**Supplementary Table 1: Distribution of covariates by help provision towards parents/in-laws and grandchildren, among those with at least one parent/parent-in-law and one grandchild alive, age 55.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| N=2,427 | Men |  | Women |   |
|  | Help provided to: |  | Help provided to: |
|  | Both | Grand-children only | Parents/ in-laws only | None |  | Both | Grand-children only | Parents/ in-laws only | None |   |
| *Marital Status*  |  |  |  |  |  |  |  |  |  |  |
| Single/Divorced/Separated/ Widowed | 3.7 | 5.2 | 19.0 | 14.8 | \* | 11.6 | 15.9 | 16.3 | 22.0 | \* |
| Married/Civil partner/Cohabiting | 96.3 | 94.8 | 81.0 | 85.2 |  | 88.4 | 84.1 | 83.7 | 78.0 |  |
| *Whether illness reduces ability to carry out daily activities*  |  |  |  |  |  |  |  |
| No illness/conditions | 73.0 | 69.9 | 69.0 | 70.4 |  | 64.6 | 62.6 | 74.0 | 62.1 | \* |
| Yes, severely reduced | 4.1 | 7.6 | 4.6 | 6.3 |  | 7.7 | 13.4 | 10.6 | 12.9 |  |
| Yes, a little reduced | 11.4 | 10.4 | 12.1 | 12.0 |  | 14.0 | 14.4 | 8.1 | 12.1 |  |
| Not reduced at all | 11.6 | 12.1 | 14.4 | 11.3 |  | 13.7 | 9.6 | 7.3 | 12.9 |  |
| *Perceived health* |  |  |  |  |  |  |  |  |  |  |
| Excellent/Very good/Good | 82.2 | 77.1 | 83.1 | 77.5 | \* | 77.9 | 70.7 | 78.9 | 72.3 | \* |
| Fair | 14.4 | 15.3 | 9.3 | 14.8 |  | 14.8 | 17.9 | 14.6 | 15.4 |  |
| Poor | 3.4 | 7.6 | 7.6 | 7.8 |  | 7.3 | 11.5 | 6.5 | 12.3 |  |
| *Emotional issues* |  |  |  |  |  |  |  |  |  |  |
| No | 90.9 | 91.6 | 89.1 | 88.0 |  | 81.3 | 77.3 | 84.6 | 75.0 |  |
| Yes | 9.1 | 8.4 | 10.9 | 12.0 |  | 18.7 | 22.7 | 15.5 | 25.0 |  |
| *Number of parents/in-laws alive* |  |  |  |  |  |  |  |  |
| 1 | 35.4 | 41.4 | 32.8 | 43.0 | \* | 43.7 | 54.8 | 35.8 | 46.2 | \* |
| 2 | 38.4 | 40.6 | 37.9 | 38.7 |  | 36.6 | 33.1 | 43.1 | 40.2 |  |
| 3 | 21.6 | 14.5 | 22.4 | 12.0 |  | 15.5 | 9.3 | 13.8 | 9.9 |  |
| 4 | 4.7 | 3.6 | 6.9 | 6.3 |  | 4.3 | 2.8 | 7.3 | 3.8 |  |
| *Number of grandchild(ren) alive* |  |  |  |  |  |  |  |
| 1 | 32.8 | 34.9 | 39.7 | 45.1 |  | 27.6 | 26.5 | 39.0 | 37.1 | \* |
| 2 | 25.1 | 22.9 | 23.6 | 21.1 |  | 23.8 | 24.0 | 22.8 | 25.0 |  |
| 3 | 15.5 | 16.5 | 16.7 | 12.0 |  | 14.1 | 15.9 | 13.0 | 12.9 |  |
| 4+ | 26.6 | 25.7 | 20.1 | 21.8 |  | 34.5 | 33.6 | 25.2 | 25.0 |  |
| *Co-residence with grandchild(ren)*  |  |  |  |  |  |  |  |
| No | 95.5 | 93.6 | 98.3 | 97.2 | \* | 95.5 | 95.5 | 97.6 | 96.2 |  |
| Yes | 4.5 | 6.4 | 1.7 | 2.8 |  | 4.5 | 4.6 | 2.4 | 3.8 |  |
| *Co-residence with parents/in-laws*  |  |  |  |  |  |  |  |  |  |  |
| No | 96.5 | 99.2 | 93.7 | 95.1 | \* | 97.9 | 99.0 | 98.4 | 100.0 |  |
| Yes+ | 3.5 | 0.8 | 6.3 | 4.9 |  | 2.1 | 1.0 | 1.6 | 0.0 |  |
| *Employment status*  |  |  |  |  |  |  |  |  |  |  |
| Full-time job | 84.9 | 82.3 | 81.0 | 75.4 |  | 41.8 | 47.2 | 54.5 | 40.9 | \* |
| Part-time job | 4.8 | 4.8 | 4.6 | 9.2 |  | 33.0 | 27.8 | 26.8 | 23.5 |  |
| Not working | 6.0 | 5.2 | 7.5 | 9.2 |  | 6.7 | 7.6 | 3.3 | 6.8 |  |
| Looking after the home/family | 1.5 | 0.8 | 0.6 | 1.4 |  | 14.3 | 10.1 | 8.9 | 13.6 |  |
| Permanently sick/disabled | 2.8 | 6.8 | 6.3 | 4.9 |  | 4.3 | 7.3 | 6.5 | 15.2 |  |
| *Employment status of the partner*  |  |  |  |  |  |  |  |
| No partner | 3.7 | 5.2 | 19.0 | 14.8 | \* | 11.6 | 15.9 | 16.3 | 22.0 | \* |
| Full-time job(30+ hrs) | 40.6 | 41.0 | 35.6 | 43.0 |  | 63.7 | 61.6 | 55.3 | 53.0 |  |
| Part-time job(<29 hrs) | 31.3 | 26.9 | 24.1 | 14.8 |  | 7.7 | 6.1 | 7.3 | 9.1 |  |
| Not working | 9.3 | 6.8 | 5.2 | 9.2 |  | 12.0 | 10.1 | 14.6 | 14.4 |  |
| Looking after home/family | 11.0 | 12.9 | 10.9 | 13.4 |  | 0.9 | 1.0 | 1.6 | 0.0 |  |
| Permanently sick/disabled | 4.1 | 7.2 | 5.2 | 4.9 |  | 4.0 | 5.3 | 4.9 | 1.5 |  |
| *Education*  |  |  |  |  |  |  |  |  |  |  |
| None | 21.4 | 25.7 | 25.9 | 28.9 | \* | 18.9 | 20.7 | 15.5 | 24.2 | \* |
| Low O-level | 24.2 | 18.1 | 17.8 | 20.4 |  | 20.7 | 16.7 | 18.7 | 13.6 |  |
| High O-level | 39.5 | 35.7 | 29.9 | 26.8 |  | 42.4 | 42.2 | 43.9 | 34.1 |  |
| A-level and Sub-degree | 6.5 | 9.2 | 9.8 | 8.5 |  | 9.1 | 12.1 | 6.5 | 14.4 |  |
| Degree and higher | 8.4 | 11.2 | 16.7 | 15.5 |  | 9.1 | 8.3 | 15.5 | 13.6 |  |
| *Housing tenure*  |  |  |  |  |  |  |  |  |  |  |
| Own-outright | 67.0 | 58.6 | 59.2 | 49.3 | \* | 64.2 | 58.6 | 60.2 | 56.1 | \* |
| Own with mortgage | 21.6 | 31.3 | 24.1 | 23.9 |  | 22.4 | 20.0 | 23.6 | 19.7 |  |
| Rent it | 10.1 | 8.4 | 14.4 | 21.8 |  | 12.3 | 20.2 | 15.5 | 21.2 |  |
| Other | 1.3 | 1.6 | 2.3 | 4.9 |   | 1.0 | 1.3 | 0.8 | 3.0 |   |
| Notes: (+) Less than 5 in each cell (39 males and 20 females co-residing with parents/in-laws); (\*) p<0.10 |

|  |  |
| --- | --- |
| **Supplementary Table 2: Odds ratios of providing care to grandchildren or parents/ parents-in-law(1) by whether helped the other generation and by socio-demographic characteristics (full model).** |  |
|   |   | Model AGrandchildren |   | Model B: Parents/Parents-In-Law |
|  |  | Men  | Women  |  | Men  | Women  |
|   |   | OR | P | OR | P |   | OR | P | OR | P |
| ***Caring intensity*** |  |  |  |  |  |  |  |  |  |
| Caring (hrs a week) for parents/parents-in-law or grandchildren  | 9 or less | 1.63 | \*\*\* | 1.57 | \*\*\* |  | 1.76 | \*\*\* | 1.52 | \*\* |
| Ref. Not caring | 10+ | 3.06 | \*\*\* | 3.25 | \*\*\* |  | 1.82 | \*\*\* | 2.38 | \*\*\* |
| ***Family circumstances (structure and proximity)*** |   |   |   |   |   |   |   |   |   |
| Number of grandchildren | 2 | 1.42 | \* | 1.42 | \* |  | 1.24 |  | 0.96 |  |
| 3 | 1.23 |  | 1.74 | \*\* |  | 1.18 |  | 0.91 |  |
| Ref. 1 | 4+ | 1.45 | \* | 1.96 | \*\*\* |   | 1.16 |   | 1.10 |   |
| Number of parents/in-laws | 2 | 0.89 |  | 0.66 | \*\* |  | 1.17 |  | 1.32 | \*\* |
| 3 | 0.77 |  | 0.81 |  |  | 1.98 | \*\*\* | 1.99 | \*\*\* |
| Ref. 1 | 4 | 0.46 | \*\* | 0.41 | \*\* |  | 1.63 |  | 1.95 | \* |
| Coresiding with grandchildren | **Yes** | 2.52 | \*\* | 1.52 |   |   | 0.63 |   | 0.79 |   |
| Coresiding with parents/in-laws | **Yes** | 0.40 | \*\* | 1.68 |   |   | 2.66 | \*\* | 2.34 |   |
| ***Partnership status***  |   |   |   |   |   |   |   |   |   |
| Relationship Ref. Single/Divorced/Separated/ Widowed | Married/Civil partner/Cohabiting | 3.74 | \*\*\* | 1.77 | \*\* |   | 0.71 |   | 0.92 |   |
| ***Health indicators*** Longstanding illness reducing ability to carry out day-to-day activities(2)  | Yes, severely reduced | 2.01 |  | 1.28 |  |  | 0.91 |  | 0.82 |  |
| Ref. No illness | Yes, a little reduced | 0.90 |  | 1.68 | \* |  | 1.19 |  | 1.03 |  |
|   | Not reduced at all | 0.88 |  | 1.41 |  |  | 1.13 |  | 1.16 |  |
| Emotional Issues |  |   |   |   |   |   |   |   |   |   |
| Ref. No  | Yes | 0.78 |   | 1.03 |   |   | 1.23 |   | 0.85 |   |
| Perceived health | Excellent/Very good/Good | 1.06 |  | 0.69 |  |  | 1.97 | \* | 1.14 |  |
| Ref. Poor health | Fair | 1.34 |  | 0.64 |  |  | 1.50 |  | 0.97 |  |
| ***Socio-economic resources*** |   |  |  |  |  |  |  |  |  |  |
| Own employment Ref. Full-time job(30+ hrs) | Part-time job | 0.93 |  | 1.18 |  |  | 0.79 |  | 1.27 | \* |
| Not working | 0.76 |  | 1.67 |  |  | 0.96 |  | 0.93 |  |
| Looking after home/family | 1.32 |  | 0.96 |  |  | 1.83 |  | 1.32 |  |
| Permanently sick/disabled | 0.70 |  | 0.34 | \*\* |  | 0.89 |  | 0.92 |  |
| Partner's employment Ref. Full-time job (30+ hrs) | No partner |   |   |   |   |   |   |   |   |   |
| Part-time job | 1.40 | \* | 0.76 |  |  | 1.30 |  | 1.20 |  |
| Not working | 1.34 |  | 0.64 | \* |  | 1.32 |  | 1.23 |  |
| Looking after home/family | 0.94 |  | 0.94 |  |  | 0.93 |  | 1.62 |  |
| Permanently sick/disabled | 1.08 |   | 0.99 |   |   | 0.69 |   | 1.28 |   |
| Education level Ref. No education degree | Low O-level | 1.24 |  | 1.17 |  |  | 1.31 |  | 1.34 |  |
| High O-level | 1.30 |  | 1.06 |  |  | 1.25 |  | 1.07 |  |
| A-level and Sub-degree | 0.84 |  | 1.03 |  |  | 1.01 |  | 0.67 | \* |
| Degree and higher | 0.61 | \* | 0.63 | \* |  | 0.94 |  | 1.07 |  |
| Housing tenure | Own with mortgage | 0.92 |   | 1.01 |   |   | 0.64 | \*\*\* | 1.09 |   |
| Ref. Own-outright | Rent it | 0.49 | \*\*\* | 0.83 |  |  | 0.90 |  | 0.62 | \*\* |
|   | Other | 0.42 | \* | 0.46 |   |   | 0.40 | \* | 0.66 |   |
|   | \_cons | 0.47 |   | 2.25 |   |   | 0.61 |   | 0.68 |   |
| N |  | 1,098 |   | 1,315 |   |   | 1,098 |   | 1,315 |   |
| Notes: (1) Among those with at least one parent/parent-in-law and one grandchild alive; Significance levels: \*p<0.10; \*\*p<0.05; \*\*\*p<0.01; (2) help with day-to-day activities include washing and dressing, household cleaning, cooking, shopping for essentials, using public/ private transport, walking a defined distance, climbing stairs, remembering to pay bills, lifting objects from ground/ work surface, gardening, gripping objects; hearing and speaking in a noisy room. |
| Source: Authors’ own analysis National Child Development Study (NCDS, wave 9). |

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| **Supplementary Table 3. Multinomial models: relative risk ratios of men(1) aged 55 years of helping only grandchildren, only parents/parents-in-law or neither generation relative to caring for both generations** |
|  |  | **Only grandchildren** |  | **Only parents/in-laws** |  | None |
| Base outcome (**Caring for both generations**) | RRR | P |  | RRR | P |  | RRR | P |
| ***Partnership status***  |   |   |   |   |   |   |   |   |
| Relationship Ref. Single/Divorced/Separated/Widowed | Married/Civil partner/Cohabiting | 0.82 |   |   | 0.17 | \*\*\* |   | 0.41 | \*\* |
| ***Family circumstances (structure and proximity)*** |  |  |  |  |  |  |  |  |
| Number of grandchildren | 2 | 0.85 |  |  | 0.75 |  |  | 0.53 | \*\* |
| 3 | 0.99 |  |  | 0.96 |  |  | 0.55 | \* |
| Ref. 1 | 4+ | 0.91 |  |  | 0.71 |  |  | 0.58 | \*\* |
| Number of parents/in-laws | 2 | 0.94 |   |   | 1.28 |   |   | 0.88 |   |
| 3 | 0.59 | \*\* |  | 1.58 | \* |  | 0.57 | \* |
| Ref. 1 | 4 | 0.63 |   |   | 2.39 | \*\* |   | 1.33 |   |
| Coresiding with grandchildren | Yes | 1.49 |  |  | 0.36 |  |  | 0.66 |  |
| Coresiding with parents/in-laws | Yes | 0.07 | \*\* |  | 1.27 |  |  | 0.91 |  |
| ***Health indicators*** |  |  |  |  |  |  |  |  |
| Longstanding illness reducing ability to carry out day-to-day activities(2) Ref. No illness/health conditions | Yes, severely reduced | 0.86 |  |  | 0.38 |  |  | 0.48 |  |
| Ref. No illness | Yes, a little reduced | 0.91 |  |  | 1.18 |  |  | 0.86 |  |
|  | Not reduced at all | 1.04 |  |  | 1.39 |  |  | 0.91 |  |
| Emotional Issues |  |  |  |  |  |  |  |  |  |
| Ref. No  | Yes | 0.61 |  |  | 0.97 |  |  | 1.18 |  |
| Perceived health | Excellent/Very good/Good | 0.33 | \*\* |   | 0.67 |   |   | 0.49 |   |
| Ref. Poor health | Fair | 0.41 | \* |   | 0.44 |   |   | 0.56 |   |
| ***Socio-economic resources*** |   |   |   |   |   |   |   |   |
| Own employment Ref. Full-time job(30+ hrs) | Part-time job(<29 hrs) | 1.03 |  |  | 0.76 |  |  | 1.57 |  |
| Not working | 0.97 |  |  | 1.18 |  |  | 1.40 |  |
| Looking after home/family | 0.39 |  |  | 0.36 |  |  | 0.57 |  |
| Permanently sick/disabled | 2.17 |   |   | 2.91 |   |   | 1.31 |   |
| Partner's employment Ref. Full-time job(30+ hrs) | No partner |  |  |  |  |  |  |  |  |
| Part-time job(<29 hrs) | 0.90 |  |  | 0.87 |  |  | 0.44 | \*\*\* |
| Not working | 0.62 |  |  | 0.55 |  |  | 0.67 |  |
| Looking after home/family | 1.11 |  |  | 1.15 |  |  | 1.10 |  |
| Permanently sick/disabled | 1.90 | \* |  | 1.53 |  |  | 1.11 |  |
| Education level Ref. No education degree | Low O-level | 0.64 | \* |   | 0.63 |   |   | 0.73 |   |
| High O-level | 0.77 |  |  | 0.70 |  |  | 0.62 | \* |
| A-level and Sub-degree | 1.16 |  |  | 1.41 |  |  | 1.08 |  |
| Degree and higher | 1.20 |   |   | 1.82 | \* |   | 1.68 |   |
| Housing tenure | Own with mortgage | 1.72 | \*\*\* |  | 1.25 |  |  | 1.54 | \* |
| Ref. Own-outright | Rent it | 0.77 |  |  | 1.52 |  |  | 2.38 | \*\*\* |
|  | Other | 1.81 |  |  | 1.59 |  |  | 5.36 | \*\*\* |
|   | \_cons | 2.13 |   |   | 2.28 |   |   | 2.09 |   |
| Notes: (1) Among those with at least one parent/parent-in-law and one grandchild alive; Significance levels: \*p<0.10; \*\*p<0.05; \*\*\*p<0.01; (2) Help with day-to-day activities include washing and dressing, household cleaning, cooking, shopping for essentials, using public/ private transport, walking a defined distance, climbing stairs, remembering to pay bills, lifting objects from ground/ work surface, gardening, gripping objects; hearing and speaking in a noisy room. |

Source: Authors’ own analysis National Child Development Study (NCDS, wave 9).

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| **Supplementary Table 4. Multinomial models: relative risk ratios of women(1) aged 55 years of helping only grandchildren, only parents/parents-in-law or not caring relative to caring for both generations**  |
|  |  | **Only grandchildren** |  | **Only parents/in-laws** |  | None |
| Base outcome (**Caring for both generations**) | RRR | P |  | RRR | P |  | RRR | P |
| ***Partnership status***  |   |   |   |   |   |   |   |
| Relationship Ref. Single/Divorced/ Separated/Widowed | Married/Civil partner/Cohabiting | 1.11 |   |   | 0.59 | \* |   | 0.64 |   |
| ***Family circumstances (structure and proximity)*** |  |  |  |  |  |  |  |  |
| Number of grandchildren | 2 | 1.01 |  |  | 0.68 |  |  | 0.74 |  |
| 3 | 1.11 |  |  | 0.60 |  |  | 0.62 |  |
| Ref. 1 | 4+ | 0.91 |  |  | 0.51 | \*\* |  | 0.44 | \*\*\* |
| Number of parents/in-laws | 2 | 0.76 | \* |   | 1.60 | \*\* |   | 1.13 |   |
| 3 | 0.48 | \*\*\* |  | 1.18 |  |  | 0.66 |  |
| Ref. 1 | 4 | 0.52 | \* |   | 2.67 | \*\* |   | 1.06 |   |
| Coresiding with grandchildren | Yes | 1.05 |  |  | 0.49 |  |  | 0.89 |  |
| Coresiding with parents/in-laws | Yes | 0.53 |  |  | 0.70 |  |  | - |  |
| ***Health indicators*** Longstanding illness reducing ability to carry out day-to-day activities(2)  | Yes, severely reduced | 1.46 |  |  | 1.36 |  |  | 0.70 |  |
| Ref. No illness | Yes, a little reduced | 0.92 |  |  | 0.48 | \* |  | 0.70 |  |
|   | Not reduced at all | 0.72 |   |   | 0.41 | \*\* |   | 0.93 |   |
| Emotional Issues |  |  |  |  |  |  |  |  |
| Ref. No  | Yes | 1.12 |  |  | 0.81 |  |  | 1.22 |  |
| Perceived health | Excellent/Very good/Good | 0.83 |   |   | 1.38 |   |   | 1.19 |   |
| Ref. Poor health | Fair | 1.04 |   |   | 1.77 |   |   | 1.23 |   |
| ***Socio-economic resources*** |   |   |   |   |   |   |   |   |
| Own employment Ref. Full-time job(30+ hrs) | Part-time job(<29 hrs) | 0.70 | \*\* |  | 0.67 |  |  | 0.76 |  |
| Not working | 0.81 |  |  | 0.31 | \*\* |  | 0.82 |  |
| Looking after home/family | 0.54 | \*\*\* |  | 0.51 | \* |  | 1.12 |  |
| Permanently sick/disabled | 0.75 |   |   | 1.29 |   |   | 4.39 | \*\*\* |
| Partner's employment Ref. Full-time job(30+ hrs) | No partner | 1.00 |  |  | 1.00 |  |  | 1.00 |  |
| Part-time job(<29 hrs) | 0.74 |  |  | 1.03 |  |  | 1.27 |  |
| Not working | 0.82 |  |  | 1.61 |  |  | 1.22 |  |
| Looking after home/family | 0.94 |  |  | 2.90 |  |  | - |  |
| Permanently sick/disabled | 0.94 |  |  | 1.86 |  |  | 0.33 |  |
| Education level Ref. No education degree | Low O-level | 0.78 |   |   | 1.03 |   |   | 0.56 | \* |
| High O-level | 1.03 |  |  | 1.23 |  |  | 0.70 |  |
| A-level and Sub-degree | 1.50 |  |  | 0.85 |  |  | 1.50 |  |
| Degree and higher | 1.03 |   |   | 1.95 | \* |   | 1.33 |   |
| Housing tenure | Own with mortgage | 0.93 |  |  | 1.00 |  |  | 0.93 |  |
| Ref. Own-outright | Rent it | 1.77 | \*\*\* |  | 1.40 |  |  | 1.93 | \*\* |
|  | Other | 1.21 |  |  | 1.05 |  |  | 3.67 | \* |
|   | \_cons | 0.89 |   |   | 0.26 |  |   | 0.37 |   |
| Notes: (1) Among those with at least one parent/parent-in-law and one grandchild alive; Significance levels: \*p<0.10; \*\*p<0.05; \*\*\*p<0.01; (2) Help with day-to-day activities include washing and dressing, household cleaning, cooking, shopping for essentials, using public/ private transport, walking a defined distance, climbing stairs, remembering to pay bills, lifting objects from ground/ work surface, gardening, gripping objects; hearing and speaking in a noisy room. |

Source: Authors’ own analysis National Child Development Study (NCDS, wave 9).