Parent-care by adult 'Only children': Analysis of UK cohort data

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Introduction

With the combination of declining family sizes, increased longevity and a mixed economy of social care provision that relies extensively on informal carers, often spouses and adult children, for both provision and coordination of care, the UK has been characterised as facing a care crisis. According to the UK Family Resources Survey, an estimated 8% of the UK population provided some unpaid social care in 2016/17, and among these informal carers 33% were adult children providing care for parents living outside their home, with further 7% being adult children caring for a co-resident parent. The situation affects both older people in need of additional help and support in daily life, with unmet need a documented concern (Vlachantoni, 2019), and their family members who provide support and care as best they can. Adult children with siblings can share the responsibility, time and effort, as well as any financial contributions required for formal social care for older parents, and evidence suggests that a larger network of informal carers reduces burden on adult children (Tolkacheva, Van Groenou, De Boer, & Van Tilburg, 2011). The provision of intensive informal social care 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).

Research on only children in general is relatively limited, and tends to focus on outcomes and circumstances during childhood. UK birth registration statistics show that one-child families were more common prior to the post-war baby boom and have become more common again more recently. Thus, the need for research on the circumstances and outcomes of this subgroup across the life course is becoming more relevant. Focused primarily on the childhood life stage, research suggest that of the two primary theories of how only children differ from their peers with siblings, the resource dilution (Blake, 1981; Downey, 1995) and the socialisation (or siblings as resources,Goetting, 1986) theories, the resource dilution theory is more applicable in childhood (Mellor, 1990; Polit & Falbo, 1987). On average, existing research shows that children growing up in smaller families, including only children, tend to fare better than children in large families. Yet beyond childhood, there may be challenges for only children as they grow older, such as caring for their ageing parents without siblings to share the load with. In adulthood it may well be that the theories suggested for childhood reverse (Goetting, 1986). Adult only children experience a concentration of parental need rather than resources, and 'siblings as resources' may come to the fore more during this life stage. On the other hand, in practice parent-care is not necessarily shared equally among adult siblings. Geographical proximity of the children to their parent(s), the gender composition of the sibling group and life-course stage (career demands and children) influence the division of parent-care labour. Adult daughters tend to provide more care for their parents than their brothers, but adult sons who do not have a sister tend to provide more care than adult sons who do (e.g. Grigoryeva, 2017; Leinonen, 2011).

This paper investigates whether and how adult only children's provision of parent-care differs from adult children with siblings. More specifically, the paper seeks to answer the following questions: Does involvement in parent-care differ by whether adult children have siblings or are only children? Does the gendering of parent-care provision differ by sibling status? Do the determinants of parent-care differ for adult children with and without siblings? Does the relationship between parent-care provision and subjective wellbeing differ for only children and those with siblings?

Data and Methods

In the first instance this paper analyses data from two UK birth cohort studies, the 1958 and 1970 cohorts. The 1958 National Child Development Study (NCDS) is a longitudinal survey of an initial cohort of 17,415 people born in Great Britain in a particular week of 1958. Regarding contact with parents and provision of parent-care in adulthood, the study asked respondents at ages 50 and 55 to identify from a list which, if any, types of tasks they did "regularly or frequently" for their parent(s), including items such as basic personal care, cooking meals, shopping, housework and personal affairs. Respondents who reported doing any such parent-care tasks were

asked to estimate the number of weekly hours they spent in total providing help and support for their parent(s). The final analysis sample in middle adulthood consists of 8,551 respondents, including 523 who in childhood (age 11) were identified as only children (6%). Similarly, the 1970 British Cohort Study (BCS70) is a longitudinal study of an initial cohort of approximately 17,000 people born in Great Britain during a particular week in 1970. The study asked the same parent care questions as NCDS when the BCS70 cohort members were aged 38 and 42. The final BCS70 analysis sample consists of 9,034 respondents, including 687 who in childhood (age 10) were identified as only children (8%). The BCS70 and NCDS data collections at ages 38 and 42 and ages 50 and 55, respectively, correspond to similar calendar years (2008 and 2012 for BCS70 and 2008 and 2013 for NCDS).

Future work (which we aim to present at the EPC conference) will involve adding a third cohort, the 1946 National Survey of Health and Development (NSHD) to the analysis. This survey has followed a subsample of the individuals born in a given week in 1946. The NSHD asked the cohort member at age 68 to identify any people they provide help or assistance to, from which the respondent's parents can be identified. However, the level of detail about the type of care provided is more limited than in the two other studies and for this reason the bulk of the analysis will focus of the two later-born cohorts.

We use logistic and linear regression analyses to compare firstly the engagement in type and hours of parent care (see below for discussion of measures used), and secondly the subjective wellbeing of parent-carers, among adult children who have siblings and adult only children. We include in the models interaction effects to investigate whether gender differences in care provision differ by sibling status, and whether differences in subjective wellbeing between those who provide care and those who do not differ by sibling status.

Sibling status: Siblings were asked about in different ways in the childhood sweeps of the studies, including birth histories asked of the mother and details about all resident household members and their relationship to the cohort member. We define as only children those who do not have co-resident biological siblings. Only children were identified in each of the studies based on information available at age 10/11 rather than earlier sweeps at age 5 or 7, or later sweeps at age 16. This was deemed late enough in the cohort member's childhood to capture the existence of any younger siblings (age gaps of more than 10 years being relatively rare) and also early enough that any older siblings of cohort members would likely still be young enough to reside at home.

Parent care: As noted above, respondents were asked at ages 38 and 42 (BCS70) or 50 and 55 (NCDS) to report from a list all the tasks that they regularly or frequently did for their parent(s),[1] see Table 1, in the results section for the full list of items. These items can be categorised as help with activities of daily living (ADL), combining 'provide or cooking meals' and 'helping with basic personal needs', or help with more instrumental activities of daily living (iADL) such as housework, transport and personal affairs (the remaining tasks listed, excluding financial assistance). In the modelling we analyse different measures of parent-care, focusing primarily on whether the respondent provides any help and the weekly hours spent on helping parents.

Subjective wellbeing: Different measures of mental or subjective wellbeing have been included at different sweeps of the cohort studies. The BCS70 included the 12-item General Health Questionnaire (GHQ) scale in the age 30 sweep and the Warwick-Edinburgh Mental Wellbeing (WEMWBS) scale at age 42, while the NCDS include GHQ at age 42 and CASP-6 at 55. All are multi-item scales that can be used to derive a summary score; the 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).

Results

Preliminary results suggest some differences in parent-care between adult children with and without siblings, which are more apparent at the older ages considered. Descriptive analysis (Table 1) of BCS70 data suggest that at

[1] At the age 42 sweep BCS70 did not ask about financial help and also asked one question about help to either own parents and partner's parents but at age 38 BCS70 respondents were asked specifically only about help given to own parent(s) and NCDS asked separately about help given to own parent(s) and partner's parent(s). Analysis of the NCDS data suggest most individuals who do any of these tasks help their own parents only 65% at age 50 and 61% at age 55, with a further 18% at each age providing some help or care to both their own and partner's parent(s).

ages 38 and 42 the proportions of adult children doing different tasks for their parents were very similar among only children and those with siblings; helping with personal affairs was somewhat more common among only children at age 42. This was also the case for NCDS data at age 50, along with only children more commonly helping parents financially, and with transport and shopping. At age 55, in addition to help with transport, shopping, personal affairs and financial support, only children were also more likely to help with gardening or repairs around the house, as well as household chores such as washing and cleaning.

Table 1 Parent-care by sibling status at ages 38 and 42 (BCS70) and 50 and 55 (NCDS)

	BCS70 38		42		NCDS 50		55		Ratio Only: Siblings			
	Only	Siblings	Only	Siblings	Only	Siblings	Only	Siblings	38	42	50	55
	%	%	%	%	%	%	%	%				
Lifts in car	27.3	25.3	35.2	32.1	41.6	34.4	57.9	43.9	1.08	1.10	1.21	1.32
Shopping for them	19.7	17.2	24.7	22.9	35.5	27.9	52.4	36.7	1.15	1.08	1.27	1.43
Providing/ cooking meals	13.0	10.3	16.6	14.3	16.5	14.3	24.9	20.7	1.26	1.16	1.15	1.20
Helps with basic personal needs	2.4	1.8	2.9	3.4	4.0	4.0	9.1	7.1	1.33	0.85	1.00	1.28
Washing, ironing or cleaning	7.4	5.9	8.5	8.0	9.6	8.7	20.7	14.8	1.25	1.06	1.10	1.40
Personal Affairs	11.1	9.4	20.6	17.4	35.2	23.2	44.3	28.5	1.18	1.18	1.52	1.55
Decorating, gardening or repairs	16.0	15.7	28.6	25.8	31.7	28.3	39.8	33.2	1.02	1.11	1.12	1.20
Financial help	5.2	5.3			14.4	7.2	14.6	10.0	0.98		2.00	1.46
Other help	1.7	2.4	16.2	13.5	10.4	10.2	19.5	19.2	0.71	1.20	1.02	1.02
Any care (excl. financial)	36.9	34.4	53.9	48.5	63.2	54.0	73.5	62.3	1.07	1.11	1.17	1.18
ADL help [1]	13.9	10.8	17.4	15.1	17.9	15.4	26.5	22.1	1.29	1.15	1.16	1.20
iADL help [2]	36.5	33.8	53.0	47.7	62.7	53.2	72.8	61.7	1.08	1.11	1.18	1.18
Mean hours per week - All	1.3	1.3	2.0	1.6	2.1	1.8	3.2	2.4	1.00	1.25	1.17	1.33
Mean hours if provide care	3.6	3.8	3.7	3.5	4.2	4.2	7.3	5.9	0.95	1.06	1.00	1.24
Mean hours if provide ADL care	6.3	6.5	7.3	6.2	7.5	8.7	12.3	11.0	0.97	1.18	0.86	1.12
Base n - All	*539*	*6,646*	*661*	*8,094*	*375*	*5,896*	*309*	*5,166*				
Base n - Parent-carers	*199*	*2,286*	*356*	*3,923*	*237*	*3,184*	*227*	*3,220*				
Base n - ADL parent-carers	*75*	*720*	*115*	*1,222*	*67*	*906*	*82*	*1,138*				

Notes: [1] ADL help includes providing/cooking meals and/or help with basic personal needs; [2] iADL help includes any of the other tasks but excludes those solely providing financial help. Individuals providing ADL help may also provide iADL help and vice versa.

Regression analyses (Table 2) suggest that, controlling for gender of the cohort member, maternal age, childhood social class and cohort member's level of education, at age 38 provision of parent-care did not differ by sibling status. At ages 42 and 50, adult only children in these two cohorts were somewhat more likely to provide some regular or frequent help to their parents, but at age 55 the difference was not statistically significant. Among adult children who provided some care, the weekly hours spent on parent-care did not differ significantly by sibling status at ages 38, 42 or 50, controlling for the above characteristics, but at age 55, only children who provided some parent-care reported spending more time on average on these activities, compared with those with siblings. In general, among adult children who reported providing care, women spent more time on parent-care than did men. Among carers, compared with men who have one or more brothers, women who had brothers, sisters or both tended to report a greater number of hours of care per week, as did women without siblings. There is some indication that men who are only children and provide some care, may also at the older ages provide more care than men with brothers do (although not statistically significant at age 55; results not shown).

Although not possible to test empirically with these data, in the absence of information on when each caring activity began and without being able to compare cohorts at the same ages to rule out a cohort effect, the patterns observed appears consistent with an interpretation that on average only children start providing care at an earlier age than cohort members with siblings. Perhaps adult siblings do not share care initially, with one tending to take the lead until the care needs reach a level that necessitates sharing wherever possible. At this stage the difference between only children and those with siblings is no longer noticeable in the *rates* of care provision, but rather in the *intensity* (hours) of care provided by those who do.

Table 2 Regressions: Providing any care, and hours of care per week 38 and 42 (BCS70) and 50 and 55 (NCDS)

	Binary logistic: Any care (Odds Ratios)				Linear: Hours of care if provide care			
	BCS70		NCDS		BCS70		NCDS	
	38	42	50	55	38	42	50	55
Sibling status: Only child (Ref: Siblings)	1.037	1.173*	1.429***	1.122	-0.201	0.190	0.00776	1.626*
	(0.104)	(0.101)	(0.151)	(0.118)	(0.459)	(0.345)	(0.582)	(0.902)
Observations	*6,437*	*7,886*	*4,803*	*4,970*	*2,203*	*3,719*	*2,071*	*2,083*

Note: Models control for cohort member's gender, mother's age at cohort member's birth, mother's age squared, father's occupation when cohort member was age 10/11, cohort member's highest level of educational or vocational qualification.
*Standard errors in parentheses; Significance levels *** p<0.01, ** p<0.05, * p<0.1*

To explore the determinants of providing parent-care, we run separate regression models for adult children with and without siblings because some potential determinants apply only to those with siblings. The headline finding (Appendix Table A1) across the models was that while some childhood and current characteristics, such as childhood social class, level of education, size and/or gender-composition of sibling group and number of own co-resident children were associated with the likelihood of parent-care among adult children with siblings, among only children fewer individual characteristics were consistently related to the likelihood of parent-care. Among only children, level of education, number of children and gender were broadly unrelated to the probability of providing care across the models, when controlling for other factors. Among those with siblings, a greater number of predictors were significantly related to parent care provision at the earlier ages of 38 and 42 in BCS70, than at ages 50 and 55 in NCDS. Among adult children with siblings, at age 38 women with brothers and women with both brothers and sisters were more likely to provide parent care and at this age having more siblings increased the likelihood of helping parents. Having more siblings reduced the probability of providing care at ages 50 and 55, all else being equal.

Among both only children and siblings, childhood social class (father's occupation) was related to the parent-care at ages 38 and 42 and maternal age at time of the cohort member's birth, and maternal age squared, was related to the parent-care provision at ages 50 and 55. The data used do not include direct information about the parents' care needs or means to access formal care so these results may suggest that unmeasured characteristics of the care recipient, such as the type and level of difficulties they have and their geographical proximity, may be particularly important, and possibly more so among only children.

Controlling for gender and sibling status, providing any care or more hours per week spent on parent-care were both negatively associated with subjective wellbeing at age 42 (results not shown).[2] However, wellbeing did not differ by sibling status, nor did the association between caring and wellbeing differ by sibling status. At age 55, again controlling for gender and sibling status, providing more hours per week was negatively associated with subjective wellbeing at age 55. Again, wellbeing did not differ significantly by sibling status on its own but a significant interaction between sibling status and hours of care suggests the negative association between hours of care and wellbeing is greater for those with siblings. All else being equal, at higher intensities of parent-care the wellbeing was lower on average among those with siblings than among only children, a finding that will be explored in more detail in the presentation.

In sum, the relationships between sibling status, gender and informal care for ageing parents and wellbeing are complex and differ both at the different ages considered and by the type of parent-care measure used. Next steps include incorporating a third cohort, born 1946, to provide information about parent-care in later adulthood, at age 68.

[2] Note that while a prior measure of wellbeing is available, it is not possible to identify whether this pre-dates the start of parent-care as no care history or age when started helping parents is available. The GHQ12 was measured 12 years prior to the outcome in the BCS70 study (at age 30) and 13 years prior in the NCDS study (at age 42). Including the prior measure of wellbeing in the model does not alter the interpretation of results; the size of the coefficient for the care variable increases but neither the direction nor significance of sibling status or care variables change.

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Appendix Table A1 – Binary logistic Regression – Determinants of providing any care, by sibling status

	Only children				Siblings			
Odds Ratios	BCS70 38	BCS70 42	NCDS 50	NCDS 55	BCS70 38	BCS70 42	NCDS 50	NCDS 55
Gender, Female	1.259	0.698**	1.060	0.951				
	(0.248)	(0.117)	(0.222)	(0.202)				
Respondent & Sibling Gender (Ref: Male, brother(s)):					1.347***	1.012	0.741***	0.856
Female, brother(s)					(0.125)	(0.0794)	(0.0843)	(0.0965)
Male, sister(s)					1.176	1.084	0.826	0.829
					(0.116)	(0.0890)	(0.0978)	(0.0975)
Female, sister(s)					1.078	0.944	0.890	0.821*
					(0.105)	(0.0770)	(0.107)	(0.0977)
Male, both					0.997	1.081	0.833	0.852
					(0.107)	(0.0955)	(0.0959)	(0.0980)
Female, both					1.190*	1.033	0.915	0.930
					(0.123)	(0.0893)	(0.105)	(0.107)
Mother's age at CM birth	1.039	0.970	1.444**	2.118***	1.019	1.047	1.301***	1.360***
	(0.122)	(0.0983)	(0.237)	(0.432)	(0.0457)	(0.0394)	(0.0686)	(0.0783)
Mother's age squared	1.000	1.001	0.994**	0.985***	1.000	1.000	0.995***	0.993***
	(0.00201)	(0.00176)	(0.00284)	(0.00363)	(0.000798)	(0.000673)	(0.000921)	(0.00103)
Father's occupation (Ref=I Managers) II Professionals	2.522	1.319	2.206*	1.075	1.287*	1.311**	0.843	0.921
	(1.483)	(0.562)	(0.994)	(0.486)	(0.183)	(0.149)	(0.125)	(0.135)
III Non-manual	2.519	1.344	2.755**	1.606	1.741***	1.293*	0.918	0.935
	(1.585)	(0.636)	(1.409)	(0.815)	(0.279)	(0.171)	(0.150)	(0.151)
III Skilled Manual	3.429**	2.187*	1.863	0.682	2.481***	2.030***	1.147	0.926
	(1.960)	(0.906)	(0.796)	(0.293)	(0.343)	(0.227)	(0.162)	(0.130)
IV Semi-skilled	2.350	1.971	2.132	1.027	2.809***	2.047***	1.148	0.792
	(1.528)	(0.937)	(1.048)	(0.510)	(0.440)	(0.264)	(0.181)	(0.125)
V Unskilled	9.701***	4.168**	2.147	0.413	4.101***	2.877***	1.318	0.676*
	(8.342)	(2.723)	(1.391)	(0.281)	(0.863)	(0.516)	(0.280)	(0.145)
Lone mother	4.042**	2.234*	1.289	0.488	2.095***	1.931***	0.656*	0.362***
	(2.466)	(1.019)	(0.738)	(0.295)	(0.382)	(0.283)	(0.148)	(0.0869)
Not recorded	3.161	2.610*	1.251	3.673	2.667***	1.914***	0.976	0.755
	(2.410)	(1.517)	(1.279)	(3.959)	(0.513)	(0.306)	(0.170)	(0.130)
Highest qualification (Ref: None) NVQ Level 1	0.846	1.421	0.813	0.893	0.952	1.140	1.038	0.795
	(0.514)	(0.637)	(0.512)	(0.539)	(0.136)	(0.127)	(0.150)	(0.115)
NVQ Level 2	1.225	1.556	0.606	1.175	1.068	1.199**	1.281*	0.918
	(0.536)	(0.475)	(0.318)	(0.592)	(0.121)	(0.104)	(0.164)	(0.117)
NVQ Level 3	1.669	2.187**	0.671	1.875	0.883	1.121	1.168	0.877
	(0.782)	(0.742)	(0.365)	(0.985)	(0.109)	(0.107)	(0.157)	(0.118)
NVQ Level 4	1.470	1.425	0.496	1.048	0.811*	0.902	0.920	0.778**
	(0.630)	(0.423)	(0.258)	(0.524)	(0.0909)	(0.0762)	(0.118)	(0.0992)
NVQ Level 5	0.874	1.677	0.572	0.636	0.561***	0.701***	0.930	0.820
	(0.444)	(0.608)	(0.360)	(0.404)	(0.0844)	(0.0823)	(0.162)	(0.142)
Partnership status (Ref: Married) Cohabiting	1.558	1.051	0.717	0.961	1.065	1.003	0.866	0.904
	(0.447)	(0.297)	(0.272)	(0.346)	(0.0856)	(0.0767)	(0.0911)	(0.0987)
Not living with a partner	1.566*	0.988	0.968	1.185	1.597***	0.898*	1.060	1.003
	(0.414)	(0.218)	(0.263)	(0.320)	(0.120)	(0.0557)	(0.0878)	(0.0788)
Number of own children in household	1.071	1.078	0.922	0.937	0.982	0.949**	0.994	0.933*
	(0.106)	(0.0942)	(0.101)	(0.118)	(0.0279)	(0.0218)	(0.0317)	(0.0349)
Number of siblings					1.033*	1.020	0.938**	0.905***
					(0.0186)	(0.0157)	(0.0245)	(0.0242)
Constant	0.0341	0.495	0.00733	9.20e-05	0.0989	0.192	0.0279	0.0556
Observations	*502*	*624*	*397*	*413*	*5,935*	*7,262*	*4,401*	*4,557*

*Standard errors in parentheses; Significance levels *** p<0.01, ** p<0.05, * p<0.1*