



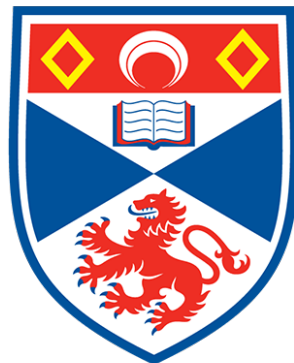
Next-Generation Leaders for Global Good



Caring across generations: the long-term economic effects of dual caregiving

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2. Glossary

Accumulation: The build-up of savings in a pension pot over an individuals' working life (Moulton et al 2026, p6).

Carer: Anyone who provides unpaid care to a family member, partner or friend who cannot cope without support due to illness, frailty, disability, mental health or addiction problems (NHS England n.d).

Defined benefit (DB) pension: A pension which pays out a secure income for life, guaranteed and written by the sponsoring employer, calculated by age, years of service and salary (Moulton et al 2026).

Defined contribution (DC) pension: A personally provided pension, not funded by an employer, including self-invested personal pensions, individual personal pensions and individual stakeholder pensions (Moulton et al 2026 p8).

Dual caregiving: The combination of multiple care responsibilities including children and elders (Suzuki and Honjo 2022).

Financial wealth: The total value of savings and investments within a household, minus total value of debts (Moulton et al p7).

Intermediate class: Children whose fathers were employed in profession, managerial or technical occupations but were living in council accommodation or mother had been employed in manual occupation during their childhood; or if fathers were employed in skilled manual or non-manual occupations; or if fathers was in manual occupation/service routine but lived in owner-occupied accommodation (Elliott and Lawrence 2014).

Middle class: Children whose fathers were employed in profession, managerial or technical occupations at age 11 and they were not living in rented council accommodation and mother was not in manual occupation during their childhood (Elliott and Lawrence 2014).

Private pension: All pension schemes individuals or employers have in the past or are currently contributing to; pensions individuals are currently receiving income from; pensions from which funds have been withdrawn, not including inherited pensions (Moulton et al 2026 p8).

Savings: Monies in accounts at banks, building societies, Premium Bonds or National Saving Accounts or Certificates, ISAs, Trusts/Bonds and Gilts, not including pensions (Moulton et al p9).

State pension: A regular payment from the UK government to individuals at state pension age, aged 66 for this cohort (Moulton et al 2026 p9).

Working class: Children whose fathers were in manual or partly skilled occupations and were not living in owner-occupied accommodation at age 11 (Elliott and Lawrence 2014).

3. Introduction

Caregiving is an undervalued and unpaid dimension of the economy which disproportionately affects marginalised groups, yet it is invaluable in sustaining the labour supply. This research therefore asks: do gender and social class origin at age 11 moderate the relationship between dual care responsibilities and retirement wealth outcomes in the National Child Development Study (NCDS) 1958 cohort?

Findings reveal that gender and social class origins influence whether individuals provide care at all, together with intensity and duration of caregiving over the life course, thus shaping retirement outcomes. Most strikingly, high caregiving burdens, mostly faced by women from working class backgrounds, reduce the odds of holding a pension aged 62 by 73.5%. This report first reviews existing literature, then outlines the methodology, results, discussions and final conclusions.

4. Literature review

Contemporary caregiving research focuses on single-axis characteristics, such as gender, likely reflecting caregiving's historical association with women (Cresswell 2013; Katz 2001; Office for National Statistics 2024). Globally, women undertake 75% of informal carework, equating to 11 billion hours per day (Seedat and Rondon 2021). Despite this, women's contributions are seen as low-value or invisible within mainstream economics (Cresswell 2013; Seedat and Rondon 2021).

One strand of this research examines eldercare, though largely within a European context. Heger and Korfhage (2020) show that in Germany, informal eldercare reduces lifetime earnings and pension savings due to the opportunity-cost of caregiving; providing care forfeits participation in the formal, paid labour market. However, Germany's welfare state and pension architecture greatly differs from the UKs, so it is unclear whether these findings correlate within a British context.

Eldercare's impacts are most severe for (single) women, who constitute most informal carers. This burden increases with age, whilst men typically only engage in eldercare after retirement (Petrillo et al 2026), creating a wide gender eldercare gap between ages 50 and 60. Eldercare research is often isolated from childcare research, however dual care (simultaneous elder and childcare) is typical between ages 42 and 50, in the 'sandwich generation'. Dual caregiving's impacts on long-term economic wealth remain under-researched.

Childcare produces a parallel effect to eldercare. Opportunities for education and training, which underpin career growth and financial stability, become compromised, diminishing earnings and long-term economic wealth. Moreover, women are more likely to leave the formal labour market altogether due to the inability to balance paid work and caregiving (Petrillo et al 2026; Xue and McMunn 2021; Heger and Korfhage 2020). Economic disparities are reflected in a 13% gender pay gap among full-time employees as of April 2024, which British parliament partly attributes to women's disproportionate share of unpaid carework (Francis-Devine 2024; Francis-Devine et al. 2025).

Early Department of Work and Pensions (DWP) analysis of the 1958 NCDS cohort suggests wage gaps progress into retirement wealth gaps. Male members hold on average nearly

double the DB pension income and triple the DC pension pot of female members (Moulton et al 2026). Lower lifetime wages perhaps explain reduced accumulation, though the direct contribution of caregiving remains underexplored (Heger and Korfhage 2020), positioning this cohort as an opportune group in which to test the relationship directly (Cribb 2023).

A second study, the UK Household Longitudinal Study, extends research beyond gender to influences of deprivation and class. Caregivers are 4% more likely than non-carers to experience poverty, live in deprived areas, and have reduced access to formal care provision (Petrillo et al 2026). Moulton et al (2026) acknowledge some intersectional disadvantage, suggesting those with home-care responsibilities and poor health have reduced pensions. Harris et al (2020) echo that socio-economically disadvantaged individuals provide more intense caregiving, with greater economic effects.

Counterintuitively, Petrillo et al (2026) found that the gender care gap is largest amongst the least deprived. Caregiving may be shared more equally through necessity by lower classes, whilst wealthier households hold a more traditional gendered division of care. This suggests that class and gender interact to influence care burdens, rather than acting in isolation. Existing work does not test that interaction, and no work extends to retirement wealth outcomes. Current research, like that of Petrillo et al (2026), also measures class and deprivation in adulthood, not as they were experienced in childhood.

This research takes a distinct methodological approach, measuring class at age eleven. Bourdieusian ‘theorisation of class relations’ (Wright 2009; Wami et al 2020) argues social classes develop heterogeneous habitus – cultural markers and dispositions – which influence how individuals experience and impact society. This shapes caregiving norms and gendered roles within families, aligned with expectations and available resources. Consequently, adult caregiving burdens are shaped by class upbringings, which caregiving research has not directly interrogated.

Overall, this literature is best understood through an intersectional lens (Crenshaw 1989), where the multiplicative effects of identity characteristics extend beyond their independent contributions (Petrillo et al 2026). These studies show that gender and class each shape caregiving and economic consequences and gesture to their interaction, but none model the interaction against long-term wealth outcomes, still less with childhood class as moderator. No existing study offers a comprehensive caregiving biography across the life course — timing, intensity, duration, and sequencing of care spells — linked to retirement wealth and moderated by early-life class. This research addresses that gap using the NCDS 1958 cohort.

5. Methodology

5.1 Research aims

1. Identify whether childhood social class origin and sex predict caregiving participation over the life course.
2. Quantify the cumulative time individuals spend on caregiving over the life course, including overlapping dual care of multiple generations.
3. Assess whether caregiving histories contribute to observed gender and social class disparities in retirement wealth.

5.2 The data

This research uses NCDS data, a longitudinal study tracing the lives of cohort members born across Great Britain in the same week of 1958. Since birth, cohort members have engaged in eleven check-ins, known as sweeps, collecting data via methods such as computer-assisted personal interviews; web-based self-completion questionnaires and bio-medical observations. Information gathered focuses on factors affecting physical, educational and social development, to understand human development over the lifespan (Moulton et al 2026, p6).

The Centre for Longitudinal Studies (CLS) synthesises NCDS data into raw and derived data sets, of which this research draws on three. The first is *National Child Development Study: Activity Histories, 1974-2013* (University of London, Institute of Education, Centre for Longitudinal Studies 2024a), which determines whether cohort members have ever provided care. The second is *National Child Development Study: Childhood Data from Birth to Age 16, Sweeps 0-3, 1958-1974* (CLS 2024b), which determines social class of individuals at age 11. Finally, the most recent sweep, *National Child Development Study: Age 62, Sweep 10, 2019–2024* (CLS 2024c), informed investigation on retirement wealth and more recent care responsibilities.

The cohort began with 17415 members, however attrition has since reduced the sample, as cohort members died, missed sweep, or dropped out the study. Of 8405 cohort members participating in sweep 10, only 3923 (47%) were retained for regression analysis, as each cohort member was required to have: savings data, caregiving history from sweeps 4 to 9, valid sex, and valid social class. This reduction is largely from non-response to household saving questions and absence from activity histories sweeps used to measure caregiving burden. Both non-participations may not be random, with those dropping out more likely to be disadvantaged, further diminishing observable effects of intersectionality in the full cohort.

5.3 Analysis

Descriptive analysis examines patterns across variables, comparing distribution measures such as mean, median and range. Statistical tests examine observed significance at a 95% confidence interval in RStudio, following the DWP's analytical approach into retirement wealth of this cohort (Moulton et al 2026). Confidence intervals indicate the likely range of the true value, with a 5% threshold as the cut-off for statistical significance.

Tests were selected according to each variable's distribution and measurement level. Chi-square tests were used to compare categorical variables. Mann-Whitney U Tests examined relationships between two groups, and Kruskal-Wallis tests between three groups, for non-normally distributed continuous variables. Finally, logistic and linear regression models examined predictors of retirement wealth outcomes, including caregiving participation and burden, sex, and social class background.

NCDS data uses numeric codes, with negative numbers denoting missing or inapplicable responses. Negative numbers were recoded to NA in R and excluded from calculations to avoid misleading statistical analysis.

5.4 Key measures

Social class in childhood was determined as middle, intermediate or working-class, using Elliott and Lawrence's (2014) methodology. Traditionally social class is defined solely by father's occupation, though this overlooks working-class women's disadvantage, since mother's occupation and housing tenure better captures strain in female-headed or dual-income households. Instead, social class is determined from fathers' occupation (n1171) mother's occupation (n539 and n1225) and housing tenure (n1152) at age 11.

Sex	Middle class	Intermediate class	Working class	Total
Male	1310 (19.2%)	2483 (36.4%)	3021 (44.3%)	6814
Female	1255 (19.3%)	2324 (35.8%)	2918 (44.9%)	6497
Total	2565	4807	5939	13311

Table 1: distribution of characteristics of cohort members at age 11, identifying sex at birth and social class (n=13311).

Most cohort members are working-class, around a third are intermediate class and the smallest proportion is middle-class. 5281 cohort members were unclassified due to missing information, usually father's occupation.

Whether cohort members were ever caregivers was determined by primary economic activity in activity histories data set (variable = JACTIV, 18=looking after home and family, 21=maternity leave). A life-stage proxy was constructed across spells 4 to 9. Hours spent caregiving for grandchildren (n10gccarhw), parents and partner's parents (n10hourspar and n10hourspcar) were calculated and compared against each cohort member's previous caregiving histories. Total months caregiving were then summed across all activity spells. This was categorised into four burden groups: none (zero months), low (under 24 months), moderate (24 to 59 months) and high (60 or more months).

In line with Moulton et al (2026), this report investigated four categories of retirement wealth: defined contribution, defined benefit, household savings, and household wealth. However, data limitations reduced this to three outcome variables. Firstly, whether cohort member holds any pension, secondly total household savings, top-coded to £80,000. Finally, total retirement wealth, combining pension values with household savings. Pension fund values are reported for a subset only, as most cohort members had not yet accessed their pensions at age 62. Following Moulton et al (2026), pension status (whether any private pension exists) is used as the primary binary pension outcome, and household savings used as the primary continuous wealth measure; total retirement wealth is retained as an exploratory measure only, given its partial pension coverage.

6. Results

6.1 Relationship between social class origin, sex and caregiving

6.1.1 Caregiving between 23 and 55

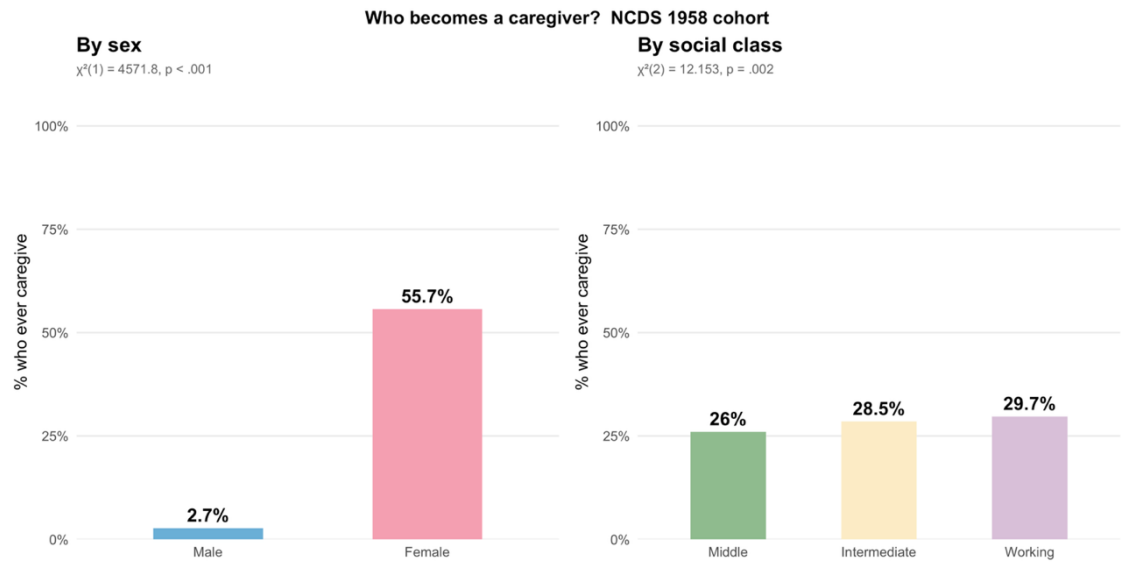


Figure 1: percentage of cohort members who had ever been a caregiver, ages 23-55, by sex and class (n=7720).

Between 23 and 55, Figure 1 shows just 2.7% of male and 55.7% of female cohort members had ever been a caregiver. A chi-square test of independence showed caregiving status was significantly associated with sex ($\chi^2=4571.8, p<0.001$). Caregiving varies by social class background. Middle-class cohort members provided least proportion of care (26%) and working class provided most (29.7%). Class association was statistically significant ($\chi^2=12.153, p=0.002$), though the absolute difference across classes is smaller than that of sex, suggesting sex is a stronger determinant of whether individuals have ever provided care than class.

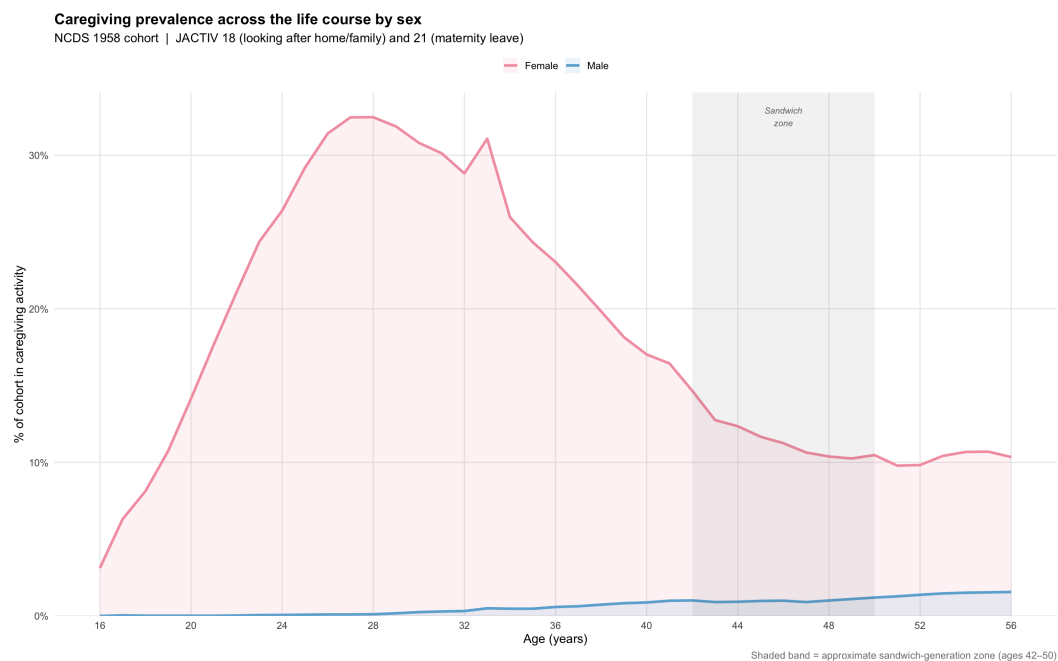


Figure 2: percentage of cohort members providing care ages 16-55 by sex (n=7720).

Figure 2 demonstrates that throughout the entire life course, a far greater percentage of females than males provided care. The proportion of women caregiving spikes at 27, followed by a slight plateau staying above 28% until a further spike at 33. For men, there is a slight, continuous increase in the percentage of cohort members providing care from roughly 0.1% to 1.5%. The shaded band which demonstrates the sandwich zone, where dual care is most prevalent, shows women are still more likely to be providing care.

6.1.2 Caregiving for grandchildren at age 62

Of cohort members whose sex and class are known ($n=3942$), caregiving for grandchildren is provided disproportionately by women (56%) compared to men (44%). Caregiving is provided most by working-class individuals (44%) compared to 38% of intermediate-class individuals and starkly to 18% of middle-class individuals. Both associations for sex ($\chi^2=34.187$, $p<0.001$) and class ($\chi^2=7.259$, $p=0.027$) are statistically significant in Chi-square testing, though the association between grandchild caregiving is stronger for sex than class. The bivariate associations have been refined using logistic regression, allowing both predictors to be tested simultaneously, for each type of caregiving below.

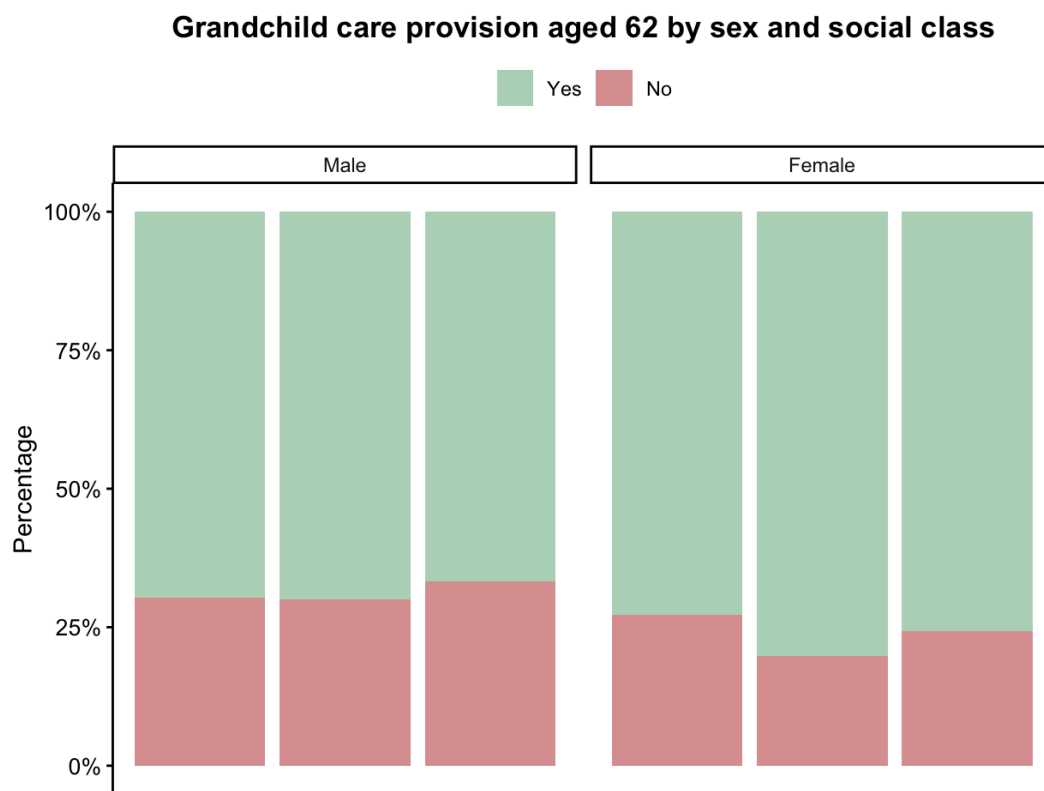


Figure 3: characteristics of cohort members providing or not providing grandchild care at age 62 ($n=3942$).

Figure 3 shows that within every class category, a greater proportion of women provide grandchild care. Controlling for class, women are estimated as 1.27 times more likely to provide care than men ($OR=1.271$, $p<0.001$). Controlling for sex, intermediate class cohort members are 1.24 times more likely to provide care than middle class cohort members. However, this effect is weaker ($OR=1.238$, $p=0.038$), with the confidence interval sitting just

above 1. There is no significant difference in care provision between working- and middle-class backgrounds (OR=1.010, $p=0.090$). Overall, sex is the strongest predictor of grandchild care provision, though class does have effects.

6.1.3 Caregiving for parents at age 62

The majority (95.5%) of cohort members whose parents are still alive ($n=1292$) provide some kind of care. Women make up a larger share of carers (52%) compared to men (48%). There is no clear class difference. This is confirmed with Chi-squared testing, showing a statistical gender difference ($\chi^2=3.859$, $p=0.049$) but no class difference ($\chi^2=2.197$, $p=0.333$).

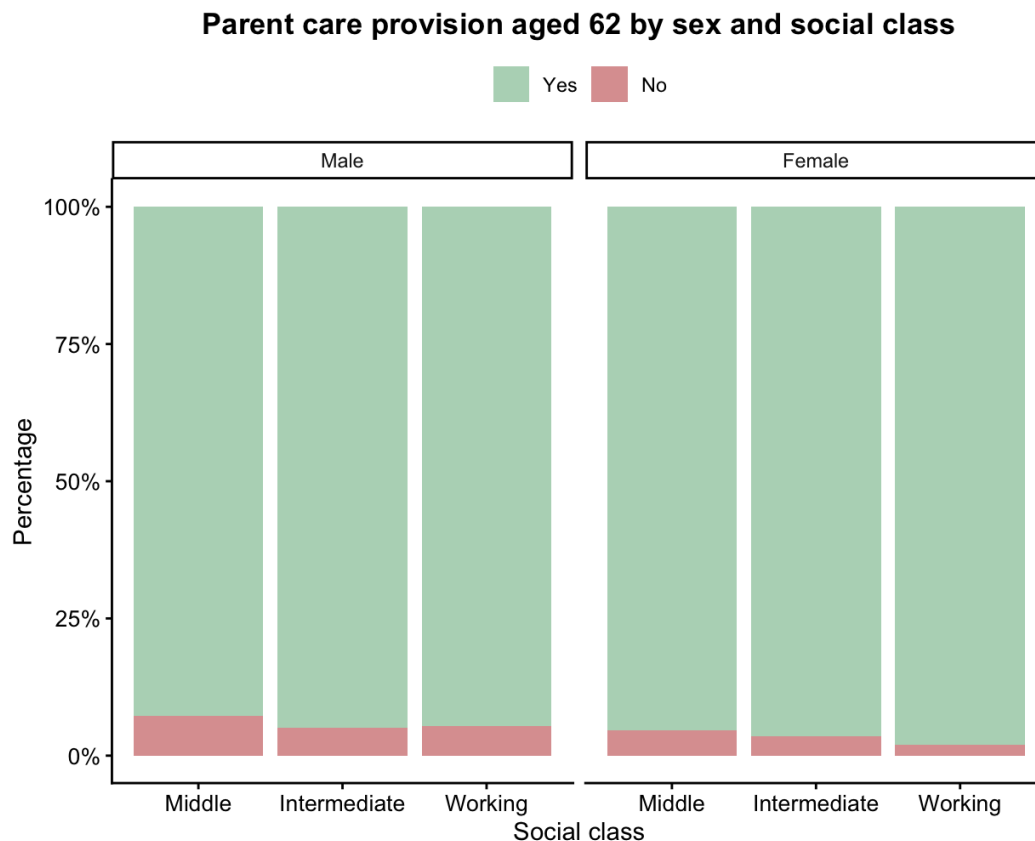


Figure 4: characteristics of those providing or not providing care for parents at age 62 ($n=1292$).

Within all classes, women are 1.78 times more likely to provide care for parents than men, showing a gendered effect, though this is weak as the confidence interval sits just above 1 (OR=1.78, $p=0.037$). Controlling for sex, there is no strong association between class and caregiving between either middle and intermediate class (OR=1.38, $p=0.311$) or working and middle class (OR=1.65, $p=0.151$). This shows that sex is most strongly associated with eldercare, though not to the same extent as grandchildren care.

6.1.4 Caregiving for partner's parents at age 62

The majority (91%) of cohort members whose partner's parents are alive ($n=755$) provide some extent of care. Typical gender patterns are reversed, with 71% men comprising carers, compared to 29% of women. There is a difference in the number of carers made up of middle and working class. However, neither gender nor class associations are statistically significant ($\chi^2=0.199$, $p=0.656$ and $\chi^2=1.738$, $p=0.419$), likely due to the small sample of men.

Partner's parent care provision aged 62 by sex and social class

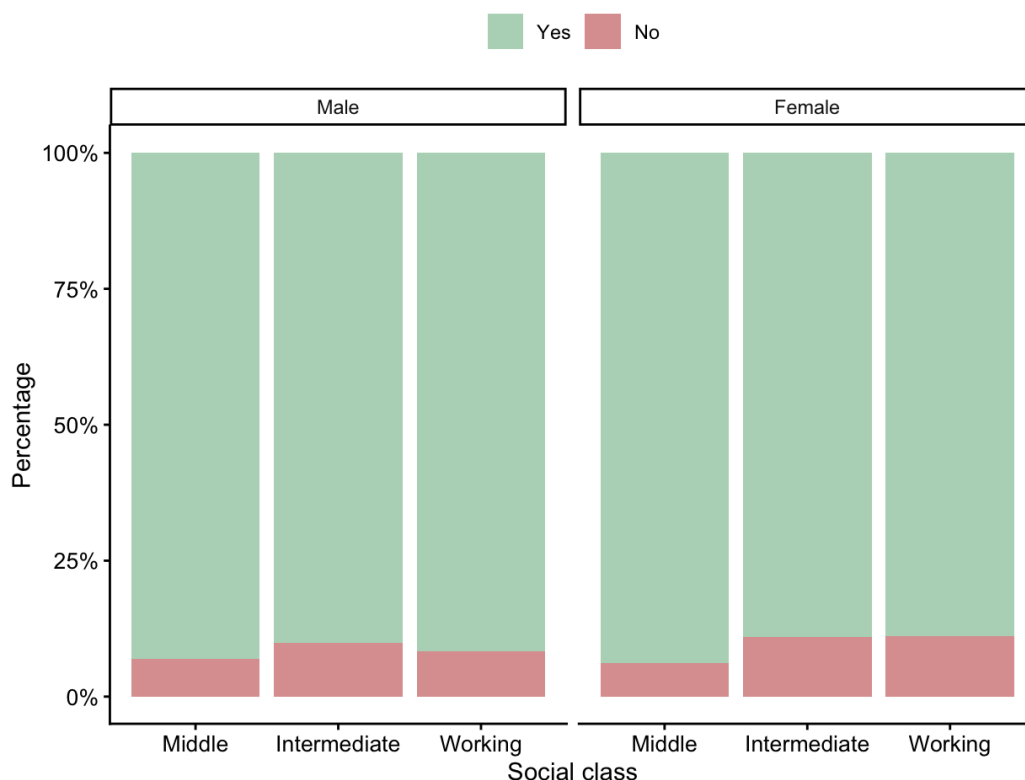


Figure 5: characteristics of cohort members providing or not providing care for partner's parents at age 62 (n=755).

Controlling for class, females are not more likely to provide care than men (OR=0.86, $p=0.862$). Furthermore, controlling for sex, there is no difference in the likelihood of working, intermediate or middle classes providing care for partner's parents (OR=0.63, $p=0.196$ for intermediate and middle class and OR=0.71, $p=0.354$ for intermediate and working class). Overall, sex and class background hold little influence over whether a cohort member is likely to provide care for their partner's parents.

6.2 Quantifying time spent caregiving

6.2.1 Time spent caregiving by identity group aged 23 to 55

Sex	Childhood social class	Carers	Total spells	Average caregiving spells per carer	Mean months per carer	Median months per carer	Total months spent caregiving	Mean months per carer
Male	Middle	30	33	1.1	57.2	45	1889	63.0
Male	Intermediate	62	67	1.1	48.8	37	3267	52.7
Male	Working	92	97	1.1	54.6	39	5297	57.6
Female	Middle	636	984	1.5	61.2	36	60232	94.7
Female	Intermediate	1310	2053	1.6	63.7	40	130717	99.8
Female	Working	1671	2701	1.6	67.9	45	183373	109.7
Total		3801	5935				384775	101.2

Table 2: Caregiving participation and duration, ages 23-55 by sex and class (n=3801).

Table 2 shows vast gendered differences in intensity and duration. For every month of care men provided, women provided 36 months. Overall, women accumulated 374,322 months of caregiving and men 10453. Women from all class backgrounds, on average, spent at least 31 more months caring than men. The greatest care duration difference is between working class women, who spent 109.7 months caregiving, and intermediate class males, who spent 52.7 months caregiving.

Median months spent caregiving varies less by gender, though data are right skewed, suggesting women still provide longer spells of care. Each caregiving spell provided by males lasted between 48.8 and 57.2 months on average, whilst female caregiving spells lasted between 61.2 and 67.9 months. Not only were spells longer, but women also undertook more spells (1.5 to 1.6 spells per person) than men (1.1 spells per person).

Mann-Whitney U testing of spell duration by sex did not reach conventional significance ($W=772284$, $p=0.051$), though women recorded longer mean and median care spells across every class. This result suggests the test is a symptom of unbalanced sample sizes (197 male spells and 5932 female spells), rather than evidence of no difference.

Class patterns are evident with mean months spent caring increasing from middle-class (94.7 months) to intermediate-class (99.8 months) to working class (109.7 months). This class pattern is stronger for women. For male cohort members, burden is most intense for middle class, then working, then intermediate class. Middle class males spent 63 months caregiving, working class males 57.6 months and intermediate class 52.7 months on average. The range of months spent caregiving per carer across class is smaller for men, at 10.3 months, whilst for women the range was 15 months, suggesting a greater class disparity for women.

Kruskal-Wallis rank sum test showed class and caregiving duration association is statistically significant ($\chi^2=7.7358$, $p=0.021$). Pairwise Wilcoxon rank sum tests with Bonferroni revealed this difference was driven by middle- and working-class carers ($p=0.035$), as opposed to intermediate and working class ($p=0.163$) or middle and intermediate class ($p=0.894$). Overall, this suggests that women – in particular working-class women – experience more intense caregiving burdens in prevalence, frequency and duration.

6.2.2 Time spent caregiving for grandchildren aged 62

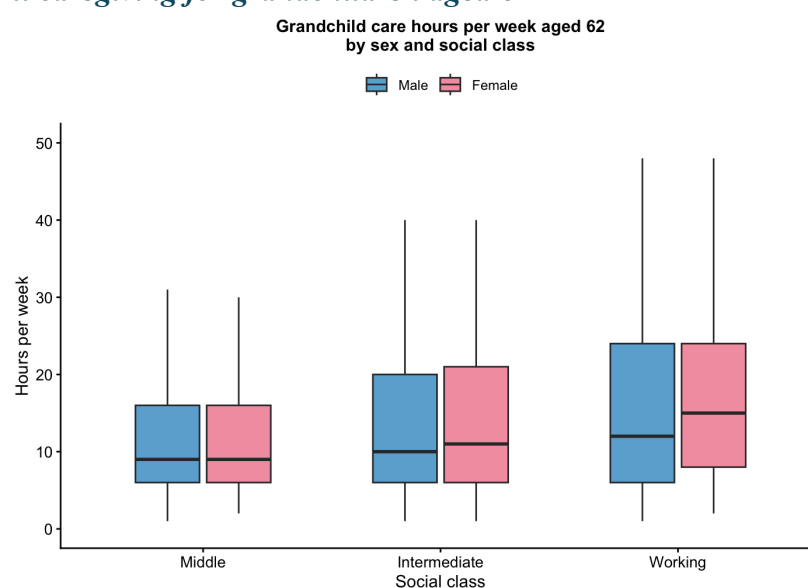


Figure 6: distribution of grandchild care hours by sex and class at age 62 ($n=3942$).

Females provide an average of 12 hours caregiving for grandchildren per week, whereas men provided 10. Kruskal-Wallis testing shows gendered differences are not significant ($H=2.01$, $p=0.156$). Figure 6 shows an increase in median hours spent caregiving by class, from 9 hours from middle class to 10 hours intermediate class, to 14 hours working class. This class association is statistically significant against Kruskal-Wallis testing ($H=28.07$, $p<0.001$).

6.2.3 Time spent caregiving for parents aged 62

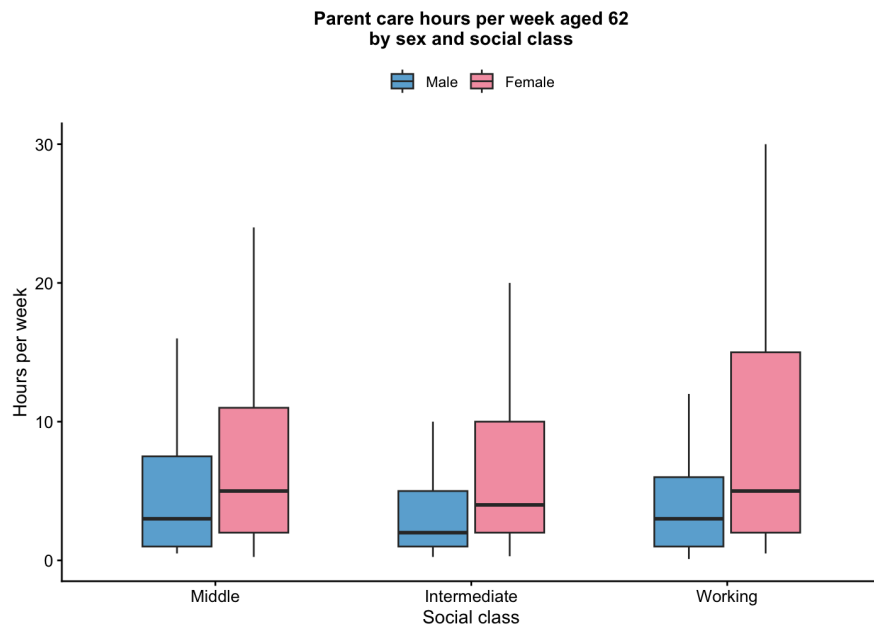


Figure 7: distribution of parent care hours by sex and class at age 62 ($n=1292$).

There is visibly a difference in the median hours of care provided by men and women for parents, with female median line higher across all classes. Kruskal-Wallis rank sum test reveals that women provide 2.5 times more care hours than male counterparts ($H=60.91$, $p<0.001$), shown with median hours of women being 5 compared to men's 2 hours of care. There are no class associations with hours of care provided ($H=3.93$, $p=0.140$), with all class backgrounds providing 3 to 4 hours of care per week.

6.2.4 Time spent caregiving for partner's parents aged 62

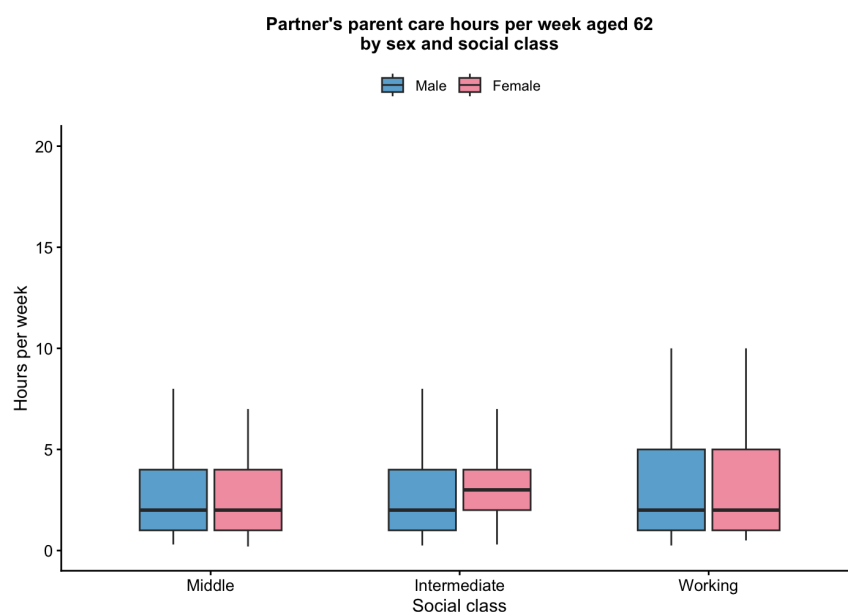


Figure 8: distribution of partner's parent care hours by sex and class at age 62 ($n=755$).

There is no statistically significant difference in number of hours of care provided for partner's parents by sex ($H=2.26$, $p=0.133$) or class ($H=2.07$, $p=0.355$), shown by Kruskal-Wallis tests.

6.2.5 Total time spent caregiving aged 62

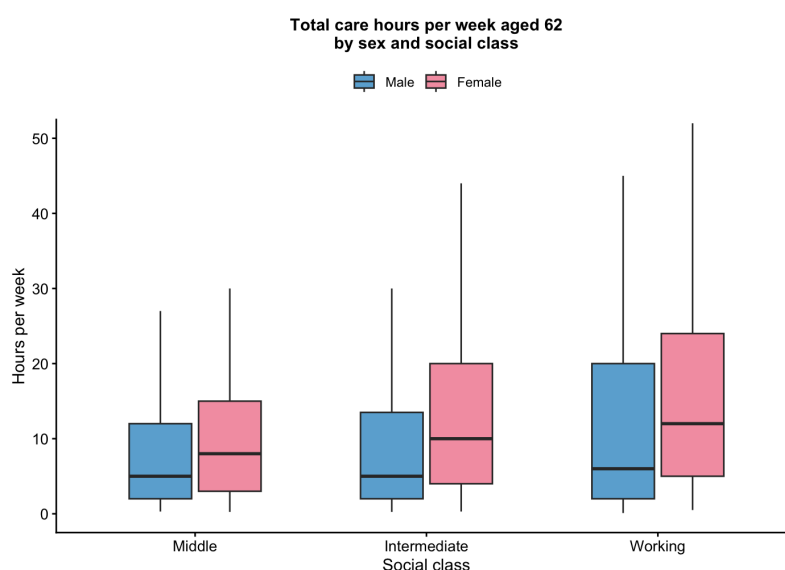


Figure 9: box plot showing total dual care hours provided by cohort members by sex and class ($n=5018$).

Figure 9 shows uneven distribution of dual care hours (total care hours) by both gender and class. Women provide, on average, 10 hours of care per week, with men providing half of that at 5 hours. Middle class provides the least care, averaging 6 hours per week, rising to 8 hours among intermediate class and 10 hours among working class. Kruskal-Wallis testing shows that both sex ($H=112.96$, $p<0.001$) and class ($H=47.93$, $p<0.001$) are statistically significant.

6.2.6 Relationship between care burden at 23 to 55 and 62

	Yes	No	Caregiving at 62
High (5+ yrs)	762	936	45%
Moderate (2-5 yrs)	287	329	47%
Low (<2 yrs)	191	265	42%
None	2131	3426	38%

Table 3: care burden intensity, ages 23-55, and percentage still caregiving at 62 ($n=5557$).

Those with no prior caregiving history were least likely to be caregiving at 62, with only 38% of those who had not previously provided care now caregiving. In contrast, those who provided high caregiving across their lives, 45 to 47% are still likely to be providing care. Chi-square testing shows this is statistically significant ($\chi^2=34.025$, $p<0.001$). This suggests caregiving is not a bounded spell, but a persistent pattern over the life course.

Characteristic	Odds ratio	P-value	95% CI
No care burden	1	-	-
Low prior care burden (<2 yrs)	1.31	0.021	1.04 to 1.64
Moderate prior care burden (2-5 yrs)	1.70	<0.001	1.39 to 2.09
High prior care burden (5+ yrs)	1.56	<0.001	1.34 to 1.82
Female	0.76	<0.001	0.67 to 0.87
Middle class	1	-	-
Intermediate class	1.14	0.051	1.00 to 1.29
Working class	1.15	0.027	1.02 to 1.31

Table 4: binary logistic regression results predicting likelihood of providing care at 62 (n=6909).

Binary logistic regression analysis was employed to predict whether cohort members providing informal care at 62 was associated with prior care burden, sex and childhood social class. Compared to a person with no caregiving history, any burden of prior caregiving makes a cohort member more likely to provide care at 62. Low burden care histories make individuals 31% more likely; moderate care histories 70% more likely; high burden 56% more likely. Overall, prior caregiving burdens indicate caregiving at 62, again suggesting that caregiving is cumulative and persistent over the life course.

As shown in table 4, gender is not an indication of whether care giving will be provided at 62 comparatively to whether it was provided over the rest of the life course. Working class people are 15% more likely to be providing caregiving at 62 than middle class cohort members, controlling for sex and prior caregiving burden. This suggests the class gap pattern in caregiving found across sweeps 4 to 9 persists at sweep 10.

6.3 Caregiving histories and retirement wealth

6.3.1 Savings

Care burden	Sex	Number of cohort members	Median amount of savings (£)	Mean amount of savings (£)	Percentage within no savings
None	Male	1919	18000	28233	1.2
None	Female	776	16000	26460	0.9
Low (<2 yrs)	Male	28	2000	17022	0
Low (<2 yrs)	Female	194	10000	24212	2.1
Moderate (2-5 yrs)	Male	21	7000	17436	0
Moderate (2-5 yrs)	Female	259	15000	28419	1.2
High (5+ yrs)	Male	16	5000	17138	0
High (5+ yrs)	Female	710	12000	25070	1.7

Table 5: mean and median savings by lifetime caregiving burden and sex at age 62 (n=3923).

Those who provided no primary caregiving over their life course have higher savings than any other caregiving burden intensity by median savings. The median for all groups is lower than the mean, suggesting the data are right-skewed, with outliers towards larger values.

Predictor	Estimate (£)	Std. Error	t value	p
Intercept (middle class, male, no prior caregiving)	£30,418	984.0	30.913	-
Low caregiving burden (<2 yrs)	-£3,935	2114.3	-1.861	0.063
Moderate caregiving burden (2-5 yrs)	£279	1946.4	0.143	0.886
High caregiving burden (5+ yrs)	-£2000	1443.4	-1.386	0.166
Female	-£876	1159.1	-0.756	0.450
Intermediate class	-£1475	1138.3	-1.296	0.195
Working class	-£5751	1189.0	-4.837	<0.001

Table 6: linear regression coefficients predicting household savings from caregiving burden, sex, and social class (n=3923).

Linear regression was estimated to assess any associations between prior caregiving burdens, sex, childhood social class and household savings at age 62.

The model was statistically significant overall ($F(6, 3916)=6.07$, $p<0.001$), though it explained only a 0.9% variance in savings ($R^2=0.009$). At an individual level, childhood class was the most significant individual factor predicting savings ($p<0.001$), with those from working class backgrounds having on average £5751 less in savings than middle class counterparts, controlling for sex and caregiving. Caregiving burden showed a negative effect, with those having a high prior caregiving burden with £2000 less in savings, controlling for gender and class, though this was not statistically significant ($p=0.166$).

A second model tested whether these relationships between characteristics and savings operated through reduced employment. Total months in paid employment between ages 23 and 55 (sweeps 4 to 9) was added as a potential mediator. However, employment history was not a significant predictor of savings at 62 ($b=£8.79$ per month, $p=0.158$), nor did it alter that caregiving or class coefficients, nor explain variance ($R^2=0.010$). Overall, this suggests that the relationship between caregiving and amount of savings is not impacted merely by whether a cohort member spent less or more time in paid employment. Rather, it suggests that other mechanisms, such as interrupted career progression, would be greater influences.

Finally, a third model tested whether caregiving penalises women's savings more than men's, through adding interaction terms between caregiving burden and sex. None reached conventional significance. The positive direction of the interaction terms indicates that women with prior caregiving burdens have higher savings than men with prior caregiving burdens. However, this is likely due to be the small male carer burden groups ($n=16$ to 28 per category). The model only explained a 1.1% variance in savings ($R^2=0.011$, $F(9, 3913)=4.78$, $p<0.001$).

6.3.2 Pensions

Sex	Class background	Percentage with pension	Percentage with no pension
Male	Middle	94	6
Male	Intermediate	94.1	5.9
Male	Working	93.1	6.9
Female	Middle	88.2	11.8
Female	Intermediate	87.5	12.5
Female	Working	85.4	14.6

Table 7: percentage of each sex and class background with and without a pension at age 62 ($n=3923$).

A greater proportion of men than women hold a pension. This gender gap widens with class disadvantage, with a 0.9%-point difference amongst men to 2.8%-point difference amongst women, meaning working-class women have the lowest pension coverage of any group, at 85.4%.

Predictor	Estimate (log-odds)	Std. error	Z value	P	Odds ratio
Intercept (middle class, male, no prior caregiving)	2.78177	0.13194	21.083	<0.001	16.148
Low caregiving burden (< 2 yrs)	-0.62818	0.24119	-2.605	0.009	0.534
Moderate caregiving burden (2-5 yrs)	-0.40892	0.23883	-1.712	0.087	0.664

High caregiving burden (5+ yrs)	-1.32685	0.16084	-8.249	<0.001	0.265
Female	-0.11388	0.15802	-0.721	0.471	0.892
Intermediate class	0.02863	0.14159	0.202	0.840	1.029
Working class	-0.14053	0.14386	-0.977	0.329	0.869

Table 8: binary logistic regression odds ratios predicting pension coverage from caregiving burden, sex and social class at age 62 (n=3923).

Binary logistic regression was applied to assess any predictors between prior caregiving burden, sex and background childhood class and whether an individual has a pension. Prior caregiving burden was the strongest predictor in the model. Cohort members with a high prior caregiving burden had a 73.5% reduction in odds on whether they held any kind of private pension compared to those who did not provide care (OR=0.27, $p<0.001$). A moderate burden did not reach conventional significance (OR=0.66, $p=0.087$), low burden caregiving also significantly reduced the odds of having a pension by around half (OR=0.53, $p=0.009$).

Once prior caregiving burden was controlled for, neither sex nor social class background was a significant predictor of pension status at 62. This contrasts with savings, where working class membership was the strongest predictor of outcome.

A further interaction model tested whether caregiving penalised women's pension status to a greater extent than men's by adding caregiving burden and sex interaction terms to the base model. The interaction model did not improve model fit (AIC=2363.5 compared to 2360.3 for the model without the interaction) and none of the interaction terms reached significance. This means that caregiving affects men's and women's pension status in similar ways within this sample, though the small number of male carers ($n=65$) limits statistical power to detect a genuinely different effect.

7. Discussions

Results show that caregiving is a cumulative burden over the lifetime, with compounding intersectional effects on long-term economic wealth. Between the ages of 23 and 55, caregiving was almost exclusively female, with women accounting for 95% of caregivers. Still at age 62, women remained more likely to provide care, particularly for grandchildren.

However, the gender gap had narrowed by age 62, with a greater proportion of men providing care, and no significant gender difference in eldercare provision. This is likely because eldercare can be provided around paid economic work, whereas childcare often requires forfeiting paid work entirely. This suggests lower lifetime accumulation when women are expected to sacrifice regular, mainstream employment.

Caregiving is a lifestyle rather than a bounded spell; those with no prior caregiving history were least likely to be providing care at 62, while those with the highest burden were most likely to provide care. This links to Wright (2009) and Wami et al's (2020) idea of habitus — how personal norms and expectations shape how individuals act. In line with this, working-class cohort members were most likely to still be providing care at 62 — 15% more likely than those from middle class backgrounds. Over the life course, caregiving intensity and duration is increasingly burdened from middle to working class.

Class and gender do not operate independently. Between 23 and 62, working class women took the greatest care burden, with significantly longer and more frequent care responsibilities, forfeiting formal, paid employment.

There is strong evidence that non-caregivers have higher median savings than caregivers, though this was not statistically significant. Social class was the strongest predictor of savings, with working-class backgrounds £5700 less than middle class backgrounds. Employment history was not a significant factor of savings, suggesting it is not time spent in employment impacting savings, but how caregiving, sex and class shape career progression.

Most significantly, a high caregiving burden of over five years correlated with a 73.5% reduction in the odds of holding a private pension. Even a low caregiving burden reduced the odds of having a pension by around 50%. Once prior caregiving burden was controlled for, neither sex nor social class background alone was a significant predictor of pension status at 62. However, high care burdens consistently fall to women, meaning that women, particularly those of working-class, have the least likelihood of having a pension. This contrasts with savings, where working-class membership was the strongest predictor.

Together, these results show that when caregiving becomes a primary occupation, it is women who carry the burden. This gap closes with age, as formal employment reduces. However, the gender and class gap identified is less about whether care is provided, but more about how much is sacrificed to provide it. Men participate in caring, but in ways which do not cost them their careers, or long-term wealth.

Caregiving, class and gender operate through distinct but connected mechanisms in determining long-term economic outcomes. Caregiving burdens determine whether cohort members have pensions at all, while savings shape how much wealth is accumulated within it. The gender gap in pension status is substantially explained by women's disproportionate share of caregiving over the life course, as opposed to sex independently. On the other hand, household savings is most strongly predicted by social class. Ultimately, the caregiving penalty on pensions is the single largest effect found within this research.

8. Limitations

The findings are limited in that, whilst insightful, they are specific to one group of cohort members born in March 1958. Repeatability would require testing across further cohorts, particularly the 1970 cohort. However, results are comparable to the UK Household Longitudinal Survey, though that research does not combine all elements of this paper.

When merging activities histories with sweep 10 data, information on sex, class, partial completion of sweeps 4 to 9, and completion of sweep 10 was required. Of 14737 cohort members in activity histories sweep, 8327 were retained for sweep 10 analysis sample. Those retained were more likely to provide care (44.8%) than those who dropped out (38.3%), thus sweep 10 slightly over-represents caregivers.

Additionally, fathers' occupation was also essential to categorising class at age 11, since this definition focuses on two-parent families. Basing class solely on mother's occupation would have allowed inclusion of more cohort members. However, this would likely have exacerbated results, as single-parent disadvantage compounds caregiving responsibilities, savings and pension outcomes.

9. Conclusions

In conclusion, there is strong evidence that caregiving histories, social class origins and sex influence retirement wealth disparities within the 1958 NCDS.

1. Identify how childhood social class origins and sex influence whether individuals provide caregiving over the life course.

Across the life course, women and working-class individuals provide the most care, with most significant compounding effects for working-class women. Gender and class disparities are starker between ages 23 and 55 than at age 62.

2. Quantify cumulative time individuals spent on caregiving over their life course.

Between 23 and 55, women provided 36 months of care for every 1 month of care provided by men and provided a weekly average of 2.5 more hours of care than male counterparts at age 62.

3. Assess whether caregiving histories contribute to observed gender and social class disparities in retirement wealth.

Caregiving burdens were the dominant predictor of pension status, with high caregiving burdens over the life course reducing the odds of holding a pension by 73.5%. Class remained the greatest predictor of savings. Working class women were most severely disadvantaged across both pensions and savings outcomes.

This research demonstrates a need for policymakers to drive cultural change in how caregiving is perceived. Caregiving disrupts wealth accumulation, with gendered, class-based, long-term economic effects. Policies encouraging more equal sharing of caregiving burdens and monetary compensation should be explored, particularly to support women in prime career-development years, to build a more stable, equitable ageing population.

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