  | (0.0155) | (0.0157) | (0.0149) | (0.0154) |
|  |  |  |  |  |
|  | ***Control variables*** |
| Male child |  | -0.0969\*\*\* |  | -0.0360 |
|  |  | (0.0334) |  | (0.0312) |
| Child’s age |  | -0.00915\*\*\* |  | -0.00723\*\*\* |
|  |  | (0.00240) |  | (0.00232) |
|  |  |  |  |  |
| Additional control variables |  | ✓ |  | ✓ |
| Federal state fixed effects |  | ✓ |  | ✓ |
| Number of observations | 1,174 | 1,174 | 1,174 | 1,174 |
| Adjusted R² | 0.20 | 0.095 | 0.024 | 0.076 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. We pooled observations from waves 2, 4, 6, and 8. A constant and wave fixed effects are included in all regressions. Standard errors are in parentheses and clustered at the child-parent level. All variables that capture filial norms are standardized. Additional control variables include children’s educational attainment, religious affiliation, self-rated poor health, net household income, and country of birth. All variables, with the exception of time-invariant variables, were measured in the wave in which the parent needed long-term care. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01

Table S.9: Association between children's filial norms and their caregiving behavior if a parent needs long-term care including an extended set of control variables

|  |  |  |
| --- | --- | --- |
|  | (A) Probability that child provides help with activities of daily living to a parent needing long-term care | (B) Probability that child provides household help to a parent needing long-term care |
|  | (1) | (2) | (3) | (4) |
|  |  |  |  |  |
| *(A) Children should accommodate their parents if they cannot take care for themselves any longer* |
| Child’s filial norms | 0.0321\* |  | 0.0335\*\* |  |
|  | (0.0166) |  | (0.0155) |  |
|  |  |  |  |  |
| *(B) Children should arrange their work so as to be able to care for their sick parents* |
| Child’s filial norms |  | 0.0226 |  | 0.00968 |
|  |  | (0.0171) |  | (0.0160) |
|  |  |  |  |  |
|  | ***Control variables*** |
| Male child | -0.129\*\*\* | -0.130\*\*\* | -0.0400 | -0.0368 |
|  | (0.0337) | (0.0336) | (0.0356) | (0.0360) |
| Child’s age | 0.00471 | 0.00437 | 0.00171 | 0.00123 |
|  | (0.00287) | (0.00291) | (0.00302) | (0.00306) |
|  |  |  |  |  |
|  | ***Additional control variables*** |
| Child’s education |  |  |  |  |
| * Enrolled in high school
 | -0.0707 | -0.0727 | -0.0359 | -0.0345 |
|  | (0.0785) | (0.0785) | (0.0938) | (0.0934) |
| * No degree, lower schooling degree
 | Reference | Reference | Reference | Reference |
| * Intermediate schooling degree
 | -0.0437 | -0.0408 | -0.0148 | -0.0127 |
|  | (0.0441) | (0.0434) | (0.0455) | (0.0452) |
| * Upper schooling degree
 | -0.0362 | -0.0377 | -0.0382 | -0.0404 |
|  | (0.0476) | (0.0469) | (0.0473) | (0.0469) |
| Child’s religious affiliation |  |  |  |  |
| * Roman Catholic
 | Reference | Reference | Reference | Reference |
| * German Protestant
 | 0.0504 | 0.0497 | 0.0547 | 0.0532 |
|  | (0.0415) | (0.0417) | (0.0428) | (0.0430) |
| * Other
 | 0.0440 | 0.0472 | -0.0215 | -0.0166 |
|  | (0.0739) | (0.0731) | (0.0618) | (0.0612) |
| * No confession
 | -0.0591 | -0.0612 | -0.0250 | -0.0314 |
|  | (0.0515) | (0.0519) | (0.0506) | (0.0511) |
| Child’s poor self-rated health | -0.0547 | -0.0516 | -0.0552 | -0.0500 |
|  | (0.0358) | (0.0358) | (0.0388) | (0.0387) |
| Child’s net household income (in Euros) |  |  |  |  |
| * ≥0; <1,500
 | Reference | Reference | Reference | Reference |
| * ≥1,500; <2,500
 | -0.0910\*\* | -0.0914\*\* | -0.0634 | -0.0658 |
|  | (0.0447) | (0.0451) | (0.0501) | (0.0504) |
| * ≥2,500; <3,500
 | -0.0783\* | -0.0730 | -0.0569 | -0.0554 |
|  | (0.0469) | (0.0474) | (0.0515) | (0.0521) |
| * ≥3.500; <4,500
 | -0.0186 | -0.0189 | -0.0336 | -0.0381 |
|  | (0.0579) | (0.0586) | (0.0614) | (0.0617) |
| * ≥4,500
 | -0.0626 | -0.0637 | -0.0923 | -0.0954 |
|  | (0.0609) | (0.0611) | (0.0629) | (0.0630) |
| * No data
 | -0.0519 | -0.0506 | -0.145\*\* | -0.145\*\* |
|  | (0.0546) | (0.0551) | (0.0623) | (0.0624) |
| Child’s country of birth |  |  |  |  |
| * Federal Republic of Germany
 | Reference | Reference | Reference | Reference |
| * German Democratic Republic
 | -0.0484 | -0.0551 | -0.0190 | -0.0244 |
|  | (0.0481) | (0.0478) | (0.0509) | (0.0509) |
| * Europe
 | 0.00732 | 0.0127 | -0.0313 | -0.0161 |
|  | (0.0671) | (0.0665) | (0.0597) | (0.0596) |
| * Americas
 | -0.161\* | -0.158 | -0.0286 | -0.0275 |
|  | (0.0972) | (0.104) | (0.0647) | (0.0639) |
| * Asia
 | 0.0461 | 0.0496 | 0.145\* | 0.156\*\* |
|  | (0.0784) | (0.0766) | (0.0769) | (0.0761) |
| * Africa
 | -0.0831 | -0.0541 | -0.0982 | -0.0542 |
|  | (0.0951) | (0.0886) | (0.103) | (0.102) |
|  |  |  |  |  |
|  | ***Additional control variables for sensitivity analyses*** |
| Child’s marital status |  |  |  |  |
| * Single
 | Reference | Reference | Reference | Reference |
| * Married
 | -0.0761 | -0.0823\* | -0.0919\*\* | -0.0982\*\* |
|  | (0.0467) | (0.0466) | (0.0468) | (0.0470) |
| * Divorced/Widowed
 | -0.159\*\* | -0.165\*\*\* | -0.0949 | -0.102 |
|  | (0.0629) | (0.0630) | (0.0646) | (0.0651) |
| Number of children |  |  |  |  |
| * No children
 | Reference | Reference | Reference | Reference |
| * One child
 | -0.0184 | -0.00487 | -0.0332 | -0.0215 |
|  | (0.0504) | (0.0503) | (0.0459) | (0.0467) |
| * Two children
 | -0.120\*\* | -0.108\*\* | -0.0847\* | -0.0763 |
|  | (0.0532) | (0.0540) | (0.0508) | (0.0513) |
| * Three or more children
 | -0.0890 | -0.0762 | -0.0757 | -0.0653 |
|  | (0.0611) | (0.0619) | (0.0578) | (0.0589) |
| Child’s employment status |  |  |  |  |
| * Full-time employed
 | Reference | Reference | Reference | Reference |
| * Part-time employed
 | 0.0161 | 0.00298 | 0.0545 | 0.0435 |
|  | (0.0476) | (0.0473) | (0.0481) | (0.0482) |
| * Other work
 | -0.00868 | -0.0125 | 0.0252 | 0.0211 |
|  | (0.0450) | (0.0446) | (0.0456) | (0.0459) |
| * Unemployed
 | -0.0260 | -0.0270 | 0.00306 | 0.00526 |
|  | (0.0676) | (0.0676) | (0.0622) | (0.0623) |
| * Non-working
 | -0.0122 | -0.0167 | 0.0588 | 0.0578 |
|  | (0.0580) | (0.0584) | (0.0646) | (0.0647) |
| * In Education/vocational training
 | -0.00590 | 0.00203 | -0.0639 | -0.0580 |
|  | (0.0611) | (0.0616) | (0.0628) | (0.0629) |
| Distance to parent |  |  |  |  |
| * Lives in the same household
 | Reference | Reference | Reference | Reference |
| * Less than 10 minutes
 | -0.140\*\* | -0.129\*\* | -0.171\*\*\* | -0.164\*\* |
|  | (0.0565) | (0.0567) | (0.0641) | (0.0635) |
| * More than 10 minutes, less than one hour
 | -0.452\*\*\* | -0.441\*\*\* | -0.372\*\*\* | -0.367\*\*\* |
| (0.0549) | (0.0558) | (0.0615) | (0.0614) |
| * More than one hour
 | -0.603\*\*\* | -0.598\*\*\* | -0.505\*\*\* | -0.506\*\*\* |
|  | (0.0600) | (0.0612) | (0.0674) | (0.0672) |
| Parent’s gender | -0.0539\* | -0.0580\* | -0.0458 | -0.0483 |
|  | (0.0315) | (0.0315) | (0.0305) | (0.0306) |
| Parents’ marital status |  |  |  |  |
| * Married
 | Reference | Reference | Reference | Reference |
| * Single
 | 0.117 | 0.111 | -0.185\*\* | -0.189\*\* |
|  | (0.0875) | (0.0879) | (0.0823) | (0.0822) |
| * Divorced/widowed
 | 0.103\*\*\* | 0.101\*\*\* | 0.0729\*\* | 0.0703\*\* |
|  | (0.0354) | (0.0350) | (0.0342) | (0.0344) |
| Parent’s educational attainment |  |  |  |  |
| * No degree, lower schooling degree
 | Reference | Reference | Reference | Reference |
| * Intermediate schooling degree
 | 0.0562 | 0.0609\* | 0.0235 | 0.0273 |
|  | (0.0342) | (0.0343) | (0.0369) | (0.0368) |
| * Upper schooling degree
 | -0.0207 | -0.0213 | -0.0306 | -0.0328 |
|  | (0.0471) | (0.0474) | (0.0421) | (0.0424) |
| Federal state fixed effects | ✓ | ✓ | ✓ | ✓ |
| Number of observations | 1,013 | 1,013 | 1,013 | 1,013 |
| Adjusted R² | 0.291 | 0.289 | 0.214 | 0.211 |

Notes: Results are obtained from ordinary least squares regressions. Each column represents a separate regression. We pooled observations from waves 2, 4, 6, and 8. A constant and wave fixed effects are included in all regressions. Standard errors are in parentheses and clustered at the child-parent level. All variables that capture filial norms are standardized. All variables, with the exception of filial norms and time-invariant variables, were measured in the wave in which the parent needed long-term care. Filial norms were obtained from the second wave. \* p<0.10, \*\* p<0.05, \*\*\* p<0.01