UCL Centre for Longitudinal Studies

Descriptive findings:

Socio-demographic and health correlates of childlessness at age 50 among men and women in two British cohort studies

CLS working paper number 2026/1

Authors:

Samantha Parsons, Aase Villadsen, Alice Goisis

Funded by

UKRI Economic and Social Research Council

Contact the author

Sam Parsons

UCL Centre for Longitudinal Studies

sam.parsons@ucl.ac.uk

This working paper was first published in May 2026 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. It is home to a unique series of UK national cohort studies. It is part of the UCL Social Research Institute, based at the UCL Institute of Education.
For more information, visit www.cls.ucl.ac.uk.

This document is available in alternative formats. Please contact the Centre for Longitudinal Studies:

Email: clsdata@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, UCL Institute of Education, or the Economic and Social Research Council (ESRC).

How to cite this paper

Parsons, S., Villadsen, A., Goisis, A. (2026) *Descriptive findings: Socio-demographic and health correlates of childlessness at age 50 among men and women in two British cohort studies* CLS Working Paper 2026/1. London: UCL Centre for Longitudinal Studies.

Contents

Abstract

Background

Family formation in the UK and many other western countries has shifted markedly, with later and lower fertility being observed in more recent generations. Childlessness increased among cohorts born since the end of the Second World War, though it has declined slightly among the most recent cohorts completing childbearing.

Objective

To examine characteristics associated with childlessness at age 50 among women and men born in 1958 and 1970, focusing on socio-demographic status indicators of the family of origin, cognitive performance in mid-childhood and academic attainment at age 16, together with physical and mental health during childhood, adolescence and early adulthood.

Methods

We analyse data from the 1958 National Child Development Study and the 1970 British Cohort Study, linking prospectively collected early-life data to harmonised fertility histories at age 50 to descriptively assess correlates of childlessness. We use logistic regression techniques and include interaction terms to highlight differences by sex and cohort.

Results

Never having co-resided with a partner was the strongest predictor of childlessness, though its influence weakens over time reflecting more childbearing outside of partnerships in the 1970 cohort for both men and women. Higher status family background increases childlessness, particularly for women, with a study member's own higher cognitive ability and educational attainment in adolescence linked to greater childlessness for both men and women. Poor health and wellbeing indicators were associated with increased childlessness, especially among men born in 1958.

Contribution

By linking harmonised fertility histories to prospectively collected life-course data for two British cohorts, this study provides a gendered and generational perspective on the early-life correlates of childlessness at age 50.

1. Introduction

Over the past five decades, permanent childlessness – the absence of biological children by the end of the reproductive life course – has increased across many high-income countries (Kreyenfeld and Konietzka 2017). In the UK, childlessness has followed a fluctuating cohort pattern (Office for National Statistics 2024). High levels were observed among women born in the early 20th century (21% for the 1920 cohort), which then declined for those born in the mid-1940s (9% for the 1946 cohort), before rising again for later cohorts, reaching around 20% for women born between 1961 and 1966, and then declining slightly to 16% among those born in 1977–78, the most recent cohorts to complete childbearing.

These fluctuations suggest the selection into, and the meaning of, childlessness has changed over time, with similar aggregate levels of childlessness reflecting different underlying processes across historical periods. For example, mid-20th century childlessness has been linked to structural constraints such as economic hardship during the Great Depression and male mortality during World War II (Kreyenfeld and Konietzka 2017). By contrast, rising childlessness in more recent cohorts is likely driven by different mechanisms, although evidence on whether and how the correlates of childlessness have changed across generations remain under explored.

The largest body of existing research has examined socio-economic correlates of childlessness, particularly education, employment, occupation and income (Berrington, 2017; Berrington, Stone and Beaujouan 2015; Burkimsher and Zeman 2017; Fieder, Huber and Bookstein 2011; Keizer, Dykstra and Jansen 2008; Kreyenfeld and Konietzka 2017; Portanti and Whitworth 2010; Rotkirch and Miettinen 2017; Wood, Neels and Kil 2014). For women, higher educational attainment is consistently associated with higher rates of lifetime childlessness, whereas for men the relationship is weaker and often reversed: men with higher education, stable employment, and higher income are more likely to become fathers across many European and non-European contexts (Barthold et al. 2012; Burkimsher and Zeman 2017; Fieder et al. 2011). Early-life socioeconomic background also matters. Studies show that women

from higher-status families and smaller families of origin – especially only children – are more likely to remain childless (Kiernan 1989; Nisén et al. 2013; Portanti and Whitworth 2010). Cognitive ability has also been linked to childlessness, with higher childhood intelligence predicting childlessness among women, independent of education and earnings, but not among men (Kanazawa 2014).

Partnership history is a key mechanism underlying these associations. Highly educated women and socioeconomically disadvantaged men are more likely to remain unpartnered, which strongly predicts childlessness (Köppen et al. 2017; Moustgaard and Martikainen 2009). In the UK, over 80% of women and over 90% of men born in 1970 who had never married or cohabited by their early 40s were childless (Berrington 2017), with similar patterns observed across several European countries (Kreyenfeld and Konietzka 2017).

Health has received comparatively less attention but is increasingly recognised as important for having children. Recent large-scale evidence from Finland and Sweden shows that a wide range of early-life conditions – particularly mental-behavioural, metabolic, and congenital disorders – are associated with a heightened risk of lifelong childlessness (Liu et al. 2024). Health may affect childlessness both directly through biological mechanisms and indirectly via partnership trajectories and reproductive decision-making. UK and Australian studies further indicate that poor childhood health, limiting long-term illness, and infertility concerns (own or partner) are more prevalent among the childless (Berrington 2017; Jin et al. 2024; Portanti and Whitworth 2010).

However, existing research has tended to focus on either social or health correlates in isolation, with limited attention paid to the joint roles of early-life socioeconomic background, education, cognition, and health. As childlessness is projected to rise further due to delayed partnering, increased singlehood, and greater social acceptance (Rybińska 2021; Xu et al. 2022), a more integrated understanding of who remains permanently childless is increasingly important for assessing later-life social and health consequences.

The current study

The aim of the current study is to descriptively examine and compare a broad range of correlates of childlessness across two nationally representative British birth cohort studies, born in 1958 and 1970. Leveraging newly created harmonised fertility datasets, we examine both socio-demographic and health correlates of childlessness from birth through to early adulthood and show stability and change across generations and between men and women.

2. Methods

Data

We use data from the 1958 National Child Development Study (NCDS) and the 1970 British Cohort Study (BCS70).

The NCDS follows the lives of over 17,000 people born in England, Scotland, and Wales in a single week in March of 1958 (Power and Elliott 2006). The first survey was carried out at the birth of the child, with subsequent follow up surveys at age 7 through to age 62. We use data from interviews at birth, age 7, 11, 16 and 23 (University College London 2024a), together with the number of cohabiting partnerships a study member had by age 50 which is derived from the partnership history dataset (University College London 2024b).

BCS70 follows the lives of around 17,000 people born in England, Scotland, and Wales in a single week in April of 1970 (Elliott and Shepherd 2006; Sullivan et al. 2022). The initial survey was carried out at the birth of the child, with follow up surveys taking place between age 5 through to 51 years. We use data from interviews at birth, age 5, 10, 16 and 26 (University College London 2025a), together with the number of cohabiting partnerships a study member had by age 46 (the latest available at time of analyses) which is derived from the partnership history dataset (University College London 2026).

Our key measure of childlessness at age 50 is taken from the recently deposited harmonised fertility datasets for each cohort (University College London 2025b). This data is available for the 1946, 1958, 1970 and Next Steps (1989-90) cohorts. We do not include the 1946 cohort to maximise on comparable covariates or the Next Steps cohort as their fertility histories are not yet complete. For further details see Villadsen, Parsons and Goisis (2026).

Analytic sample and multiple imputation

Our analytic samples comprised study members who participated at birth or joined the study in any sweep up to age 16 and were alive at age 50 (NCDS: *n*=17,063;

BCS70: *n*=16,981). As in all longitudinal studies, both studies have experienced attrition over time: 53% of the original NCDS birth sample participated at age 50 and 44% of the BCS70 birth sample participated at age 51. Although attrition at age 50 did not differ by fertility status, we addressed potential bias from attrition and item non-response using multiple imputation by chained equations (White, Royston and Wood 2011), assuming missing at random (MAR). To strengthen the plausibility of MAR, models included key predictors of missingness (e.g., childhood socioeconomic disadvantage, early-life mental health, and cognitive ability) (Silverwood et al. 2021; Mostafa et al. 2021; Mostafa and Wiggins 2015). Estimates were pooled across 20 imputed datasets using Rubin's rules, appropriate for approximately 20% overall missingness (Little and Rubin 2014).

Measures

Childless at age 50

The key outcome measure is permanent childlessness, defined as having no biological children at age 50.

Correlates of being childless

To examine characteristics associated with childlessness, we focused on pre-parenthood measures to avoid bidirectional associations and selected comparable indicators across cohorts. These included family socio-demographic characteristics at birth (parental marital status, education, social class); cognitive ability in mid-childhood (age 11 NCDS; age 10 BCS70); educational attainment at the end of compulsory schooling (age 16); physical health (birthweight, childhood disability); adolescent mental health (behaviour problems) and BMI (age 16). We also included early adult health (general health, longstanding illness) and psychological distress (age 23 NCDS; age 26 BCS70), and the number of co-residential partners by midlife (age 50 NCDS; age 46 BCS70). Details of all measures, including discrepancies in question wording which could influence the distribution of study members across analytic groups are included in Supplementary Table S1.1-S1.4.

Analyses

We first describe the distribution of study members across our key outcome measure of childlessness at age 50 and the selected socio-demographic and health characteristics. We then use logistic regression to examine whether the proportion childless at age 50 varied across categories of each covariate within each cohort, analysing men and women separately. Next, we included interaction terms to test whether the proportion childless at age 50 (a) differed by sex for each covariate within each cohort, and (b) varied across cohorts when men and women were analysed separately. For ease of interpretation (Mood, 2010; Breen et al., 2018), Table 1.1-1.9 presents the predicted probabilities (expressed as percentages) of being childless at age 50 by cohort and sex, derived from the logistic models. Estimates are presented with 95% confidence intervals. All analyses were conducted in Stata 19 (StataCorp, 2025).

3. Results

Supplementary Table S2.1-S2.9 presents the distribution of study members by childlessness and across all covariates by cohort and sex. Childlessness at age 50 was lower in the 1970 cohort than in the 1958 cohort (men: 16.8% vs. 21.7%; women: 15.5% vs. 20.4%), with around 1% more men than women childless in both cohorts.

Reflecting social change, a higher proportion of the 1970 cohort were born to single mothers and to parents who remained in education beyond the minimum leaving age; social class distributions were similar across cohorts. Cognitive scores in mid-childhood were similarly distributed, but the 1970 cohort was more likely to achieve good grades in English or Maths examinations at age 16, with only marginal cohort differences in attaining five or more good grade exam passes overall.

In terms of health, higher levels of adolescents in the 1970 cohort were overweight (BMI >=25) and, by their early–mid 20s, more of the 1970 cohort had a longstanding illness or psychological distress. Few participants in either cohort had never co-resided with a partner by midlife, highest among 1970 cohort men (6.5%).

We next examined how the covariates were associated with childlessness at age 50. Table 1.1-1.9 gives the predicted probabilities (expressed as percentages) of being childless at age 50 by cohort and sex, derived from the logistic models, and shows both continuity and generational change in these associations, with some marked gender differences. Supplementary Table S3.1-S3.11 provides the coefficients and significance levels from all the logistic regression models, including those with interaction terms.

Partnership history is the strongest correlate in both cohorts, highlighting the centrality of union formation to parenthood. However, its association weakens over time. In the 1958 cohort, 88.3% of never-partnered men and 79.2% of never-partnered women were childless at age 50, compared with 65.9% and 56.2% in the 1970 cohort. This points to increasing parenthood outside long-term co-residential unions for both men and women. Within each cohort, never-partnered women were significantly less likely than men to remain childless at age 50. In addition, never-partnered men and women in the

1970 cohort were significantly less likely to remain childless compared with their 1958 counterparts.

Turning to family background, men and women born to single mothers rather than married parents in the 1970 cohort were significantly less likely to remain childless at age 50, as was also the case for women in the 1958 cohort. Compared to fathers in unskilled or semi-skilled occupations, men and women in the 1958 cohort were significantly more likely to be childless if their fathers held managerial or professional occupations; for women in the 1970 cohort, this pattern extended to fathers in any non-manual occupation. In the 1958 cohort, women were significantly more likely than men to be childless if their father had a skilled non-manual (IIInm) role. Parental extended education was associated with increased levels of childlessness among women in both cohorts, and mothers with extended education for men in the 1970 cohort.

Turning to study members' own skills, compared to those with average reading and maths scores (middle three quintiles) in mid-childhood, men and women with high scores (top quintile) in both cohorts were significantly more likely to be childless at age 50. In the 1958 cohort, men with low scores (bottom quintile) were also significantly more likely to be childless, whereas in the 1970 cohort women with low maths scores were less likely to be childless. Within the 1958 cohort, women were significantly less likely than men with low maths scores to be childless, and men with poor maths skills in the 1970 cohort were less likely to be childless compared to men born in 1958. Similarly, compared to those who did not achieve a 'good grade' examination pass in English language at age 16, men and women in both cohorts who achieved a good pass were significantly more likely to be childless at age 50. The same pattern was observed for women in both cohorts who achieved a good pass in maths, with women being significantly more likely than men who had a good pass in maths to be childless. Similarly, gaining five or more A-C passes were associated with women being more likely to be childless in both cohorts and for men born in 1958, however the effect was stronger for women than men in this cohort.

Associations between health and wellbeing and childlessness at age 50 were more consistently observed among men than women, particularly in the 1958 cohort. In that

cohort, men and women with poor health in mid-childhood, a high BMI (>=25) in adolescence, and a longstanding illness in their 20s were significantly more likely to be childless at age 50. Among men, this pattern also extended to those with high levels of behavioural problems (top quintile) in adolescence, as well as those with poor general health and psychological distress in their 20s. In addition, compared to men with average levels of behavioural problems (middle three quintiles), men with low levels (bottom quintile) were significantly less likely to be childless. In terms of sex differences, women were significantly less likely than men with a high BMI (>=25) to be childless.

In the 1970 cohort, compared to the corresponding reference groups, men and women with low birthweight and with poor general health, a longstanding illness, or psychological distress in their 20s were significantly more likely to be childless at age 50. There were no significant interactions by sex in this cohort. However, compared to women in poor health in the 1958 cohort, women in poor general health in the 1970 cohort were significantly more likely to be childless.

4. Discussion

This study provides an integrated life-course analysis of childlessness, observing descriptive associations with early-life socio-demographic background, cognitive development, education attainment, health indicators and partnership history in the 1958 and 1970 British birth cohorts. Around one in five individuals born in 1958 and one in six born in 1970 were childless at age 50, with slightly higher rates among men.

In line with existing research (e.g. Berrington 2017), partnership history was the dominant correlate across cohorts and sexes. Never having co-resided with a partner strongly predicted childlessness, though less so in the 1970 cohort, indicating a partial decoupling of parenthood from long-term unions, especially for women. Looking next at family-of-origin factors, a higher status whether measured by social class or extended parental education, increased childlessness, particularly for women in both cohorts – again supporting existing evidence Being born to a single mother reduced permanent childlessness for women in both cohorts and men born in 1970, perhaps reflecting the increased statistical power associated with the increased prevalence of single parenthood in the more recent generation.

For a study members own characteristics, we find that higher cognitive ability and educational attainment were associated with increased childlessness among men and women, pointing to persistent educational stratification in fertility as found in previous research (Berrington, Stone and Beaujouan, 2015). We do not however, find any evidence to support other findings (e.g. Barthold et al. 2012; Burkimsher and Zeman 2017; Fieder et al., 2011) that higher human capital facilitates men's fertility, although conversely, we do show that poor cognitive skills among men in the 1958 cohort was associated with increased levels of childlessness.

Supporting other research (Berrington 2017; Jin et al. 2024; Portanti and Whitworth 2010), indicators of poor physical health – low birthweight, childhood health problems or disability, being overweight in adolescence, poor general health, and longstanding illness in early adulthood – were associated with childlessness in both cohorts, but more consistently among men, particularly so in the 1958 cohort. Mental health

indicators (behaviour problems in adolescence, psychological distress in early adulthood) were linked to childlessness only among men in the 1958 cohort, with psychological distress impacting on the fertility of both men and women in the 1970 cohort. We also show that low levels of behaviour problems were associated with reduced childlessness among men in the 1958 cohort. These findings point to health-related exclusion from partnerships and parenthood, particularly for men, as a key but underexplored research area.

Overall, the findings underscore both continuity and change in the correlates of childlessness, highlighting gendered pathways and the role of health and shifting partnership norms. As childlessness becomes more common, understanding its heterogeneous life-course origins is critical for anticipating later-life inequalities in health, wellbeing, and social support.

Strengths and limitations

Our findings are based on observational longitudinal data and although we addressed attrition and item non-response using multiple imputation with auxiliary variables to strengthen the plausibility of the missing-at-random assumption, bias from non-ignorable missingness cannot be excluded. While we were able to consider a wide range of family background and individual-level characteristics, we acknowledge that the analysis was further constrained by the availability of harmonised measures across cohorts and is generalisable only to individuals born in Britain around 1958 or 1970, whose life-course contexts may differ from other generations. Reassuringly however, our results align with existing evidence.

The longitudinal design and large sample sizes of the two British cohort studies have enabled us to produce robust findings linking lifetime childlessness to a wide range of pre-parenthood family background, cognitive, educational, and health characteristics, offering insight into how childless men and women differ prior to family formation. However, it is important to stress that these results are purely descriptive and should not be interpreted as causal in any way.

Finally, childlessness is heterogeneous, often being categorised into voluntary and involuntary forms, those who are *childfree* by choice and those why are *childless*

involuntarily (Basten 2009; Tanturri and Mencarini 2008), however others suggest that childlessness exists on a continuum (Berrington 2017; Letherby 2002; McAllister and Clarke, 2000). While we could not distinguish these forms here, forthcoming surveys of both cohorts will collect information on reasons for childlessness, enabling more nuanced analyses in the future.

Table 1.1 Study members childless at age 50: predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Childless at age 50	21.7 [20.5;23.0]	16.8 [15.8;17.9]	20.4 [19.2;21.6]	15.5 [14.5;16.4]

Table 1.2 Study members childless by partnership history: predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Lived with 1+ partner (bcs70 46; ncds 50)[(R)]	17.9 [16.6;19.2]	13.4 [12.4;14.5]	17.5 [16.4;18.7]	13.5 [12.5;14.4]
Never lived with a partner age 46/50	88.3 [84.1;92.5]	65.9 [59.9;71.9]	79.2 [72.7;85.7]	56.2 [50.0;62.5]

Table 1.3 Study members childless by socio-demographic characteristics at birth (Family structure): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Single mother	17.1 [11.2;23.1]	11.4 [7.4;15.4]	13.2 [7.2;19.2]	9.6 [5.9;13.3]
Married parents[(R)]	21.9 [20.6;23.2]	17.1 [16.0;18.3]	20.6 [19.5;21.8]	15.8 [14.8;16.8]

Table 1.4 Study members childless by socio-demographic characteristics at birth (parental education): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Mother left education by minimum age(R)	21.8 [20.4;23.2]	16.2 [14.8;17.5]	19.9 [18.6;21.1]	14.6 [13.3;15.8]
Mother in education beyond minimum age	21.7 [19.2;24.1]	18.1 [16.5;19.8]	21.9 [19.7;24.0]	17.2 [15.5;18.8]
Father left education by minimum age(R)	21.6 [20.1;23.0]	16.5 [15.3;17.6]	19.6 [18.2;21.0]	14.5 [13.3;15.8]
Father in education beyond minimum age	22.3 [20.1;24.4]	17.6 [15.8;19.4]	22.8 [20.6;25.1]	17.2 [15.6;18.8]

Table 1.5 Study members childless by socio-demographic characteristics at birth (Household social class): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Social class: unskilled/semi-skilled(R)	20.8 [18.2;23.3]	17.0 [15.0;19.1]	17.9 [15.0;20.8]	14.3 [12.3;16.3]
Social class: III-manual	22.0 [20.5;23.6]	16.0 [14.6;17.4]	19.8 [18.2;21.3]	14.4 [13.1;15.7]
Social class: III-non-manual	18.8 [15.4;22.1]	17.5 [14.6;20.4]	21.5 [18.3;24.7]	18.2 [15.7;20.7]
Social class: managerial/professional	23.9 [21.4;26.5]	18.1 [15.7;20.5]	24.4 [21.6;27.2]	17.4 [15.1;19.8]

Table 1.6 Study members childless by childhood cognitive scores / exam results: predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Reading score age 10/11: bottom quintile	23.5 [20.6;26.3]	15.0 [12.8;17.2]	20.1 [17.3;22.9]	13.3 [11.1;15.5]
Reading score age 10/11: middle quintiles(R)	20.2 [18.7;21.7]	16.9 [15.6;18.2]	19.1 [17.8;20.4]	15.1 [13.9;16.3]
Reading score age 10/11: top quintile	24.0 [21.6;26.4]	19.1 [16.6;21.6]	25.0 [22.1;27.9]	18.7 [16.5;21.0]
Maths score age 10/11: bottom quintile	23.7 [21.0;26.3]	15.5 [13.4;17.5]	19.2 [16.5;22.0]	12.8 [11.0;14.7]
Maths score age 10/11: middle quintiles(R)	20.7 [19.2;22.3]	16.7 [15.3;18.0]	19.8 [18.4;21.2]	15.4 [14.2;16.6]
Maths score age 10/11: top quintile	22.5 [20.3;24.7]	18.8 [16.5;21.0]	23.7 [21.0;26.4]	19.4 [16.8;21.9]
English O'Level age 16: no/low grade(R)	21.1 [19.7;22.5]	16.2 [14.9;17.6]	19.2 [17.7;20.7]	13.8 [12.6;15.1]
English O'Level age 16: grade A-C	25.0 [22.3; 27.7]	18.1 [16.4;19.7]	23.7 [21.4;26.1]	17.7 [16.2;19.2]
Maths O'Level age 16: no/low grade(R)	21.6 [20.0;23.2]	16.7 [15.4;18.0]	19.7 [18.3;21.0]	14.2 [13.0;15.3]
Maths O'Level age 16: grade A-C	22.0 [19.8; 24.3]	17.2 [15.5;18.8]	23.4 [20.8;26.0]	18.5 [16.8;20.2]
Number A-C grade O'Levels: 0(R)	21.1 [19.2;22.9]	16.6 [15.2;18.0]	18.5 [16.7;20.4]	14.0 [12.6;15.4]
Number A-C grade O'Levels: 1-4	21.7 [19.6;23.8]	17.1 [15.0;19.2]	20.7 [18.4;23.0]	15.0 [13.2;16.8]
Number A-C grade O'Levels: 5+	23.9 [21.5;26.3]	17.3 [15.4;19.2]	24.5 [22.1;27.0]	18.9 [16.9;20.9]

Table 1.7 Study members childless by health indicators (physical health at birth/in childhood): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Normal birthweight[(R)]	21.5 [20.2; 22.9]	16.5 [15.4;17.6]	20.3 [19.1;21.4]	15.1 [14.1;16.1]
Low birthweight (<2500 grams)	25.7 [20.1;31.4]	23.0 [17.9;28.0]	22.1 [17.5;26.8]	20.2 [15.8;24.5]
Handicap/disability age 10/11 or 16: no[(R)]	20.8 [19.5; 22.1]	16.2 [15.0;17.3]	20.0 [18.8;21.2]	15.2 [14.1;16.2]
Handicap/disability age 10/11 or 16: yes	28.4 [24.7;32.0]	19.9 [17.2;22.5]	24.3 [20.0;28.6]	17.1 [14.5;19.8]
BMI age 16: <18.5	22.5 [20.0;25.1]	16.5 [13.9;19.0]	19.4 [16.6;22.2]	15.3 [12.7;17.9]
BMI age 16: >18.5<25[(R)]	20.8 [19.3;22.3]	16.6 [15.4;17.8]	20.2 [19.0;21.4]	15.4 [14.2;16.5]
BMI age 16: >25	30.9 [24.9;36.8]	19.9 [15.7;24.0]	24.5 [20.2;28.8]	16.2 [13.1;19.4]

Table 1.8 Study members childless by health indicators (physical health in adulthood): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Excellent/Good General Health age 23/26[(R)]	21.1 [19.8;22.3]	15.9 [14.8;17.0]	20.2 [19.0;21.4]	14.8 [13.8;15.8]
Fair/Poor General Health age 23/26	29.9 [25.4;34.3]	25.4 [20.2;30.6]	22.4 [18.6;26.2]	21.5 [18.0;24.9]
Longstanding (limiting)[1] illness age 23/26: no[(R)]	21.3 [19.9;22.7]	15.7 [14.5;16.9]	20.0 [18.9;21.2]	14.5 [13.5;15.5]
Longstanding (limiting)[1] illness age 23/26: yes	35.8 [28.5;43.0]	22.9 [19.6;26.1]	34.4 [25.9;42.9]	20.2 [17.4;22.9]

Table 1.9 Study members childless by health indicators (mental health adolescence/adulthood): predicted probabilities expressed as percentages

Covariate	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Rutter behaviour score age 16: bottom quintile	18.8 [16.8;20.9]	16.2 [14.1;18.2]	19.0 [16.5;21.5]	15.7 [13.6;17.7]
Rutter behaviour score age 16: middle quintiles(R)	21.7 [20.1;23.3]	16.6 [15.4;17.9]	20.5 [19.0;22.0]	15.6 [14.2;16.9]
Rutter behaviour score age 16: top quintile	26.6 [22.9;30.4]	18.7 [15.8;21.7]	22.1 [19.2;25.0]	14.7 [12.1;17.3]
Malaise score age 23/26: low symptoms 0-7(R)	21.4 [20.2;22.7]	16.4 [15.2;17.5]	20.3 [19.0;21.5]	14.9 [13.8;15.9]
Malaise score age 23/26: high symptoms 8+	32.4 [25.0;39.8]	20.8 [17.0;24.6]	22.1 [17.3;26.8]	18.2 [15.5;20.8]
N=100%	*8710*	*8706*	*8353*	*8275*

Note: Imputed samples; 95% Confidence Intervals in parentheses [ ]. [1] Longstanding 'limiting' illness in NCDS, longstanding illness in BCS70. (R) = reference category in logistic regression models.

5. References

Barthold, J. A., Myrskylä, M., and Jones, O. R. (2012). Childlessness drives the sex difference in the association between income and reproductive success of modern Europeans. *Evolution and Human Behavior, 33* (6), 628-638.

Basten, S. (2009). Voluntary childlessness and being childfree. *The future of human reproduction: Working paper, 5*, 1-23.

Berrington, A. (2017). Childlessness in the UK. In M. Kreyenfeld and D. Konietzka (Eds.), *Childlessness in Europe: Contexts, causes, and consequences* (pp. 57-76). Cham, Switzerland: Springer Nature.

Berrington, A., Stone, J., and Beaujouan, E. (2015). Educational differences in timing and quantum of childbearing in Britain: A study of cohorts born 1940–1969. *Demographic research, 33*, 733-764.

Burkimsher, M., and Zeman, K. (2017). Childlessness in Switzerland and Austria. In M. Kreyenfeld and D. Konietzka (Eds.), *Childlessness in Europe: Contexts, causes, and consequences* (pp. 115-137).

Elliott, J. and Shepherd, P. (2006). 'Cohort Profile: 1970 British Birth Cohort (BCS70)'. *International Journal of Epidemiology*, 35 (4), 836–843, doi: /10.1093/ije/dyl174.

Fieder, M., Huber, S., and Bookstein, F. L. (2011). Socioeconomic status, marital status and childlessness in men and women: an analysis of census data from six countries. *Journal of Biosocial Science, 43* (5), 619-635.

Jin, C., Tooth, L. R., Xu, X., and Mishra, G. D. (2024). Associations between factors in childhood and young adulthood and childlessness among women in their 40s: A national prospective cohort study. *Journal of Affective Disorders, 360*, 26-32.

Kanazawa, S. (2014). Intelligence and childlessness. *Social science research, 48*, 157-170.

Keizer, R., Dykstra, P. A., and Jansen, M. D. (2008). Pathways into childlessness: Evidence of gendered life course dynamics. *Journal of biosocial science, 40*(6), 863-878.

Kiernan, K. E. (1989). Who remains childless? *Journal of Biosocial Science, 21* (4), 387-398.

Köppen, K., Mazuy, M., and Toulemon, L. (2017). Childlessness in France. In M. Kreyenfeld and D. Konietzka (Eds.), *Childlessness in Europe: Contexts, causes, and consequences* (pp. 77-95).

Kreyenfeld, M., and Konietzka, D. (2017). Childlessness in East and West Germany: Long-term trends and social disparities. In M. Kreyenfeld and D. Konietzka (Eds.), *Childlessness in Europe: Contexts, causes, and consequences*: Springer International Publishing.

Letherby, G. (2002). Childless and bereft?: Stereotypes and realities in relation to 'voluntary'and 'involuntary'childlessness and womanhood. *Sociological inquiry, 72* (1), 7-20.

Little, R. and Rubin, D. (2014). Statistical Analysis with Missing Data. 2nd Edition, John Wiley and Sons, Hoboken.

Liu, A., Akimova, E. T., Ding, X., Jukarainen, S., Vartiainen, P., Kiiskinen, T., . . . Lombardi, S. (2024). Evidence from Finland and Sweden on the relationship between early-life diseases and lifetime childlessness in men and women. *Nature Human Behaviour, 8* (2), 276-287.

McAllister, F., and Clarke, L. (2000). Voluntary childlessness: Trends and implications. *Infertility in the modern world. Present and future prospects, 189*, 237.

Mostafa, T. and Wiggins, R. (2015). The impact of attrition and non-response in birth cohort studies: a need to incorporate missingness strategies. *Longitudinal and Life Course Studies*, 6 (2), 131-146.

Mostafa, T., Narayanan, M., Pongiglione, B., Dodgeon, B., Goodman, A. and Silverwood, R. (2021). Missing at random assumption made more plausible: evidence from the 1958 British birth cohort. *Journal of Clinical Epidemiology*, 136, 44-54.

Moustgaard, H., and Martikainen, P. (2009). Nonmarital cohabitation among older Finnish men and women: Socioeconomic characteristics and forms of union dissolution. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 64* (4), 507-516.

Nisén, J., Martikainen, P., Kaprio, J., and Silventoinen, K. (2013). Educational differences in completed fertility: A behavioral genetic study of Finnish male and female twins. *Demography, 50* (4), 1399-1420.

Office for National Statistics. (2024). Childbearing for women born in different years. Retrieved from https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/datasets/childbearingforwomenbornindifferentyearsreferencetable

Portanti, M., and Whitworth, S. (2010). Lifelong childlessness in England and Wales. *Longitudinal and Life Course Studies, 1* (2), 155-169.

Power, C. and Elliott, J. (2006). 'Cohort Profile: 1958 British birth cohort (National Child Development Study)'. *International Journal of Epidemiology*, 35(1), 34-41s, doi: 10.1093/ije/dyi183.

Rotkirch, A., and Miettinen, A. (2017). Childlessness in Finland. In M. Kreyenfeld and D. Konietzka (Eds.), *Childlessness in Europe: Contexts, causes, and consequences* (pp. 139-158).

Rybińska, A. (2021). Trends in Intentions to Remain Childless in the United States. *Population Research and Policy Review,* 40, 661–672. https://doi.org/10.1007/s11113-020-09604-9

Silverwood, R., Narayanan, M., Dodgeon, B. and Ploubidis, G.B. (2021). Handling missing data in the National Child Development Study: User guide, (Version 2). London: UCL Centre for Longitudinal Studies.

StataCorp. 2025. *Stata Statistical Software: Release 19*. College Station, TX: StataCorp LLC

Sullivan, A., Brown, M., Hamer, M. and Ploubidis, G. (2022). Cohort Profile Update: The 1970 British Cohort Study (BCS70)' *International Journal of Epidemiology,* 52 (3), e179–e186 doi: /10.1093/ije/dyac148.

Tanturri, M. L., and Mencarini, L. (2008). Childless or childfree? Paths to voluntary childlessness in Italy. *Population and development review, 34* (1), 51-77.

University College London, UCL Social Research Institute, Centre for Longitudinal Studies (2024a). National Child Development Study, [data series], UK Data Service, 14th Release, SN: 2000032, DOI: http://doi.org/10.5255/UKDA-Series-2000032

University of London, Institute of Education, Centre for Longitudinal Studies (2024b). National Child Development Study: Partnership Histories, 1974-2013, [data collection], UK Data Service, 2nd Edition. SN: 6940, DOI: http://doi.org/10.5255/UKDA-SN-6940-2

University College London, UCL Social Research Institute, Centre for Longitudinal Studies (2025a). 1970 British Cohort Study, [data series], UK Data Service, 12th Release, SN: 200001, DOI: http://doi.org/10.5255/UKDA-Series-200001

University College London, UCL Institute of Education, Centre for Longitudinal Studies. (2025b). Harmonised Fertility Histories in the National Child Development Study, 1970 British Cohort Study and Next Steps, 1981-2024. [data collection]. UK Data Service. SN: 9418, DOI: http://doi.org/10.5255/UKDA-SN-9418-1

University College London, UCL Institute of Education, Centre for Longitudinal Studies. (2026). 1970 British Cohort Study: Partnership Histories, 1986-2024. [data

collection]. 5th Edition. UK Data Service. SN: 6941, DOI: http://doi.org/10.5255/UKDA-SN-6941-5

White, I.R., Royston, P. and Wood, A.M. (2011). Multiple imputation using chained equations: Issues and guidance for practice. *Statistics in Medicine*, 30 (4), 377–399.

Wood, J., Neels, K., and Kil, T. (2014). The educational gradient of childlessness and cohort parity progression in 14 low fertility countries. *Demographic research, 31*, 1365-1416.

Xu, X., Liang, J., Raymo, J.M., Kim, B. and Ofstedal, M.B. (2022). Defining Childlessness Among Middle-Aged and Older Americans: A Research Note. *Demography*, 59 (3), 813-826. doi: 10.1215/00703370-9987649.

Supplementary Tables S1.1-S1.4: Individual covariate measures

Table S1.1 Socio-demographic characteristics at birth

Covariates	NCDS	BCS70
Marital status of mother	Present marital status	Present marital status
Mother's education	Did the mother stay at school after minimum school leaving age (yes/no)	Age full-time education was completed (inc. college or university)
Father's education Note: not asked until 1965 in NCDS	Did the father stay at school after minimum school leaving age (yes/no)	Age at which full-time education was completed (inc. college or university)
The Registrar General's Social Class (RGSC) was the UK's official system (1911-1998) for classifying occupations based on skill and status.	Measured from the occupation of the mother's husband or if missing the mothers' father's occupation at the age she left school.	Measured from the occupation of the mother's husband or if missing the mother's own occupation before her current pregnancy.

Table S1.2 Study member cognitive scores/exams

Covariates	NCDS	BCS70
Reading score age 10/11	The reading comprehension test was constructed by the National Foundation for Educational Research in England and Wales (NFER) specifically for use in the survey. The child was required to choose from a selection of 5 words to appropriately complete a sentence. The test consisted of 35 questions, giving a total score between 0-35.	Shortened Edinburgh Reading Test: A test of word recognition, which examined vocabulary, syntax, sequencing, comprehension and retention. The test consisted of 67 items and scores ranged between 0-65.
Maths score age 10/11	The arithmetic test comprised of 40 items involving numerical and geometric work. The test was constructed by the NFER specifically for use in the survey. One mark was awarded for each correct	Friendly Maths Test: A multiple-choice test including arithmetic, number skills, fractions, algebra, geometry and statistics. The test was developed specifically for use in the survey and consisted of 72

Covariates	NCDS	BCS70
	answer, giving a total score between 0- 40.	items and scores ranged between 1-72.
Grade A-C (or equivalent) exam pass in English language, maths and total number A-C grades achieved by age 16.	Information on grades in all public examinations was collected from school exam records in 1978.	Study members parents reported their grades in public examinations in 1986; study members reported their grades in 1996 and 2000.

Table S1.3 Study Member Physical and Mental Health

Covariates	NCDS	BCS70
Birthweight	Weight at birth (recorded in pounds and ounces)	Weight at birth (recorded in pounds and ounces)
Handicap/disability age 10/11 or 16	(medical examination, age 11): Has the child any congenital or acquired condition or handicap? Further explanation/guidance included. yes/no/insufficient information (interviewer summary, age 16): taking in to account the information you have obtained during the interview and any other relevant information, do you consider the child has any handicapping condition or disability? yes/no/don't know	(parent interview, age 11): do you consider that the child has a physical or mental disability or handicap, or any other disabling condition that interferes with normal everyday life, or which might be a problem at school? yes, slight/yes, severe/no/not known. (parent interview, age 16): does your teenager have an impairment, a disability or a handicap? Further explanation/guidance included. no/yes/not known
Body Mass Index (BMI) age 16	Study members height and weight were recorded in a medical examination and used to derive their Body Mass Index (BMI)	Study members height and weight were recorded in a medical examination and used to derive their Body Mass Index (BMI)
General Health age 23/26	How would you describe your health generally? excellent/good/fair/poor	How would you describe your general health? excellent/good/fair/poor
Longstanding (limiting) illness age 23/26	Do you have any long-standing illness, disability or infirmity which limits you're your activities in any way compared with people of your own age?	Do you suffer from any long-term health problem, long-standing illness, infirmity or disability of any kind? no/yes/don't know

Covariates	NCDS	BCS70
	yes/no/don't know	
Rutter behaviour score age 16	The Rutter Behaviour Scale is a set of questions which combine to give an index of behaviour difficulties in a child (Rutter et al, 1970; Elander and Rutter, 1996). Parents, overwhelmingly the study member's mother, completed the parental questionnaire (Child Scale A). There were 31 questions in total, although the number of questions included in the surveys varied over time. Responses to each question were scored 0 (does not apply) 1 (applies somewhat) 2 (certainly applies). At age 16, 18 questions were included, providing a total score range of 0-36	The Rutter Behaviour Scale is a set of questions which combine to give an index of behaviour difficulties in a child (Rutter et al, 1970; Elander and Rutter, 1996). Parents, overwhelmingly the study member's mother, completed the parental questionnaire (Child Scale A). There were 31 questions in total, although the number of questions included in the surveys varied over time. Responses to each question were scored 0 (does not apply) 1 (applies). At age 16, 19 questions were included, providing a total score range of 0-38
Malaise score age 23/26	The Malaise Inventory (Rutter et al, 1970) is a set of self-completion questions which combine to measure levels of psychological distress, or depression. The 24 'yes-no' items of the inventory provide a total score range of 0-24.	The Malaise Inventory (Rutter et al, 1970) is a set of self-completion questions which combine to measure levels of psychological distress, or depression. The 24 'yes-no' items of the inventory provide a total score range of 0-24.

Table S1.4 Study member partnership history

Covariates	NCDS	BCS70
Study member partnership history	Data on all live-in relationships lasting one month or more have been collected in all NCDS sweeps from age 33.	Data on all live-in relationships lasting one month or more have been collected in all BCS70 sweeps from age 30.

Supplementary Tables S2.1-S2.9 Distribution (%) of study members

Table S2.1 Childless at age 50

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Childless at age 50	**21.7**	**16.8**	**20.4**	**15.5**

Table S2.2 Study member partnership history

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Lived with 1+ partner (bcs age 46; ncds age 50)	94.5	93.5	95.4	95.3
Never lived with a partner age 46/50	5.5	6.5	4.6	4.7

Table S2.3 Socio-demographic characteristics at birth (family structure)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Single mother	2.8	5.1	3.3	6.0
Married mother	97.2	94.9	96.7	94.0

Table S2.4 Socio-demographic characteristics at birth (parental education)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Mother minimum age education	74.6	65.1	74.1	65.7
Mother beyond minimum age education	25.4	34.9	25.9	34.3
Father minimum age education	75.0	65.5	74.7	64.6
Father beyond minimum age education	25.0	34.5	25.3	35.4

Table S2.5 Socio-demographic characteristics at birth (household social class)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Social class: unskilled/semi-skilled	21.1	22.9	21.6	23.3
Social class: III-manual	49.1	44.5	48.8	44.8
Social class: III-non-manual	11.6	14.0	11.4	13.5
Social class: managerial/professional	18.2	18.6	18.2	18.3

Table S2.6 Study member health indicators (physical health at birth/childhood)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Normal birthweight	94.9	94.1	93.1	93.1
Low birthweight (<2500 grams)	5.1	5.9	6.9	6.9
Handicap/disability age 10/11 or 16: no	87.5	81.3	90.6	85.1
Handicap/disability age 10/11 or 16: yes	12.5	18.7	9.4	14.9
BMI age 16: <18.5	26.0	19.7	17.9	15.6
BMI age 16: <25	69.0	71.7	73.5	73.0
BMI age 16: >25	5.0	8.6	8.6	11.4

Table S2.7 Study member health indicators (physical health in adulthood)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Excellent/Good General Health age 23/26	92.6	90.3	91.0	89.8
Fair/Poor General Health age 23/26	7.4	9.7	9.0	10.2
Longstanding (limiting)[1] illness age 23/26: no	96.9	84.1	97.6	82.6
Longstanding (limiting)[1] illness age 23/26: yes	3.1	15.9	2.4	17.4

Note: Imputed samples. [1] Longstanding 'limiting' illness in NCDS, longstanding illness in BCS70.

Table S2.8 Study member health indicators (mental health adolescence/adulthood)

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Rutter behaviour score age 16: bottom quintile	25.1	24.4	24.6	23.8
Rutter behaviour score age 16: middle quintiles	59.7	60.0	59.9	59.8
Rutter behaviour score age 16: top quintile	15.3	15.6	15.6	16.3
Malaise score age 23/26: low symptoms 0-7	97.2	89.2	92.1	81.9
Malaise score age 23/26: high symptoms 8+	2.8	10.8	7.9	18.1

Table S2.9 Study member cognitive scores/exams

Covariates	NCDS Men	BCS70 Men	NCDS Women	BCS70 Women
Reading score age 10/11: bottom quintile	24.4	23.5	23.5	19.1
Reading score age 10/11: middle quintiles	56.0	58.9	58.8	61.2
Reading score age 10/11: top quintile	19.6	17.6	17.7	19.7
Maths score age 10/11: bottom quintile	21.7	21.3	21.8	23.0
Maths score age 10/11: middle quintiles	57.5	57.6	59.9	61.1
Maths score age 10/11: top quintile	20.8	21.1	18.4	15.9
English O'Level age 16: no/low grade	83.0	66.5	73.5	57.9
English O'Level age 16: grade A-C	17.0	33.5	26.5	42.1
Maths O'Level age 16: no/low grade	75.9	67.0	80.2	70.3
Maths O'Level age 16: grade A-C	24.1	33.0	19.8	29.7
Number A-C grade O'Levels: 0	55.6	56.3	49.8	50.0
Number A-C grade O'Levels: 1-4	26.3	22.4	29.7	25.4
Number A-C grade O'Levels: 5+	18.2	21.3	20.5	24.6
N=100%	*8710*	*8706*	*8353*	*8275*

Supplementary Tables S3.1 - S3.11: Predicting being childless at 50 by sex and cohort.

Logistic regression results: coefficients and 95% confidence intervals (includes interactions by sex within cohort and interactions by cohort for men and women separately)

Table S3.1 Study member partner

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Never had a partner (v had a partner)	3.55*** [3.11:4.00]	2.89*** [2.49:3.29]	-0.66** [-1.14:-0.18]	2.52*** [2.25:2.80]	2.11*** [1.85:2.37]	-0.41* [-0.80:-0.03]	-1.03*** [-1.55:-0.51]	-0.78** [-1.27:-0.30]

Table S3.2 Socio-Demographic

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Single mother (v married parents)	-0.31 [-0.73:0.12]	-0.55* [-1.07:-0.04]	-0.24 [-0.87:0.38]	-0.48* [-0.89:-0.08]	-0.58* [-1.04:-0.12]	-0.10 [-0.67:0.48]	-0.18 [-0.69:0.34]	-0.03 [-0.68:0.62]
Mother ext edu (v mother min edu)	-0.01 [-0.16:0.15]	0.12^ [-0.01:0.26]	0.13 [-0.07:0.32]	0.14* [-0.00:0.28]	0.20* [0.05:0.35]	0.06 [-0.14:0.26]	0.14 [-0.05:0.34]	0.08 [-0.13:-0.28]
Father ext edu (v father min edu)	0.04 [-0.10:0.19]	0.19* [0.03:0.36]	0.15 [-0.06:0.36]	0.08 [-0.05:0.22]	0.20** [0.05:0.35	0.12 [-0.08:0.32]	0.04 [-0.16:0.24]	0.01 [-0.22:-0.23]

Table S3.3 Family social class

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
III manual	0.08 [-0.08:0.23]	0.12 [-0.09:0.33]	0.05 [-0.19:0.29]	-0.07 [-0.25:0.10]	0.01 [-0.18:0.20]	0.08 [-0.17:0.34]	-0.15 [-0.39:0.09]	-0.11 [-0.42:0.20]
III non-manual	-0.13 [-0.39:0.14]	0.23 [-0.06:0.52]	0.36* [0.06:0.65]	0.03 [-0.20:0.26]	0.29* [0.06:0.51]	0.26 [-0.06:0.57]	0.15 [-0.19:0.51]	0.06 [-0.33:0.45]
II or I (v semi or unskilled manual)	0.18^ [-0.01:0.38]	0.39** [0.14:0.64]	0.21 [-0.08:0.50]	0.07 [-0.14:0.28]	0.24* [0.00:0.47]	0.16 [-0.14:0.46]	-0.11 [-0.39:0.17]	-0.16 [-0.52:0.21]

Table S3.4 Cognition: Reading score 10/11

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Bottom quintile	0.19* [0.04:0.35]	0.06 [-0.12:0.24]	-0.13 [-0.36:0.09]	-0.15 [-0.34:0.04]	-0.15 [-0.36:0.06]	0.00 [-0.26:0.26]	-0.34** [-0.59:-0.10]	-0.21 [-0.49:0.08]
Top quintile (v middle quintiles)	0.22** [0.06:0.39]	0.34*** [0.17:0.52]	0.12 [-0.10:0.34]	0.15^ [-0.02:0.32]	0.26** [0.09:0.43]	0.12 [-0.12:0.35]	-0.08 [-0.31:0.15]	-0.08 [-0.31:0.15]

Tabel S3.5 Cognition: Maths score 10/11

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Bottom quintile	0.17* [0.01:0.33]	-0.04 [-0.22:0.14]	-0.21^ [-0.42:0.00]	-0.09 [-0.27:0.09]	-0.21* [-0.40:-0.03]	-0.12 [-0.37:0.12]	-0.26* [-0.50:-0.02]	-0.18 [-0.45:0.09]
Top quintile (v middle quintiles)	0.10 [-0.04:0.25]	0.23** [0.06:0.40]	0.12 [-0.09:0.34]	0.14^ [-0.02:0.31]	0.28** [0.10:0.46]	0.13 [-0.10:0.37]	0.04 [-0.19:0.26]	0.05 [-0.19:0.28]

Table S3.6 Public examinations 16

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
English A-C grade (v no A-C grade]	0.22** [0.06:0.38]	0.27** [0.10:0.44]	0.05 [-0.15:0.25]	0.13^ [-0.02:0.28]	0.29*** [0.15:0.43]	0.16 [-0.04:0.37]	-0.09 [-0.32:0.13]	0.02 [-0.20:0.23]
Maths A-C grade (v no A-C grade]	0.02 [-0.15:0.19]	0.22** [0.05:0.40]	0.20* [0.00:0.40]	0.03 [-0.11:0.18]	0.32*** [0.18:0.46]	0.29** [0.08:0.50]	0.01 [-0.21:0.23]	0.10 [-0.13:0.32]
1-4 Grade A-C exams	0.04 [-0.13:0.20]	0.14 [-0.06:0.34]	0.10 [-0.11:0.31]	0.04 [-0.13:0.20]	0.08 [-0.10:0.26]	0.04 [-0.18:0.27]	0.00 [-0.25:0.26]	-0.06 [-0.34:0.22]
5+ Grade A-C exams (v 0 A-C exam passes]	0.16^ [-0.01:0.33]	0.36*** [0.17:0.54]	0.19^ [-0.02:0.41]	0.05 [-0.11:0.22]	0.36*** [0.19:0.54]	0.31* [0.07:0.55]	-0.11 [-0.35:0.13]	0.01 [-0.25:0.26]

Table S3.7 Health indicators

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Low birthweight (v normal birthweight)	0.23 [-0.08:0.54]	0.11 [-0.16:0.38]	-0.12 [-0.52:0.28]	0.41** [0.12:0.70]	0.35* [0.06:0.63]	-0.06 [-0.43:0.30]	0.18 [-0.30:0.66]	0.24 [-0.18:0.65]
Handicap/disability 10/11 or 16 (v none]	0.41*** [0.22:0.60]	0.25* [0.00:0.50]	-0.16 [-0.44:0.12]	0.25** [0.08:0.43]	0.14 [-0.06:0.34]	-0.11 [-0.37:0.15]	-0.16 [-0.42:0.10]	-0.11 [-0.43:0.22]

Table S3.8 Health indicators: BMI 16

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
<18.5 underweight	0.10 [-0.08:0.28]	-0.05 [-0.23:0.13]	-0.16 [-0.39:0.08]	-0.01 [-0.21:0.19]	-0.01 [-0.24:0.22]	0.00 [-0.31:0.31]	-0.11 [-0.38:0.15]	0.04 [-0.27:0.35]
25+ overweight/obese (v normal BMI)	0.53*** [0.26:0.80]	0.25* [0.01:0.49]	-0.28^ [-0.61:0.05]	0.22 [-0.04:0.48]	0.06 [-0.18:0.30]	-0.16 [-0.51:0.20]	-0.31 [-0.73:0.10]	-0.19 [-0.52:0.14]

Table S3.9 Health indicators

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Poor/fair health 26 (v good/excellent)	0.47*** [0.26:0.68]	0.13 [-0.10:0.36]	-0.33* [-0.62:-0.05]	0.58*** [0.29:0.87]	0.45*** [0.24:0.67]	-0.13 [-0.42:0.17]	0.11 [-0.25:0.48]	0.32* [0.00:0.64]
Longstanding illness (v no)	0.72*** [0.38:1.07]	0.74*** [0.36:1.12]	0.02 [-0.43:0.46]	0.46*** [0.25:0.67]	0.40*** [0.21:0.59]	-0.06 [-0.30:0.18]	-0.26 [-0.66:0.14]	-0.34 [-0.77:0.09]

Table S3.10 Health indicators: Rutter behaviour

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
Bottom quintile	-0.18* [-0.34:-0.02]	-0.10 [-0.28:0.08]	0.08 [-0.14:0.30]	-0.03 [-0.21:0.14]	0.01 -0.19:0.21]	0.04 [-0.23:0.31]	0.14 [-0.09:0.38]	0.10 [-0.15:0.36]
Top quintile (v middle quintiles)	0.27** [0.07:0.46]	0.09 [-0.09:0.28]	-0.18 [-0.42:0.07]	0.14 [-0.07:0.35]	-0.07 [-0.30:0.15]	-0.21 [-0.50:0.07]	-0.13 [-0.43:0.18]	-0.16 [-0.43:0.11]

Table S3.11 Health indicators

Covariates	NCDS Men	NCDS Women	NCDS Women (v Men)	BCS70 Men	BCS70 Women	BCS70 Women (v Men)	BCS70 Men (v NCDS Men)	BCS70 Women (v NCDS Women)
8+ malaise score (v 0-7 score)	0.56** [0.23:0.90]	0.11 [-0.18:0.40]	-0.46* [-0.89:-0.02]	0.29* [0.04:0.54]	0.24* [0.04:0.44]	-0.05 [-0.35:0.24]	-0.27 [-0.71:0.16]	0.13 [-0.23:0.49]