Having a sibling is like a treasure?

Care for ageing parents by adult children with and without siblings

CLS working paper number 2021/1

By Jenny Chanfreau and Alice Goisis

CENTRE FOR LONGITUDINAL STUDIES

UKRI Economic and Social Research Council

Corresponding author

Jenny Chanfreau

UCL Centre for Longitudinal Studies

j.chanfreau@ucl.ac.uk

This working paper was first published in March 2021 by the UCL Centre for Longitudinal Studies.

UCL Social Research Institute

University College London

20 Bedford Way

London WC1H 0AL

www.cls.ucl.ac.uk

The UCL Centre for Longitudinal Studies (CLS) is an Economic and Social Research Council (ESRC) Resource Centre based at the UCL Social Research Institute, University College London. It manages four internationally-renowned cohort studies: the 1958 National Child Development Study, the 1970 British Cohort Study, Next Steps, and the Millennium Cohort Study. For more information, visit www.cls.ucl.ac.uk.

Disclaimer

This working paper has not been subject to peer review.

CLS working papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

Any opinions expressed here are those of the author(s) and not those of the UCL Centre for Longitudinal Studies (CLS), the UCL Social Research Institute, University College London, or the Economic and Social Research Council.

How to cite this paper

Chanfreau, J., Goisis, A. (2021) *Having a sibling is like a treasure? Care for ageing parents by adult children with and without siblings.* CLS Working Paper 2021/1. London: UCL Centre for Longitudinal Studies.

Keywords

Only child, siblings, parent-care, informal care, 1970 British Cohort Study, 1958 National Child Development Study, 1946 MRC National Survey of Health and Development Cohort.

Acknowledgement

This work was supported by the Economic and Social Research Council grant number ES/S002103/1.

Abstract

While adult children with siblings can share caring for older parents, adult only children face this responsibility alone. Yet, despite the extensive literature on informal caregiving more generally, research on only children's parent-care is limited. Given increased longevity and reliance on informal caregiving, as well as an increase in one-child families, there is a need to further investigate only children's caregiving. This paper investigates whether and how adult only children's parent-care differs from those with siblings, how sibling composition intersects with gender and how it relates to wellbeing. Using data from three large scale British birth cohorts we analyse parent-care at different ages: 38 and 42 (born 1970), 50 and 55 (born 1958), and 63 (born 1946). Results show that only children are more likely to provide parent-care, with differences greater at later ages. Provision is gendered, and the sibling group composition matters for involvement. While caring is related to wellbeing, we found no evidence that this differs between only children and those with siblings.

Introduction

With increased longevity and elder care policy that relies heavily on informal carers several global north countries without extensive formal care coverage have been projected to face a care gap (Cangiano, 2014; Pickard, 2015). Such projections raise concerns both for older people in need of additional help and support in daily life, and their family members who provide support and care. Analysis of US data on older people's expectations shows that adult children are the most frequently cited source of expected informal care if needs arise, with nearly half of older people naming their child or child-in-law as an anticipated future caregiver (Abrahamson, Hass, & Sands, 2017). The provision of intensive informal social care tends to be gendered, and has been associated with stress, lower mental wellbeing and detrimental effects on employment (Gomez-Leon, Evandrou, Falkingham, & Vlachantoni, 2019; Pearlin, Mullan, Semple, & Skaff, 1990; Wolf, Raissian, & Grundy, 2015). Adult children with siblings can share the responsibility, time and effort of care for older parents, as well as any financial contributions required for formal provision, potentially reducing the stress on individual siblings.

In contrast, only children – defined here as not having co-resident biological siblings in childhood – face the responsibility for parent-care alone. While a relatively small group in most Western/ global north populations, one-child families have been increasing in prevalence steeply among cohorts of women born between in the 1940s-60s in a number of Southern European, East Asian and Eastern European countries (Breton & Prioux, 2009; Frejka, 2008; Frejka, Jones, & Sardon, 2010). Despite the extensive literature on informal caregiving more generally, research on only children's parent-care is limited. Based on the studies available, US data suggests that compared with their counterparts who have siblings only children tend to be more likely to provide care to a parent (Coward & Dwyer, 1990; Dwyer & Coward, 1991; Spitze & Logan, 1991), while more recent European research is less conclusive (Ogg & Renaut, 2006; Rainer & Siedler, 2012).

With limited existing research on parent-care among only children, these trends point to a need to better understand how their caregiving may differ from those with siblings, especially in contexts, such as the UK, where formal elder care is not universally available. In the UK, the mixed economy of social care provision relies

extensively on informal carers, including adult children, for both provision and coordination of care. The country has been characterised as facing a care crisis in the absence of extensions to formal care, with projections of increasing longevity and associated increased need for care. Unmet need is already a documented concern for a non-negligible minority of older people (e.g. Vlachantoni, 2019; Vlachantoni et al., 2011) and the projected informal care gap (Pickard, 2015) raises concerns about future demands on a potentially shrinking pool of kin carers. In this context, being an only child in middle adulthood, a period of concentration of parental need, may present challenges without the resource of a sibling to draw on for support.

Drawing on unique data from three large-scale UK surveys, this paper contributes to the literature on care patterns among adult children by providing detailed analysis of how patterns of caregiving differ between only children and those with siblings. We analyse provision of care to parents at multiple ages covering prior, during and after the 'peak' parent-care period of middle adulthood. We investigate how these patterns are gendered, how caregiving patterns relate to wellbeing and whether this association differs by sibling status.

Background

In a life course perspective, informal care provision tends to peak in middle adulthood, with estimates of about a fifth of individuals aged 45-59 providing care (Dahlberg, Demack, & Bambra, 2007; Moen, Robison, & Fields, 1994, based on US data on women). According to UK Family Resources Survey data,[1] an estimated 7% of the UK population provided some unpaid social care in 2018/19. This figure is considerably higher in middle adulthood at 12% among 45-54 year olds and 13% among 55-64 year olds. Among these informal carers (all ages), 34% were adult children providing care for parents living outside their home, with a further 6% being adult children caring for a co-resident parent.

While spousal/partner care tends to be the primary source of informal care for disabled older people, the need for care by adult children is both projected to increase (in the absence of expansions to formal care) and to exceed the availability

[1] Family Resources Survey, 2018/19: Carers data tables. https://www.gov.uk/government/statistics/family-resources-survey-financial-year-201819

of such informal care (Pickard, 2015). This informal ‘care gap’ is projected due to the numbers of older people increasing faster than younger age groups. Increasing longevity means marked increases among the ‘oldest old’ groups (aged 85 and older), a group both more likely to have complex needs and less likely to have a spouse able to care (Kingston, Comas-Herrera, & Jagger, 2018; Pickard, 2015; Pickard, Wittenberg, Comas-Herrera, King, & Malley, 2007). In the context of limited public elder care provision, these predicted changes will likely intensify the pressure on working age people to provide informal care to parents.

Characteristics of parent-carers

Within extended or inter-generational family networks, care for older family members tends to be organised along kinship lines, with geographical proximity and gender key determinants of type and intensity of care. Parent-care tends to be provided by children to their own parents and to a much lesser extent to parents-in-law (Henz, 2009, 2010; Szinovacz & Davey, 2008). While couples tend to share parent-care to some extent, spouses usually play a more supplementary or assisting role. Larger sibling groups also tend to involve spouses less and enable siblings to share care or take turns, thus decreasing individual children’s care load. Studies from both the US and European countries have found that larger sibship size is associated with lower likelihood of providing parent-care (Spitze & Logan, 1991; Stuifbergen, Van Delden, & Dykstra, 2008; Szinovacz & Davey, 2008; Tolkacheva, Van Groenou, De Boer, & Van Tilburg, 2011). However, cross-national analysis suggests patterns of parent-care also vary by formal care systems. Noticeable reductions in individual caregiving associated with having a sibling tends to be characteristic of systems where the responsibility for social care to a greater extent lies with individuals/families rather than the state (Rainer & Siedler, 2012).

Like other forms of care, parent-care is also gendered; both overall and within sibling groups. Daughters tend to be more likely than sons to provide care, and to be designated the ‘main carer’ (Dwyer & Coward, 1991; Vergauwen & Mortelmans, 2019). Further, women tend to provide more personal care while men tend more towards instrumental support (Gomez-Leon et al., 2019; Matthews & Heidorn, 1998). In practice, parent-care is not necessarily shared equally among adult siblings. Women with brothers tend to do more parent-care than their brothers, but also more

than women with sisters, while men with brothers tend to provide more care than men with sisters (Grigoryeva, 2017). Controlling for gender, within sibling groups, adult children with more contact with their parent and those living nearest to the parent, especially if their sibling(s) lived a considerable distance away have been found most likely to (start to) provide care (Ogg & Renaut, 2006; Vergauwen & Mortelmans, 2019). In addition, the quality of the parent-child relationship and parental marital status have also been identified as correlates of caregiving in analysis of Dutch data (Stuifbergen et al., 2008).

Only children and parent-care

Existing research on only children is relatively limited and tends to focus on outcomes and circumstances during childhood (for reviews see e.g. Falbo, 2012; Falbo & Polit, 1986; Polit & Falbo, 1987). Two competing explanation of how only children differ from their peers with siblings predominate. The resource dilution theory (Blake, 1981; Downey, 1995; Steelman, Powell, Werum, & Carter, 2002) suggests only children fare better than children from larger families because they benefit from the concentration of the time and material resources of their parents. The socialisation (or siblings as resources; Downey & Condron, 2004; Goetting, 1986) theory posits that children benefit from the competition, negotiation, conflict-resolution and mutual support involved in growing up with siblings. Research suggest that the resource dilution theory is more applicable in childhood (Mellor, 1990; Polit & Falbo, 1987). However, as the discussion on parent-carers above suggests, it may well be that the theories suggested for childhood reverse in adulthood. In middle adulthood, with specific challenges such as shouldering the responsibility for ageing parents' informal care, 'siblings as resources' may come to the fore more, as adult only children experience a concentration of parental need rather than resources.

Research comparing parent-care among both adults with siblings and only children is sparse. Our search of the literature has yielded only a handful of studies (Coward & Dwyer, 1990; Dwyer & Coward, 1991; Ogg & Renaut, 2006; Rainer & Siedler, 2012; Spitze & Logan, 1991). These studies found that only children tended to have more contact with parents, and to help more than adult children with siblings (Spitze & Logan, 1991). They also show that only children and siblings in single-gender

groups were more likely than those in mixed-gender groups to provide care (Dwyer & Coward, 1991). A further finding was that only daughters were more likely to provide care than either only sons or daughters with siblings, and while only sons were more likely to provide care than sons with brothers, there was no gender difference in the time spent caring among only children who did provide care (Coward & Dwyer, 1990). Published three decades ago and focused on the US context, it is difficult to disentangle whether these findings are generalizable to other contexts and/or periods. With its mix of private payment and means-tested provision for low income recipients (Robertson, Gregory, & Jabbal, 2014), the US formal care system is more similar to that in the UK than some European countries with universal coverage. On the other hand, based on data collected in the 1980s, these findings also pre-date some of the demographic changes that have more recently led to elder care being framed as 'in crisis'.

More recent analysis of data covering a range of European countries suggest less consistent results by sibling status. One study found no differences in caregiving between only children and mixed-gender sibling groups (Ogg & Renaut, 2006), while another reported significantly lower parent-care time among siblings than only children but pointed to the important role of the country context (Rainer & Siedler, 2012). The latter study found the presence of siblings was influential in countries where policy positions elder care as a family responsibility but not in countries where responsibility for elder care lies with the state.

To conclude, although there is some evidence that only children provide more parent-care compared to their counterparts with siblings, prior evidence is limited in the time periods and contexts covered and reveals mixed findings. Further, none of the existing studies explicitly investigated parent care at different ages. As noted above, caregiving tends to peak in middle adulthood, but without the option to switch or take turns with a sibling it is possible the peak begins earlier and/or lasts longer for only children.

Carer wellbeing

The association between informal caregiving and mental health and wellbeing is well established in the literature, including higher incidence of depressive symptoms among carers and deterioration over time with prolonged caregiving, especially at

high intensities (e.g. Bom, Bakx, Schut, & van Doorslaer, 2019; Kenny, King, & Hall, 2014; Pinquart & Sörensen, 2003b). As the caregiver stress framework (Pearlin et al., 1990) suggests, the relationship between caregiving and wellbeing is complex and depends on the combination of care needs as well as the caregiver's time pressure, role conflict and access to support. However, effect sizes tend to be small overall and vary considerably by subgroup. Caregiving women tend to report higher levels of care-related stress and lower wellbeing than men, explained in part by greater intensity of caregiving with lower levels of societal support due to gendered caregiving expectations (Bom et al., 2019; Heger, 2017; Pinquart & Sörensen, 2006). Meanwhile, spousal carers tend to report higher levels of stress and depression than adult children caring for a parent, which is perhaps a reflection of difference in care intensity (Pinquart & Sörensen, 2003a, 2003b). Again, some analysis suggests the association may in part depend on the country-level institutional context with lower wellbeing among women caregivers observed in the more familial Mediterranean countries but not in Northern European countries with more widespread state elder care (Brenna & Novi, 2016).

A larger caregiving network has been found to be associated with less stress or burden reported by parent-carers (Tolkacheva et al., 2011), but no study has yet investigated whether the association between informal caregiving and mental health or wellbeing differs between only children and those with siblings. One study investigated mental health among presumed sole caregivers but did not consider the presence of siblings (Heger, 2017), and while one study of caregiving by sibling status included caregiver stress (Coward & Dwyer, 1990), it did test whether stress-levels differed by sibling status among carers. It is possible that without someone to share the responsibility or emotional load with, caregiving might be more stressful or detrimental for mental health and wellbeing.

Study aims and contribution

This paper contributes to the existing literature by providing for the first time a detailed analysis of parent-care by adult only children and those with siblings across a range of ages including the 'peak' parent-care years, variation by gender and associated wellbeing. More specifically, the paper seeks to answer the following research questions:

Does involvement in parent-care differ by whether adult children have siblings or are only children? If so, how do these patterns vary across different ages?
How do gender and sibling status intersect in the provision of parent-care?
Does the relationship between caregiving and subjective wellbeing differ for adult only children and those with siblings?

Data & Methods

Data

We analyse data from three British cohort studies, the 1970, 1958 and 1946 birth cohorts. As data on siblings is rarely comprehensively collected in surveys of adults, a key strength of using these studies is that they allow us to identify individuals with and without siblings using data collected in childhood. The 1970 British Cohort Study (CLS, 2016, 2019) follows a cohort of initially approximately 17,000 people born in a particular week in 1970. Similarly, the National Child Development Study (CLS, 2012, 2015) surveys an initial cohort of 17,415 people born in a particular week of 1958. The third dataset is the National Survey of Health and Development (Douglas, Wadsworth, & Kuh, 2015; Kuh, Hardy, Richards, & Wadsworth, 2015). This survey has followed a subsample of the individuals born in a given week in 1946 (5,362 of the initially surveyed 13,687 births). Across the three different cohorts we are able to observe caregiving at five different ages: 38, 42 (1970 cohort), 50 and 55 (1958 cohort) and 63 (1946 cohort). We restrict all analyses to respondents with at least one living parent at the age of interest. In fact, although the caregiving questions were repeated at age 69 in the 1946 cohort study, by then few individuals had a living parent so this is not included.

Due to the long-running nature of the birth cohorts, attrition over the decades has affected the size and representativeness of the samples (Tarek Mostafa et al., 2020; Tarek Mostafa & Wiggins, 2014). To adjust for missingness we used multiple imputation prior to undertaking analysis. We first excluded individuals known to have died or emigrated and those known to have no living parent (as reported prior to or at the sweep analysed, see Appendix Table A1 for further details). Next, following the steps outlined by Carpenter and Kenward (2012) we ran chained equations imputations including all variables in the substantive model plus auxiliary variables.

The auxiliary variables used are specified in the missing data user guide for the 1958 study (Silverwood, Narayanan, Dodgeon, & Ploubidis, 2020), and we used similar measures for the other cohorts. We created 50 imputed data sets separately for each age and sample specification (all individuals for parent-care provision and wellbeing analyses; caregivers for analysis of care intensity). The complete cases sample sizes available for analysis at ages 38, 42, 50, 55 and 63 were 6,332; 6,986; 4,073; 3,148 and 364, respectively; following multiple imputation, the respective analysis sample sizes were: 17,255; 16,703; 12,775; 11,339 and 2,364 (see Appendix Table A1 for further details).

Outcome variables

Parent care: The 1970 and 1958 studies asked respondents to identify tasks they did "regularly or frequently" for their parent(s). Respondents who mentioned one or more tasks were then asked to estimate the total number of weekly hours spent assisting their parent(s).

The tasks listed were:

- Lifts in the car
- Shopping for them
- Providing or cooking meals
- Help with basic personal needs
- Washing, ironing or cleaning
- Personal affairs
- Decorating, gardening or repairs
- Financial help (not asked at age 42)
- Other help

With the exception of financial help, which was not included at age 42, the same tasks were asked about at each age (38, 42, 50 and 55). At ages 38 and 50 the cohort members were asked separately about each parent if they did not live together but at ages 42 and 55 one set of questions captured help to any parent. We harmonised the questions so that at each age they relate to any help provided to either or both parents. Additionally, at age 42 the question wording related to either

own or a partner's parent(s). Based on data from the 1958 cohort we can assume the help is primarily directed to their own parent.[2]

We grouped 'providing or cooking meals', 'help with basic personal needs' and 'washing, ironing or cleaning' together as care activities. These tasks relate more to assistance with activities of daily living, while the remaining tasks capture help with more instrumental activities of daily living. Through this distinction, we aim to differentiate between those providing 'care' where a parent might struggle to cope without assistance from those whose help may in part reflect intergenerational socialising more generally. We thus denote any respondent who engages in any of the care activities as a 'carer' and those doing any of the other tasks but none of the 'care' activities as a 'helper'.

The 1946 cohort members were asked whether they 'look after or give special help to anyone who is sick, frail, or has a disability'. This was followed by a question about their relationship to the care-recipient which allows us to identify that the recipient is a parent. All respondents who reported giving help to any recipient were also asked to estimate the range of time they spent weekly on all caregiving; 0-4 hours to 20+ hours per week. Although we recognise the limitations of comparing across studies due to differences in how the care information is collected, the 1946 cohort provides highly useful information about care patterns towards the end of the age span when individuals may be called upon to care for a parent.

Subjective wellbeing: Different measures of mental health and subjective wellbeing have been included at different sweeps of the cohort studies. The 1970 study included the 9-item Malaise scale and the Warwick-Edinburgh Mental Wellbeing scale (WEMWBS) at age 42, the 1958 study included the Malaise scale at age 50 and CASP-6 at 55, while the 1946 study included the General Health Questionnaire (GHQ) at age 63. All are multi-item scales that provide a summary score. The Malaise scale and GHQ capture negative affect (higher scores indicating more depressive symptoms) while CASP-6 and WEMWBS capture positive subjective wellbeing and self-realisation (higher scores indicating greater wellbeing).

[2] At both age 50 and 55 cohort members were asked the same questions separately about own and partner's parents and approximately 80% of caregivers in the 1958 cohort helped their own parent(s) either exclusively or alongside helping their partner's parent.

Covariates

Sibling status: Only children were identified in each of the studies based on information available at age 10/11 which was deemed late enough in the cohort member's childhood to capture the existence of younger siblings in the vast majority of cases (age gaps of more than 10 years being rare) and also early enough that older siblings of cohort members would likely still be co-resident. The 1970 and 1958 studies further allow us to identify whether the siblings reported included brothers, sisters or both. At age 10/11, 8% of those born in 1970, 7% of those born in 1958 and 17% of those born in 1946 were only children.[3] The general trend is similar to that of the proportion of women with one child only, as reported in official UK cohort fertility estimates (ONS, 2018). Estimates from other sources suggest the prevalence of one-child families has been relatively stable, fluctuating between 10 and 15% of women born between 1940 and the mid-1960s following a decline from over a fifth of women born in the early to mid-1920s (Breton & Prioux, 2009; Frejka, 2008).

Other Covariates: Only children may differ systematically from individuals with siblings and in ways that could affect their caring patterns. The mothers of only children tend to be older on average at the time of the birth, than the age at first birth among women who go on to have more children, while parental divorce/separation is another documented factor more common among only children (Jefferies, 2001; Parr, 2007). Socio-economic selection into which parents have one child may also differ by context and period (Choi & Monden, 2019; Falbo & Dudley, 1993), making this an important aspect to account for especially in analysis of different cohorts. In the models we thus included covariates to capture parental/family of origin circumstances (collected in childhood), as well as individual adult circumstance and care-relevant information.

We include maternal age at the time of the cohort member's birth (continuous for the 1970 and 1958 cohorts and age bands for the 1946 cohort), an indicator of maternal education beyond compulsory schooling age, and the father's social class using the General Register Office occupational categorisation. As a proxy measure of parental

[3] Note these percentages differ slightly from those in adulthood reported in Appendix Table 1, due to the inclusion criteria for the analysis of the adult sample (i.e. at least one living parent).

separation during childhood, we include an indicator of whether the father was recorded as present in the household at the age 10/11 interview.

Measures of the respondent's circumstances in adulthood include the cohort member's qualification level, occupation and marital status. Highest qualification was measured as NVQ level in the 1970 and 1958 cohorts (six categories ranging from None to NVQ-5 or above) while the 1946 cohort included a four-category measure (from None to degree-level or above). The major SOC groupings were used for respondent occupation (1970 and 1958 cohorts only) and marital status was recorded as married, cohabiting or single.

Past research indicates geographical distance between child and parent, and the gender and marital status of the parent (particularly widowhood) are related to care (Dwyer & Coward, 1991; Kalmijn, 2007; Rainer & Siedler, 2012). We therefore included the following care-related covariates: an indicator of which parent is alive (both/ mother/ father); and a binary indicator of whether the cohort member lives in the same region as they did in childhood (age 10/11) as a crude proxy for distance, in the absence of a direct measure.

Methods

For the 1970 and 1958 data we used multinomial logistic regression to analyse the odds of providing help, or of providing care, as opposed to neither, and linear regression to analyse the hours of care/help (among those providing assistance). For the 1946 data, we used binary logistic regression to analyse the odds of providing care to a parent and ordered logistic regression for the time spent caring (again among those who reported providing care to a parent). Each of these regressions were run firstly unadjusted, including sibling status as the only predictor of the care outcome, and then adjusting for the covariates listed above.

To investigate how parent-care is gendered we ran the fully adjusted models for the 1970 and 1958 cohort data with a variable that combined respondent gender with only child status and the gender composition of the sibling group. This allowed us to explicitly distinguish between women who are only daughters, have sisters, have brothers or both, and the same among men.

Finally, for all three datasets, we used linear regression to analyse the mental health and wellbeing and included interaction effects to investigate whether variations in wellbeing by caregiving differ by sibling status. All analyses were performed using Stata SE version 16.

Results

Descriptive results

We begin with a descriptive overview of the cohorts, see Appendix Table A2 for summary statistics. Among those born in 1970 (and with at least one surviving parent), the majority of respondents had both parents alive at both age 38 and 42. Among the older cohorts, the largest proportion of respondents reported that only their mother was alive (just under half at age 50 and just over half at age 55, among those born in 1958, and over two-thirds of those born in 1946 at age 63). The majority were recorded as living in the same region in adulthood as at age 10/11; over 70% at each age among those born in 1970 and 1958 and over half among those born in 1946. However, co-residence with a parent was uncommon. Most respondents with at least one living parent reported that their parent(s) lived elsewhere, ranging from 91% among only children at age 38 to 97% among those with siblings at age 55. At younger ages, rates of co-residence with a parent were similar among only children and those with siblings, however, at age 55 co-residence was more common among only children (10% of only children aged 55 living with one or both parents compared with 5% of those with siblings at the same age). Comparable co-residence rates cannot be calculated for the 1946 cohort, where we only have information about co-residence for caregivers. The 1970 and 1958 cohort members were also asked to rate how close they felt to their parents at age 30 (1970 cohort) and age 42 (1958 cohort) with the vast majority reporting feeling close or very close to their parent(s). This did not differ substantially by sibling status.

Table 1 below shows the patterns of parent-care for only children and those with siblings. At each age, we show the percentage doing helping tasks only and the percentage (also) doing caring tasks (see Appendix Table A3 for individual tasks). On average, adult only children were more likely to do care tasks at every age. Except at age 38, this was also the case for helping tasks. The table also shows the mean or range of weekly hours spent assisting parents. Among helpers, the intensity

is similar among only children and those with siblings, and fairly low at each age, at around 2-2 ½ hours per week at ages 38, 42 and 50; rising to 3-4 hours a week among those aged 55. Among carers at age 55, only children spent almost 2 extra hours per week caregiving, at an average of about 13 hours per week, compared with about 11 hours among those with siblings. About a fifth (20%) of only children who were carers at age 55, reported spending 20 hours or more per week on parent-care (15% among those with siblings). At age 63 among those who provided parent-care, only children reported somewhat less time spent on care than did those with siblings. A smaller percentage of only children than those with siblings reported higher intensities of caregiving (in total to all recipients), 13% spending 10-19 hours and 12% spending 20 or more hours per week (16% and 20% respectively among those with siblings).

Table 1 Parent care summary: % of respondents by caregiving type

	1970 cohort				1958 cohort				1946 cohort	
	38		42		50		55		63	
	Only	Sibling	Only	Sibling	Only	Sibling	Only	Sibling	Only	Sibling
	%	%	%	%	%	%	%	%	%	%
Caregiving type										
No help	62.5	61.9	46.1	49.2	35.0	43.7	26.0	35.3	57.2	70.3
Helper	20.4	24.0	33.5	32.1	43.4	36.9	39.9	36.5		
Carer	17.1	14.1	20.5	18.7	21.7	19.4	34.1	28.2	42.8	29.7
Intensity among carers*										
Up to 4 hours	62.0	61.7	61.6	62.6	52.1	53.6	37.1	43.5	43.7	35.0
5 – 9 hours	17.7	18.2	14.9	17.4	19.0	19.2	22.0	22.1	31.6	29.7
10 – 19 hours	14.1	13.6	14.4	13.1	17.2	14.3	20.8	19.3	13.1	15.5
20 hours or more	6.3	6.5	9.1	7.0	11.7	12.9	20.2	15.2	11.6	19.9
Intensity Mean hours										
Helpers	2.0	2.3	2.1	2.1	2.5	2.4	3.6	3.1		
Carers	5.7	5.9	6.6	6.1	8.8	8.8	13.1	11.2		
Observations (All)	*1,677*	*15,578*	*1,574*	*15,129*	*945*	*11,830*	*831*	*10,508*	*358*	*2,006*

* Note: Care intensity in the 1946 cohort includes all caregiving to any recipient, and thus for the small minority (<10%) who cared for someone else as well as a parent the hours reported would be higher than the time spent on parent-care.

Regression results

Provision of help or care

Table 2 summarises the unadjusted and adjusted exponentiated coefficients for only children (reference category: children with siblings) across the models; for full model

results see Appendix Table A4. The unadjusted coefficients confirm that at ages 50 and 55 (but not earlier ages), only children were significantly more likely than those with siblings to do helper tasks. At ages 50, 55 and 63 only children are also significantly more likely to provide care. While a number of the estimates changed little in magnitude when adjusting for other variables, where adjusted coefficients differed from the unadjusted, the direction of change was generally to strengthen or increase the difference between only children and those with siblings. This indicates that the differences observed in the descriptive analysis above are not explained by only children and their parents having different socio-demographic characteristics (e.g. different maternal age profiles).

Some of the non-significant coefficients in the unadjusted analyses became statistically significant when including covariates. At age 38 only children were more likely to do carer tasks (significant at the 10% level) and at age 42, only children were more likely to do both help and care (5% level), when adjusting for other variables. Thus, in the fully adjusted models, only children were clearly likely to provide care, rather than no help or care, at every age. At the later ages, the size of the coefficients also increased slightly when including covariates.

Finally, the size of the coefficients also increased across the ages, and at ages 55 and 63 only children were substantially more likely to provide care than were adult children with siblings.

The coefficients for the other covariates were all in the expected direction and consistent with previous findings (see Appendix Table A4). For example, women were consistently more likely than men to provide care rather than no help or care, but less likely than men to do helping tasks (only) at ages 42, 50 and 55. Across the measures that capture social class, where significant, those from more working-class backgrounds or with lower qualifications tended to be more likely to provide help or care, rather than neither. Finally, living in another region in adulthood than at the age of 10/11 significantly reduced the likelihood of helping or caring for a parent at every age.

Table 2 Regression Summary - Coefficients for Only Child (ref: sibling)

	Multinomial logistic regression - Base category: No help															
	Helper								Carer							
	Unadjusted				Fully adjusted				Unadjusted				Fully adjusted			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
1970 Cohort																
Age 38	0.84	0.10	0.15	0.66 - 1.07	0.92	0.12	0.49	0.71 - 1.18	1.20	0.14	0.11	0.96 - 1.50	1.27	0.16	0.06	0.99 - 1.64
Age 42	1.11	0.11	0.27	0.92 - 1.35	1.21	0.12	0.05	1.00 - 1.46	1.17	0.13	0.16	0.94 - 1.45	1.30	0.15	0.02	1.03 - 1.63
1958 Cohort																
Age 50	1.47	0.16	0.00	1.18 - 1.83	1.52	0.18	0.00	1.21 - 1.92	1.39	0.18	0.01	1.07 - 1.81	1.41	0.20	0.02	1.06 - 1.86
Age 55	1.48	0.21	0.01	1.12 - 1.96	1.56	0.22	0.00	1.18 - 2.07	1.64	0.23	0.00	1.24 - 2.17	1.78	0.28	0.00	1.31 - 2.41
									Binary logistic Regression - Base category: No parent care							
									Carer							
									Unadjusted				Fully adjusted			
									OR	SE	p	95% CI	OR	SE	p	95% CI
1946 Cohort																
Age 63									1.83	0.42	0.01	1.17 - 2.88	2.08	0.62	0.01	1.16 - 3.72

Notes: Separate regression models were run for each age shown estimated on 50 imputed datasets. Sample excludes individuals with both parents known to have died; post-imputation sample sizes n=17,255 (age 38), n=16,703 (age 42), n=12,775 (age 50), n=11,339 (age 55), n=2,364 (age 63). Fully adjusted models all control for respondent gender, maternal age at respondent's birth, maternal education, and paternal occupational class, parental separation in childhood, cohort member's level of qualification, occupation (1970 and 1958 cohorts only), and cross-regional moves between childhood and adulthood and which parent is alive. See Appendix Table A4 for full results; Appendix Table A5 reproduces this summary table showing the fully adjusted model regression results based on complete cases analysis alongside these estimates for the fully adjusted model using MI, for comparison.

Intensity of help/care provision

Table 3 shows the unadjusted and adjusted coefficients for only children across the models; for full model results see Appendix Table A6. Given that they provide some help or care to a parent, there was no significant difference by sibling status in the intensity of caregiving at any age. However, while not statistically significant at conventional levels, the size of the coefficient at age 55 is of a substantively greater magnitude than at the other ages (in the direction of only children spending more time on average per week helping or caring for their parent(s) compared to those with siblings). At age 63, on the other hand, the coefficient suggest only children were less likely to provide care at higher intensities than those with siblings, although again not statistically significant at conventional levels.

Table 3 Regression Summary - Coefficients for Only Child (ref: sibling)

	Linear regression: Hours per week spent helping/caring							
	Unadjusted				Fully adjusted			
	Coeff.	SE	p	95% CI	Coeff.	SE	p	95% CI
1970 Cohort								
Age 38	0.13	0.35	0.71	-0.55 - 0.81	0.08	0.34	0.81	-0.59 - 0.76
Age 42	0.25	0.39	0.52	-0.50 - 1.01	0.49	0.38	0.20	-0.26 - 1.24
1958 Cohort								
Age 50	0.19	0.58	0.75	-0.95 - 1.32	0.31	0.55	0.58	-0.78 - 1.39
Age 55	1.33	1.05	0.20	-0.72 - 3.39	1.54	1.00	0.12	-0.42 - 3.50
	Ordinal logistic regression: Banded hours per week spent helping/caring							
	Unadjusted				Fully adjusted			
	OR	SE	p	95% CI	OR	SE	p	95% CI
1946 Cohort								
Age 63	0.63	0.18	0.09	0.36 - 1.08	0.59	0.20	0.11	0.30 - 1.13

Notes: Separate regression models were run for each age shown estimated on 50 imputed datasets. Sample excludes individuals with both parents known to have died and those known not provide help/care; post-imputation sample sizes n=11,702 (age 38), n=12,003 (age 42), n=9,607 (age 50), n=9,339 (age 55), n=2,121 (age 63). Fully adjusted models control for respondent gender, maternal age at respondent's birth, maternal education, and paternal occupational class, parental separation in childhood, cohort member's level of qualification, occupation (1970 and 1958 cohorts only), cross-regional moves since childhood and which parent is alive (1970 and 1958 cohorts only; the smaller sample size and older age of the 1946 cohort meant that after the sample restrictions the imputation model did not converge when the indicator of which parent was alive was included). See Appendix Table A6 for full results; Appendix Table A7 reproduces this summary table showing the fully adjusted model regression results based on complete cases analysis alongside these estimates for the fully adjusted model using MI, for comparison

Women reported more caregiving hours than men at every age, controlling for the other variables. Greater parental age was significantly and positively related to

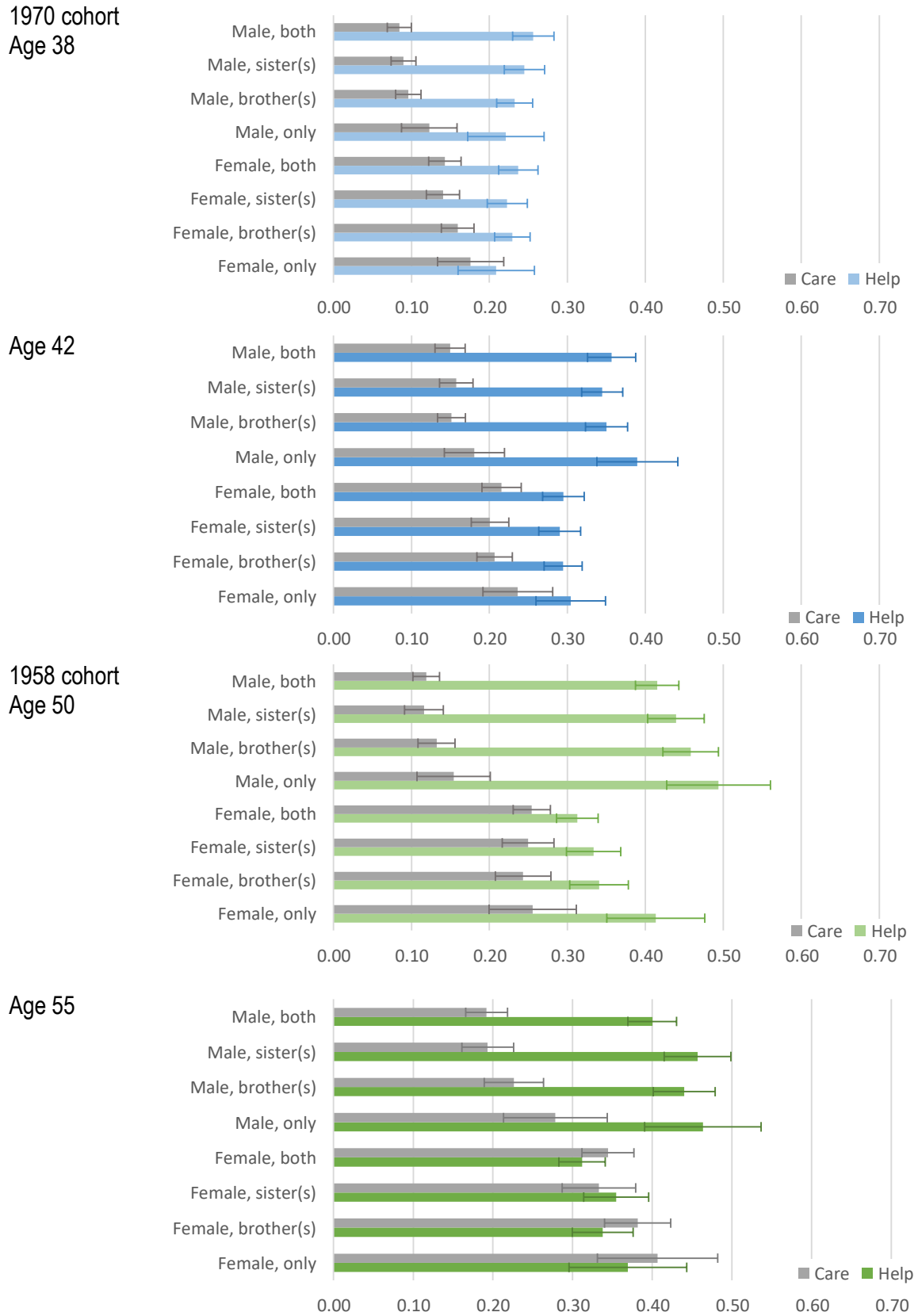
caregiving intensity at ages 42, 50 and 55; as was having one rather than both parents still alive at ages 38, 42, 50 and 55. However, having had a cross-regional move since the age of 10/11 was generally not significantly related to caregiving intensity (only at age 50 was this statistically significant and negatively related to hours).

Gendered care and sibling group composition

Controlling for the presence of siblings and other factors, respondent gender was thus related to the provision of help at ages 42, 50 and 55, the provision of care at every age, and the intensity among those providing any help or care at every age. Building on the existing literature on the gender composition of sibling groups and parent-care we explored how men and women without siblings compare with those with brothers, sisters or both using the 1970 and 1958 cohort data. Figure 1 shows the predicted probabilities of cohort members helping or caring by this more detailed breakdown of own gender and the gender of any sibling(s). For the full model results, see Appendix Table A8.

At all ages, regardless of the sibling composition, all groups of women were more likely than men to provide care while men tended to be more likely than women to do (solely) helping tasks. Although the differences in rates of caring are small among men and among women (and the confidence intervals for the sibling groupings overlap), some consistent patterns emerge. Firstly, among men, only sons had the highest predicted probability of providing parent care at all ages, as was also the case with only daughters among women. Secondly, the next highest probability of providing care among women was by those with at least one brother (both brothers and sisters at age 38 and 55 or solely brothers at ages 42 and 50). In contrast, among men, the lowest predicted probability of care provision was among those with at least one sister (both brothers and sisters at ages 38, 42 and 50, solely sisters at age 55). One explanation, as others have suggested (Szinovacz & Davey, 2013), could be that men with siblings (in particular sisters) are able to avoid care. However, the high proportions of men in all groups and at all ages who do helping tasks is at odds with this, a point we return to in the discussion.

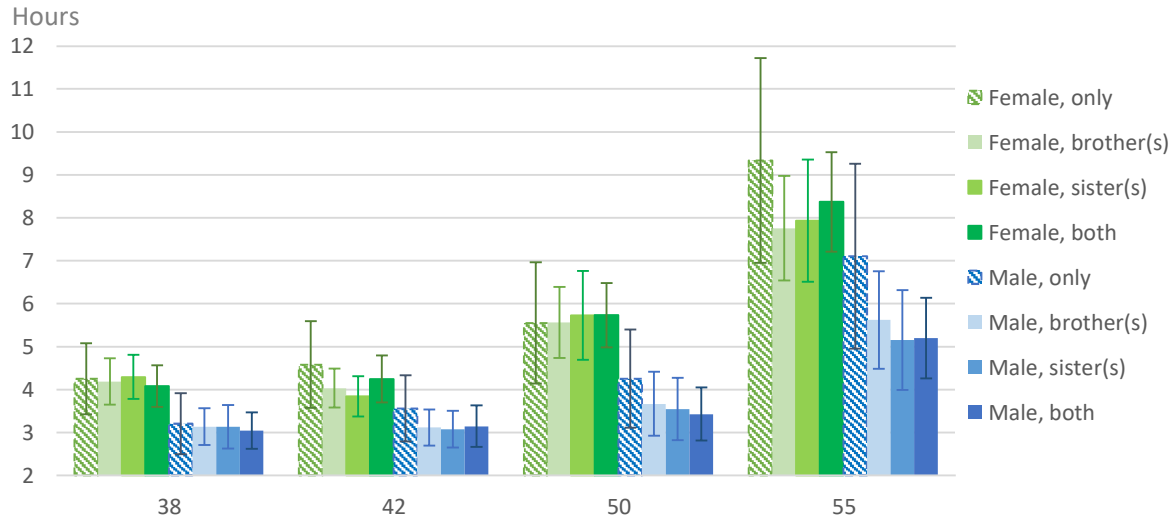
Figure 1 Predicted probabilities of providing help and care by gender and sibling composition, with 95% CI



Notes: Predicted probabilities of providing help, or providing care, with 95% confidence intervals, based on model including full list of covariates; see Appendix Table A8 for full results.

Among adult children who provided help or care, the intensity of care provision also differed by gender and sibling group composition (Figure 2). Among men, only sons consistently reported the most time spent on help or care at every age and similarly only daughters tended to report the most time on average (except for age 50). Again, men with at least one sister reported lower intensity of parental help/care on average at both ages 50 and 55.

Figure 2 Predicted weekly hours spent providing care by gender and sibling composition, with 95% CI



Notes: Predicted mean hours spent helping parent, with 95% confidence intervals, based on model including full list of covariates; see Appendix Table A9 for full results.

On the assumption that parental care-needs are unrelated to the sex of their child(ren), we checked descriptively whether men with siblings, who tended to have lower participation rates in parent-care and spend less time on providing help or care to their parents, instead contributed financially at higher rates. In fact, we found that at both ages 50 and 55, the highest proportion helping their parent(s) financially was among only sons (at 16% and 17% respectively), followed by only daughters (11% and 15%; see Appendix Table A10).

Mental health and Wellbeing

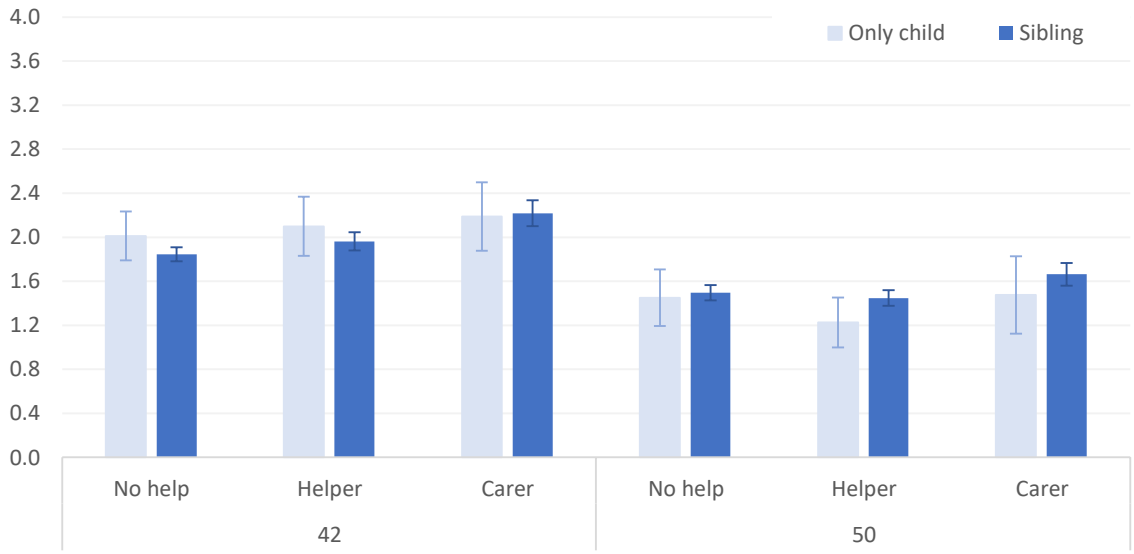
The final set of analyses investigated whether the association between caregiving and mental health and wellbeing differs by sibling status. The hypothesis is that parent-care may be more stressful for an only child than those with siblings as they cannot share with a sibling either the tasks and hours of care or the emotional labour and sense of responsibility for ageing parents. Where available, we use both

measures of mental (ill)health (the 9-item Malaise scale available at ages 42 and 50, the GHQ scale at age 63) and positive measures of wellbeing (WEMWBS at age 42 and CASP-6 at age 55).

In line with other research (e.g. Bom et al., 2019; Pinquart & Sörensen, 2003b), we found that, on average, caregiving was associated with worse outcomes on both mental health and wellbeing measures, either when measured as caregiver status or intensity, or both (see Table A11 in the Appendix for the full model results). At age 42, both helpers and carers reported higher malaise scores on average and lower wellbeing scores, while at age 50 carers reported higher malaise. In contrast, helping or caring was unrelated to wellbeing at age 55. Increasing care intensity was also associated with higher malaise and lower wellbeing at both ages 42 and 50/55. At age 63, the mental health (GHQ) of those caring for a parent did not differ from those who did not provide care (caring for another recipient was associated with worse GHQ scores, significant at the 10% level). Notably, while statistically significant at the earlier ages, all the effect sizes are small.

Across most of the ages and measures, mental health and wellbeing did not differ significantly between only children and those with siblings. At age 50, only children reported lower malaise scores on average (slightly better mental health) than did those with siblings; significant at the 10% level, adjusting for caregiving and gender. This was the case both in the full sample and among those who did some help or care (significant at 5% level, adjusting for intensity), but again the effect sizes are small. The effects of care status or care intensity on mental health or wellbeing did not differ significantly by sibling status at any of the ages. The results are summarised in Figure 3 below for the Malaise outcome available at age 42 and 50 (1970 and 1958 cohorts respectively); the overlapping confidence intervals indicating no significant difference in the association between caregiving and mental health at each age. Bearing in mind that as a group they are more likely to assist parents, this is not to say that only children are unaffected by caregiving but rather that they do not appear to be differently or more strongly affected than those who have siblings.

Figure 3 Predicted malaise scores by sibling status and care provision, with 95% CI



Notes: Predicted mean malaise scores on 9-item scale, with 95% confidence intervals, controlling for gender; see Appendix Table A11 (Panel A Model 3 for 1970 and 1958 cohorts) for full results.

Figure 3 also illustrates how the differences observed in mental health are substantively small. The predicted mean scores vary between 1.8 and 2.2 at age 42 and between 1.2 and 1.7 at age 50, on a scale ranging from 0 to 9 where scores of 4 and above indicate 'high' malaise. This finding is likely a reflection of the relatively low intensity of care generally provided by adult children to their parents. As can be seen from Table 1, the average hours of care provided by adult children doing 'carer' tasks ranged from just under 6 hours per week at age 38 to 13 hours per week among only children at age 55. The literature on mental health and wellbeing among carers has generally pointed to detrimental effects particularly of high-intensity caregiving (Bom et al., 2019). As there are few high-intensity caregivers in our samples, the negative but relatively weak associations found are thus consistent with prior research.

Discussion

The confluence of increasing longevity, declining family sizes and projected informal care gap raises concerns about the future demands on a potentially shrinking pool of kin carers. Prior research on the parent-care patterns of only children suggests that they might provide more help to their parents compared to their counterparts with siblings, but evidence is limited (in the periods and geographical contexts covered) and mixed. Given demographic trends pointing towards both increased longevity alongside reliance on informal carers to support older people as well as an

increasing proportion of only children in several countries, it is necessary to further investigate caregiving patterns amongst only children. In this study, we contribute to closing this gap in knowledge by analysing parent-care patterns among only children and those with siblings across the full range of the middle adulthood life stage when informal caregiving tends to peak. We focus on the UK, a context that relies heavily on informal care.

We found that, on average, only children were more likely to provide parent-care and that the difference in caregiving by sibling status increased across the ages studied. At all the ages analysed, only children were more likely than those with siblings to provide care and/or help to their parent(s) and at ages 55 and 63 only children were substantially more likely to be parent-carers. Among helpers and carers, differences by sibling status in the intensity (time spent assisting a parent per week) were almost non-existent until age 55 when the difference became larger, although still not statistically significant at conventional levels. Overall, the results point to an increasing involvement in parent-care for only children in middle-adulthood and could suggest that the 'peak' informal care years might be more intense and last longer for only children. Although informal care may be both expected and preferred by many older people and their families, in institutional contexts that rely heavily on kin for elder care a concern is that informal care could represent a burden for only children with ageing parents. In the context of shrinking family size, more universal formal care would ensure that, irrespective of the size of the kin network, caregiving does not interfere with other aspects and quality of life (e.g. social, employment and leisure). More universal formal care could also help ensure that older people in need of additional help and support in daily life are not disadvantaged if they have one child only, or none at all, which this research has not been able to look at directly but which represents a fruitful avenue for future research.

Consistent with prior research (e.g. Coward & Dwyer, 1990; Grigoryeva, 2017), we also found that parent-care is strongly gendered, in addition to being patterned by sibling status. Only sons provide more care than sons with siblings: at age 55 they reported on average over seven hours per week and approaching the care intensity reported by some daughters with brothers. Nonetheless, we find that gender and sibling status do not interact in a formal statistical sense as the association between gender and caregiving does not differ by sibling status. The balance of proportions

doing helping tasks only versus care among only sons is more similar to other men than to any of the groups of women. Further, at no age were only sons more likely to provide care, nor did they report higher intensity on average, than any of the groups of women. Thus, while having no siblings is associated with greater caregiving demands on both women and men, it seems that gender is an even more powerful determinant than sibling status. This finding is consistent with earlier findings in the US context (Coward & Dwyer, 1990).

However, when interpreting these findings, it is important to highlight that the concept of 'care' is itself a gendered construction. Qualitative research with sons suggests substantively different caregiving to that described by daughters (Matthews & Heidorn, 1998) and criticizes the literature for taking daughters' approach as the yardstick of what counts as care. Therefore, whilst interpreting the results, we need to bear in mind that without direct information on parental care needs, our distinction between caring and helping may reinforce the gendered conceptualisation of care and consequently the gender differences we observe may in part be an artefact of what we 'count' as care. Indeed, the higher rates of 'helping' among men should not be dismissed. As a counter-point, however, gender differences in type and intensity of care have been found to be smaller among spousal carers than among adult children, with many male spousal carers undertaking gender-atypical household and care activities (Arber & Ginn, 1995; Milligan & Morbey, 2016). Further, similarly gendered patterns also emerged in our analysis of the time devoted to helping and/or caring which is not attributable to how tasks are categorised.

To our knowledge, this is the first study to have examined the association between caregiving and mental health and wellbeing by sibling status. Our analysis was informed by prior studies finding that larger care networks are linked to less caregiver stress and that being a (presumed) sole caregiver is linked to poorer mental health (Heger, 2017; Tolkacheva et al., 2011), neither of which had focused specifically on only children. We found that both care status and intensity were statistically significantly associated with worse mental health and wellbeing but also that these differences were substantively small. We interpret this as a reflection of the relatively low intensity of care provided by most adult children to their parents, rather than something inherently different about parent-care compared to informal care for other recipients, and thus consistent with prior research.

We found no evidence that the association between caregiving and wellbeing differs by sibling status. Thus, while as a group only children are more likely to provide parent-care and this is linked to somewhat lower wellbeing, we do not find evidence that their wellbeing is additionally affected by being an only child caregiver for ageing parents. However, the results need to be interpreted cautiously since we compare the wellbeing of these groups at a given point in time only. In fact, we do not observe baseline levels of wellbeing and thus we have not been able to test whether, and if so to what extent, the wellbeing of only children has decreased as a result of the onset of caregiving.

There are some limitations to our study. First, the cohort data allowed us to identify only children and observe care at different ages but we do not have parent-care measures at the same ages for the different cohorts. Because of the nature of parent-care, a role that may emerge as parents age, the patterns are logically consistent with an age effect. However, ages 38, 50 and 63 in this paper refer to data collections that correspond to roughly the same calendar year (2008/2009) for cohorts born 12 years apart. When setting our analysis inclusion criteria of having at least one living parent we noted that parental mortality differs slightly between these cohorts, suggesting that parental care needs may well also differ.[4] On the other hand, the proportion of only children was fairly similar across the cohorts suggesting the selection into being an only child is unlikely to have changed and thus any parental differences across cohorts should not differentially affect only children and those with siblings. Further, although our analysis described caregiving patterns at multiple ages, we were not able to track individual caregiving trajectories. If one way that siblings can share care is by taking turns being ‘main carer’ (Szinovacz & Davey, 2013), future research could investigate whether caregiving only children do so over a longer duration, and how this might affect their mental health, employment and other outcomes over time.

[4] For example, at age 42 95% of both only children and those with siblings born in 1970 had at least one living parent, while among those born in 1958 at the same age the corresponding figure was 87% of only children and 89% of those with siblings. At age 55, 54% of only children and 62% of those with siblings born in 1958 had at least one living parent, while the corresponding figures for those born in 1946, at the slightly earlier age of 53, were 55% of only children and 51% of those with siblings.

Second, we lack information on the caregiving behaviour of all siblings in a family and whether the assistance parents receive meets their needs and preferences. Interestingly, recent analysis of care received by elderly parents, using data from other European countries with information on multiple sources of care, also suggests that among adult children gender outweighs sibling status in regard to caregiving (Batur van Liempt, Vergauwen, & Mortelmans, 2020). Individuals tend to over-estimate the likelihood of receiving informal care, with a majority of people expecting to receive care from their child(ren), and a non-negligible minority have needs that are not entirely met (Abrahamson et al., 2017; Desai, Lentzner, & Weeks, 2001). Future research could thus explore whether unmet care needs in older age vary by completed family size and composition.

Third, we observe that providing care does not have a differential effect on the wellbeing of only children, but we are unable to tell if providing care has had a negative effect on their wellbeing given their baseline levels. Future research could address this limitation by comparing the wellbeing of adult only children and with siblings before and after the onset of care provision.

Despite these limitations, our analysis contributes to the literature on parent-care by being the first to analyse caregiving at different ages through the peak life course stage and to investigate the association between caregiving and mental health by sibling status. Moreover, we add to the literature on only children, which has hitherto focused largely on the childhood stage and has argued that only children fare better compared to children from large families (and similar to children from small families) because they benefit from greater parental resources. We challenge this view by showing that later in the life course adult only children experience a concentration of parental needs rather than resources. Therefore, in middle adulthood and in the context of parent-care the ‘siblings as resources’ could be a more fitting explanation for differences between only children and those with siblings. As the results suggest that the theories proposed for childhood reverse in adulthood, there is need to expand the literature which has primarily looked at the childhood period to examine other aspects of the life and wellbeing of only children to further our understanding of this growing demographic sub-group.

References

Abrahamson, K., Hass, Z., & Sands, L. (2017). Likelihood that expectations of informal care will be met at onset of caregiving need: a retrospective study of older adults in the USA. *BMJ Open, 7*(12), e017791. doi:10.1136/bmjopen-2017-017791

Arber, S., & Ginn, J. (1995). Gender differences in informal caring. *Health & Social Care in the Community, 3*(1), 19-31. doi:10.1111/j.1365-2524.1995.tb00003.x

Batur van Liempt, Z., Vergauwen, J., & Mortelmans, D. (2020). *Gender Composition of Adult Children of Care Regimes from a Care Network Perspective. Conference presentation.* Paper presented at the British Society for Population Studies Annual Conference.

Blake, J. (1981). Family size and the quality of children. *Demography, 18*(4), 421-442. doi:10.2307/2060941

Bom, J., Bakx, P., Schut, F., & van Doorslaer, E. (2019). The Impact of Informal Caregiving for Older Adults on the Health of Various Types of Caregivers: A Systematic Review. *The gerontologist, 59*(5), e629-e642. doi:10.1093/geront/gny137

Brenna, E., & Novi, C. (2016). Is caring for older parents detrimental to women's mental health? The role of the European North–South gradient. *Review of Economics of the Household, 14*(4), 745-778. doi:10.1007/s11150-015-9296-7

Breton, D., & Prioux, F. (2009). The one-child family: France in the European context. *Demographic Research, 20*, 657-691. doi:10.4054/DemRes.2009.20.27

Cangiano, A. (2014). Elder Care and Migrant Labor in Europe: A Demographic Outlook. *Population and Development Review, 40*(1), 131-154. doi:10.1111/j.1728-4457.2014.00653.x

Carpenter, J., & Kenward, M. (2012). *Multiple Imputation and its Application* (1. Aufl. ed.). Hoboken: Hoboken: Wiley.

Choi, S., & Monden, C. (2019). *Where It Matters to Be the Only One: School Performance Outcomes of Only-children Across 31 Countries*. SocArXiv.

CLS. (2012). *National Child Development Study: Sweep 8, 2008-2009. 3rd Edition. University of London, Institute of Education, Centre for Longitudinal Studies. UK Data Service. [data collection]. http://doi.org/10.5255/UKDA-SN-6137-2*.

CLS. (2015). *National Child Development Study: Sweep 9, 2013. [data collection]. University of London, Institute of Education, Centre for Longitudinal Studies. UK Data Service. SN: 7669, http://doi.org/10.5255/UKDA-SN-7669-1*.

CLS. (2016). *1970 British Cohort Study: Forty-Two-Year Follow-Up, 2012. [data collection]. 2nd Edition. University of London, Institute of Education, Centre for Longitudinal Studies. UK Data Service. SN: 7473, http://doi.org/10.5255/UKDA-SN-7473-2*.

CLS. (2019). *1970 British Cohort Study: Thirty-Eight-Year Follow-Up, 2008-2009. [data collection]. 5th Edition. University of London, Institute of Education, Centre for Longitudinal Studies. UK Data Service. SN: 6557, http://doi.org/10.5255/UKDA-SN-6557-4*.

Coward, R. T., & Dwyer, J. W. (1990). The Association of Gender, Sibling Network Composition, and Patterns of Parent Care by Adult Children. *Research on Aging, 12*(2), 158-181. doi:10.1177/0164027590122002

Dahlberg, L., Demack, S., & Bambra, C. (2007). Age and gender of informal carers: a population-based study in the UK. *Health & Social Care in the Community, 15*(5), 439-445. doi:10.1111/j.1365-2524.2007.00702.x

Desai, M. M., Lentzner, H. R., & Weeks, J. D. (2001). Unmet need for personal assistance with activities of daily living among older adults. *GERONTOLOGIST, 41*(1), 82-88. doi:10.1093/geront/41.1.82

Douglas, J., Wadsworth, M., & Kuh, D. (2015). *MRC NSHD 1946-2005 Data*.

Downey, D. B. (1995). When Bigger Is Not Better: Family Size, Parental Resources, and Children's Educational Performance. *American Sociological Review, 60*(5), 746-761. doi:10.2307/2096320

Downey, D. B., & Condron, D. J. (2004). Playing Well with Others in Kindergarten: The Benefit of Siblings at Home. *Journal of Marriage and Family, 66*(2), 333-350. doi:10.1111/j.1741-3737.2004.00024.x

Dwyer, J. W., & Coward, R. T. (1991). A multivariate comparison of the involvement of adult sons versus daughters in the care of impaired parents. *Journal of Gerontology, 46*(5), S259. doi:10.1093/geronj/46.5.S259

Falbo, T. (2012). Only Children: An Updated Review. *Journal of Individual Psychology, 68*(1), 38-49.

Falbo, T., & Dudley, L. P. (1993). The Academic, Personality, and Physical Outcomes of Only Children in China. *Child Development, 64*(1), 18-35. doi:10.1111/j.1467-8624.1993.tb02893.x

Falbo, T., & Polit, D. F. (1986). Quantitative Review of the Only Child Literature: Research Evidence and Theory Development. *Psychological Bulletin, 100*(2), 176-189. doi:10.1037/0033-2909.100.2.176

Frejka, T. (2008). Parity distribution and completed family size in Europe: Incipient decline of the two-child family model? *Demographic Research, 19*, 47-71.

Frejka, T., Jones, G. W., & Sardon, J. P. (2010). East Asian Childbearing Patterns and Policy Developments. *Population and Development Review, 36*(3), 579-606. doi:10.1111/j.1728-4457.2010.00347.x

Goetting, A. (1986). The Developmental Tasks of Siblingship over the Life Cycle. *Journal of marriage and the family, 48*(4), 703. doi:10.2307/352563

Gomez-Leon, M., Evandrou, M., Falkingham, J., & Vlachantoni, A. (2019). The dynamics of social care and employment in mid-life. *Ageing and Society, 39*(2), 381. doi:10.1017/S0144686X17000964

Grigoryeva, A. (2017). Own Gender, Sibling's Gender, Parent's Gender: The Division of Elderly Parent Care among Adult Children. *American Sociological Review, 82*(1), 116-146. doi:10.1177/0003122416686521

Heger, D. (2017). The Mental Health of Children Providing Care to their Elderly Parent. *Health Economics, 26*(12), 1617-1629. doi:10.1002/hec.3457

Henz, U. (2009). Couples' provision of informal care for parents and parents-in-law: far from sharing equally? *Ageing and Society, 29*(3), 369-395. doi:10.1017/S0144686X08008155

Henz, U. (2010). Parent Care as Unpaid Family Labor: How Do Spouses Share? *Journal of Marriage and Family, 72*(1), 148-164. doi:10.1111/j.1741-3737.2009.00689.x

Jefferies, J. (2001). *A Reluctance to Embrace the One-Child Family in Britain?* Retrieved from https://www.demogr.mpg.de/Papers/workshops/010623_paper05.pdf

Kalmijn, M. (2007). Gender Differences in the Effects of Divorce, Widowhood and Remarriage on Intergenerational Support: Does Marriage Protect Fathers? *Social Forces, 85*(3), 1079-1104. doi:10.1353/sof.2007.0043

Kenny, P., King, M. T., & Hall, J. (2014). The physical functioning and mental health of informal carers: evidence of care-giving impacts from an Australian population-based cohort. *Health & Social Care in the Community, 22*(6), 646-659. doi:10.1111/hsc.12136

Kingston, A., Comas-Herrera, A., & Jagger, C. (2018). Forecasting the care needs of the older population in England over the next 20 years: estimates from the Population Ageing and Care Simulation (PACSim) modelling study. *The Lancet Public Health, 3*(9), e447-e455. doi:10.1016/S2468-2667(18)30118-X

Kuh, D., Hardy, R., Richards, M., & Wadsworth, M. (2015). *MRC NSHD 2006-2012 Data*.

Matthews, S., & Heidorn, J. (1998). Meeting filial responsibilities in brothers-only sibling groups. *The journals of gerontology, 53*(5), S278-S286. doi:10.1093/geronb/53B.5.S278

Mellor, S. (1990). How Do Only Children Differ from Other Children? *The Journal of Genetic Psychology, 151*(2), 221-230. doi:10.1080/00221325.1990.9914656

Milligan, C., & Morbey, H. (2016). Care, coping and identity: Older men's experiences of spousal care-giving. *Journal of Aging Studies, 38*, 105-114. doi:10.1016/j.jaging.2016.05.002

Moen, P., Robison, J., & Fields, V. (1994). Women's work and caregiving roles - A life-course approach. *Journal of Gerontology, 49*(4), S176-S186. doi:10.1093/geronj/49.4.S176

Mostafa, T., Narayanan, M., Pongiglione, B., Dodgeon, B., Goodman, A., Silverwood, R., & Ploubidis, G. (2020). *Improving the plausibility of the missing at random assumption in the 1958 British birth cohort: A pragmatic data driven approach*. Retrieved from London: https://cls.ucl.ac.uk/wp-content/uploads/2020/04/CLS-working-paper-2020-6-Improving-the-plausibility-of-the-missing-at-random-assumption-in-the-1958-British-birth-cohort.pdf

Mostafa, T., & Wiggins, R. D. (2014). *Handling attrition and non-response in the 1970 British Cohort Study*. Retrieved from https://cls.ucl.ac.uk/wp-content/uploads/2017/04/CLS-WP-2014-2.pdf

Ogg, J. I. M., & Renaut, S. (2006). The support of parents in old age by those born during 1945-1954: a European perspective. *Ageing and Society, 26*(5), 723-743. doi:10.1017/S0144686X06004922

Parr, N. (2007). Which women stop at one child in Australia? *Journal of Population Research, 24*(2), 207-225. doi:10.1007/BF03031931

Pearlin, L., Mullan, J., Semple, S., & Skaff, M. (1990). Caregiving and the Stress Process: An Overview of Concepts and Their Measures. *GERONTOLOGIST, 30*(5), 583. doi:10.1093/geront/30.5.583

Pickard, L. (2015). A growing care gap? The supply of unpaid care for older people by their adult children in England to 2032. *Ageing and Society, 35*(1), 96-123. doi:10.1017/S0144686X13000512

Pickard, L., Wittenberg, R., Comas-Herrera, A., King, D., & Malley, J. (2007). Care by Spouses, Care by Children: Projections of Informal Care for Older People in England to 2031. *Social Policy and Society, 6*(3), 353-366. doi:10.1017/S1474746407003685

Pinquart, M., & Sörensen, S. (2003a). Associations of stressors and uplifts of caregiving with caregiver burden and depressive Mood: A meta-analysis. *The journals of gerontology, 58*(2), P112-128. doi:10.1093/geronb/58.2.P112

Pinquart, M., & Sörensen, S. (2003b). Differences Between Caregivers and Noncaregivers in Psychological Health and Physical Health: A Meta-Analysis. *Psychology and Aging, 18*(2), 250-267. doi:10.1037/0882-7974.18.2.250

Pinquart, M., & Sörensen, S. (2006). Gender differences in caregiver stressors, social resources, and health: an updated meta-analysis. *The journals of gerontology. Series B, Psychological sciences and social sciences, 61*(1), P33. doi:10.1093/geronb/61.1.P33

Polit, D. F., & Falbo, T. (1987). Only Children and Personality Development: A Quantitative Review. *Journal of Marriage and Family, 49*(2), 309-325. doi:10.2307/352302

Rainer, H., & Siedler, T. (2012). Family Location and Caregiving Patterns from an International Perspective. *Population and Development Review, 38*(2), 337-351. doi:10.1111/j.1728-4457.2012.00495.x

Robertson, R., Gregory, S., & Jabbal, J. (2014). *The social care and health system of nine countries*. Retrieved from https://www.kingsfund.org.uk/sites/default/files/media/commission-background-paper-social-care-health-system-other-countries.pdf

Silverwood, R., Narayanan, M., Dodgeon, B., & Ploubidis, G. (2020). *Handling missing data in the National Child Development Study: User guide*. UCL Centre for Longitudinal Studies. London. Retrieved from https://cls.ucl.ac.uk/wp-content/uploads/2020/04/Handling-missing-data-in-the-National-Child-Development-Study-User-Guide.pdf

Spitze, G., & Logan, J. R. (1991). Sibling structure and intergenerational relations. *Journal of marriage and the family, 53*(4), 871-884. doi:10.2307/352994

Steelman, L. C., Powell, B., Werum, R., & Carter, S. (2002). Reconsidering the Effects of Sibling Configuration: Recent Advances and Challenges. *Annual Review of Sociology, 28*(1), 243-269. doi:10.1146/annurev.soc.28.111301.093304

Stuifbergen, M. C., Van Delden, J. J. M., & Dykstra, P. A. (2008). The implications of today's family structures for support giving to older parents. *Ageing and Society, 28*(3), 413-434. doi:10.1017/S0144686X07006666

Szinovacz, M., & Davey, A. (2008). The division of parent care between spouses. *Ageing and Society, 28*(4), 571-597. doi:10.1017/S0144686X07006915

Szinovacz, M., & Davey, A. (2013). Changes in adult children's participation in parent care. *Ageing and society., 33*, 667-697. doi:10.1017/S0144686X12000177

Tolkacheva, N., Van Groenou, M. B., De Boer, A., & Van Tilburg, T. (2011). The impact of informal care-giving networks on adult children's care-giver burden. *Ageing and Society, 31*(1), 34-51. doi:10.1017/S0144686X10000711

Vergauwen, J., & Mortelmans, D. (2019). An integrative analysis of sibling influences on adult children's care-giving for parents. *Ageing and Society*, 1-25. doi:10.1017/S0144686X19001156

Vlachantoni, A. (2019). Unmet need for social care among older people. *Ageing and Society, 39*(4), 657-684. doi:10.1017/S0144686X17001118

Vlachantoni, A., Shaw, R., Willis, R., Evandrou, M., Falkingham, J., & Luff, R. (2011). Measuring unmet need for social care amongst older people. *Population Trends*(145), 60-72.

Wolf, D., Raissian, K., & Grundy, E. (2015). Parental disability, parent care, and offspring mental health outcomes. *European Journal of Ageing, 12*(3), 175-185. doi:10.1007/s10433-015-0339-y

Appendix Tables

Table A1 Analysis sample: Comparison of complete cases and multiple imputation sample sizes

		Participated in Wave	Reported at least 1 living parent*	Non-missing on sibling status & caregiving status	Complete cases: Non-missing on all covariates	Original sample size**	Emigrated or died***	Reported no living parent*	MI sample
1970	38	8,874	8,167	7,161	6,332	18,637	1,346	36	17,255
	42	9,841	9,213	8,037	6,986	18,637	1,406	528	16,703
1958	50	9,790	7,093	5,845	4,073	18,558	2,752	3,031	12,775
	55	9,137	5,530	4,503	3,148	18,558	2,945	4,274	11,339
1946	63	2,662	459	435	364	5,362	732	2,266	2,364

* Reported at any data collection sweep up to and including the sweep analysed. Questions asked at ages: 30, 38 & 42 (1970); 42, 46, 50 & 55 (1958) and 53 & 63 (1946).

** Present in the outcome file and non-missing on cohort member sex

*** Emigration or cohort member death not available for 1946 cohort; we exclude individuals who have not participated in the study since age 16.

Table A2 Summary statistics of cohorts

		1970 Cohort				1958 Cohort				1946 Cohort	
	Age	38		42		50		55		62	
		Only %	Sibling %	Only %	Sibling %	Only %	Sibling %	Only %	Sibling %	Only %	Sibling %
Sex	Men	49.6	51.5			51.1	51.7			56.1	56.1
	Women	50.4	48.5			48.9	48.3			43.9	53.3
Moved since childhood	Same region	74.4	75.9	74.9	75.4	74.9	73.1	73.5	72.1	53.4	54.5
	Different region	25.6	24.1	25.1	24.6	25.1	26.9	26.5	27.9	46.6	45.5
Parent alive	Both	62.3	67.0	59.4	64.6	32.4	38.3	26.5	28.0	23.0	11.2
	Mother	22.6	20.5	31.5	26.7	48.5	47.0	52.1	54.6	65.1	74.2
	Father	15.1	12.5	9.1	8.7	19.1	14.7	21.4	17.4	11.8	14.6
Co-reside with parent	No	91.3	92.6	92.2	93.7	93.0	95.5	90.1	95.3		
	Yes	8.7	7.4	7.8	6.3	7.0	4.5	9.9	4.7		
Earlier relationship with parent*	Very close	56.8	58.5			51.3	47.5				
	Close	33.9	34.4			40.9	40.6				
	Not close/No contact	9.3	7.1			7.8	11.9				
Mother's age	<=24	57.0	44.1			36.7	45.0			36.7	33.1
	25-29	25.0	31.5			35.2	34.1			35.8	32.4
	30-34	10.9	15.8			19.2	18.3			17.5	23.0
	35+	7.0	8.6			8.8	8.8			10.0	11.5
Mother's age at cohort member's birth in years	(mean)	24.56	26.10			26.74	26.60				
	Total (row %)	9.8	90.2			7.3	92.7			15.1	84.9

Note: The minor within-cohort age differences may be due to changing sample composition (sample inclusion criteria is having at least one surviving parent), as well as individual changes over time. * Relationship closeness to parent(s) asked at an earlier sweep of data collection in the 1970 and 1958 cohort studies (age 30 and 42 respectively).

Table A3 Percentage reporting doing each task for a parent regularly or frequently, by sibling status

	1970 cohort				1958 cohort			
	38		42		50		55	
	Only %	Sibling %	Only %	Sibling %	Only %	Sibling %	Only %	Sibling %
Lifts in car	28.0	26.7	34.4	33.3	42.3	34.8	59.3	45.1
Shopping for them	20.8	19.5	25.6	25.5	37.2	29.4	53.7	38.7
Providing/ cooking meals	14.5	11.8	17.0	15.4	17.8	15.2	28.0	23.1
Helps with basic personal needs	3.6	2.9	3.9	4.1	4.9	5.3	10.9	9.4
Washing, ironing or cleaning	8.1	7.6	10.0	9.4	12.0	10.0	23.9	17.7
Personal Affairs	11.9	11.3	19.4	18.5	35.0	23.5	43.6	30.0
Decorating, gardening or repairs	18.9	18.5	31.0	27.9	34.4	29.3	42.0	35.0
Financial help	6.9	7.2			13.5	7.6	15.7	10.9
Other help	1.7	2.8	14.6	14.6	11.2	10.4	10.9	10.9

Table A4 Multinomial and Binary Regression: Parent care provision

1970 Age 38	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Only Child (Ref=Sibling)	0.84	0.10	0.15	0.66 - 1.07	1.20	0.14	0.11	0.96 - 1.50	0.92	0.12	0.49	0.71 - 1.18	1.27	0.16	0.06	0.99 - 1.64
Female (Ref=Male)									1.01	0.06	0.91	0.90 - 1.12	1.73	0.15	0.00	1.45 - 2.06
Mother's age									1.04	0.01	0.00	1.03 - 1.05	1.05	0.01	0.00	1.03 - 1.06
Parental social: II (Ref: I)									1.32	0.22	0.09	0.96 - 1.82	1.27	0.25	0.24	0.86 - 1.88
III non-manual									1.54	0.26	0.01	1.11 - 2.13	1.28	0.27	0.24	0.85 - 1.94
IV manual									1.68	0.26	0.00	1.24 - 2.28	1.61	0.32	0.02	1.09 - 2.36
V									1.99	0.34	0.00	1.43 - 2.77	1.81	0.37	0.00	1.20 - 2.71
VI									2.47	0.49	0.00	1.67 - 3.63	2.66	0.70	0.00	1.59 - 4.45
Not available/ Unemp.									2.35	1.19	0.09	0.87 - 6.34	2.02	1.04	0.17	0.73 - 5.56
Mother stayed in school (Ref: Left)									0.75	0.04	0.00	0.66 - 0.84	0.73	0.06	0.00	0.62 - 0.86
Parental separation = Yes (Ref: No)									1.02	0.07	0.77	0.90 - 1.16	1.12	0.10	0.22	0.93 - 1.34
CM Highest NVQ Level = NVQ1 level (Ref: No qua)									1.10	0.16	0.51	0.83 - 1.45	1.08	0.20	0.67	0.75 - 1.57
NVQ2 level									1.08	0.13	0.53	0.85 - 1.35	1.15	0.17	0.34	0.86 - 1.54
NVQ3 level									1.07	0.14	0.61	0.83 - 1.38	1.12	0.19	0.52	0.79 - 1.57
NVQ4 level									1.01	0.13	0.92	0.79 - 1.30	1.13	0.18	0.46	0.82 - 1.55
NVQ5 level									0.78	0.13	0.14	0.56 - 1.09	1.02	0.21	0.93	0.68 - 1.53
CM occupation = Professionals (Ref: Managers)									0.90	0.10	0.35	0.72 - 1.12	0.85	0.13	0.29	0.63 - 1.15
Associate prof. & technical									0.92	0.08	0.36	0.77 - 1.10	0.85	0.10	0.17	0.67 - 1.07
Administrative & secretarial									1.01	0.10	0.94	0.83 - 1.23	1.07	0.14	0.59	0.84 - 1.37
Skilled trades									1.26	0.13	0.03	1.03 - 1.55	1.13	0.18	0.46	0.82 - 1.55

1970 Age 38	Multinomial logistic regression - Base category: No help Unadjusted Helper				Carer				Fully adjusted Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Personal services									0.99	0.11	0.91	0.79 - 1.24	1.20	0.17	0.20	0.91 - 1.59
Sales & customer services									1.05	0.16	0.75	0.78 - 1.41	1.60	0.30	0.01	1.10 - 2.31
Process, plant & machine									1.31	0.16	0.03	1.03 - 1.67	1.39	0.21	0.03	1.04 - 1.88
Elementary operations									1.10	0.14	0.49	0.85 - 1.42	1.07	0.18	0.69	0.77 - 1.49
Marital status = Cohabiting (Ref: Married)									1.10	0.08	0.21	0.95 - 1.28	1.00	0.11	0.98	0.81 - 1.23
Not living with a partner									1.19	0.08	0.01	1.05 - 1.36	1.82	0.15	0.00	1.55 - 2.13
Region different than age 10 = Yes (Ref=Same)									0.48	0.03	0.00	0.42 - 0.55	0.43	0.04	0.00	0.36 - 0.52
Which parent alive = Mother (Ref: Both)									1.93	0.16	0.00	1.65 - 2.27	2.70	0.26	0.00	2.23 - 3.27
Father									0.96	0.09	0.68	0.80 - 1.16	4.20	0.44	0.00	3.42 - 5.16
Constant	0.39	0.01	0.00	0.36 - 0.41	0.23	0.01	0.00	0.21 - 0.24	0.08	0.02	0.00	0.05 - 0.13	0.02	0.01	0.00	0.01 - 0.03
Observations	17,255								17,255							

1970 Age 42	Multinomial logistic regression - Base category: No help Unadjusted Helper				Carer				Fully adjusted Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Only Child (Ref=Sibling)	1.11	0.11	0.27	0.92 - 1.35	1.17	0.13	0.16	0.94 - 1.45	1.21	0.12	0.05	1.00 - 1.46	1.30	0.15	0.02	1.03 - 1.63
Female (Ref=Male)									0.82	0.05	0.00	0.73 - 0.92	1.34	0.10	0.00	1.16 - 1.56
Mother's age									1.04	0.01	0.00	1.03 - 1.05	1.06	0.01	0.00	1.05 - 1.07

1970 Age 42	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Parental social: II (Ref: I)									1.15	0.17	0.32	0.87 - 1.53	1.22	0.21	0.25	0.87 - 1.71
III non-manual									1.37	0.19	0.02	1.05 - 1.80	1.19	0.21	0.33	0.84 - 1.70
IV manual									1.45	0.19	0.00	1.13 - 1.87	1.55	0.25	0.01	1.13 - 2.12
V									1.62	0.23	0.00	1.23 - 2.15	1.94	0.33	0.00	1.39 - 2.71
VI									1.66	0.30	0.01	1.16 - 2.37	2.56	0.52	0.00	1.72 - 3.82
Not available/ Unemp.									1.93	0.84	0.13	0.82 - 4.52	3.41	1.59	0.01	1.37 - 8.49
Mother stayed in school (Ref: Left)									0.76	0.04	0.00	0.68 - 0.85	0.81	0.06	0.00	0.71 - 0.93
Parental separation = Yes (Ref: No)									1.12	0.07	0.09	0.98 - 1.27	1.05	0.07	0.44	0.92 - 1.21
CM Highest NVQ Level = NVQ1 level (Ref: No qua)									1.27	0.19	0.12	0.94 - 1.70	0.88	0.15	0.46	0.64 - 1.22
NVQ2 level									1.36	0.17	0.01	1.07 - 1.73	0.95	0.12	0.68	0.73 - 1.23
NVQ3 level									1.37	0.18	0.01	1.07 - 1.77	1.09	0.16	0.56	0.82 - 1.44
NVQ4 level									1.18	0.14	0.15	0.94 - 1.49	0.84	0.11	0.21	0.65 - 1.10
NVQ5 level									0.95	0.14	0.73	0.71 - 1.27	0.81	0.15	0.24	0.56 - 1.15
CM occupation = Professionals (Ref: Managers)									1.08	0.11	0.46	0.89 - 1.31	0.97	0.12	0.81	0.76 - 1.24
Associate prof. & technical									1.04	0.08	0.61	0.89 - 1.22	0.98	0.10	0.85	0.81 - 1.19
Administrative & secretarial									1.06	0.10	0.54	0.88 - 1.26	1.03	0.12	0.82	0.81 - 1.30
Skilled trades									1.40	0.13	0.00	1.16 - 1.69	1.16	0.13	0.18	0.93 - 1.45
Personal services									0.88	0.10	0.24	0.71 - 1.09	1.19	0.15	0.16	0.94 - 1.52
Sales & customer services									1.31	0.16	0.03	1.03 - 1.65	1.28	0.20	0.11	0.95 - 1.74
Process, plant & machine									1.53	0.18	0.00	1.21 - 1.92	1.59	0.26	0.00	1.16 - 2.20

1970 Age 42	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Elementary operations									1.31	0.17	0.03	1.03 - 1.68	1.32	0.18	0.04	1.01 - 1.72
Marital status = Cohabiting (Ref: Married)									1.03	0.08	0.73	0.88 - 1.20	1.00	0.10	0.99	0.83 - 1.21
Not living with a partner									0.85	0.05	0.01	0.75 - 0.96	1.22	0.08	0.00	1.07 - 1.39
Region different than age 10 = Yes (Ref=Same)									0.56	0.04	0.00	0.50 - 0.64	0.54	0.04	0.00	0.46 - 0.62
Which parent alive = Mother (Ref: Both)									1.60	0.10	0.00	1.43 - 1.80	1.72	0.12	0.00	1.50 - 1.98
Father									0.71	0.07	0.00	0.58 - 0.87	1.30	0.12	0.01	1.08 - 1.56
Constant	0.65	0.02	0.00	0.62 - 0.69	0.38	0.01	0.00	0.36 - 0.41	0.16	0.04	0.00	0.10 - 0.25	0.04	0.01	0.00	0.02 - 0.06
Observations	16,703								16,703							

1958 Age 50	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Only Child (Ref=Sibling)	1.47	0.16	0.00	1.18 - 1.83	1.39	0.18	0.01	1.07 - 1.81	1.52	0.18	0.00	1.21 - 1.92	1.41	0.20	0.02	1.06 - 1.86
Female (Ref=Male)									0.80	0.06	0.00	0.69 - 0.92	2.13	0.18	0.00	1.81 - 2.50
Mother's age									1.05	0.01	0.00	1.04 - 1.06	1.12	0.01	0.00	1.11 - 1.14
Parental social: II (Ref: I)									1.21	0.18	0.20	0.90 - 1.63	0.94	0.17	0.72	0.66 - 1.33
III non-manual									1.52	0.26	0.01	1.09 - 2.11	0.96	0.19	0.83	0.64 - 1.42
IV manual									1.51	0.23	0.01	1.13 - 2.03	1.25	0.22	0.20	0.89 - 1.76
V									1.56	0.29	0.02	1.08 - 2.24	1.29	0.27	0.23	0.85 - 1.95
VI									1.83	0.34	0.00	1.27 - 2.64	1.90	0.39	0.00	1.27 - 2.86

1958 Age 50	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Mother stayed in school (Ref: Left)									0.87	0.06	0.06	0.75 - 1.01	0.81	0.08	0.03	0.67 - 0.98
Parental separation = Yes (Ref: No)									0.45	0.11	0.00	0.28 - 0.72	0.40	0.13	0.00	0.22 - 0.74
CM Highest NVQ Level = NVQ1 level (Ref: No qua)									1.02	0.14	0.89	0.77 - 1.35	1.12	0.18	0.48	0.82 - 1.52
NVQ2 level									1.08	0.12	0.49	0.87 - 1.34	1.15	0.14	0.25	0.91 - 1.47
NVQ3 level									1.25	0.16	0.08	0.97 - 1.61	1.07	0.16	0.65	0.80 - 1.45
NVQ4 level									1.08	0.14	0.57	0.83 - 1.39	1.06	0.16	0.70	0.79 - 1.43
NVQ5 level									1.07	0.19	0.70	0.76 - 1.52	1.07	0.21	0.74	0.72 - 1.58
CM occupation = Professionals (Ref: Managers)									0.99	0.11	0.96	0.80 - 1.24	1.09	0.17	0.60	0.79 - 1.49
Associate prof. & technical									0.81	0.09	0.07	0.64 - 1.02	0.87	0.12	0.30	0.66 - 1.14
Administrative & secretarial									1.12	0.13	0.33	0.89 - 1.39	1.02	0.15	0.91	0.76 - 1.37
Skilled trades									1.01	0.10	0.93	0.83 - 1.23	1.01	0.15	0.95	0.75 - 1.36
Personal services									1.01	0.12	0.95	0.79 - 1.28	1.14	0.18	0.41	0.83 - 1.56
Sales & customer services									0.99	0.15	0.92	0.74 - 1.32	1.01	0.18	0.98	0.71 - 1.42
Process, plant & machine									1.04	0.15	0.79	0.78 - 1.38	1.21	0.25	0.36	0.80 - 1.82
Elementary operations									1.20	0.18	0.23	0.89 - 1.60	1.17	0.24	0.43	0.79 - 1.74
Marital status = Cohabiting (Ref: Married)									0.93	0.09	0.46	0.77 - 1.12	0.71	0.09	0.01	0.55 - 0.91
Not living with a partner									0.93	0.07	0.31	0.81 - 1.07	1.32	0.11	0.00	1.12 - 1.55
Region different than age 10 = Yes (Ref=Same)									0.41	0.03	0.00	0.36 - 0.46	0.37	0.03	0.00	0.31 - 0.43

1958 Age 50	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Which parent alive = Mother (Ref: Both)									1.77	0.10	0.00	1.58 - 1.98	1.95	0.17	0.00	1.64 - 2.33
Father									0.54	0.05	0.00	0.45 - 0.65	1.13	0.12	0.26	0.92 - 1.39
Constant	0.84	0.02	0.00	0.80 - 0.89	0.44	0.01	0.00	0.42 - 0.47	0.18	0.05	0.00	0.11 - 0.31	0.01	0.00	0.00	0.00 - 0.02
Observations	12,775								12,775							

1958 Age 55	Multinomial logistic regression - Base category: No help															
	Unadjusted								Fully adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Only Child (Ref=Sibling)	1.48	0.21	0.01	1.12 - 1.96	1.64	0.23	0.00	1.24 - 2.17	1.56	0.22	0.00	1.18 - 2.07	1.78	0.28	0.00	1.31 - 2.41
Female (Ref=Male)									0.91	0.08	0.26	0.77 - 1.07	2.02	0.19	0.00	1.68 - 2.43
Mother's age									1.05	0.01	0.00	1.03 - 1.06	1.12	0.01	0.00	1.10 - 1.14
Parental social class: II (Ref: I)									1.17	0.19	0.34	0.85 - 1.62	1.22	0.24	0.32	0.82 - 1.80
III non-manual									1.07	0.19	0.71	0.76 - 1.51	1.21	0.25	0.36	0.80 - 1.81
IV manual									1.23	0.19	0.17	0.91 - 1.66	1.47	0.27	0.04	1.02 - 2.12
V									1.14	0.20	0.47	0.80 - 1.61	1.45	0.33	0.09	0.94 - 2.25
VI									1.20	0.26	0.39	0.79 - 1.83	1.75	0.37	0.01	1.15 - 2.67
Mother stayed in school (Ref: Left)									0.92	0.07	0.28	0.79 - 1.07	0.95	0.09	0.57	0.79 - 1.14
Parental separation = Yes (Ref: No)									0.38	0.11	0.00	0.21 - 0.68	0.44	0.14	0.01	0.24 - 0.81
CM Highest NVQ Level = NVQ1 level (Ref: No qua)									0.89	0.14	0.49	0.65 - 1.23	0.73	0.13	0.08	0.51 - 1.04
NVQ2 level									1.01	0.14	0.93	0.78 - 1.32	0.82	0.14	0.24	0.59 - 1.15
NVQ3 level									1.08	0.15	0.56	0.82 - 1.43	0.92	0.17	0.64	0.65 - 1.31
NVQ4 level									1.12	0.16	0.41	0.85 - 1.48	0.77	0.15	0.17	0.52 - 1.12

1958 Age 55	Multinomial logistic regression - Base category: No help Unadjusted Helper				Carer				Fully adjusted Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
NVQ5 level									1.15	0.22	0.47	0.79 - 1.69	0.76	0.18	0.24	0.49 - 1.20
CM occupation = Professionals (Ref: Managers)									0.82	0.10	0.11	0.64 - 1.05	0.92	0.14	0.59	0.68 - 1.24
Associate prof. & technical									0.66	0.08	0.00	0.52 - 0.84	0.88	0.13	0.39	0.65 - 1.18
Administrative & secretarial									1.00	0.14	0.97	0.77 - 1.31	0.99	0.15	0.97	0.74 - 1.33
Skilled trades									1.28	0.17	0.06	0.99 - 1.66	1.33	0.22	0.09	0.95 - 1.85
Personal services									0.81	0.12	0.17	0.61 - 1.09	0.88	0.16	0.48	0.61 - 1.27
Sales & customer services									1.11	0.19	0.54	0.80 - 1.54	1.16	0.22	0.43	0.80 - 1.68
Process, plant & machine									1.20	0.20	0.26	0.87 - 1.67	1.25	0.28	0.32	0.81 - 1.94
Elementary operations									0.83	0.16	0.33	0.56 - 1.21	0.92	0.18	0.68	0.63 - 1.35
Marital status = Cohabiting (Ref: Married)									0.97	0.10	0.75	0.78 - 1.19	0.88	0.12	0.32	0.68 - 1.14
Not living with a partner									0.79	0.07	0.01	0.66 - 0.94	1.38	0.12	0.00	1.16 - 1.64
Region different than age 10 = Yes (Ref=Same)									0.53	0.04	0.00	0.46 - 0.61	0.34	0.03	0.00	0.29 - 0.40
Which parent alive = Mother (Ref: Both)									1.50	0.11	0.00	1.29 - 1.74	1.66	0.14	0.00	1.40 - 1.97
Father									0.55	0.06	0.00	0.45 - 0.67	0.93	0.11	0.53	0.74 - 1.16
Constant	1.03	0.03	0.30	0.97 - 1.10	0.80	0.03	0.00	0.75 - 0.86	0.35	0.11	0.00	0.19 - 0.65	0.02	0.01	0.00	0.01 - 0.04
Observations	11,339								11,339							

Binary logistic regression - Base category: No parent care

1946 Age 63	Unadjusted				Fully adjusted			
	OR	SE	p	95% CI	OR	SE	p	95% CI
Only Child (Ref=Sibling)	1.83	0.42	0.01	1.17 - 2.88	2.08	0.62	0.01	1.16 - 3.72
Female (Ref=Male)					2.56	0.56	0.00	1.67 - 3.95
Mother's age at birth = 25-29 (Ref: <25)					1.69	0.41	0.03	1.05 - 2.71
30-34					1.13	0.34	0.69	0.62 - 2.03
35+					0.65	0.61	0.64	0.10 - 4.10
Parental social class: II (Ref: I)					0.73	0.32	0.47	0.31 - 1.73
III non-manual					0.97	0.44	0.95	0.40 - 2.35
IV manual					0.80	0.38	0.64	0.31 - 2.04
V					0.60	0.30	0.30	0.22 - 1.58
VI					0.55	0.36	0.36	0.15 - 2.01
Not available/ Unemp.					0.92	0.46	0.87	0.34 - 2.47
Mother stayed in school (Ref: Left)					0.79	0.18	0.32	0.50 - 1.25
Parental separation = Yes (Ref: No)					0.86	0.21	0.54	0.52 - 1.40
Highest Qual=Up to O-level (Ref: None)					2.38	0.78	0.01	1.25 - 4.52
Up to A-level					1.47	0.50	0.25	0.76 - 2.85
Degree or above					3.24	1.40	0.01	1.40 - 7.54
Which parent alive = Father (Ref: Mother)					1.01	0.52	0.99	0.37 - 2.76
Both					1.68	0.39	0.02	1.07 - 2.65
Region different than age 11 = Yes (Ref=Same)					0.52	0.12	0.00	0.34 - 0.80
Which parent alive = Mother (Ref: Both)					0.42	0.18	0.04	0.18 - 0.96
Father					0.46	0.18	0.05	0.21 - 1.01
Constant	0.41	0.05	0.00	0.32 - 0.53	0.27	0.14	0.01	0.09 - 0.76
Observations	2,364				2,364			

Table A5 Regression Summary - Coefficients for Only Child (ref: sibling) – Complete cases and MI

	Multinomial logistic regression - Base category: No help Complete cases: Fully adjusted								Multiple imputation: Fully Adjusted							
	Helper				Carer				Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI	RRR	SE	p	95% CI
1970 Cohort																
Age 38	0.93	0.12	0.58	0.72 - 1.20	1.22	0.20	0.23	0.89 - 1.67	0.92	0.12	0.49	0.71 - 1.18	1.27	0.16	0.06	0.99 - 1.64
Age 42	1.28	0.14	0.02	1.04 - 1.59	1.25	0.17	0.10	0.96 - 1.63	1.21	0.12	0.05	1.00 - 1.46	1.30	0.15	0.02	1.03 - 1.63
1958 Cohort																
Age 50	1.44	0.22	0.01	1.07 - 1.93	1.45	0.26	0.04	1.01 - 2.07	1.52	0.18	0.00	1.21 - 1.92	1.41	0.20	0.02	1.06 - 1.86
Age 55	1.50	0.29	0.04	1.03 - 2.19	1.52	0.33	0.05	1.00 - 2.31	1.56	0.22	0.00	1.18 - 2.07	1.78	0.28	0.00	1.31 - 2.41
	Binary logistic Regression - Base category: No parent care															
	Complete cases: Fully adjusted								Multiple imputation: Fully Adjusted							
					Carer								Carer			
					OR	SE	p	95% CI					OR	SE	p	95% CI
1946 Cohort																
Age 63					1.90	0.64	0.06	0.98 - 3.69					2.08	0.62	0.01	1.16 - 3.72
Sample n																
Age 38	6,332								17,255							
Age 42	6,986								16,703							
Age 50	4,073								12,775							
Age 55	3,148								11,339							
Age 63	364								2,364							

Notes: Fully adjusted models all control for respondent gender, maternal age at respondent's birth, maternal education, and paternal occupational class, parental separation in childhood, cohort member's level of qualification, occupation (1970 and 1958 cohorts only), and cross-regional moves between childhood and adulthood and which parent is alive.

Table A6 Linear Regression: Hours per week spent helping/caring

Linear Regression

1970 Age 38	Unadjusted				Fully adjusted			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Only Child (Ref=Sibling)	0.13	0.35	0.71	-0.55 - 0.81	0.08	0.34	0.81	-0.59 - 0.76
Female (Ref=Male)					1.07	0.23	0.00	0.63 - 1.51
Mother's age					0.00	0.02	0.85	-0.04 - 0.03
Parental social: II (Ref: I)					-0.18	0.53	0.74	-1.21 - 0.86
III non-manual					-0.25	0.56	0.66	-1.35 - 0.85
IV manual					-0.31	0.52	0.55	-1.34 - 0.71
V					0.09	0.58	0.88	-1.05 - 1.23
VI					0.19	0.61	0.75	-1.00 - 1.38
Not available/ Unemp.					-0.84	1.08	0.44	-2.95 - 1.28
Mother stayed in school (Ref: Left)					-0.32	0.19	0.10	-0.70 - 0.06
Parental separation = Yes (Ref: No)					0.27	0.20	0.18	-0.13 - 0.67
CM Highest NVQ Level = NVQ1 level (Ref: No qualification)					-0.29	0.52	0.58	-1.32 - 0.74
NVQ2 level					0.03	0.42	0.95	-0.81 - 0.86
NVQ3 level					-0.27	0.43	0.53	-1.10 - 0.57
NVQ4 level					-0.05	0.40	0.91	-0.83 - 0.73
NVQ5 level					0.71	0.60	0.23	-0.46 - 1.89
CM occupation = Professionals (Ref: Managers)					-0.57	0.42	0.17	-1.39 - 0.25
Associate prof. & technical					-0.02	0.36	0.96	-0.72 - 0.68
Administrative & secretarial					-0.07	0.36	0.84	-0.77 - 0.63
Skilled trades					0.31	0.38	0.42	-0.44 - 1.06
Personal services					0.53	0.53	0.32	-0.51 - 1.56
Sales & customer services					1.14	0.60	0.06	-0.04 - 2.32
Process, plant & machine					0.87	0.52	0.09	-0.15 - 1.89
Elementary operations					1.35	0.61	0.03	0.16 - 2.54
Marital status = Cohabiting (Ref: Married)					-0.05	0.23	0.82	-0.51 - 0.41
Not living with a partner					1.02	0.26	0.00	0.52 - 1.52
Region different than age 10 = Yes (Ref=Same)					-0.35	0.28	0.21	-0.90 - 0.19
Which parent alive = Mother (Ref: Both)					1.42	0.27	0.00	0.88 - 1.96
Father					2.00	0.46	0.00	1.10 - 2.90
Constant	3.61	0.10	0.00	3.41 - 3.80	1.97	0.76	0.01	0.47 - 3.46
Observations	11,702				11,702			

	Linear Regression							
1970 Age 42	Unadjusted				Fully adjusted			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Only Child (Ref=Sibling)	0.25	0.39	0.52	-0.50 - 1.01	0.49	0.38	0.20	-0.26 - 1.24
Female (Ref=Male)					0.95	0.20	0.00	0.55 - 1.35
Mother's age					0.08	0.02	0.00	0.04 - 0.11
Parental social: II (Ref: I)					0.14	0.49	0.78	-0.83 - 1.10
III non-manual					-0.21	0.46	0.64	-1.12 - 0.69
IV manual					0.34	0.45	0.45	-0.55 - 1.22
V					0.98	0.48	0.04	0.05 - 1.92
VI					1.07	0.65	0.10	-0.20 - 2.33
Not available/ Unemp.					1.55	1.78	0.38	-1.94 - 5.05
Mother stayed in school (Ref: Left)					-0.22	0.21	0.29	-0.63 - 0.19
Parental separation = Yes (Ref: No)					0.12	0.21	0.58	-0.30 - 0.53
CM Highest NVQ Level = NVQ1 level (Ref: No qua)					-1.47	0.68	0.03	-2.80 - -0.15
NVQ2 level					-1.51	0.58	0.01	-2.65 - -0.36
NVQ3 level					-1.76	0.56	0.00	-2.86 - -0.65
NVQ4 level					-1.52	0.58	0.01	-2.65 - -0.39
NVQ5 level					-1.76	0.63	0.01	-3.01 - -0.52
CM occupation = Professionals (Ref: Managers)					-0.22	0.32	0.49	-0.86 - 0.41
Associate prof. & technical					-0.03	0.29	0.92	-0.59 - 0.53
Administrative & secretarial					-0.35	0.32	0.27	-0.97 - 0.27
Skilled trades					0.18	0.34	0.60	-0.49 - 0.85
Personal services					0.71	0.46	0.12	-0.20 - 1.61
Sales & customer services					0.55	0.66	0.40	-0.74 - 1.84
Process, plant & machine					0.65	0.41	0.11	-0.15 - 1.45
Elementary operations					1.60	0.69	0.02	0.24 - 2.96
Marital status = Cohabiting (Ref: Married)					0.16	0.26	0.54	-0.34 - 0.66
Not living with a partner					1.29	0.24	0.00	0.82 - 1.77
Region different than age 10 = Yes (Ref=Same)					-0.37	0.26	0.15	-0.88 - 0.13
Which parent alive = Mother (Ref: Both)					0.83	0.21	0.00	0.42 - 1.23
Father					0.69	0.32	0.03	0.06 - 1.31
Constant	3.58	0.10	0.00	3.37 - 3.78	1.23	0.84	0.15	-0.43 - 2.88
Observations	12,003				12,003			

Linear Regression

1958 Age 50	Unadjusted				Fully adjusted			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Only Child (Ref=Sibling)	0.19	0.58	0.75	-0.95 - 1.32	0.31	0.55	0.58	-0.78 - 1.39
Female (Ref=Male)					2.10	0.33	0.00	1.44 - 2.75
Mother's age					0.18	0.04	0.00	0.11 - 0.25
Parental social class: II (Ref: I)					-0.11	0.74	0.88	-1.56 - 1.33
III non-manual					0.54	0.84	0.53	-1.12 - 2.19
IV manual					0.09	0.72	0.90	-1.32 - 1.50
V					0.48	0.82	0.56	-1.12 - 2.09
VI					0.99	0.96	0.30	-0.89 - 2.87
Mother stayed in school (Ref: Left)					-0.63	0.34	0.07	-1.30 - 0.04
Parental separation = Yes (Ref: No)					-0.55	1.20	0.65	-2.90 - 1.81
CM Highest NVQ Level = NVQ1 level (Ref: No qua)					-1.11	0.76	0.14	-2.59 - 0.37
NVQ2 level					-0.49	0.74	0.51	-1.93 - 0.95
NVQ3 level					-1.47	0.65	0.02	-2.74 - -0.20
NVQ4 level					-1.44	0.70	0.04	-2.82 - -0.07
NVQ5 level					-1.34	1.14	0.24	-3.58 - 0.89
CM occupation = Professionals (Ref: Managers)					0.51	0.62	0.41	-0.71 - 1.72
Associate prof. & technical					-0.45	0.53	0.39	-1.48 - 0.58
Administrative & secretarial					-0.44	0.59	0.45	-1.59 - 0.71
Skilled trades					-0.09	0.54	0.87	-1.15 - 0.97
Personal services					0.20	0.66	0.77	-1.10 - 1.49
Sales & customer services					-0.95	0.76	0.21	-2.43 - 0.53
Process, plant & machine					1.41	0.91	0.12	-0.37 - 3.20
Elementary operations					0.48	0.80	0.55	-1.10 - 2.05
Marital status = Cohabiting (Ref: Married)					-0.01	0.43	0.98	-0.86 - 0.84
Not living with a partner					3.04	0.47	0.00	2.12 - 3.96
Region different than age 10 = Yes (Ref=Same)					-0.97	0.36	0.01	-1.67 - -0.27
Which parent alive = Mother (Ref: Both)					1.29	0.35	0.00	0.59 - 1.98
Father					0.85	0.44	0.06	-0.02 - 1.73
Constant	4.57	0.17	0.00	4.24 - 4.89	-1.82	1.25	0.14	-4.27 - 0.63
Observations	9,607				9,607			

Linear Regression

1958 Age 55	Unadjusted				Fully adjusted			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Only Child (Ref=Sibling)	1.33	1.05	0.20	-0.72 - 3.39	1.54	1.00	0.12	-0.42 - 3.50
Female (Ref=Male)					2.77	0.49	0.00	1.80 - 3.74
Mother's age					0.27	0.05	0.00	0.16 - 0.37
Parental social class: II (Ref: I)					1.46	1.05	0.17	-0.60 - 3.52
III non-manual					0.93	1.10	0.40	-1.22 - 3.09
IV manual					0.46	1.01	0.65	-1.51 - 2.43
V					0.89	1.28	0.49	-1.61 - 3.39
VI					2.70	1.38	0.05	-0.01 - 5.42
Mother stayed in school (Ref: Left)					0.16	0.54	0.77	-0.89 - 1.21
Parental separation = Yes (Ref: No)					-1.97	1.78	0.27	-5.47 - 1.52
CM Highest NVQ Level = NVQ1 level (Ref: No qua)					-2.12	1.17	0.07	-4.42 - 0.18
NVQ2 level					-1.37	1.08	0.20	-3.48 - 0.74
NVQ3 level					-2.26	1.16	0.05	-4.53 - 0.01
NVQ4 level					-2.96	1.05	0.00	-5.02 - -0.90
NVQ5 level					-2.70	1.43	0.06	-5.50 - 0.11
CM occupation = Professionals (Ref: Managers)					-0.20	0.86	0.81	-1.88 - 1.48
Associate prof. & technical					1.39	0.89	0.12	-0.35 - 3.14
Administrative & secretarial					0.08	0.89	0.93	-1.66 - 1.82
Skilled trades					1.09	0.79	0.17	-0.46 - 2.64
Personal services					0.39	0.94	0.68	-1.45 - 2.24
Sales & customer services					0.83	1.23	0.50	-1.58 - 3.23
Process, plant & machine					0.90	1.12	0.42	-1.30 - 3.10
Elementary operations					1.56	1.22	0.20	-0.84 - 3.95
Marital status = Cohabiting (Ref: Married)					0.40	0.73	0.58	-1.03 - 1.83
Not living with a partner					3.87	0.66	0.00	2.56 - 5.17
Region different than age 10 = Yes (Ref=Same)					-0.85	0.65	0.19	-2.12 - 0.43
Which parent alive = Mother (Ref: Both)					1.23	0.47	0.01	0.31 - 2.16
Father					1.55	0.73	0.03	0.12 - 2.97
Constant	6.65	0.27	0.00	6.12 - 7.18	-3.23	1.94	0.10	-7.04 - 0.57
Observations	9,339				9,339			

1946 Age 63	Ordered logistic regression Unadjusted OR	SE	p	95% CI	Fully adjusted OR	SE	p	95% CI
Only Child (Ref=Sibling)	0.63	0.18	0.09	0.36 - 1.08	0.59	0.20	0.11	0.30 - 1.13
Female (Ref=Male)					2.56	0.73	0.00	1.46 - 4.47
Mother's age at birth = 25-29 (Ref: <25)					1.49	0.44	0.18	0.83 - 2.67
30-34					4.12	1.73	0.00	1.81 - 9.40
35+					1.66	1.00	0.40	0.51 - 5.42
Parental social class: II (Ref: I)					1.33	0.71	0.60	0.46 - 3.81
III non-manual					1.75	0.99	0.33	0.57 - 5.33
IV manual					2.22	1.16	0.13	0.80 - 6.18
V					2.13	1.34	0.23	0.62 - 7.32
VI					2.49	2.16	0.29	0.45 - 13.63
Not available/ Unemp.					3.64	2.74	0.09	0.83 - 15.89
Mother stayed in school (Ref: Left)					1.06	0.28	0.83	0.63 - 1.77
Parental separation = Yes (Ref: No)					1.09	0.22	0.68	0.73 - 1.63
Highest Qual=Up to O-level (Ref: None)					0.88	0.33	0.72	0.42 - 1.81
Up to A-level					0.59	0.23	0.17	0.28 - 1.26
Degree or above					1.11	0.55	0.84	0.42 - 2.95
Marital status = Cohabiting (Ref: Married)					1.15	0.60	0.78	0.42 - 3.19
Not living with a partner					1.34	0.47	0.41	0.67 - 2.67
Region different than age 11 = Yes (Ref=Same)					1.17	0.27	0.48	0.75 - 1.84
/cut1	0.53	0.08	0.00	0.40 - 0.72	2.46	1.66	0.18	0.66 - 9.22
/cut2	1.84	0.28	0.00	1.37 - 2.49	10.81	7.37	0.00	2.84 - 41.13
/cut3	4.11	0.86	0.00	2.73 - 6.19	27.49	18.88	0.00	7.15 - 105.66
Observations	2,121				2,121			

Table A7 Regression Summary - Coefficients for Only Child (ref: sibling) – Complete cases and MI

Linear regression: Hours per week spent helping/caring – Among Helpers and carers

		Complete cases				Multiple imputation			
		Coeff.	SE	p	95% CI	Coeff.	SE	p	95% CI
1970 Cohort									
	Age 38	0.48	0.36	0.18	-0.23 - 1.19	0.08	0.34	0.81	-0.59 - 0.76
	Age 42	-0.20	0.31	0.52	-0.81 - 0.41	0.49	0.38	0.20	-0.26 - 1.24
1958 Cohort									
	Age 50	-0.67	0.61	0.27	-1.86 - 0.52	0.31	0.55	0.58	-0.78 - 1.39
	Age 55	1.50	0.93	0.11	-0.31 - 3.32	1.54	1.00	0.12	-0.42 - 3.50

Ordinal logistic regression: Banded hours per week spent helping/caring – Among carers

		Complete cases				Multiple imputation			
		OR	SE	p	95% CI	OR	SE	p	95% CI
1946 Cohort									
	Age 63	0.63	0.24	0.23	0.29 - 1.35	0.59	0.20	0.11	0.30 - 1.13
Sample n									
	Age 38	2,060				11,702			
	Age 42	3,359				12,003			
	Age 50	2,283				9,607			
	Age 55	1,984				9,339			
	Age 63	186				2,121			

Notes: Fully adjusted models control for respondent gender, maternal age at respondent's birth, maternal education, and paternal occupational class, parental separation in childhood, cohort member's level of qualification, occupation (1970 and 1958 cohorts only), cross-regional moves since childhood and which parent is alive (1970 and 1958 cohorts only; the smaller sample size and older age of the 1946 cohort meant that after the sample restrictions the imputation model did not converge when the indicator of which parent was alive was included).

Table A8 Multinomial Regression: Parent care with gendered sibling composition

1970 Age 38	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	1.09	0.09	0.33	0.92 - 1.28	1.83	0.22	0.00	1.45 - 2.30
Male, sister(s)	1.06	0.10	0.49	0.89 - 1.27	0.94	0.12	0.65	0.73 - 1.21
Female, sister(s)	1.01	0.11	0.91	0.82 - 1.24	1.55	0.22	0.00	1.16 - 2.05
Male, both	1.12	0.10	0.21	0.94 - 1.35	0.89	0.12	0.40	0.69 - 1.16
Female, both	1.11	0.11	0.31	0.91 - 1.34	1.61	0.22	0.00	1.24 - 2.10
Male, only	0.97	0.16	0.86	0.71 - 1.33	1.31	0.25	0.16	0.90 - 1.90
Female, only	0.98	0.17	0.89	0.70 - 1.37	2.00	0.37	0.00	1.38 - 2.88
Mother's age	1.04	0.01	0.00	1.03 - 1.05	1.05	0.01	0.00	1.03 - 1.06
Parental social: II (Ref: I)	1.32	0.22	0.09	0.96 - 1.82	1.26	0.25	0.24	0.85 - 1.87
III non-manual	1.54	0.26	0.01	1.11 - 2.13	1.28	0.27	0.25	0.84 - 1.93
IV manual	1.68	0.26	0.00	1.24 - 2.28	1.61	0.32	0.02	1.09 - 2.36
V	1.98	0.33	0.00	1.42 - 2.75	1.81	0.37	0.00	1.21 - 2.72
VI	2.44	0.49	0.00	1.65 - 3.60	2.67	0.70	0.00	1.59 - 4.48
Not available/ Unemp.	2.32	1.18	0.10	0.86 - 6.29	2.03	1.05	0.17	0.74 - 5.61
Mother stayed in school (Ref: Left)	0.75	0.04	0.00	0.66 - 0.84	0.73	0.06	0.00	0.62 - 0.86
Parental separation = Yes (Ref: No)	1.02	0.07	0.77	0.90 - 1.16	1.12	0.10	0.23	0.93 - 1.33
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	1.10	0.16	0.50	0.83 - 1.45	1.08	0.21	0.68	0.74 - 1.57
NVQ2 level	1.08	0.13	0.52	0.86 - 1.36	1.15	0.17	0.33	0.86 - 1.54
NVQ3 level	1.07	0.14	0.59	0.83 - 1.38	1.12	0.19	0.52	0.79 - 1.57
NVQ4 level	1.02	0.13	0.90	0.79 - 1.30	1.13	0.18	0.46	0.82 - 1.56
NVQ5 level	0.78	0.13	0.15	0.56 - 1.09	1.03	0.21	0.90	0.68 - 1.55
CM occupation = Professionals (Ref: Managers)	0.90	0.10	0.36	0.72 - 1.13	0.85	0.13	0.28	0.63 - 1.14
Associate prof. & technical	0.92	0.08	0.35	0.77 - 1.10	0.85	0.10	0.17	0.67 - 1.07
Administrative & secretarial	1.01	0.10	0.94	0.82 - 1.23	1.07	0.14	0.61	0.83 - 1.37
Skilled trades	1.26	0.13	0.03	1.02 - 1.55	1.13	0.18	0.45	0.82 - 1.55
Personal services	0.99	0.11	0.90	0.79 - 1.23	1.20	0.17	0.20	0.91 - 1.59
Sales & customer services	1.04	0.16	0.77	0.78 - 1.40	1.60	0.30	0.01	1.10 - 2.33
Process, plant & machine	1.31	0.16	0.03	1.03 - 1.66	1.40	0.21	0.03	1.04 - 1.89
Elementary operations	1.09	0.14	0.51	0.84 - 1.41	1.07	0.18	0.68	0.77 - 1.49
Marital status = Cohabiting (Ref: Married)	1.10	0.08	0.22	0.95 - 1.27	1.00	0.11	0.99	0.81 - 1.24
Not living with a partner	1.19	0.08	0.01	1.04 - 1.36	1.82	0.15	0.00	1.56 - 2.13
Region different than age 10 = Yes (Ref=Same)	0.48	0.03	0.00	0.42 - 0.55	0.43	0.04	0.00	0.36 - 0.52
Which parent alive = Mother (Ref: Both)	1.93	0.16	0.00	1.64 - 2.27	2.71	0.26	0.00	2.24 - 3.27

1970 Age 38	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Father	0.96	0.09	0.65	0.80 - 1.15	4.22	0.44	0.00	3.43 - 5.18
Constant	0.08	0.02	0.00	0.05 - 0.13	0.02	0.01	0.00	0.01 - 0.03
Observations	17,255				17,255			

1970 Age 42	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	0.84	0.08	0.05	0.71 - 1.00	1.37	0.14	0.00	1.12 - 1.67
Male, sister(s)	0.99	0.09	0.87	0.83 - 1.17	1.04	0.12	0.72	0.84 - 1.30
Female, sister(s)	0.81	0.08	0.03	0.67 - 0.98	1.30	0.15	0.02	1.04 - 1.63
Male, both	1.03	0.09	0.74	0.87 - 1.22	1.00	0.10	0.98	0.81 - 1.22
Female, both	0.86	0.08	0.09	0.72 - 1.03	1.45	0.16	0.00	1.17 - 1.80
Male, only	1.29	0.18	0.06	0.99 - 1.69	1.39	0.23	0.05	1.01 - 1.91
Female, only	0.94	0.13	0.67	0.72 - 1.23	1.70	0.26	0.00	1.25 - 2.30
Mother's age	1.04	0.01	0.00	1.03 - 1.05	1.06	0.01	0.00	1.05 - 1.07
Parental social: II (Ref: I)	1.15	0.17	0.32	0.87 - 1.53	1.22	0.21	0.25	0.87 - 1.71
III non-manual	1.37	0.19	0.02	1.05 - 1.80	1.19	0.22	0.33	0.84 - 1.70
IV manual	1.45	0.19	0.00	1.13 - 1.87	1.55	0.25	0.01	1.13 - 2.12
V	1.62	0.23	0.00	1.23 - 2.15	1.94	0.33	0.00	1.39 - 2.70
VI	1.65	0.30	0.01	1.15 - 2.36	2.54	0.52	0.00	1.71 - 3.78
Not available/ Unemp.	1.92	0.83	0.13	0.82 - 4.49	3.38	1.57	0.01	1.36 - 8.40
Mother stayed in school (Ref: Left)	0.76	0.04	0.00	0.68 - 0.85	0.81	0.06	0.00	0.71 - 0.93
Parental separation = Yes (Ref: No)	1.12	0.07	0.09	0.98 - 1.27	1.06	0.07	0.44	0.92 - 1.21
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	1.27	0.19	0.12	0.94 - 1.70	0.89	0.14	0.46	0.64 - 1.22
NVQ2 level	1.36	0.17	0.01	1.07 - 1.73	0.95	0.12	0.69	0.73 - 1.23
NVQ3 level	1.38	0.18	0.01	1.07 - 1.78	1.09	0.16	0.55	0.82 - 1.44
NVQ4 level	1.19	0.14	0.15	0.94 - 1.50	0.85	0.11	0.21	0.65 - 1.10
NVQ5 level	0.95	0.14	0.75	0.71 - 1.28	0.81	0.15	0.24	0.56 - 1.16
CM occupation = Professionals (Ref: Managers)	1.08	0.11	0.46	0.88 - 1.31	0.97	0.12	0.82	0.76 - 1.24
Associate prof. & technical	1.04	0.08	0.62	0.89 - 1.21	0.98	0.10	0.85	0.81 - 1.19
Administrative & secretarial	1.06	0.10	0.55	0.88 - 1.26	1.03	0.12	0.82	0.81 - 1.30
Skilled trades	1.40	0.13	0.00	1.16 - 1.69	1.16	0.13	0.18	0.93 - 1.45
Personal services	0.88	0.10	0.23	0.71 - 1.09	1.19	0.15	0.16	0.93 - 1.52
Sales & customer services	1.30	0.16	0.03	1.03 - 1.65	1.28	0.20	0.12	0.94 - 1.73
Process, plant & machine	1.53	0.18	0.00	1.21 - 1.92	1.60	0.26	0.00	1.16 - 2.20
Elementary operations	1.31	0.16	0.03	1.03 - 1.68	1.32	0.18	0.04	1.01 - 1.72
Marital status = Cohabiting (Ref: Married)	1.03	0.08	0.73	0.88 - 1.20	1.00	0.10	0.99	0.83 - 1.21
Not living with a partner	0.85	0.05	0.01	0.75 - 0.96	1.22	0.08	0.00	1.07 - 1.39

1970 Age 42	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Region different than age 10 = Yes (Ref=Same)	0.56	0.04	0.00	0.50 - 0.64	0.53	0.04	0.00	0.46 - 0.62
Which parent alive = Mother (Ref: Both)	1.60	0.10	0.00	1.42 - 1.80	1.72	0.12	0.00	1.49 - 1.98
Father	0.71	0.07	0.00	0.58 - 0.87	1.30	0.12	0.01	1.08 - 1.56
Constant	0.16	0.04	0.00	0.09 - 0.26	0.04	0.01	0.00	0.02 - 0.06
Observations	16,703				16,703			

1958 Age 50	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	0.73	0.09	0.01	0.58 - 0.92	1.81	0.26	0.00	1.36 - 2.41
Male, sister(s)	0.88	0.09	0.25	0.72 - 1.09	0.81	0.14	0.21	0.58 - 1.13
Female, sister(s)	0.72	0.09	0.01	0.56 - 0.92	1.86	0.30	0.00	1.36 - 2.55
Male, both	0.80	0.07	0.01	0.66 - 0.95	0.79	0.11	0.10	0.60 - 1.05
Female, both	0.65	0.07	0.00	0.52 - 0.80	1.82	0.26	0.00	1.38 - 2.41
Male, only	1.26	0.22	0.19	0.89 - 1.77	1.36	0.33	0.21	0.84 - 2.18
Female, only	1.12	0.20	0.55	0.78 - 1.60	2.39	0.52	0.00	1.56 - 3.66
Mother's age	1.05	0.01	0.00	1.04 - 1.06	1.12	0.01	0.00	1.11 - 1.14
Parental social class: II (Ref: I)	1.21	0.18	0.21	0.90 - 1.63	0.93	0.17	0.71	0.66 - 1.33
III non-manual	1.52	0.26	0.01	1.09 - 2.11	0.95	0.19	0.81	0.64 - 1.42
IV manual	1.51	0.23	0.01	1.13 - 2.03	1.25	0.22	0.20	0.89 - 1.76
V	1.57	0.29	0.01	1.09 - 2.26	1.29	0.27	0.22	0.86 - 1.95
VI	1.86	0.35	0.00	1.29 - 2.68	1.91	0.40	0.00	1.27 - 2.87
Mother stayed in school (Ref: Left)	0.86	0.06	0.05	0.75 - 1.00	0.81	0.08	0.03	0.67 - 0.98
Parental separation = Yes (Ref: No)	0.46	0.11	0.00	0.28 - 0.74	0.40	0.13	0.00	0.22 - 0.74
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	1.02	0.14	0.91	0.77 - 1.34	1.12	0.18	0.48	0.82 - 1.52
NVQ2 level	1.07	0.12	0.56	0.86 - 1.32	1.15	0.14	0.26	0.90 - 1.47
NVQ3 level	1.23	0.16	0.10	0.96 - 1.59	1.07	0.16	0.67	0.79 - 1.44
NVQ4 level	1.06	0.14	0.66	0.82 - 1.37	1.06	0.16	0.72	0.78 - 1.43
NVQ5 level	1.05	0.19	0.77	0.74 - 1.49	1.06	0.21	0.77	0.72 - 1.58
CM occupation = Professionals (Ref: Managers)	0.99	0.11	0.94	0.80 - 1.23	1.09	0.17	0.59	0.80 - 1.49
Associate prof. & technical	0.81	0.09	0.07	0.65 - 1.02	0.87	0.12	0.31	0.66 - 1.14
Administrative & secretarial	1.11	0.12	0.37	0.89 - 1.38	1.02	0.15	0.91	0.76 - 1.36
Skilled trades	1.01	0.10	0.95	0.82 - 1.23	1.01	0.16	0.93	0.75 - 1.37
Personal services	1.01	0.12	0.96	0.79 - 1.28	1.14	0.18	0.42	0.83 - 1.56
Sales & customer services	0.99	0.15	0.92	0.74 - 1.32	1.01	0.18	0.98	0.71 - 1.42
Process, plant & machine	1.05	0.15	0.76	0.79 - 1.39	1.22	0.25	0.34	0.81 - 1.84
Elementary operations	1.20	0.18	0.21	0.90 - 1.61	1.18	0.24	0.42	0.79 - 1.75

1958 Age 50	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Marital status = Cohabiting (Ref: Married)	0.93	0.09	0.44	0.77 - 1.12	0.71	0.09	0.01	0.55 - 0.91
Not living with a partner	0.93	0.07	0.31	0.81 - 1.07	1.32	0.11	0.00	1.12 - 1.55
Region different than age 10 = Yes (Ref=Same)	0.41	0.03	0.00	0.36 - 0.46	0.37	0.03	0.00	0.31 - 0.43
Which parent alive = Mother (Ref: Both)	1.78	0.10	0.00	1.59 - 1.99	1.96	0.18	0.00	1.64 - 2.34
Father	0.54	0.05	0.00	0.45 - 0.65	1.13	0.12	0.26	0.92 - 1.39
Constant	0.21	0.06	0.00	0.12 - 0.36	0.01	0.00	0.00	0.01 - 0.02
Observations	12,775				12,775			

1958 Age 55	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	0.91	0.12	0.48	0.71 - 1.18	2.01	0.31	0.00	1.49 - 2.71
Male, sister(s)	0.99	0.12	0.94	0.78 - 1.26	0.82	0.14	0.23	0.58 - 1.14
Female, sister(s)	0.86	0.13	0.31	0.65 - 1.15	1.57	0.29	0.01	1.10 - 2.25
Male, both	0.74	0.09	0.02	0.58 - 0.95	0.69	0.11	0.02	0.51 - 0.94
Female, both	0.69	0.09	0.00	0.53 - 0.89	1.48	0.25	0.02	1.06 - 2.06
Male, only	1.37	0.29	0.14	0.90 - 2.07	1.59	0.36	0.04	1.02 - 2.48
Female, only	1.25	0.26	0.29	0.83 - 1.89	2.68	0.62	0.00	1.70 - 4.22
Mother's age	1.05	0.01	0.00	1.03 - 1.06	1.12	0.01	0.00	1.10 - 1.14
Parental social class: II (Ref: I)	1.17	0.19	0.34	0.85 - 1.62	1.23	0.24	0.30	0.83 - 1.81
III non-manual	1.07	0.19	0.70	0.76 - 1.51	1.22	0.25	0.34	0.81 - 1.82
IV manual	1.24	0.19	0.16	0.92 - 1.68	1.49	0.28	0.03	1.04 - 2.15
V	1.17	0.21	0.38	0.82 - 1.65	1.50	0.34	0.07	0.97 - 2.32
VI	1.25	0.27	0.30	0.82 - 1.90	1.83	0.39	0.01	1.20 - 2.79
Mother stayed in school (Ref: Left)	0.91	0.07	0.21	0.78 - 1.06	0.93	0.09	0.47	0.78 - 1.12
Parental separation = Yes (Ref: No)	0.39	0.12	0.00	0.22 - 0.71	0.46	0.14	0.01	0.25 - 0.85
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	0.89	0.14	0.46	0.64 - 1.22	0.72	0.13	0.08	0.50 - 1.04
NVQ2 level	0.99	0.14	0.95	0.76 - 1.30	0.80	0.14	0.21	0.57 - 1.13
NVQ3 level	1.06	0.15	0.70	0.80 - 1.39	0.90	0.16	0.56	0.63 - 1.29
NVQ4 level	1.09	0.16	0.56	0.82 - 1.44	0.75	0.15	0.13	0.51 - 1.09
NVQ5 level	1.12	0.22	0.57	0.76 - 1.65	0.74	0.17	0.20	0.47 - 1.17
CM occupation = Professionals (Ref: Managers)	0.82	0.10	0.11	0.64 - 1.05	0.92	0.14	0.58	0.68 - 1.24
Associate prof. & technical	0.67	0.08	0.00	0.53 - 0.85	0.88	0.13	0.41	0.65 - 1.19
Administrative & secretarial	0.99	0.14	0.94	0.76 - 1.29	0.98	0.15	0.89	0.73 - 1.31
Skilled trades	1.28	0.17	0.06	0.99 - 1.67	1.33	0.23	0.10	0.95 - 1.85
Personal services	0.82	0.12	0.17	0.61 - 1.09	0.88	0.17	0.50	0.61 - 1.28
Sales & customer services	1.11	0.19	0.53	0.80 - 1.55	1.17	0.22	0.42	0.80 - 1.69

1958 Age 55	Helper				Carer			
	RRR	SE	p	95% CI	RRR	SE	p	95% CI
Process, plant & machine	1.22	0.20	0.22	0.88 - 1.69	1.27	0.28	0.29	0.82 - 1.96
Elementary operations	0.83	0.16	0.36	0.57 - 1.23	0.93	0.18	0.72	0.64 - 1.36
Marital status = Cohabiting (Ref: Married)	0.98	0.11	0.83	0.79 - 1.21	0.89	0.12	0.37	0.69 - 1.15
Not living with a partner	0.79	0.07	0.01	0.66 - 0.94	1.38	0.12	0.00	1.16 - 1.64
Region different than age 10 = Yes (Ref=Same)	0.52	0.04	0.00	0.45 - 0.61	0.34	0.03	0.00	0.29 - 0.40
Which parent alive = Mother (Ref: Both)	1.52	0.12	0.00	1.31 - 1.77	1.69	0.15	0.00	1.42 - 2.00
Father	0.55	0.06	0.00	0.45 - 0.67	0.93	0.11	0.55	0.75 - 1.17
Constant	0.41	0.13	0.01	0.21 - 0.78	0.03	0.01	0.00	0.01 - 0.06
Observations	11,339				11,339			

Table A9 Linear Regression: Caregiving hours with gendered sibling composition

1970 Age 38	Linear Regression: Hours			
	Coef.	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	1.05	0.32	0.00	0.43 - 1.68
Male, sister(s)	0.00	0.33	1.00	-0.66 - 0.65
Female, sister(s)	1.16	0.34	0.00	0.49 - 1.83
Male, both	-0.09	0.29	0.75	-0.67 - 0.48
Female, both	0.94	0.33	0.00	0.29 - 1.59
Male, only	0.07	0.41	0.87	-0.74 - 0.88
Female, only	1.11	0.49	0.02	0.16 - 2.07
Mother's age	0.00	0.02	0.88	-0.04 - 0.03
Parental social: II (Ref: I)	-0.18	0.53	0.73	-1.22 - 0.86
III non-manual	-0.26	0.56	0.65	-1.36 - 0.84
IV manual	-0.31	0.52	0.55	-1.34 - 0.71
V	0.09	0.58	0.87	-1.05 - 1.23
VI	0.21	0.61	0.73	-0.99 - 1.41
Not available/ Unemp.	-0.81	1.09	0.45	-2.95 - 1.32
Mother stayed in school (Ref: Left)	-0.32	0.19	0.09	-0.70 - 0.05
Parental separation = Yes (Ref: No)	0.27	0.21	0.19	-0.13 - 0.67
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	-0.29	0.52	0.58	-1.32 - 0.74
NVQ2 level	0.02	0.43	0.96	-0.81 - 0.85
NVQ3 level	-0.28	0.43	0.52	-1.12 - 0.56
NVQ4 level	-0.05	0.40	0.89	-0.84 - 0.73
NVQ5 level	0.71	0.60	0.23	-0.46 - 1.88
CM occupation = Professionals (Ref: Managers)	-0.57	0.42	0.17	-1.40 - 0.25
Associate prof. & technical	-0.01	0.36	0.97	-0.71 - 0.69
Administrative & secretarial	-0.07	0.36	0.84	-0.78 - 0.63
Skilled trades	0.31	0.38	0.41	-0.43 - 1.06
Personal services	0.53	0.53	0.32	-0.50 - 1.56
Sales & customer services	1.15	0.60	0.06	-0.03 - 2.32
Process, plant & machine	0.88	0.52	0.09	-0.14 - 1.90
Elementary operations	1.35	0.61	0.03	0.16 - 2.54
Marital status = Cohabiting (Ref: Married)	-0.05	0.23	0.82	-0.51 - 0.41
Not living with a partner	1.02	0.26	0.00	0.52 - 1.52
Region different than age 10 = Yes (Ref=Same)	-0.36	0.28	0.20	-0.91 - 0.19
Which parent alive = Mother (Ref: Both)	1.42	0.27	0.00	0.89 - 1.96
Father	2.01	0.46	0.00	1.10 - 2.91
Constant	1.98	0.79	0.01	0.42 - 3.53
Observations	11,702			

1970 Age 42	Linear Regression: Hours			
	Coef.	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	0.92	0.30	0.00	0.32 - 1.51

1970 Age 42	Linear Regression: Hours			
	Coef.	SE	p	95% CI
Male, sister(s)	-0.04	0.29	0.88	-0.61 - 0.52
Female, sister(s)	0.73	0.35	0.04	0.05 - 1.40
Male, both	0.03	0.29	0.92	-0.54 - 0.60
Female, both	1.13	0.37	0.00	0.41 - 1.86
Male, only	0.44	0.42	0.29	-0.38 - 1.27
Female, only	1.46	0.54	0.01	0.40 - 2.53
Mother's age	0.07	0.02	0.00	0.04 - 0.11
Parental social: II (Ref: I)	0.14	0.49	0.78	-0.83 - 1.10
III non-manual	-0.21	0.46	0.66	-1.11 - 0.70
IV manual	0.33	0.45	0.46	-0.56 - 1.22
V	0.97	0.48	0.04	0.03 - 1.90
VI	1.04	0.64	0.11	-0.22 - 2.30
Not available/ Unemp.	1.52	1.78	0.39	-1.97 - 5.01
Mother stayed in school (Ref: Left)	-0.22	0.21	0.30	-0.63 - 0.19
Parental separation = Yes (Ref: No)	0.12	0.21	0.56	-0.29 - 0.53
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	-1.47	0.68	0.03	-2.79 - -0.15
NVQ2 level	-1.50	0.58	0.01	-2.64 - -0.35
NVQ3 level	-1.74	0.56	0.00	-2.85 - -0.64
NVQ4 level	-1.51	0.58	0.01	-2.64 - -0.38
NVQ5 level	-1.75	0.63	0.01	-3.00 - -0.51
CM occupation = Professionals (Ref: Managers)	-0.23	0.32	0.48	-0.86 - 0.41
Associate prof. & technical	-0.03	0.29	0.90	-0.60 - 0.53
Administrative & secretarial	-0.35	0.32	0.27	-0.97 - 0.27
Skilled trades	0.17	0.34	0.62	-0.50 - 0.84
Personal services	0.70	0.46	0.13	-0.21 - 1.61
Sales & customer services	0.52	0.66	0.43	-0.77 - 1.82
Process, plant & machine	0.65	0.41	0.11	-0.15 - 1.45
Elementary operations	1.59	0.69	0.02	0.24 - 2.95
Marital status = Cohabiting (Ref: Married)	0.15	0.25	0.55	-0.35 - 0.65
Not living with a partner	1.29	0.24	0.00	0.81 - 1.76
Region different than age 10 = Yes (Ref=Same)	-0.38	0.26	0.14	-0.88 - 0.12
Which parent alive = Mother (Ref: Both)	0.82	0.21	0.00	0.41 - 1.22
Father	0.68	0.32	0.03	0.05 - 1.30
Constant	1.28	0.86	0.14	-0.41 - 2.97
Observations	12,003			

1958 Age 50	Linear regression: Hours			
	Coef.	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	1.90	0.55	0.00	0.82 - 2.97
Male, sister(s)	-0.12	0.48	0.80	-1.07 - 0.83
Female, sister(s)	2.06	0.69	0.00	0.72 - 3.40
Male, both	-0.24	0.46	0.60	-1.14 - 0.65
Female, both	2.06	0.56	0.00	0.96 - 3.17

1958 Age 50	Linear regression: Hours			
	Coef.	SE	p	95% CI
Male, only	0.59	0.66	0.38	-0.71 - 1.89
Female, only	1.88	0.82	0.02	0.27 - 3.50
Mother's age	0.18	0.04	0.00	0.11 - 0.25
Parental social class: II (Ref: I)	-0.11	0.74	0.89	-1.55 - 1.34
III non-manual	0.53	0.84	0.53	-1.12 - 2.18
IV manual	0.10	0.72	0.89	-1.31 - 1.50
V	0.49	0.82	0.55	-1.12 - 2.09
VI	1.00	0.96	0.30	-0.88 - 2.88
Mother stayed in school (Ref: Left)	-0.63	0.34	0.07	-1.31 - 0.04
Parental separation = Yes (Ref: No)	-0.55	1.20	0.65	-2.91 - 1.81
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	-1.10	0.75	0.15	-2.58 - 0.38
NVQ2 level	-0.48	0.74	0.51	-1.93 - 0.96
NVQ3 level	-1.46	0.65	0.02	-2.74 - -0.19
NVQ4 level	-1.44	0.70	0.04	-2.81 - -0.07
NVQ5 level	-1.34	1.15	0.24	-3.59 - 0.90
CM occupation = Professionals (Ref: Managers)	0.51	0.62	0.41	-0.70 - 1.73
Associate prof. & technical	-0.45	0.53	0.40	-1.48 - 0.59
Administrative & secretarial	-0.43	0.59	0.46	-1.58 - 0.72
Skilled trades	-0.07	0.54	0.89	-1.13 - 0.98
Personal services	0.19	0.66	0.78	-1.11 - 1.48
Sales & customer services	-0.96	0.76	0.21	-2.44 - 0.53
Process, plant & machine	1.43	0.92	0.12	-0.37 - 3.23
Elementary operations	0.48	0.81	0.55	-1.10 - 2.06
Marital status = Cohabiting (Ref: Married)	-0.02	0.44	0.97	-0.87 - 0.84
Not living with a partner	3.03	0.47	0.00	2.10 - 3.96
Region different than age 10 = Yes (Ref=Same)	-0.97	0.36	0.01	-1.67 - -0.27
Which parent alive = Mother (Ref: Both)	1.29	0.35	0.00	0.60 - 1.98
Father	0.85	0.45	0.06	-0.03 - 1.73
Constant	-1.72	1.28	0.18	-4.23 - 0.79
Observations	9,607			

1958 Age 55	Linear regression: Hours			
	Coef.	SE	p	95% CI
Gender & siblings group: Female, brother(s) (Ref: Male, brother(s))	2.14	0.81	0.01	0.55 - 3.72
Male, sister(s)	-0.47	0.82	0.57	-2.07 - 1.14
Female, sister(s)	2.31	1.01	0.02	0.34 - 4.29
Male, both	-0.42	0.71	0.55	-1.81 - 0.97
Female, both	2.75	0.90	0.00	0.98 - 4.52
Male, only	1.49	1.17	0.20	-0.81 - 3.78
Female, only	3.71	1.29	0.00	1.18 - 6.25
Mother's age	0.27	0.05	0.00	0.16 - 0.37
Parental social class: II (Ref: I)	1.47	1.05	0.16	-0.60 - 3.53
III non-manual	0.93	1.10	0.40	-1.23 - 3.09

1958 Age 55	Linear regression: Hours			
	Coef.	SE	p	95% CI
IV manual	0.45	1.01	0.66	-1.53 - 2.43
V	0.86	1.28	0.50	-1.64 - 3.37
VI	2.68	1.37	0.05	-0.01 - 5.38
Mother stayed in school (Ref: Left)	0.16	0.54	0.76	-0.89 - 1.21
Parental separation = Yes (Ref: No)	-2.00	1.79	0.27	-5.51 - 1.52
CM Highest NVQ Level = NVQ1 level (Ref: No qua)	-2.10	1.17	0.07	-4.39 - 0.19
NVQ2 level	-1.34	1.07	0.21	-3.45 - 0.76
NVQ3 level	-2.23	1.15	0.05	-4.48 - 0.02
NVQ4 level	-2.93	1.05	0.01	-4.98 - -0.88
NVQ5 level	-2.68	1.43	0.06	-5.48 - 0.12
CM occupation = Professionals (Ref: Managers)	-0.19	0.85	0.83	-1.86 - 1.49
Associate prof. & technical	1.41	0.89	0.12	-0.34 - 3.16
Administrative & secretarial	0.12	0.89	0.90	-1.62 - 1.86
Skilled trades	1.10	0.79	0.16	-0.45 - 2.65
Personal services	0.40	0.94	0.67	-1.44 - 2.24
Sales & customer services	0.82	1.23	0.51	-1.60 - 3.24
Process, plant & machine	0.92	1.13	0.41	-1.29 - 3.12
Elementary operations	1.56	1.22	0.20	-0.84 - 3.96
Marital status = Cohabiting (Ref: Married)	0.39	0.73	0.59	-1.03 - 1.82
Not living with a partner	3.86	0.67	0.00	2.55 - 5.16
Region different than age 10 = Yes (Ref=Same)	-0.84	0.65	0.20	-2.11 - 0.44
Which parent alive = Mother (Ref: Both)	1.23	0.47	0.01	0.31 - 2.15
Father	1.55	0.72	0.03	0.13 - 2.97
Constant	-2.93	2.04	0.15	-6.93 - 1.07
Observations	9,339			

Table A10 Percent reporting providing financial help to a parent regularly or frequently, by gender and sibling group composition

Financial help	1970 Cohort Age 38	1958 Cohort Age 50	Age 55
	%	%	%
Female, sister(s)	4.9	6.0	9.8
Male, sister(s)	6.6	7.3	10.0
Female, both	8.2	6.8	10.2
Male, both	10.8	8.5	11.0
Female, brother(s)	5.2	6.9	11.7
Male, brother(s)	7.2	9.5	13.0
Female, only	6.7	11.4	14.5
Male, only	7.1	15.6	16.6
Observations	17,255	12,775	11,339

Table A11 Linear Regression: Mental health/ Wellbeing

1970 Cohort	Panel A - Sample: All Mental Health: Malaise Scale – Age 42				Panel C - Sample: All Wellbeing: WEMWBS – Age 42			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Model 1								
Parent-care type= Helper (Ref: No Help)	0.12	0.05	0.02	0.02 - 0.22	-0.63	0.24	0.01	-1.10 - -0.17
Carer	0.36	0.06	0.00	0.23 - 0.48	-1.13	0.25	0.00	-1.63 - -0.64
Female (Ref=Male)	0.37	0.05	0.00	0.28 - 0.46	0.30	0.20	0.13	-0.09 - 0.69
Constant	1.68	0.04	0.00	1.61 - 1.75	48.86	0.17	0.00	48.52 - 49.19
Model 2								
Only Child (Ref=Sibling)	0.12	0.09	0.20	-0.06 - 0.30	0.15	0.34	0.66	-0.52 - 0.83
Parent-care type= Helper (Ref: No Help)	0.12	0.05	0.03	0.01 - 0.22	-0.64	0.24	0.01	-1.10 - -0.17
Carer	0.35	0.06	0.00	0.23 - 0.48	-1.14	0.25	0.00	-1.63 - -0.64
Female (Ref=Male)	0.37	0.05	0.00	0.28 - 0.46	0.30	0.20	0.13	-0.09 - 0.69
Constant	1.67	0.04	0.00	1.60 - 1.74	48.84	0.17	0.00	48.51 - 49.18
Model 3								
Only Child (Ref=Sibling)	0.17	0.12	0.16	-0.07 - 0.40	-0.08	0.47	0.87	-1.01 - 0.85
Parent-care type= Helper (Ref: No Help)	0.12	0.05	0.03	0.01 - 0.22	-0.67	0.24	0.01	-1.15 - -0.19
Carer	0.37	0.06	0.00	0.25 - 0.50	-1.20	0.26	0.00	-1.70 - -0.69
Interaction: Only#Helper	-0.03	0.16	0.85	-0.35 - 0.29	0.33	0.66	0.62	-0.97 - 1.62
Only#Carer	-0.20	0.19	0.30	-0.57 - 0.17	0.60	0.75	0.42	-0.86 - 2.06
Female (Ref=Male)	0.37	0.05	0.00	0.28 - 0.46	0.30	0.20	0.13	-0.09 - 0.69
Constant	1.67	0.04	0.00	1.59 - 1.74	48.86	0.17	0.00	48.53 - 49.20
Observations	16,703				16,703			

1970 Cohort	Panel B - Sample: Helpers & Carers Mental Health: Malaise Scale – Age 42				Panel D - Sample: Helpers & Carers Wellbeing: WEMWBS – Age 42			
	Coef.	SE	p	95% CI	Coef.	SE	p	95% CI
Model 1								
Caregiving hours/ week	0.03	0.01	0.00	0.02 - 0.05	-0.12	0.02	0.00	-0.17 - -0.08
Female (Ref=Male)	0.48	0.07	0.00	0.35 - 0.62	-0.16	0.26	0.53	-0.66 - 0.34
Constant	1.69	0.05	0.00	1.59 - 1.79	48.86	0.20	0.00	48.47 - 49.24
Model 2								
Only Child (Ref=Sibling)	-0.01	0.11	0.91	-0.23 - 0.20	0.65	0.47	0.16	-0.27 - 1.57
Caregiving hours/ week	0.03	0.01	0.00	0.02 - 0.05	-0.13	0.02	0.00	-0.17 - -0.08
Female (Ref=Male)	0.48	0.07	0.00	0.35 - 0.62	-0.17	0.26	0.52	-0.67 - 0.34
Constant	1.69	0.05	0.00	1.59 - 1.79	48.79	0.20	0.00	48.40 - 49.18
Model 3								
Only Child (Ref=Sibling)	-0.01	0.12	0.91	-0.25 - 0.22	0.60	0.50	0.23	-0.38 - 1.59
Caregiving hours/ week	0.03	0.01	0.00	0.02 - 0.05	-0.13	0.02	0.00	-0.17 - -0.08
Interaction: Only#Hours	0.00	0.02	0.95	-0.03 - 0.03	0.01	0.06	0.83	-0.10 - 0.12
Female (Ref=Male)	0.48	0.07	0.00	0.35 - 0.62	-0.17	0.26	0.52	-0.67 - 0.34
Constant	1.69	0.05	0.00	1.59 - 1.80	48.80	0.20	0.00	48.41 - 49.19

Observations	12,003				12,003			

Note: Panels A and B: Higher scores on the 9-item Malaise scale indicate greater psychological distress. Panels C and D: Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS): Higher scores indicate higher wellbeing.

1958 Cohort	**Panel A - Sample: All**				**Panel B - Sample: All**			
	Mental Health: Malaise Scale (Age 50)				**Wellbeing: CASP-6 (Age 55)**			
	Coef.	**SE**	**p**	**95% CI**	**Coef.**	**SE**	**p**	**95% CI**
Model 1								
Parent-care type= Helper (Ref: No Help)	-0.06	0.05	0.21	-0.16 - 0.04	0.03	0.14	0.84	-0.24 - 0.29
Carer	0.16	0.06	0.01	0.03 - 0.28	-0.08	0.15	0.60	-0.36 - 0.21
Female (Ref=Male)	0.58	0.04	0.00	0.49 - 0.66	0.00	0.11	1.00	-0.22 - 0.22
Constant	1.21	0.04	0.00	1.13 - 1.29	18.39	0.11	0.00	18.17 - 18.62
Model 2								
Only Child (Ref=Sibling)	-0.15	0.09	0.07	-0.32 - 0.01	0.08	0.21	0.69	-0.33 - 0.50
Parent-care type= Helper (Ref: No Help)	-0.06	0.05	0.24	-0.16 - 0.04	0.03	0.14	0.85	-0.24 - 0.29
Carer	0.16	0.06	0.01	0.04 - 0.28	-0.08	0.15	0.59	-0.37 - 0.21
Female (Ref=Male)	0.58	0.04	0.00	0.49 - 0.66	0.00	0.11	1.00	-0.22 - 0.22
Constant	1.22	0.04	0.00	1.14 - 1.30	18.39	0.11	0.00	18.16 - 18.61
Model 3								
Only Child (Ref=Sibling)	-0.04	0.14	0.75	-0.32 - 0.23	0.08	0.39	0.83	-0.68 - 0.84
Parent-care type= Helper (Ref: No Help)	-0.05	0.05	0.37	-0.15 - 0.06	0.05	0.14	0.72	-0.22 - 0.32
Carer	0.17	0.07	0.01	0.04 - 0.30	-0.11	0.15	0.46	-0.40 - 0.18
Interaction: Only#Helper	-0.18	0.18	0.32	-0.53 - 0.17	-0.30	0.48	0.53	-1.25 - 0.64
Only#Carer	-0.14	0.23	0.53	-0.60 - 0.31	0.36	0.51	0.48	-0.65 - 1.36
Female (Ref=Male)	0.58	0.05	0.00	0.49 - 0.67	0.00	0.11	0.99	-0.22 - 0.22
Constant	1.22	0.04	0.00	1.13 - 1.30	18.39	0.11	0.00	18.16 - 18.61
Observations	12,775				11,339			

1958 Cohort	**Panel B - Sample: Helpers & Carers**				**Panel D - Sample: Helpers & Carers**			
	Mental Health: Malaise Scale - Age 50				**Wellbeing: CASP-6 - Age 55**			
	Coef.	**SE**	**p**	**95% CI**	**Coef.**	**SE**	**p**	**95% CI**
Model 1								
Caregiving hours/ week	0.02	0.00	0.00	0.01 - 0.03	-0.02	0.01	0.00	-0.03 - -0.01
Female (Ref=Male)	0.56	0.06	0.00	0.44 - 0.67	0.04	0.12	0.74	-0.20 - 0.28
Constant	1.18	0.04	0.00	1.10 - 1.26	18.48	0.09	0.00	18.30 - 18.65
Model 2								
Only Child (Ref=Sibling)	-0.24	0.10	0.02	-0.44 - -0.04	0.16	0.25	0.51	-0.33 - 0.66
Caregiving hours/ week	0.02	0.00	0.00	0.01 - 0.03	-0.02	0.01	0.00	-0.03 - -0.01
Female (Ref=Male)	0.56	0.06	0.00	0.44 - 0.67	0.04	0.12	0.75	-0.20 - 0.28
Constant	1.20	0.04	0.00	1.11 - 1.28				
Model 3								
Only Child (Ref=Sibling)	-0.26	0.11	0.02	-0.47 - -0.04	0.09	0.27	0.74	-0.45 - 0.63
Caregiving hours/ week	0.02	0.00	0.00	0.01 - 0.03	-0.02	0.01	0.00	-0.03 - -0.01
Interaction: Only#Hours	0.00	0.01	0.79	-0.02 - 0.02	0.01	0.02	0.58	-0.02 - 0.04
Female (Ref=Male)	0.56	0.06	0.00	0.44 - 0.67	0.04	0.12	0.74	-0.20 - 0.28

Constant	1.20	0.04	0.00	1.11 - 1.28	18.47	0.09	0.00	18.29 - 18.66
Observations	9,607				9,339			

Note: Panels A and B: Higher scores on the 9-item Malaise scale indicate greater psychological distress. Panels C and D: Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS): Higher scores indicate higher wellbeing.

1946 Cohort	**Panel A - Sample: All** **Mental Health: GHQ**			
	Coef.	**SE**	**p**	**95% CI**
Model 1				
Care recipient= Parent (Ref: No Care)	0.47	0.42	0.27	-0.36 - 1.31
Other recipient	0.84	0.45	0.06	-0.03 - 1.72
Female (Ref=Male)	1.10	0.26	0.00	0.59 - 1.62
Constant	1.40	0.23	0.00	0.94 - 1.86
Model 2				
Only Child (Ref=Sibling)	0.23	0.39	0.56	-0.54 - 0.99
Care recipient= Parent (Ref: No Care)	0.45	0.43	0.29	-0.39 - 1.29
Other recipient	0.83	0.44	0.06	-0.04 - 1.70
Female (Ref=Male)	1.11	0.26	0.00	0.59 - 1.62
Constant	1.37	0.24	0.00	0.89 - 1.85
Model 3				
Only Child (Ref=Sibling)	0.12	0.46	0.79	-0.78 - 1.03
Care recipient= Parent (Ref: No Care)	0.43	0.44	0.33	-0.44 - 1.30
Other recipient	0.81	0.46	0.08	-0.09 - 1.70
Interaction: Only#Parent	0.16	0.67	0.81	-1.16 - 1.48
Only#Other	0.21	0.77	0.78	-1.29 - 1.71
Female (Ref=Male)	1.11	0.26	0.00	0.59 - 1.62
Constant	1.39	0.24	0.00	0.91 - 1.86
Observations	2,364			

1946 Cohort	**Panel B - Sample: Carers** **Mental Health: GHQ**			
	Coef.	**SE**	**p**	**95% CI**
Model 1				
Caregiving hours/ week = 5-9 (Ref: 0-4)	0.25	0.39	0.52	-0.51 - 1.01
10-19	0.28	0.51	0.58	-0.71 - 1.27
20+	0.57	0.80	0.47	-0.99 - 2.14
Female (Ref=Male)	1.00	0.39	0.01	0.24 - 1.76
Constant	1.93	0.32	0.00	1.31 - 2.56
Model 2				
Only Child (Ref=Sibling)	0.55	0.42	0.19	-0.27 - 1.38
Caregiving hours/ week = 5-9 (Ref: 0-4)	0.27	0.39	0.49	-0.49 - 1.03
10-19	0.32	0.51	0.54	-0.69 - 1.32
20+	0.63	0.81	0.44	-0.95 - 2.21
Female (Ref=Male)	0.98	0.39	0.01	0.22 - 1.74
Constant	1.83	0.34	0.00	1.17 - 2.49
Model 3				

1946 Cohort	Panel B - Sample: Carers Mental Health: GHQ			
	Coef.	SE	p	95% CI
Only Child (Ref=Sibling)	0.40	0.52	0.44	-0.63 - 1.43
Caregiving hours/ week = 5-9 (Ref: 0-4)	0.22	0.39	0.57	-0.55 - 1.00
10-19	0.26	0.53	0.62	-0.78 - 1.30
20+	0.59	0.80	0.46	-0.98 - 2.15
Interaction: Only#5-9	0.24	0.75	0.75	-1.23 - 1.72
Only#10-19	0.36	1.11	0.75	-1.82 - 2.53
Only#20+	0.32	1.18	0.79	-2.00 - 2.65
Female (Ref=Male)	0.98	0.39	0.01	0.22 - 1.74
Constant	1.86	0.33	0.00	1.21 - 2.51
Observations	2,121			

Note: Panels A and B: Higher scores on the GHQ scale indicate greater psychological distress.