



The Wellbeing, Health, Retirement and the Lifecourse project



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Executive Summary

Labour market histories, including working up to and beyond State Pension Age, are closely linked to individuals' health and wellbeing. This report outlines the ways that a number of socio-demographic factors, including gender, health, marital status, children, and education, can impact individuals' work histories and wellbeing in later life.

Policies aimed at extending working lives beyond State Pension Age that fail to recognise individual differences in labour market histories, health and socio-demographic characteristics, and the way that these can influence the outcomes of such policies, may exacerbate existing inequalities. Policies that seek to redress inequalities throughout the lifecourse may be more effective in encouraging and enabling more individuals to work beyond State Pension Age than policies focusing on the retirement transition.

Summaries of detailed labour market histories across the lifecourse reveal the complexity of men and women's lives

Among cohorts born 1920 to 1949 in the British Household Panel Survey (BHPS) (aged 68 to 97 in 2017), men's work lives between 16 and 54 were predominantly characterised by full-time employment (83% worked mostly full-time ages 16-54; 13% were full-time to around age 49). Conversely, only one in five women in these cohorts worked mostly full-time between the ages 16 to 54, and were much more likely to be mostly out of the labour market or a family carer (30%) or to have trajectories characterised by combinations of paid employment and family care (34%). Labour market histories summarising an even longer period (16 to State Pension Age) using data from the English Longitudinal Study of Ageing (ELSA) show a similar picture for women, but some additional complexity for men. While 49% of men worked mostly full-time between the ages 16 to State Pension Age, a later-start-early-exit group was evident (8%) as well as two groups characterised by early labour market exits (30% at around age 60 and 9% at age around 49).

Men who started work later, but who left the labour market at around age 60 were more likely to be socio-economically advantaged

For those with a later-start-early-exit trajectory, 92% had a post-secondary education and 91% owned their home outright. This illustrates a significant difference between this group and those who worked mostly throughout their adult lives but who exited the labour market very early (e.g. at around age 49). Within this latter group, 17% had a post-secondary education and 60% owned their home outright.

Cohort comparisons revealed that working full-time throughout the lifecourse has become less common among men

The proportion of men working full-time throughout has declined from 92% among those born 1919-1928 (aged 89 to 98 in 2017) to 69% among those born 1939-1948 (aged 69 to 78 in 2017). The proportion of men starting work later due to extended education has increased across these same cohorts from 4% to 14%.

Among women, the percentage who experienced mostly being a family carer between the ages of 16 and 54 declined from 22% among those born between 1924 and 1933 (aged 84 to 93 in 2017) to 11% of those born between 1944 and 1953 (aged 64 to 73 in 2017). The percentage who mostly worked full-time from 16 to 54 increased from 19% to 24% for those in these cohorts respectively.

A large percentage of men and women are not in the labour market in the years leading up to and following State Pension Age

Patterns of later life labour market involvement show that about 57% of men born 1932-1945 (aged 72 to 85 in 2017) and nearly 46% of women born 1937-1950 (aged 67 to 80 in 2017) were not in the labour market in the five years prior to and following the State Pension Age (that is, at ages 60 to 69 for men and 55 to 64 for women). About 10% of men were in paid work beyond State Pension Age, as were 21% of women in these cohorts.

For men and women, strong prior labour market attachment and good health are key predictors of working beyond State Pension Age

In addition, men working full-time post State Pension Age are also more likely to report having a mortgage (Relative Risk Ratio 2.6). Women working full-time post State Pension Age are more likely to have a mortgage and an intermediate or high level of education (Relative Risk Ratio 2.7).

In cohort comparisons, men and women between the ages of 60 and 69 (for men) and 55 and 64 (for women) were more likely to be in paid work in the youngest cohort examined than in older cohorts

For example, women born between 1919 and 1928 (aged 89 to 98 in 2017) who had worked full-time throughout their lives were ten times more likely to be in paid work at age 64 compared to those who were non-employed or mostly family carers throughout. Similarly, women born between 1939 and 1948 (aged 69 to 78 in 2017) who had worked full-time throughout had a 24% predicted probability to be in paid work at 64 compared to a predicted probability of 4% among those who had been largely non-employed or family carers throughout.

Across the period 1991 to 2015, retirement reversals were relatively common in the UK, with one quarter of older adults unretiring within 15 years of first leaving the labour market and calling themselves 'retired'

Unretirement was 27% more likely among people in better health and 45% more likely among those with a higher educational level. Moreover, there was some evidence to suggest a cohort effect as those born between 1950 and 1959 (aged 58 to 67 in 2017) were almost 50% more likely to unretire (that is return to work after reporting being retired in their late fifties and/or sixties) than those born between 1940 and 1949 (aged 68 to 77 in 2017).

Adults between the ages of 55 and 70 combine paid and unpaid activities in three predominant combinations

Overall, the analysis showed that those who were engaged in full-time paid work were less likely to engage in unpaid forms of work (volunteering, civic engagement, informal care provision and looking after the home). Referred to here as *paid* workers, this pattern described about 45% of the sample, suggesting

that for this group, earlier in the lifecourse paid and unpaid activities compete for an individual's time. As engagement in paid work decreases with age people in this group do not increase their involvement in unpaid activities. 88% of this group are men.

The second and third groups comprised those classified as: *mixed activities (looking after the home)* (44%) and *mixed activities (volunteering)* (11%). People in these two groups are more likely to combine engagement in paid and unpaid work, relative to the *paid workers* group. The difference between the *paid workers* and the other two groups suggests that those who are more likely to work full-time are also less likely to engage in unpaid work activities; those who are less engaged with paid work earlier in the lifecourse are more likely to engage in unpaid activities, and they continue or increase their involvement in unpaid activities as they age.

Patterns of engagement in paid and unpaid work are related to socio-economic factors. The *mixed activities (looking after the home)* group (44%) is mostly made up of women (92%) who are more likely to be socio-economically disadvantaged relative to the other two groups. Those in the *mixed activities (volunteering)* group (11%) are more likely to engage in volunteering and civic engagement, and be socio-economically advantaged.

Health is related to patterns of engagement in paid and unpaid work, as individuals in the second group, *mixed activities (looking after the home)*, are more likely to report poor or very poor health at ages 50 to 55.

The ability to work past State Pension Age depends on one's health. This is especially true for men

For every new allostatic load risk factor, men aged 65 years and older reduced their probability of being in paid work by 1% and their weekly hours of work by 0.4 hours.

People's health on reaching State Pension Age and beyond depends on their labour market and family experiences earlier in the lifecourse

Mothers who took time out of the labour market have better disability and mortality outcomes than mothers who were constantly employed and mothers who had little labour market engagement. Similarly, mothers who took breaks for family care had the best frailty outcomes at age 60. Among men, those who retired early (at age 49 or 60 instead of 65) were frailer at age 65 than those who kept working.

There are no health benefits or disadvantages to working past State Pension Age

People who were still working after State Pension Age were healthier than those who were not. However, this appears to be a case of "reverse causation": those in poorer health left the labour market early, possibly because their health prevented them from working. Once we took people's earlier health status and their work histories into account, there was no difference in health between those who kept working after State Pension Age and those who did not.

Non-employment at all ages was associated with a higher prevalence of common mental disorder

Among 55-64 year olds in 2007, those out of the labour market had a 12% (men) or 13% (women) higher chance of having a common mental disorder than those in paid work. The largest difference in prevalence of common mental disorders as between those in paid work and those not in the labour markets was a 42% difference for men and women aged 25 to 34.

However, across all age groups, the associations of non-employment with common mental disorder were only apparent if non-employment was reported as being due to short- or long-term sickness. Non-employment for other reasons was not associated with common mental disorders.

Associations between non-employment and common mental disorder were more consistent in men than women, increased in strength between 1993 and 2000 (but less consistently from 2000 to 2007), and were reflected in different common mental disorder symptom profiles across the working age range (with somatic complaints and worries about health in older age groups and with anxiety and panic symptoms in younger adults).

Women approaching retirement and those retired have much more varied lifecourses than men

For similar working lives, women accumulate far less pension than men because of differences in the lifecourse as well as gender and motherhood pay gaps. Under our modelled assumptions, a median earning woman who worked full-time from age 16 to State Pension Age with no breaks would accrue similar pension to a man earning at the 30th percentile for men's earnings. Importantly though, among women in their 70s in 2017, only 27% had worked full-time for most of their working lives.

Those who were working full-time during decades of high aggregate earnings have accumulated more pension than those who worked full-time during times of recession. By age 66, a median earning full-time working woman aged 65 in 2017 would have accumulated only half as much private pension (£51 a week) as a similar woman currently aged 55 (£96 a week).

The impact of the new single tier State Pension is mixed for women depending on their circumstances. Compared with the previous system, accumulated State Pension is reducing for some women because they will no longer receive the additional State Pension, but increasing for others because the new single tier pension is higher.

About 73% of women in their 70s in 2017 had lifecourses that reflect long breaks from paid work (e.g. 10+ years) and/or long periods of part-time work (e.g. most of their working life, or working part-time until retirement after a break from paid work). Working part-time, even for lengthy periods, results in the accumulation of very little weekly private pension for women, even at median earnings. It is difficult to improve retirement income by additional years of part-time working. Better outcomes are achieved by delaying retirement than by

returning sooner after breaks for childcare, but there are many impediments for women in working beyond State Pension Age.

To a certain extent there are tensions between concerns around the impact that working life histories can have upon individuals' health and the need to ensure adequate retirement income in later life

This is particularly true for women with children, as our research shows that transitioning from a break from paid work in order to provide family care to part-time work is better for a woman's health than transitioning to full-time work. However, working part-time following a break from paid work can be a barrier to accumulating adequate retirement savings.

These tensions also apply more broadly in relation to working beyond State Pension Age

There is a correlation between more advantageous characteristics (such as higher levels of education, good health, and higher household income) and working beyond State Pension Age. In contrast, those who leave the labour market at a very early age (around 49) often exhibit lower levels of education and health. This suggests that those who could perhaps benefit the most from working beyond State Pension Age in order to increase their income in retirement, may be unable to do so either as a result of poor health or limited access to appropriate employment opportunities.

Introduction

For the last three years, the Wellbeing, Health, Retirement and the Lifecourse (WHERL) project has been investigating a crucial question for ageing societies: **how inequalities across the lifecourse relate to paid work in later life in the UK.**

The project brought together an interdisciplinary consortium of academics whose aim has been to investigate lifecourse influences on later life work and the implications for wellbeing, health and financial outcomes of working up to and beyond State Pension Age.

This issue is of growing importance since the UK, in common with many other Governments across the world, is implementing policies to encourage longer working lives. These policies include increases to the State Pension Age (set to rise to age 67 by 2028), removal of default retirement ages, and the Government's 'Fuller Working Lives' and 'Age Positive' initiatives. These aim to encourage older individuals to engage with paid and/or unpaid work later in life, as well as offering guidance to employers on effectively managing an ageing multi-generational workforce.

These policy reforms affect millions of people, yet their implications for health, wellbeing and financial circumstances are unknown. Do these policies harm, benefit or have little effect on the population? The WHERL project examined the lifelong drivers affecting the complex relationship between paid work in later life, health, wellbeing and retirement income, in order to answer this question.

This report brings together research on a number of cross-cutting factors that can affect the likelihood that individuals will work up to and beyond State Pension Age, as well as the impact this can have on their health, wellbeing and financial circumstances, and draws out the implications for policy and inequalities.

In Chapter one, labour market experiences from young adulthood to the mid-fifties (ages 16 to 54) are considered. Changes in labour market experiences from young adulthood to the year preceding the (then) State Pension Age for men (ages 16 to 64) and women (ages 16 to 59) across three now-retired cohorts are discussed. Marital and parental histories between the ages of 16 and 54 years are also described, and the relationship between various labour market experiences and a number of socio-demographic factors, including gender, marital status and dependent children are presented.

In Chapter two, the way the different labour market experiences explored in Chapter one impact on the likelihood that individuals remain in employment up to and beyond State Pension Age is discussed, as well as cohort changes in the proportion of older adults reporting any work in the years surrounding the State Pension Age. Finally, estimates and predictors of retirement reversal, here referred to as "unretirement", are presented.

In Chapter three, the possible tensions between paid and unpaid activities of older adults, including paid work, volunteering, informal care, civic engagement and looking after the home are considered from a lifecourse perspective. Summaries of activities of men and women between the ages of 55 and 70 are presented, as are the demographic and socio-economic predictors of various configurations of paid and unpaid activities.

The focus of Chapter four is on physical health, both in terms of the ways in which it is associated with individuals' labour market and family experiences, and the way that it might be affected by work in later life.

In Chapter five the prevalence of common mental disorder across cohorts is presented, as well as its relationship with not being in paid work, in particular the reasons for being out of the labour market.

Chapter six considers some gender specific issues which may leave women more vulnerable to having inadequate income in retirement, for example the impact of taking a break from paid work in order to provide family care.

Chapter one: Work and family histories

Summary

- Summaries of detailed labour market histories across the lifecourse reveal the complexity of men and women's lives. Among cohorts born 1920 to 1949 in the British Household Panel Survey (BHPS) (aged 68 to 97 in 2017), men's work lives between 16 and 54 were predominantly characterised by full-time employment (83% worked mostly full-time ages 16-54; 13% were full-time to around age 49). Conversely, only one in five women in these cohorts worked mostly full-time between ages 16 to 54, and were much more likely to be mostly out of the labour market or a family carer (30%) or to have trajectories characterised by combinations of paid employment and family care (34%) between the ages of 16 and 54.
- Labour market histories summarising an even longer period (16 to State Pension Age) using data from the English Longitudinal Study of Ageing (ELSA) show a similar picture for women, but some additional complexity for men. While 49% of men worked mostly full-time between the ages 16 to State Pension Age, a later-start-early-exit group was evident (8%) as well as two groups characterised by early labour market exits (30% at around age 60 and 9% at around age 49).
- Men who started work later, but who left the labour market at age around 60 were more likely to be socio-economically advantaged (92% had a post-secondary education and 91% owned their home outright), particularly in comparison to those who worked most of their adult lives but who exited the labour market very early (17% of this group had a post-secondary education and 60% owned their home outright).
- Cohort comparisons revealed that working full-time throughout the lifecourse has become less common among men, declining from 92% among those born between 1919 and 1928 (aged 89 to 98 in 2017) to 69% among those born between 1939 and 1948 (aged 69 to 78 in 2017). The proportion of men starting to work later due to extended education increased across these same cohorts from 4% to 14%. Among women, the percentage who experienced mostly being a family carer between the ages of 16 and 54 declined from 22% among those born between 1924 and 1933 (aged 84 to 93 in 2017) to 11% of those born between 1944 and 1953 (aged 64 to 73 in 2017). The percentage who mostly worked full-time from 16 to 54 increased from 19% to 24% for those in these cohorts respectively.

Introduction

In light of recent reforms to State Pension Age, it is critical to understand the factors that influence working up to and beyond State Pension Age,¹ and those associated with returns to work following retirement.² In particular, work and family experiences across the lifecourse are widely recognised as important for

¹ Mein et al. 2000; Phillipson & Smith 2005; Radl 2013

² Maestas, N. 2010

understanding later life employment and retirement.³ The research described in this chapter adopts a lifecourse perspective to summarise detailed patterns of labour market and family (marital and parental) experiences across the lifecourse and assess how these patterns have changed across cohorts.

Datasets used

Data from the British Household Population Survey (BHPS) was used to summarise experiences in the labour market and the family (marital and parental status) from the ages of 16 to 54 for respondents born between 1920 and 1949 – i.e. aged between 68 and 97 in 2017. The BHPS is an annual, nationally representative sample of Britons that began in 1991. The last wave was collected in 2008 but a subset of respondents continues to be followed in the Understanding Society study – the UK Household Longitudinal Study (UKHLS).

The English Longitudinal Study of Ageing (ELSA) includes a representative sample of the English population aged 50 or older who have been followed up every two years since its inception in 2002. Data from ELSA was used to summarise labour market experiences between the ages of 16 and State Pension Age (16-59 for women, and 16-64 for men) for cohorts who had reached State Pension Age by 2006, the year when the life history data was collected, i.e. women born before 1946 (71 and older in 2017) and men born before 1941 (76 and older in 2017). Marital and parental histories between the ages of 16 and 54 were also estimated using ELSA.

For cohort comparisons, data from the British Retirement Survey (1988/89) was also used. This is a nationally representative longitudinal study of British people aged 55-69 – i.e. born between 1919 and 1933 (aged 84 to 98 in 2017).

Summarising labour market histories

The WHERL project seeks to understand how men's and women's lifecourses influence paid work and health in later life. The project summarises the working lives of men and women using Optimal Matching Analysis, a technique used for assessing the extent of similarity between individuals' experiences by grouping individuals who share common life histories. These groups have been based on information collected in life history interviews and for the BHPS and ELSA, supplemented with information from the annual waves. Descriptive statistics and further details relating to these life histories are presented in two working papers based on data from the BHPS⁴ and ELSA.⁵

Deriving labour market and family histories

Optimal Matching Analysis is a sophisticated strategy used to summarise and describe detailed biographical information (Box 1). Optimal Matching Analysis

³ O'Rand, Henretta & Krecker 1992

⁴ Corna, Platts, Worts, Price, McDonough, Sacker, Di Gessa & Glaser 2016

⁵ Corna, Di Gessa, Platts, Sacker, Worts, Price, McDonough & Glaser 2016

was used to derive individual labour market, marital and parenthood histories between the ages of 16 and 54 years for those born between 1920 and 1949 (the youngest would be 68 in 2017).

Box 1: Typology of labour market and family (marital and parental) experiences between the ages of 16 and 54 using data from the BHPS, cohorts born 1920-1949

<p>Seven labour market histories</p>	<p>Mostly full-time throughout Mostly non-employed throughout Full-time, very early exit Family carer to part-time (medium break: 7 years) Family carer to full-time (long break: 12 years) Family carer throughout⁶ Mostly part-time throughout</p>
<p>Three marital histories</p>	<p>Never married Long-term married Marriage ends early</p>
<p>Six parental histories</p>	<p>No children in household 1 child early 1 child later 1-2 children early 1-3 children later Early large family</p>

It is important to bear in mind that this approach groups people together who share similar experiences. These are not exact groupings, rather ideal types with empirical estimates of the percentage of the population corresponding broadly to that 'ideal type'. More detailed descriptions of the groups, and further breakdowns by employment status for the labour market histories (that is, self-employed/employed) as well as detailed non-employment categories can be found in the working paper.⁷

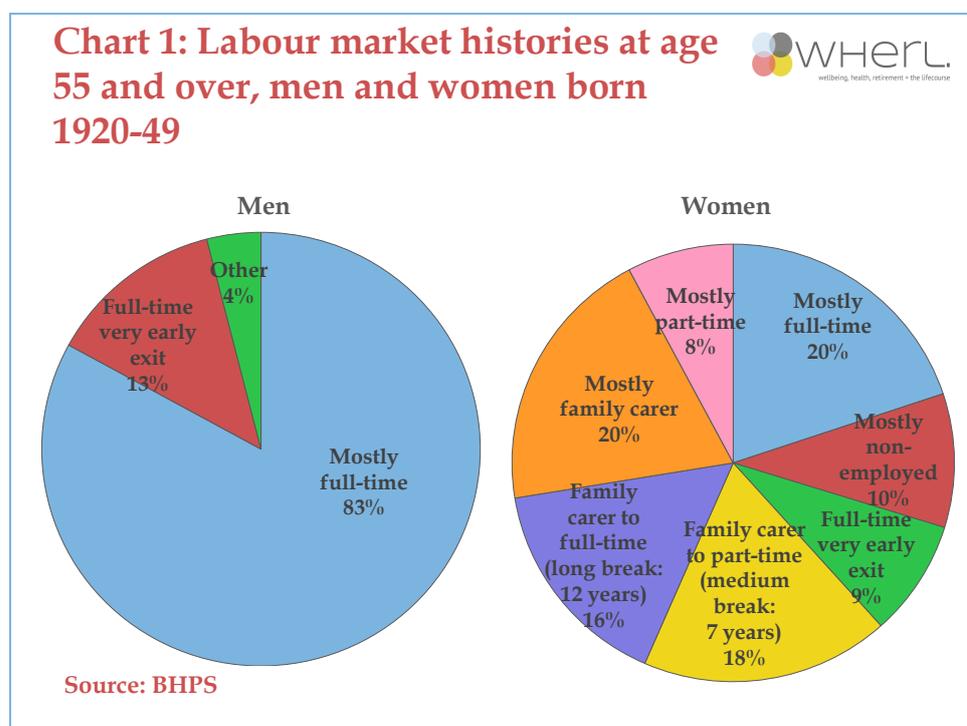
⁶ Those in the mostly family care category were in full-time work until about age 21, exiting the labour market around age 22 in contrast to those in the mostly non-employed category who largely reported being not in paid work throughout.

⁷ Corna, Platts, Worts, Price, McDonough, Sacker, Di Gessa & Glaser 2016

For those born between 1920 and 1949, 96% of men’s experiences were broadly captured by just two labour market histories, while women’s experiences were reflected in seven diverse histories⁸

The majority of men (83%) worked mostly full-time from ages 16 to 54, and about 13% showed strong labour market attachment but exited work very early (at about age 49). The remaining 4% of men were either family carers or mostly not in paid employment throughout (Chart 1).

In contrast, only one-fifth of women worked mostly full-time from ages 16 to 54 (Chart 1). Another fifth of women were largely family carers. Just over one third of the women interrupted their paid work for family care but then returned to work either part-time (18%) or full-time (16%). Far fewer were mostly out of paid employment throughout (10%), and approximately 17% experienced either an early exit from paid work following uninterrupted full-time work (8%), or an early transition from full-time to part-time employment (9%, described here as “mostly part-time”).



Most men and women born 1920-1949 (aged 68 to 97 in 2017) have been long-term married (around 72% for both sexes)⁹

The marital histories described in Box 1 captured three groups: the long-term married, the never married and those whose marriage ended early (a marital disruption due mostly to divorce in approximately their late thirties). The project only considered legal marital status and not cohabitation.

⁸ Corna, Platts, Worts, Price, McDonough, Sacker, Di Gessa & Glaser 2016

⁹ Corna, Platts, Worts, Price, McDonough, Sacker, Di Gessa & Glaser 2016

Close to one third of men and women had two dependent children in the household before the age of 30 (30% of men and 31% of women). The other common pattern for women was having experienced an early large family with three or more children in the household (26%)¹⁰

However, 23% of men and 14% of women from these birth cohorts did not have any dependent children in the household throughout their adult lives (Table 1 and 2). The six parental histories are based on the number of dependent children (defined as those under 16 years of age) living in the household at each age between the ages of 16 to 54. The focus was on dependent children because of their effect on the labour market participation of men and women.

The next section examines how the labour market histories vary by key characteristics including marital and parental histories. We restricted the analysis to those born between 1930 and 1949 (aged 68 to 87 in 2017) given the limited number of covariates available for older cohorts in the BHPS.¹¹ The analysis for men is also limited to the two most common labour market histories, as the number of respondents in the other categories is too small for meaningful analysis.

For men who were mostly in full-time work throughout, the most common parental history is having had one to two dependent children in the household early, that is, before the age of 30 (39%) (Table 1). In contrast, men whose labour market history is characterised by an early exit from work are more likely to never have had dependent children in the household (30%).

Men who mostly worked full-time throughout are more likely to be married at age 55 (74%), to have an intermediate level of education (37%), and to own their own homes outright (43%). This is in comparison to those who exited work at a very early age (at about age 49) who are more likely to be divorced/separated (25%) or to have never married (21%), to have a low educational level (below secondary level education) (65%), and to rent their accommodation (45%), for example, from a local authority or housing association, or private landlord.

¹⁰ Corna, Platts, Worts, Price, McDonough, Sacker, Di Gessa & Glaser 2016

¹¹ For example, if someone entered the BHPS at age 60 in 1991 we have no information concerning their marital or tenure status at age 55.

Table 1: Men’s labour market histories by socio-demographic characteristics, men aged 55 and over born 1930-49, BHPS

Socio-Demographic Characteristics	Mostly full-time throughout	Full-time very early exit	Total
Parental History (16-54)			
No Children in household	22	30	23
1 child early	8	5	8
1 child later	11	9	10
1-2 children early	31	24	30
1-3 children later	15	11	14
Early large family	14	21	15
Marital Status at age 55			
Never married	8	21	11
Married	74	52	70
Divorced/Separated	15	25	17
Widowed	3	3	3
Education			
Low educational level (< Secondary)	46	65	50
Intermediate educational level (A-level)	37	25	34
High educational level (Post-Secondary)	17	11	16
Housing Tenure at age 55			
Owned-outright	43	28	40
Owned with mortgage	42	26	40
Rented/Social Housing	15	45	21

Women who worked mostly full-time throughout were more likely to have had no dependent children living at home throughout their adult lives (38%), be divorced/separated (20%), have a high educational level (post-secondary) (24%), and to own their homes outright at age 55 (45%) (Table 2)

Similar to men, the following analysis for women is also restricted to those born between 1930 and 1949 (aged 68 to 87 in 2017). As expected, women with breaks in paid work (for example, family care to part-time with a 7-year break or family care to full-time with a 12-year break) were more likely to have had two dependent children in the household early (before age 30), and to be married (ranging from 72-78%) (Table 2). They were also more likely to have an intermediate educational level. Those who were mostly family carers throughout were more likely to report a low educational level (73%). This is similar to women in the group who were mostly out of the paid labour market who were also more likely to have a low educational level (66%) but were also more likely to be divorced/separated (25%) and to live in rented accommodation (whether from a private landlord or in public housing 36%).

Table 2: Women’s labour market histories by socio-demographic characteristics, women aged 55 and over born 1930-49, BHPS

Socio-Demographic Characteristics	Mostly full-time throughout	Mostly non-employed throughout	Full-time very early exit	Family carer to part-time (medium break: 7 years)	Family carer to full-time (long break: 10 years)	Mostly family carer throughout	Mostly part-time throughout	Total
Parental History (16-54)								
No child in household	38	10	44	5	<1	4	5	14
1 child early	20	11	22	9	11	8	19	13
1 child later	10	10	11	9	1	10	4	8
1-2 children early	18	15	11	41	46	31	39	31
1-3 children later	5	11	1	12	4	17	2	8
Early large family	10	43	11	26	37	30	32	26
Marital Status at age 55								
Never married	20	7	14	1	<1	4	1	7
Married	50	56	53	78	72	61	67	63
Divorced/Separated	20	25	21	12	18	21	22	19
Widowed	11	12	12	9	10	15	10	11
Education								
Low educational level (< Secondary)	42	66	61	53	49	73	63	56
Intermediate educational level (A-level)	34	17	29	36	36	25	31	31
High educational level (Post-Secondary)	24	16	10	10	15	2	6	12
Housing Tenure at age 55								
Owned-outright	45	39	41	52	46	45	52	46
Owned with mortgage	39	25	28	31	38	20	25	31
Rented/Social Housing	16	36	30	17	17	35	23	23

The consideration of labour market histories up to respective State Pension Ages for men and women (that is up to 64 for men and 59 for women in these cohorts) provides additional insight into the experiences of men and women across the lifecycle. This study used the life history data in ELSA that was collected in

2006, enabling the investigation of labour market histories for what has traditionally been thought of as the whole of working life (ages 16 to the year preceding State Pension Age). Further details about these analyses are in the second WHERL working paper.¹² The same technique described above was used to summarise these histories, but distinct typologies were derived for men and women given the different age ranges assessed (Box 2). The same marital and parental history categories (ages 16-54) described in Box 1 were also applied in ELSA.

Box 2: Typology of labour market histories between the ages of 16 and State Pension Age using data from ELSA, cohorts born 1916-46¹³

	Men 16-64	Women 16-59
Labour market histories	Mostly full-time throughout	Mostly full-time throughout
		Mostly non-employed throughout/family carer ¹⁴
	Mostly non-employed throughout	Full-time, very early exit
		Family carer to part-time (long break: 16 years)
	Full-time, very early exit	Family carer to part-time (short break: 4 years)
	Full-time, early exit	Family carer to full-time (medium break: 9 years)
Later start, early exit	Mostly part-time throughout	

The labour market histories of men up to State Pension Age (age 65 here) are more varied than compared to the histories of men up to age 55 because they incorporate a longer time (Chart 2)¹⁵

The cohorts examined were those born between 1916 to 1946, aged 71 to 101 in 2017. Although nearly half of men aged 65 and over in these cohorts spent all or most of their adult life in full-time work, close to one third (30%) experienced an early exit from work at around age 60, with an additional 9% having experienced a very early exit at about age 49.

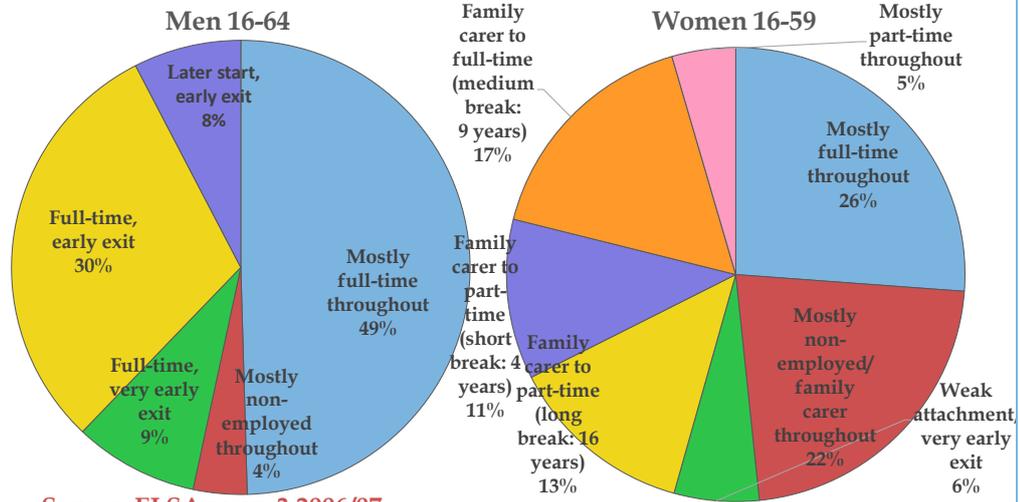
¹² Corna, Di Gessa, Platts, Sacker, Worts, Price, McDonough & Glaser 2016

¹³ Ages above 90 in ELSA are banded so the year of birth for the oldest cohort is approximate.

¹⁴ In contrast to the labour market typology for women between the ages of 16-54, those for women ages 16-59 only showed one 'ideal type' relating to non-employment largely reflecting some full-time paid work early on followed by family care.

¹⁵ Corna, Di Gessa, Platts, Sacker, Worts, Price, McDonough & Glaser 2016

Chart 2: Labour market histories up to State Pension Age: Men aged 65 and over and women aged 60 and over, born 1916-46



The labour market histories for women aged 60 and over are broadly similar to those derived using data from the BHPS for those aged 55 and over.

The next section describes additional analyses for men aged 65 and over and for women aged 60 and over. Men aged 65 and over who have mostly been either out of the labour market between the ages of 16 to 64 throughout or in full-time work but with a very early exit (at around age 49), were more likely to have had no dependent children in the household during their adult lives (from ages 16 to 54) (Table 3).

Table 3: Men’s labour market histories by socio-demographic characteristics, aged 65 and over, born 1916-41, ELSA wave 3 2006/07

Socio-Demographic Characteristics	Mostly full-time throughout	Mostly non-employed throughout	Full-time, very early exit	Full-time, early exit	Later start, early exit	ALL
Parental History (16-54)						
No children in household	15	21	19	12	14	15
1 child early	7	5	9	11	2	8
1 child later	24	20	18	23	23	23
1-2 children early	28	31	18	31	26	28
1-3 children later	11	13	8	9	23	11
Early large family	15	10	27	14	12	15
Marital Status at age 55						
Never married	3	11	10	4	2	4
Married	77	72	66	74	86	76
Divorced/Separated	6	4	13	6	5	7
Widowed	13	13	10	16	7	13
Education						
Low educational level (< Secondary)	38	31	45	38	2	35
Intermediate educational level (A-level)	38	47	38	37	6	36
High education (Post-Secondary)	23	22	17	25	92	29
Housing Tenure at age 55						
Owned-outright	75	78	60	80	91	77
Owned with mortgage	9	4	9	7	6	8
Rented/Social Housing	16	18	32	13	3	15

The vast majority of men in each of the labour market histories reported being married. Being divorced/separated is more common among men whose labour market histories are characterised by full-time work but with a very early exit (at about age 49). 92% of men whose labour market histories are characterised by a later start but with an early exit have a high level of education, in sharp contrast to the low proportion with high education among full-time workers who exited the labour market very early (17%).

In addition, 91% of men whose labour market histories are characterised by a late start to full-time work followed by an early exit at about age 60 own their own homes outright (and 92% of this group went to university), whereas only 60% of those in the mostly full-time work throughout but very early exit (at about age 49) did so. This is likely to represent an exit related to poor health or

chronic unemployment, with 45% of this group having few educational qualifications, and 32% living in rented accommodation (in comparison to just 3% of the later-start-in-paid-work-but-early-exit-group).

Women whose labour market histories are characterised by mostly full-time work throughout are the most likely to have no dependent children in the household (35% compared to less than 10% in all the other groups) (Table 4). Women whose labour market histories are characterised by breaks from paid work (that is family carers to part-time or to full-time work) are more likely to be married in comparison to women who worked full-time throughout, whereas being divorced/separated is more common among women who experienced full-time work throughout. Divorce is also more common among women who shifted from being family carers to being employed full-time. Women who have worked full-time throughout are also more likely to have a high educational level (29%). Across all the labour market histories, similar proportions of women (72%) own their own homes outright.

Table 4: Women’s labour market histories by socio-demographic characteristics, aged 60 and over, born 1916-46, ELSA wave 3 2006/07

Socio-Demographic Characteristics	Mostly full-time throughout	Mostly non-employment throughout	Weak attachment, very early exit	Family carer to part-time (longer break: 16 years)	Family carer to part-time (shorter break: 4 years)	Family carer to full-time (medium break: 9 years)	Mostly art-time throughout	Total
Parental History (16-54)								
No children in household	35	9	5	2	5	2	7	13
1 child early	14	9	16	7	12	12	15	12
1 child later	15	17	7	29	11	6	4	14
1-2 children early	19	29	41	34	42	47	49	33
1-3 children later	3	7	2	7	3	3	2	4
Early large family	14	28	30	21	27	31	24	24
Marital Status at age 55								
Never married	18	2	0	0	<1	0	0	5
Married	42	54	64	62	74	58	56	56
Divorced/Separated	14	8	9	7	5	15	13	10
Widowed	27	37	27	30	20	27	31	29

Education								
Low educational level (< Secondary)	40	54	45	47	50	35	59	46
Intermediate educational level (A-level)	32	35	38	40	37	41	28	36
High education (Post-Secondary)	29	11	17	13	13	24	13	19
Housing Tenure at age 55								
Owned-outright	72	70	73	72	78	71	67	72
Owned with mortgage	11	8	8	12	10	14	14	11
Rented/Social Housing	16	23	19	16	11	15	19	17

It is important to examine changes in the labour market and family histories of men and women across cohorts, given that Britain like many other western industrialised countries has experienced significant social and demographic change over the 20th century.¹⁶ Among the well documented trends are increases in women’s (and mothers’) labour force participation across the lifecycle, and until recently, early labour force exits among men.¹⁷ At the same time, there have been significant transformations in family behaviour including declines in childbearing and increases in divorce.¹⁸

This section presents findings from the study comparing the labour market and family histories of men and women from three 10-year birth cohorts using data from all three surveys. The cohorts compared are the 1919-28 (aged 89 to 98 in 2017), 1929-38 (aged 79 to 88 in 2017) and the 1939-48 (aged 69 to 78 in 2017) birth cohorts for men, and the 1924-33 (aged 84 to 93 in 2017), 1934-43 (aged 74 to 83 in 2017) and 1944-53 (aged 64 to 73 in 2017) birth cohorts for women (Box 3). We examine in each cohort’s circumstances between the aged of 60 to 69 for men, and 55 to 64 for women.

¹⁶ Murphy, M. 2011

¹⁷ Gregg, Gutiérrez-Domènech & Waldfogel 2007; Maas, Borchelt & Mayer 1999; Scherger, Nazroo & May 2016

¹⁸ Murphy, M. 2011

Box 3: Birth cohorts compared across the three data sources for men aged 60-69 and women aged 55-64

Data	Men aged 60-69		Women aged 55-64	
	Birth cohort	Age in 2017	Birth Cohort	Age in 2017
Retirement Survey (1988/89)	1919-1928	89-98	1924-1933	84-93
BHPS (1999/00)	1929-1938	79-88	1934-1943	74-83
ELSA wave 4 (2008/09)	1939-1948	69-78	1944-1953	64-73

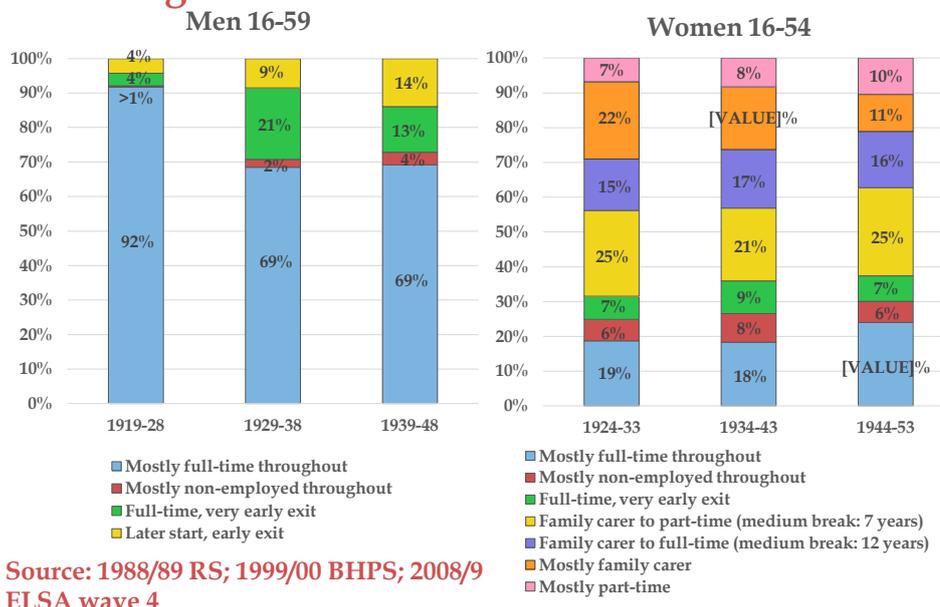
The labour market and family histories compared across cohorts are similar to those presented using data from the BHPS, but modified to reflect slightly different age ranges for men, that is 16 to 59.

The most significant change across cohorts for men aged 60 to 69 is the decline in the percentage who experienced full-time work between the ages of 16 and 59, from 92% for those born between 1919 and 1928 (men in their 90s in 2017) to 69% of those born between 1939 and 1948 (men in their 70s in 2017) (Chart 3)¹⁹

Among men in the middle cohort (those born between 1929 and 1938, in their 80s in 2017) the percentage who experienced a very early exit (at about age 49) increased in comparison to the earlier cohort but then declined again for the most recent cohort. The other important change was an increase in the percentage of men who experienced a later start into employment, most likely due to increases in education, from just 4% among men born between 1919 and 1928 (in their 90s in 2017) to 14% among the 1939-48 birth cohort (men in their 70s in 2017).

¹⁹ Glaser, Di Gessa, Corna, Platts, Stuchbury, Worts, Sacker, McDonough & Price 2016

Chart 3: Changes in labour market histories by cohort, men aged 60-69 and women aged 55-64



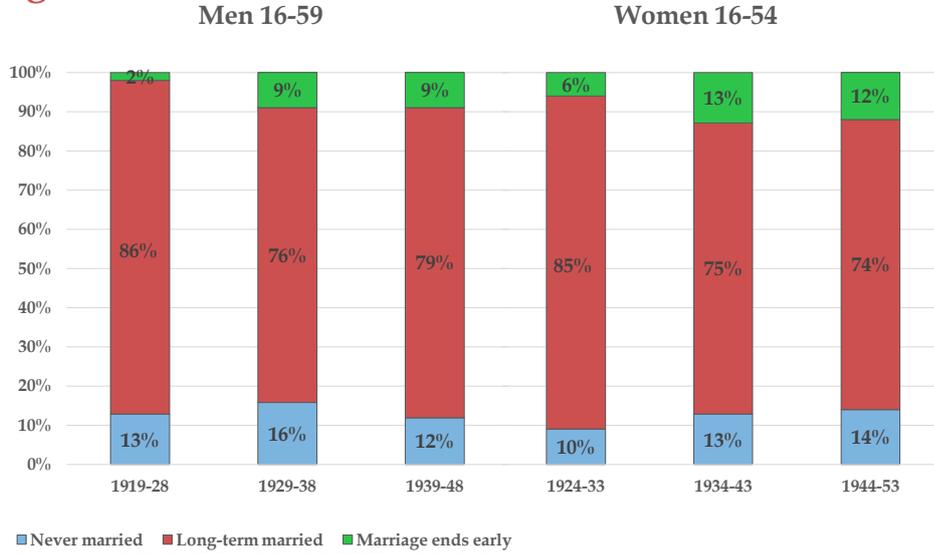
For women, the most significant change is the decline in the percentage who experienced mostly being a family carer between the ages of 16 to 59, from 22% of those born between 1924 and 1933 to 11% of those born between 1944 and 1953 (Chart 3)²⁰

In contrast, the percentage of women whose histories are mostly characterised by full-time work throughout increased from 19% for those born between 1924 and 1933 (women aged 84 to 93 in 2017) to 24% among those born between 1944 and 1953 (aged 64 to 73 in 2017). While there were small increases in proportions working mostly full-time over this 20 year period, there were similar increases in the proportions of women working mostly part-time. Even among the youngest cohort, a combination of family care and part-time work through the lifecycle remained the most common pattern.

For both men and women, more recent cohorts are more likely to have experienced a marriage ending early, and are less likely to be long-term married (Chart 4). Also, for both men and women having large families at earlier ages (or having two children early) was more common for the middle cohort, that is men born in the 1930s and women born in the mid-1930s to the 1940s (Chart 5).

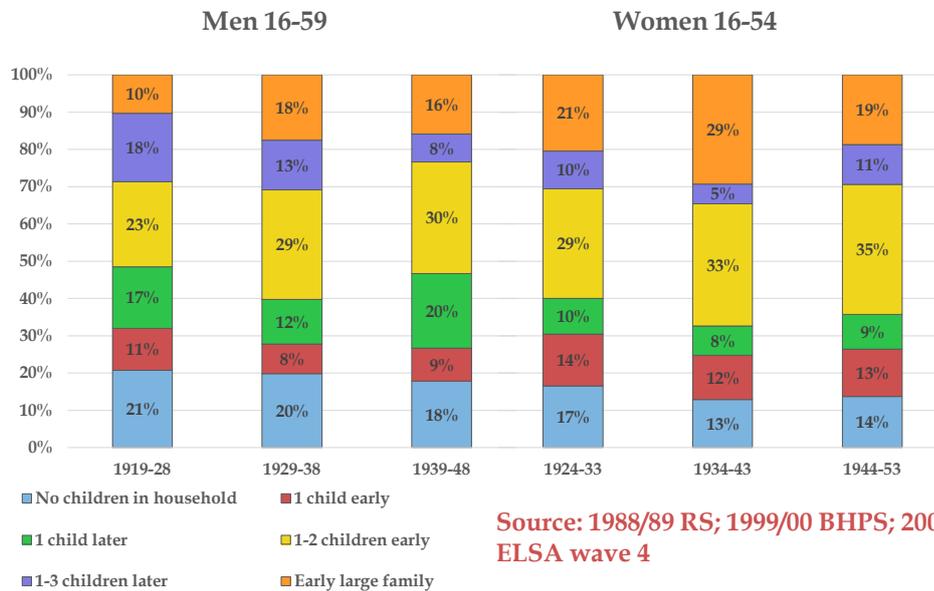
²⁰ Glaser, Di Gessa, Corna, Platts, Stuchbury, Worts, Sacker, McDonough, Price 2016

Chart 4: Changes in marital histories by cohort, men aged 60-69 and women aged 55-64



Source: 1988/89 RS; 1999/00 BHPS; 2008/9 ELSA wave 4

Chart 5: Changes in parental histories by cohort, men aged 60-69 and women aged 55-64



Source: 1988/89 RS; 1999/00 BHPS; 2008/9 ELSA wave 4

Policy implications

The normative pattern of full-time work throughout the lifecourse, particularly for men, is less common among younger cohorts. Changes in women's patterns of work tend toward stronger labour market attachment among younger cohorts, but many continue to combine paid employment, often part-time, with periods of family care. Policies that aim to encourage older adults to stay in the labour market until later ages must recognise the diversity of these experiences earlier in the lifecourse as one of the factors that influences paid employment in later life.

Policies that seek to keep older adults in work past State Pension Age must consider the potential vulnerability of those who leave the labour market at a very early age to avoid exacerbating existing inequalities.

Conclusions

This chapter presents the findings of empirical estimates of men's and women's experiences in the labour market and the family across the lifecourse using nationally representative data. The Optimal Matching Analysis employed is a sophisticated analytical tool to derive meaningful patterns from very detailed data. Subsequent analyses, described in the forthcoming chapters, assess the role of these lifecourse experiences in shaping employment experiences in later life, as well as health. Men's and women's labour market experiences across the lifecourse illustrate a variety of experiences that differ in their timing and employment tenure, and for women, are marked by periods of family care and part-time work. Cohort analyses demonstrate that for men, full-time work throughout is becoming less common while later starts – likely owing to staying in formal education for longer – are becoming more common. Early exits from the labour market appear to have levelled off for men. Among women, changes across cohorts are less marked. We see only a small increase in the proportion whose working lives are characterised by full-time employment, as well as a small increase of those working part-time after periods of family care.

Chapter two: Work family histories and retirement

Summary

- Patterns of later life labour market involvement show that about 57% of men born 1932-1945 (aged 72 to 85 in 2017) and nearly 46% of women born 1937-1950 (aged 67 to 80 in 2017) were not in the labour market in the five years prior to and following the State Pension Age (at ages 60 to 69 for men and 55 to 64 for women). About 10% of men and 21% of women were in paid work beyond State Pension Age in these cohorts.
- For men and women, strong prior labour market attachment and good health are key predictors of working beyond State Pension Age. Men working full-time post State Pension Age are also more likely to report having a mortgage (Relative Risk Ratio 2.6), while women working full-time post State Pension Age are more likely to have a mortgage and an intermediate or high level of education (Relative Risk Ratio 2.7).
- In cohort comparisons, men between the ages of 60 and 69 and women between the ages of 55 and 64 were more likely to have been in paid work in the youngest cohort. For all cohorts examined, women with a continuous, full-time labour market history had a higher probability of being in paid work at older ages even when other factors were considered. For example, women born between 1919 and 1928 (aged 89-98 in 2017) who had worked full-time throughout their lives were ten times more likely to be in paid work at age 64 compared to those who were non-employed or mostly family carers throughout. Similarly, women born between 1939 and 1948 (aged 69-78 in 2017) who had worked full-time throughout had a 24% predicted probability to be in paid work at 64 compared to a predicted probability of 4% among those who had been largely non-employed or family carers throughout.
- Across the period 1991 to 2015, retirement reversals were relatively common in the UK, with one quarter of older adults unretiring within 15 years of first leaving the labour market and calling themselves 'retired'. Unretirement was 27% more likely among people in better health and 45% more likely among those with a higher educational level. Moreover, there was some evidence to suggest a cohort effect. Those born between 1950 and 1959 (aged 58 to 67 in 2017) were almost 50% more likely to unretire (return to work after reporting being retired) in their late fifties and/or sixties than those born between 1940 and 1949 (aged 68 to 77 in 2017).

Introduction

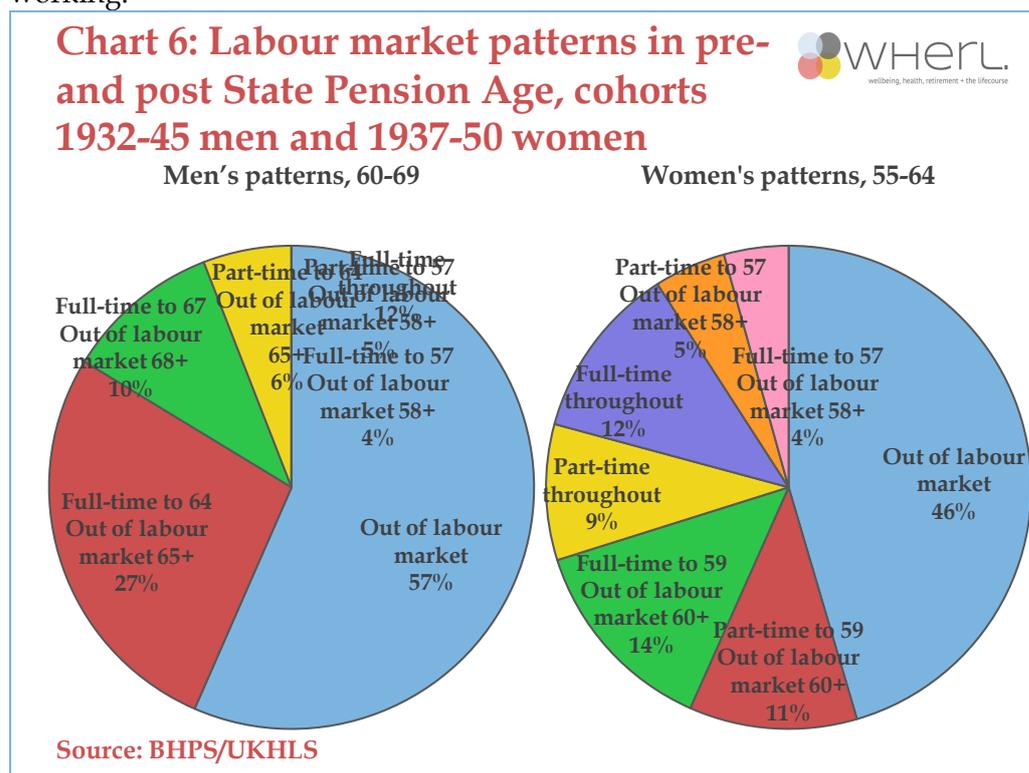
Given the dynamic nature of labour market participation in mid- and later life, in this chapter we examine patterns of employment in the five years surrounding the State Pension Age (60-69 for men and 55-64 for women) for cohorts born between 1932 to 1945 (aged 72 to 85 in 2017) for men and 1937 to 1950 (aged 67 to 80 in 2017) for women, and the socio-demographic and lifecourse factors associated with these patterns. We also assess the prevalence of unretirement – the reversal of labour market exits which people initially identified as retirement exits – and examine what predicts the decision to return to the labour market following an initial retirement.

Working up to and beyond State Pension Age

This section focuses on patterns of labour market involvement in the years leading up to and beyond State Pension Age (60-69 for men and 55-64 for women) for men born 1932-1945 (aged 72-85 in 2017) and women born 1937-1950²¹ (aged 67-80 in 2017) using data from the BHPS and the UK Household Longitudinal Study (UKHLS). Optimal Matching Analysis, discussed in the previous chapter, was used to summarise the most common patterns of labour market involvement for these cohorts in the 10 years surrounding State Pension Age. The relationship of these patterns with various socio-demographic, health and lifecourse factors was explored.

Over one half of men and nearly half of women traced a pattern of mostly being out of the labour market in the years leading up to, and following, State Pensions Age (Chart 6)²²

A minority of men stayed in work beyond age 65 (10%), while the experience of one in five women was characterised by a later life employment pattern that included part- or full-time work beyond age 60 (21%) (Chart 6). Just over one quarter of the men exited the labour market at State Pension Age (27%), while a small group (6%) worked mostly part-time to about age 64, then stopped working.



²¹ These cohorts were selected as they had complete data on ages 60-69 (for men) and 55-64 (for women) in the last wave (2015) of the Understanding Society survey.

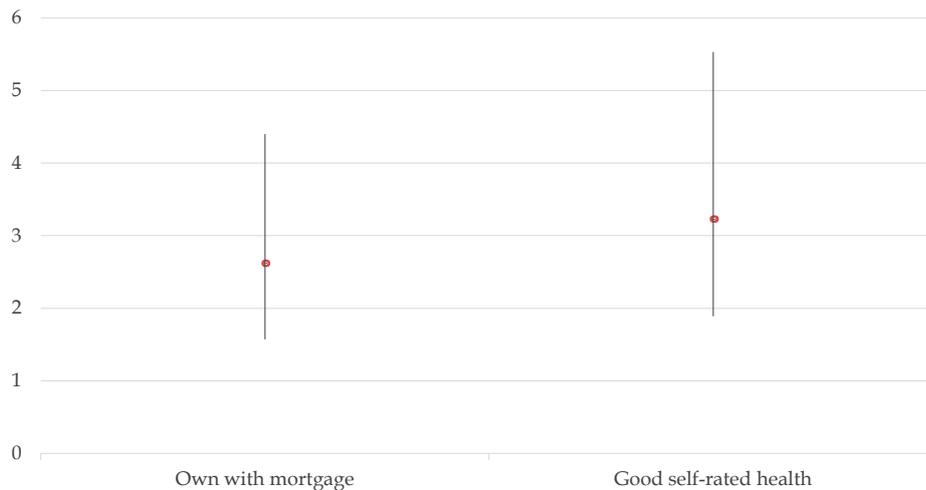
²² Corna, Di Gessa, Platts, Worts, Sacker, Price, McDonough & Glaser 2017

Women working part-time tended to exit either early at around age 57 (5%), at State Pension Age (11%), or by age 64 (9%). The patterns for women working full-time were similar, that is about 4% exited from work at around age 57, a further 14% worked to State Pension Age and then exited, and the remainder worked until about age 64 (12%).

Prior labour market attachment and good health (the latter particularly for men) is associated with later life labour market patterns that include working beyond State Pension Age²³

Men who worked full-time beyond State Pension Age, compared to those not working between 60 and 69 years of age, were more likely to have good self-rated health and have a mortgage, in addition to strong prior labour market attachment (Chart 7).

Chart 7: Predictors of working full-time past State Pension Age for men, relative to those non-employed aged 60-69, 1932-45 cohort

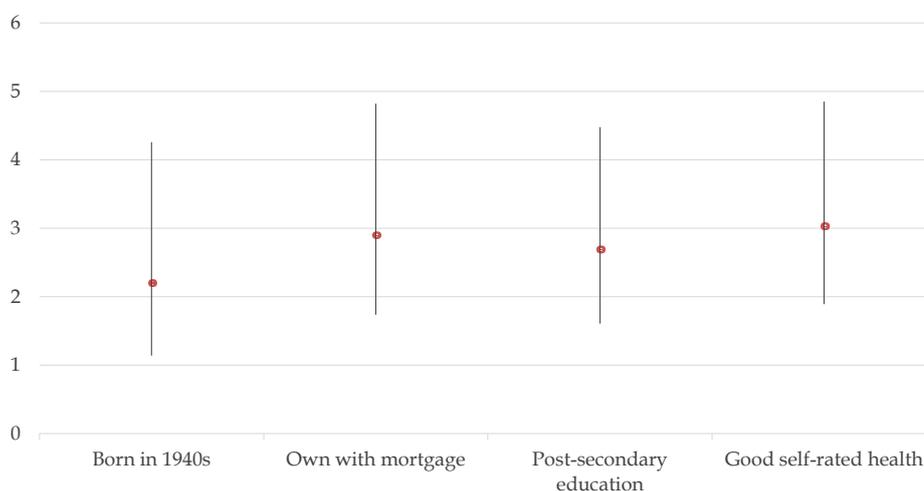


Source: BHPS/UKHLS

Compared to women who were not in the labour market between the ages of 55-64, women who worked full-time beyond State Pension Age were more likely to be from the youngest cohort (i.e. those born in the 1940s), to have a secondary or post-secondary level of education, to have a mortgage and to be in good health (Chart 8).

²³ Corna, Di Gessa, Platts, Worts, Sacker, Price, McDonough & Glaser 2017

Chart 8: Predictors of working full-time past State Pension Age for women relative to those non-employed aged 55-64, 1937-50 cohort



Source: BHPS/UKHLS

To date, we know that later-born cohorts were more likely to be in paid work in their 50s and early 60s than earlier born cohorts. They were also more likely to be working beyond State Pension Age.²⁴ However, we do not know whether, and to what extent, these changes were driven by variations in work and family experiences, or by the different health and socio-economic profiles of later-born cohorts.

Using data from the three surveys (Retirement Survey, BHPS and ELSA) for the three cohorts described in the preceding chapter, we compared the following cohorts: men born 1919-28 (aged 89 to 98 in 2017), 1929-38 (aged 79 to 88 in 2017) and 1939-48 (aged 69 to 78 in 2017) when they were respectively aged 60-69; and women born 1924-33 (aged 84 to 93 in 2017), 1934-43 (aged 74 to 83 in 2017) and 1944-53 (aged 64 to 73 in 2017) when they were respectively aged 55-64. We investigated changes across these cohorts in the relationship between people’s work and family histories and working in later life. The analysis focused on being in paid work in the five years surrounding State Pension Age, that is between ages 60 to 69 for men and ages 55 to 64 for these women.

Our earlier work suggested that among older cohorts of women, it is those with the strongest labour market attachment throughout their lives who are more likely to continue working up to and beyond State Pension Age (and this is supported by analysis from the BHPS/UKHLS described above).²⁵ However, more recent studies have found evidence of opportunity costs, whereby older

²⁴ Banks & Tetlow 2008; Crawford & Tetlow 2010

²⁵ Pienta, Burr & Mutchler 1994

divorced women who remain unmarried appear to be more likely to extend paid work, perhaps compensating for the loss of a spouse's pension and/or for earlier periods out of the labour market.²⁶

Respondents in our study were classified by whether or not they were in paid work between the ages of 55-64 for women and 60-69 for men. For women, full-time work was distinguished from part-time work (20 or more hours per week and less than 20 hours respectively).²⁷ Those not in work in these two age groups were mostly retired (almost 90% overall in all the surveys). The remaining 10% were not considered in more detail given the small number of respondents who were classified as sick, homemakers, or unemployed.

There have been significant cohort changes in working in the years around State Pension Age²⁸

For instance, the percentage of men who were not in paid work between the ages 60 to 69 rose from 68% for those born between 1919 and 1928 (men in their 90s in 2017), to 73% for those born between 1929 and 1938 (men in their 80s in 2017), before declining to 55% for the more recent cohort born between 1939 and 1948 (men in their 70s in 2017) (Table 5). This most likely reflects the trend toward earlier retirement, particularly among men, evident in the 1990s that has then been followed by a shift toward increasing employment at later ages.²⁹

Among men who were between the ages of 60 and 69, the likelihood of reporting being in paid work is related to labour market experiences earlier in the lifecourse (Table 5). In this age group, those who reported being in paid work across all three cohorts had worked full-time throughout from ages 16 to 59. Men between the ages of 60 and 69 in the two more recent cohorts (those born between 1929 and 1938 and between 1939 and 1948) who were not in paid work were, in comparison to the oldest birth cohort, more likely to have experienced a very early exit from the labour force (at about age 49). For the most recent cohort (men born between 1939 and 1948, in their 70s in 2017), those in paid work at ages 60 to 69 were more likely to have experienced a later start in employment followed by full-time work in comparison to the two older cohorts (Table 5).

Among women between the ages of 55 and 64, there was relatively little difference in the percentage in paid work between those born in the two earlier cohorts; around two thirds were not working, and around 20% worked 20 or more hours per week. However, for the most recent birth cohort (those born between 1944 and 1953, aged 64 to 73 in 2017), the percentage of women working more than 20 hours a week increased substantially to 34% (Table 6). Across all cohorts, it is women who worked mostly full-time throughout who had the

²⁶ Finch, N. 2013

²⁷ In ELSA and the BHPS being 'in paid work' is based on those who report being in paid work or self-employed in the month prior to the interview and in the week prior to the interview in the RS.

²⁸ Glaser, Di Gessa, Corna, Platts, Stuchbury, Worts, Sacker, McDonough & Price 2016

²⁹ MacNicol, J. 2015

highest likelihood of being employed for more than 20 hours a week between the ages of 55 and 64 (Table 6).

Table 5: Men aged 60-69 in paid work by labour market histories (from ages 16-59) by cohort, BHPS/UKHLS

Labour Market Histories (16-59)	Cohort					
	1919-28		1929-38		1939-48	
	Not in paid work (68%)	In paid work (32%)	Not in paid work (73%)	In paid work (27%)	Not in paid work (55%)	In paid work (45%)
Mostly full-time throughout	91	94	61	89	60	81
Mostly non-employed throughout	<1	0	3	2	6	0
Full-time, very early exit	5	0	28	2	23	1
Later start to full-time	3	6	9	8	11	17
Total	100	100	101	101	100	99

Table 6: Women aged 55-64 in paid work (full- or part-time) by labour market histories (from ages 16-54) by cohort, BHPS/UKHLS

Labour Market Histories (16-54)	Birth cohort								
	1924-33			1934-43			1944-53		
	Not in paid work (65%)	In paid work <20h (16%)	In paid work 20h+ (20%)	Not in paid work (65%)	In paid work <20h (13%)	In paid work 20h+ (22%)	Not in paid work (49%)	In paid work <20h (17%)	In paid work 20h+ (34%)
Mostly full-time throughout	17	7	34	14	10	35	15	21	39
Mostly non-employed throughout	9	2	<1	11	5	3	10	3	2
Full-time, very early exit	9	5	1	13	3	1	12	7	<1
Family carer to part-time (medium break: 7 years)	18	52	25	15	47	22	22	35	25
Family carer to full-time (long break: 12 years)	12	10	28	15	11	25	15	9	21
Mostly family carer	30	11	6	25	8	4	16	7	5
Mostly part-time	6	14	5	7	14	9	10	17	8

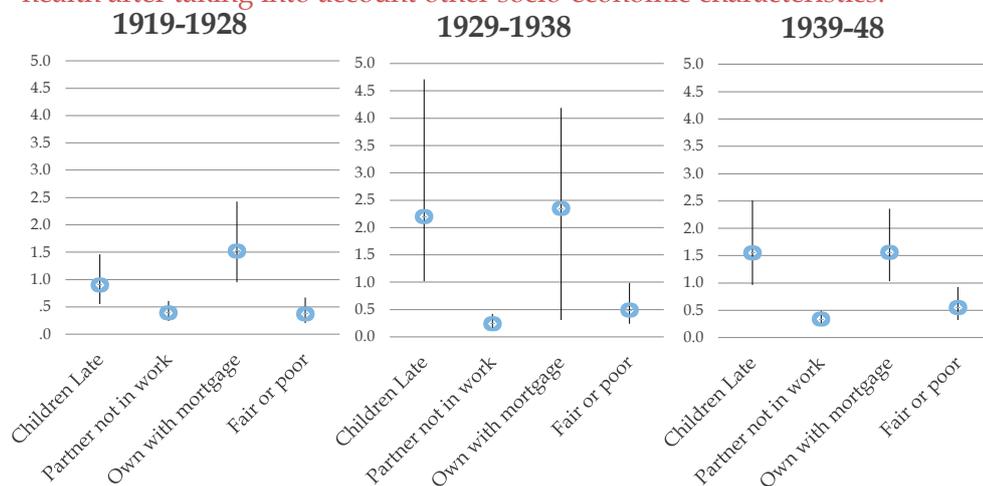
Across all birth cohorts, it is those with more advantaged characteristics who had the highest probabilities of still being in paid work at ages 60 to 69 for men and 55 to 64 for women; for example, those who reported being, in good health, and owning their own homes (Charts 7 and 8)³⁰

In addition, we examined changes across cohorts in the association between prior work and family histories and the probability of being in paid work at ages 60 to 69 for men and 55 to 64 for women, taking other key demographic and socio-economic factors into account (e.g. measures of wealth, health, living arrangements etc.). As nearly all men had worked full-time throughout it was not possible to examine associations between labour market histories and being in paid work at ages 60 to 69.

The study showed that men aged 60-69 in the two younger cohorts, in comparison to the oldest cohort, were more likely to be in paid work if they had children late, even when other factors were considered. In addition, across all three birth cohorts men aged 60-69 were more likely to be in paid work if their partner was still working, if they had a mortgage and if they were in good health (Chart 9).

Chart 9: Being in paid work more likely for the better educated and the healthier for men

Odds ratio of being in paid work at ages 60-69 by having children late, partner not in paid work, own home but with a mortgage and fair/poor health after taking into account other socio-economic characteristics.



Source: 1988/89 RS; 1999/00 BHPS; 2008/9 ELSA wave 4

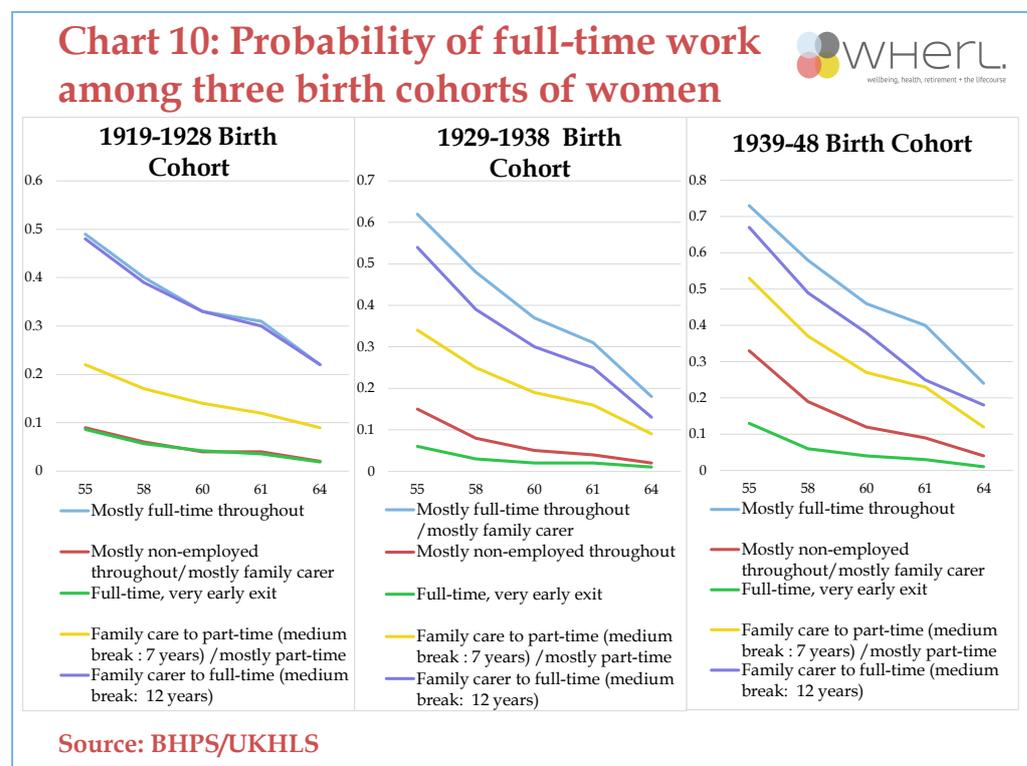
³⁰ Glaser, Di Gessa, Corna, Platts, Stuchbury, Worts, Sacker, McDonough & Price 2016

Women with a continuous, full-time labour market history had a higher probability of being in paid work at older ages across all cohorts, even when other demographic and socio-economic factors were considered (Chart 10)³¹

For example, women born between 1919 and 1928 (aged 89-98 in 2017) who had worked full-time throughout their lives were ten times more likely to be in paid work at age 64 compared to those who were non-employed or mostly family carers throughout. Similarly, women born between 1939 and 1948 (aged 69-78) who had worked full-time throughout had a 24% predicted probability of being in paid work at age 64 compared to a predicted probability of 4% among those who had been largely non-employed or family carers throughout.

However, for women who had mostly not been in paid work between the ages of 16 to 54, those in the youngest cohort were more likely to be in full-time work at age 60 (12%) compared to those in the oldest cohort (4%) (Chart 10). Divorced women were disproportionately represented in this group. This finding suggests ‘opportunity costs’ - that is that women who extend paid work may be compensating for the loss of a spouse’s pension and/or for earlier periods out of the labour market.

Like men, and across cohorts, women aged 55 to 64 who had children later were more likely to be working. Having a partner in paid work was consistently associated with being in work for women in this age group across all three birth cohorts, net of other factors.



³¹ Glaser, Di Gessa, Corna, Platts, Stuchbury, Worts, Sacker, McDonough & Price 2016

Given the dynamic nature of men's and women's working lives, it is also important to recognise that stopping work or retirement is not a single, permanent event but a process.³² Retirement can be diverse, lengthy and fuzzy, and marked by interruptions.³³ To date, little work has explored retirement reversals, or "unretirement", commonly defined as returning to paid work following a cessation of work at retirement.³⁴

In this section the focus shifts from the factors associated with working in later life, to the issue of unretirement. We explored this issue using data from the BHPS/UKHLS for those born between 1920 and 1959 (aged 58 to 97 in 2017). We sought to understand who is most likely to unretire and to determine if it is those in greatest financial need who are most likely to do so. However, it is also possible that those most concerned about their finances are not able to find paid work in later life. Since poorer incomes in later life are also associated with lower qualifications and ill health over the lifecourse, employment barriers may be substantial for those in greatest need of a job.³⁵

The study defined retirement reversals as people who, at the beginning of the observation period, declared that they were fully retired from paid work, but who then began working in paid employment or self-employment after that. This also includes those who stated they were "retired" but who were working part-time and then later took up full-time employment or self-employment. Unretirements could take place at any age between 55 and 69.

Across the period 1991 to 2015 around 25% of people experienced a retirement reversal (half within the first five years) and it is associated with better health and education³⁶

Few retirements reversals occurred after 8 years of follow-up, and none were observed after 15 years. About 9% of retirees reversed their decision within just one year of retirement.

People with the most advantaged characteristics are more likely to return to paid work following retirement (Chart 11)

Even after other factors were considered, unretirement was more common for men, the better educated, those in better health, homeowners (but with a mortgage), and the unmarried. For example, men were 25% more likely to unretire than women once other factors were considered, as were people in better health (27% more likely) or with a higher education level (45% more likely). In addition, the findings suggest the possibility of a cohort effect as the most recent cohort, (those born between 1950 and 1959, aged 58 to 67 in 2017) were almost 50% more likely to return to work after reporting being retired in

³² Atchley, R.C. 1982

³³ Kohli, M. & Rein, M. 1991

³⁴ Beehr & Bennett 2015

³⁵ Scherger 2015

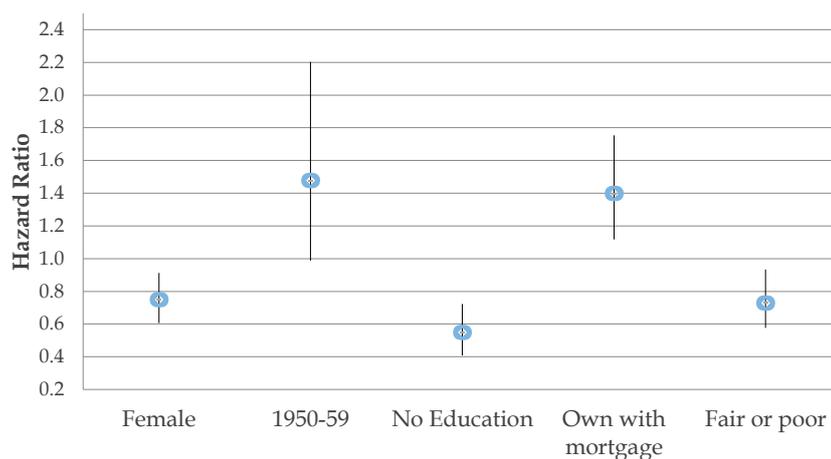
³⁶ Platts, Corna, Worts, McDonough, Price & Glaser [Forthcoming]

their late fifties and/or sixties, that is from 1991-2015 than those born between 1940 and 1949 (aged 68 to 77 in 2017).

Chart 11: Unretirement more likely for the better educated and the healthier



Hazard ratio of unretirement by gender, education, own with a mortgage and fair/poor health after adding other demographic and socioeconomic variables to the model.



Source: BHPS/UKHLS

The findings suggest that apart from still having a mortgage as a driver for unretirement, rates are not higher for participants in greater financial need on other measures, whether measured as subjective assessment of finances or by household income quintiles. The results suggest that unretirement is a strategy more often used by those who are already advantaged – thus it has the potential to exacerbate inequalities in later life.

Policy implications

The socio-economically advantaged, as well as older adults in good health, are most likely to work post State Pension Age. It is neither likely and may not be feasible for the most disadvantaged (in financial or health terms) to work to later ages.

Strong labour market attachment earlier in the lifecourse is a strong predictor of ongoing work in later life. Policies that support men and women to balance work and family demands, to maintain their ties to work across the lifecourse could be important.

The number of older adults experiencing a retirement reversal is not trivial, and policies that foster labour market opportunities that are attractive to older workers including those who have taken a break from paid work, should be encouraged.

As it is largely those with the most advantaged characteristics who are working in the years leading up to and following State Pension Age, policies seeking to encourage older workers must address inequalities across the lifecycle.

Conclusions

Identifying the key drivers of working up to and beyond State Pension Age is critical as it has important implications for later life inequalities in finances, health and wellbeing. The project findings show that it is people with the most advantaged characteristics who are more likely to work post State Pension Age, as well as those in good health. Prior labour market attachment is also a key predictor of later life work for both men and women. However, among more recent cohorts of women, that is those born between 1939 and 1948, (aged 69 to 79 in 2017) in comparison to those born between 1919 and 1928 (aged 89 to 98 in 2017), there is some evidence to suggest 'opportunity costs' as those who were largely out of the labour market from age 16 to 54 (many of whom had experienced a divorce) were more likely to undertake at least some paid work in the years around State Pension Age. Unretirement is also more common among those with more human capital rather than for those experiencing financial difficulties, suggesting that the latter group may have greater difficulty finding paid work. As more recent cohorts (those born between 1950 and 1959 - aged 58 to 67 in 2017) are more likely to unretired, this may act to increase future disparities in later life income.

Chapter three: The relationship between paid and unpaid work at older ages

Summary

- This longitudinal analysis of cohorts born between 1927 and 1953 (aged 64 to 90 in 2017) in the British Household Panel Study (BHPS) examined combinations of paid and unpaid activities undertaken between the ages of 55 and 70. The analysis revealed that over time people combined paid and unpaid activities in three predominant combinations.
- Overall, the analysis showed that those who were engaged in full-time paid work were less likely to engage in unpaid forms of work (volunteering, civic engagement, informal care provision and looking after the home). Referred to here as *paid workers*, this pattern described about 45% of the sample. For this group, paid and unpaid activities earlier in the lifecourse compete for an individual's time. As engagement in paid work decreases with age, people in this group do not increase their involvement in unpaid activities. 88% of this group are men.
- The second and third groups comprised those classified as: *mixed activities (looking after the home)* (44%) and *mixed activities (volunteering)* (11%). People in these two groups are more likely to combine engagement in paid and unpaid work, relative to the *paid workers* group. The difference between *paid workers* and the other two groups suggests that those who are more likely to work full-time are also less likely to engage in unpaid work activities; those who are less engaged with paid work earlier in the lifecourse are more likely to engage in unpaid activities, and they continue or increase their involvement in unpaid activities as they age.
- Patterns of engagement in paid and unpaid work are related to socio-economic factors. The *mixed activities (looking after the home)* group (44%) is mostly made up of women (92%) who are more likely to be socio-economically disadvantaged relative to the other two groups. Those in the *mixed activities (volunteering)* group (11%) are more likely to engage in volunteering and civic engagement, and be socio-economically advantaged.
- Health is related to patterns of engagement in paid and unpaid work, as individuals in the second group, *mixed activities (looking after the home)*, are more likely to report poor or very poor health at ages 50 to 55.

Introduction

Changes aimed at increasing labour market participation of individuals over the age of 50 may also act to limit older adults' engagement in unpaid activities, such as providing informal care, and volunteering as time is limited.³⁷ Unpaid work performed through such activities is important for both individuals and society. The 2011 UK census showed that the 50 to 64 age group is the most active in providing unpaid informal care – with 24% of women and 17% of men reporting that they help or provide support to family, friends or acquaintances

³⁷ Hank & Stuck 2008

because of ill-health or disability.³⁸ A considerable number of older adults also take part in voluntary work. The 2014/15 English Community Life Survey shows that 26% and 33% respectively among those aged 50 to 64 and 65 to 74, report volunteering at least once a month.³⁹

Increased participation in unpaid activities in the context of ageing populations is recognised as a key policy aim both nationally and internationally. The active ageing framework developed by the World Health Organisation (WHO), which aims to improve population health at older ages, focuses particularly on promoting the participation of older people in paid and unpaid activities.⁴⁰ However, there are concerns that promoting active ageing may widen health inequalities among older adults, as the ideal of achieving better health and greater participation in paid and unpaid activities at older ages may not be accessible to all social groups.⁴¹

This chapter examines how individuals combine their engagements in paid and unpaid work in the years leading up to and following the State Pension Age. The specific analytic approach taken in this section models simultaneous engagement in multiple activities over time. Specifically, the analysis identifies distinct groups of individuals who share similar patterns of engagement in paid and unpaid activities from age 55 to 70.

This research used 7 waves of data from the BHPS, described in Chapter one. Individuals in this analysis were born: before 1929 (5%), in 1930-1939 (34%), in 1940-1949 (47%), and in 1950-1953 (14%). In 2017 they are aged: over 88, 78 to 87, 68 to 77, and 64 to 67 respectively. The indicators of paid and unpaid work used in this analysis include:

- Paid work:
 - Part-time (less than 20 hours per week)
 - Full-time (more than 20 hours per week)
- Informal care provision to someone who is sick, disabled or old
- Volunteering on a monthly or weekly basis ('do unpaid voluntary work')
- Civic engagement on a monthly or weekly basis ('attend meetings for local groups/voluntary organisations')
- Looking after the home (time spent on 'housework in an average week, such as time spent cooking, cleaning and doing the laundry')
 - 0-10 hours per week
 - 11-20 hours per week
 - More than 20 hours per week

³⁸ ONS 2011

³⁹ Cabinet Office 2015

⁴⁰ WHO 2002

⁴¹ Gonzales, Matz-Costa & Morrow-Howell 2015

Findings show that men and women fall into one of three distinct groups, reflecting different combinations of paid and unpaid activities (Table 7): *paid workers, mixed activities (looking after the home), and mixed activities (volunteering)*

89% of the sample belong to the *paid workers and mixed activities (looking after the home)* groups. The findings also show that individuals in the three groups differ according to gender, marital status, socio-economic characteristics and self-rated health (Charts 15 to 17).

Table 7: Paid and unpaid work groups for ages 55 to 70, BHPS

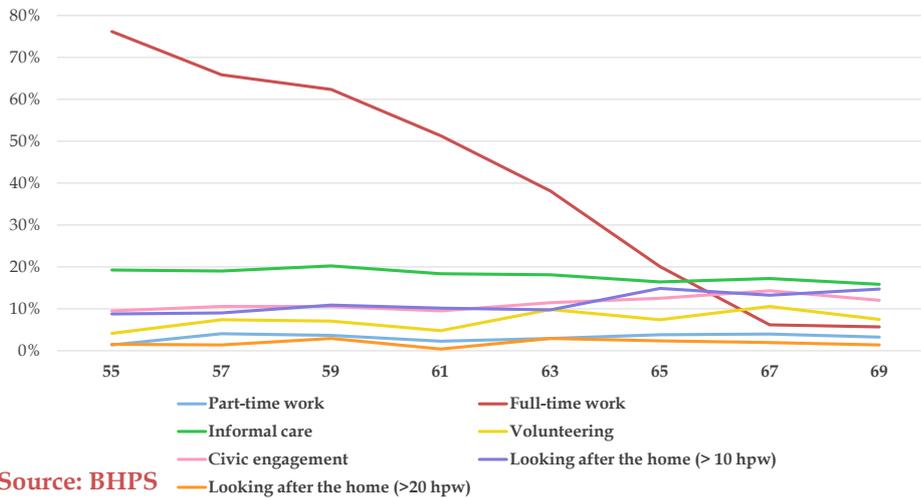
Paid and unpaid work groups	Proportion (%)
Group 1 - Paid workers	45
Group 2 - Mixed activities (Looking after the home)	44
Group 3 - Mixed activities (Volunteering)	11
Total	6,086

The *paid workers* group (Chart 12), represents a large proportion of the sample (45%). *Paid workers had a higher probability of working full-time over a longer period in comparison to the other groups. They also have a lower probability of participating in unpaid activities*

Chart 12 shows that for this group, the probability of participating in paid work declines steadily after the age of 60, and dips to around 20% probability at age 65. The probability of engaging in unpaid activities for this group (caring, volunteering, civic engagement or looking after the home) was very low between ages 55 to 70, and it stays below a 20% probability throughout the period. Compared to other groups (Charts 13 and 14), the probability of doing full-time paid work is both higher and it stays higher for longer, i.e. individuals in this group are more likely to work at each age and to work at older ages. This suggests that individuals who are more likely to work longer between ages 50 to 70 are less likely to engage in unpaid activities to begin with, and remain unlikely to engage in such activities even when no longer in paid work.

Chart 12: Group 1 - Paid workers

Graph describing the probability of engaging in paid and unpaid work for individuals in the *paid workers* group. Individuals in this group are mostly engaged in full-time paid work, with little engagement in unpaid activities. (45%).



The *mixed activities (looking after the home)* group (Chart 13) also represents a large portion of the sample (44%). This group captures the experience of individuals who have a lower probability of engaging in full-time paid work and a higher probability of *mixed activities (looking after the home)* compared to the other groups at ages 55 to 70

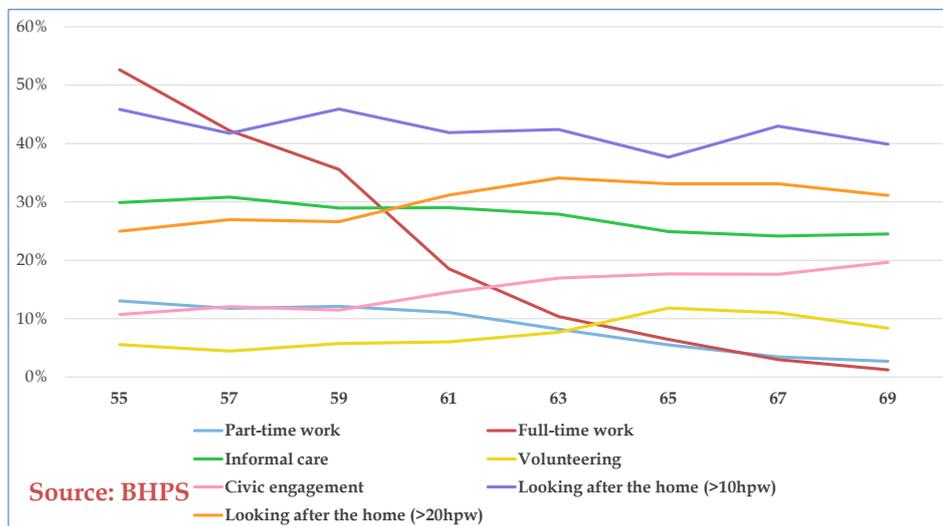
The probability of participating in full-time work is lower at age 55 in the *mixed activities (looking after the home)* group relative to *paid workers*, and declines at an earlier age, as the probability drops to just below 20% by age 61. However, relative to *paid workers*, the probability of engaging in part-time paid work in group 2 is higher throughout ages 55 to 70. Also the probability of engaging in informal care was slightly higher relative to the *paid workers* group.

The main feature distinguishing individuals classified in this group is the higher probability of looking after the home for more than 10 and more than 20 hours per week. The probability of looking after the home for more than 20 hours per week seems to slightly increase as the probability of engaging in paid work declines in the early 60s. Also the expected probability of civic engagement and volunteering seems to increase throughout the 60s, while the probabilities of being in paid work decrease. This suggests that paid work and engagement in volunteering, civic engagement and looking after the home may be competing activities for individuals falling into this group.

Chart 13: Group 2 - Mixed activities (Looking after the home)



Graph describing the probability of engaging in paid and unpaid work for the second group. Individuals have a higher probability of looking after the home, with a moderate probability of working full-time. (44%).

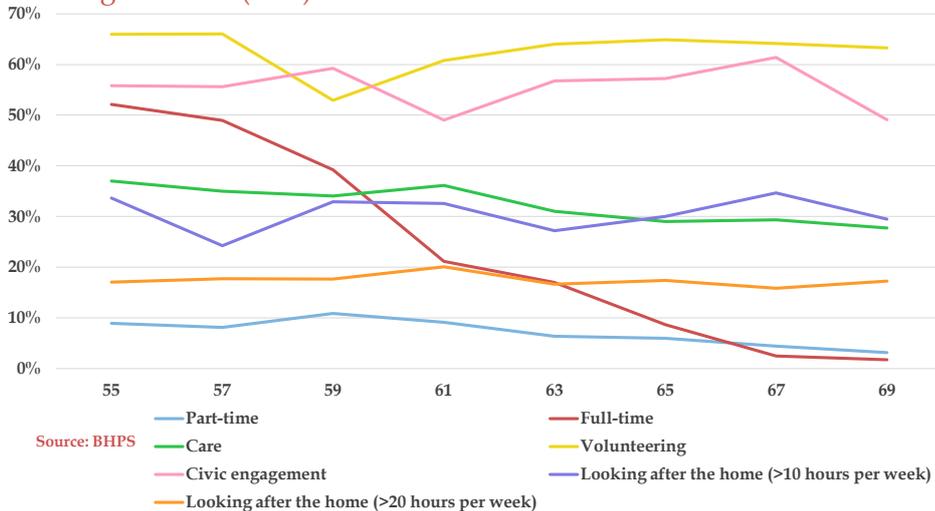


The *mixed activities (volunteering)* group (Chart 14), represents a smaller percentage of the sample (11%) and is characterised by a noticeably higher probability of taking part in volunteering and civic engagement at ages 55 to 70, relative to the other two groups

The high probability of taking part in volunteering and civic engagement is relatively consistent between ages 55 to 70, suggesting that changes in the level of paid work are not related to engagement in unpaid activities for this group. Therefore, within this group, paid work and volunteering and civic engagement do not appear to be competing activities and engagement in paid work does not seem to preclude or limit engagement in volunteering and civic engagement. The probability of undertaking full-time and part-time work for the *mixed activities (volunteering)* group is similar to that of the *mixed activities (looking after the home)* group. The probability of looking after the home (>10 and >20 hours per week) in this group (*volunteers*) is lower relative to the second group (*looking after the home*). However, the probability of providing informal care is slightly higher in the *mixed activities (volunteering)* group compared to *mixed activities (looking after the home)* group.

Chart 14: Pathway 3 - Mixed activities (Volunteering)

Graph describing the probability of engaging in paid and unpaid work for the third group. Individuals have a higher probability of volunteering and taking part in civic engagement, with a moderate probability of working full-time (11%).



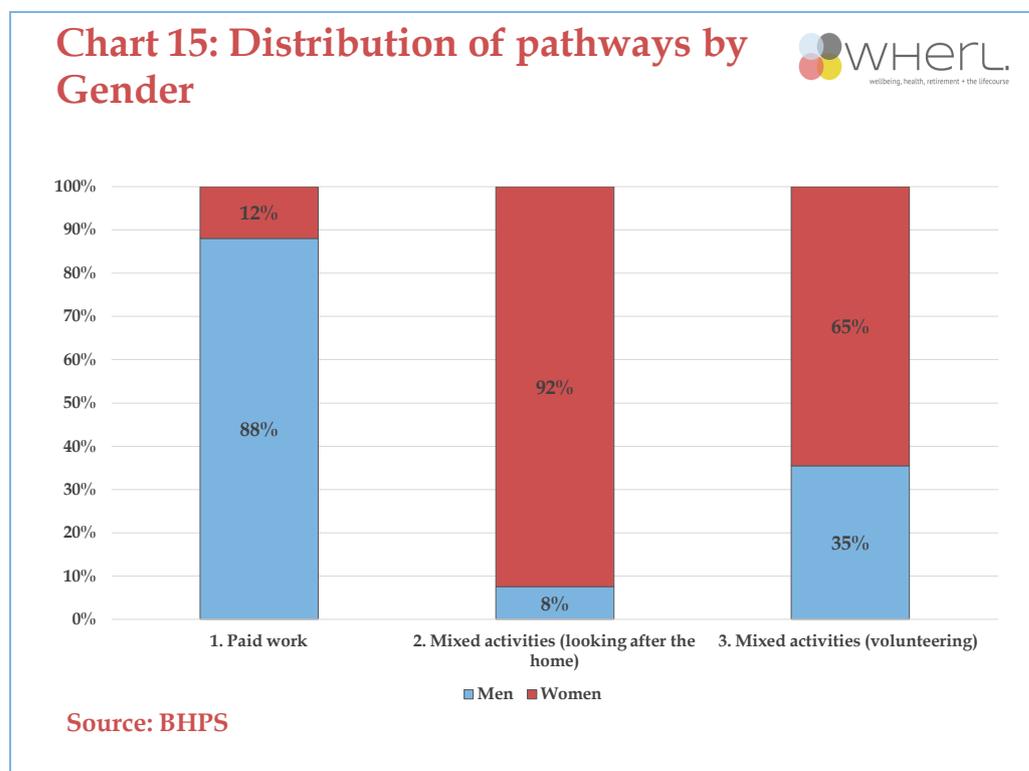
Overall, these three groups suggest that individuals who are more likely to participate in full-time employment for longer (group 1, *paid workers*), are less likely to engage in unpaid activities, relative to the other two groups. This suggests that most individuals are unlikely to engage in both full-time paid work and unpaid activities. Moreover, within each group, declines in the probability of undertaking paid work are not paralleled by an increase in the probability of engaging in unpaid activities. The only exception to this is the slight increase in levels of looking after the home, volunteering and civic engagement in group 2; however, this increase is small. This indicates that individuals who are less likely to work in mid to later life (groups 2 and 3) are more likely to have been more engaged in unpaid work to begin with, i.e. at age 55.

This analysis implies that influences earlier in the lifecourse, such as prior labour market attachment and various involvement in unpaid activities before age 55, is a factor in understanding the extent of unpaid work after age 55. If policymakers wish to encourage unpaid activities, it may be that support for combining engagement in paid and unpaid activities needs to take place earlier in the lifecourse. For example, enabling better balance between work and family demands might increase individuals' contributions through both paid work and unpaid work in later life.

People in the three groups differ according to gender (Chart 15)

Participants who conformed to the *paid workers* group are largely men (88%), while those classified in the *mixed activities (looking after the home)* group are

mostly women (92%). Nearly two-thirds of those classified in the *mixed activities (volunteering)* group are women (66%).

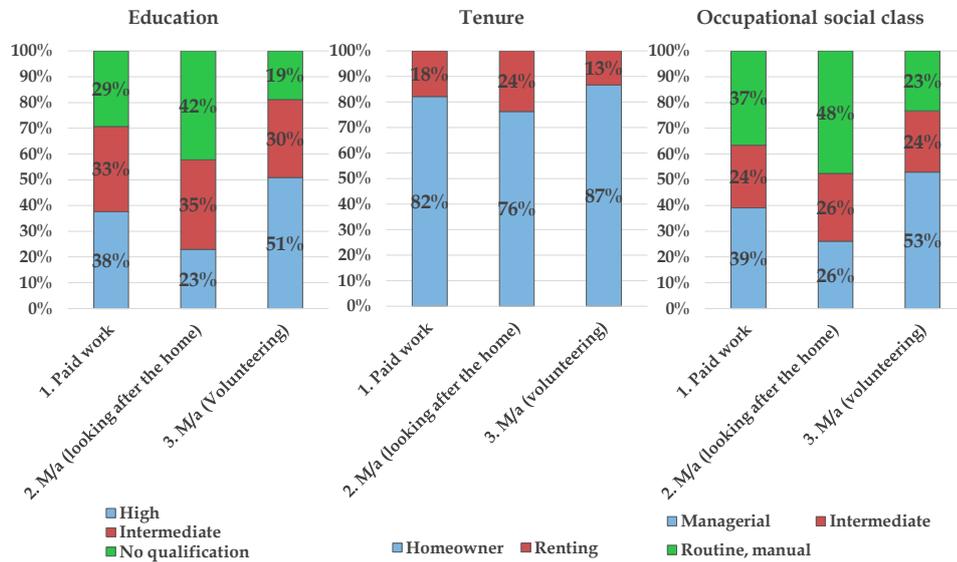


Individuals in the three groups differ markedly according to socio-economic characteristics. In particular, individuals classified in the *mixed activities (looking after the home)* group are socio-economically disadvantaged (Chart 16)⁴²

Those classified in the *mixed activities (volunteering)* group are more likely to be post-secondary graduates, homeowners, and to have a higher occupational social class, compared to people classified in one of the other two groups. People classified in the *mixed activities (looking after the home)* group are more likely to have a lower education, to be renters rather than home owners, and to have a lower occupational social class. Individuals in the *paid workers* group were more similar to those in the *mixed activities (volunteering)* group, albeit they had a higher probability of being in a lower socio-economic status group than individuals classified in the *mixed activities (volunteering)* group. Overall, Chart 16 shows the relevance of socio-economic differences when considering engagement in paid and unpaid work in the years leading up to and following State Pension Age.

⁴² In Chart 16 education was defined as high (higher degree, first degree, teaching and other higher qualifications, nursing diploma), intermediate (GCE A/O levels or equivalent, commercial qualifications, CSE grade 2-5, apprenticeship, other qualifications), no qualifications. Housing tenure was categorised as homeowners (including individuals with mortgages) and renters. Occupational social class was derived using the reduced National Statistics Socio-Economic Classification. These socio-economic indicators were assessed at age 50 to 55.

Chart 16: Distribution of pathways by socioeconomic characteristics



Source: BHPS

Individuals in the *mixed activities (looking after the home)* group are more likely to report being in poor health at least once between the ages of 50 and 55, in comparison to those in the other two groups (Chart 17).

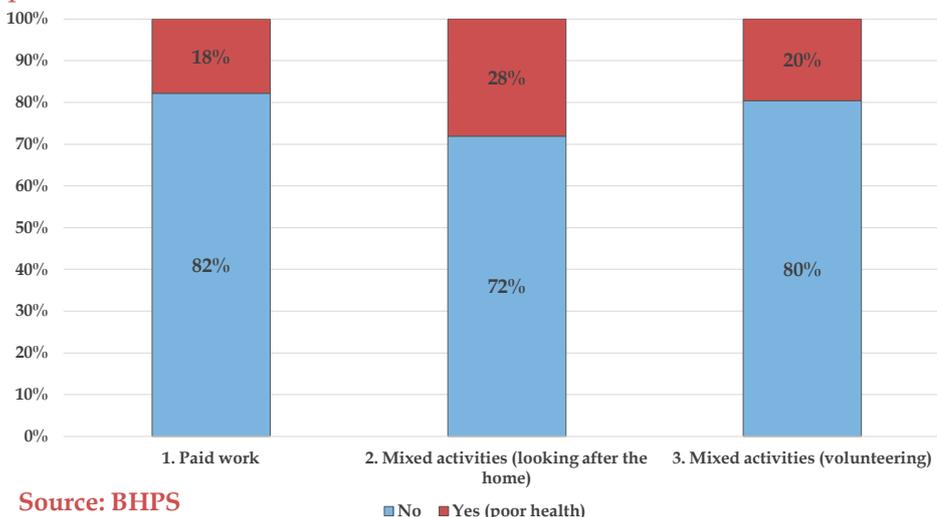
28% of people in the *mixed activities (looking after the home)* group report being in poor or very poor health at least once between the ages of 50 and 55, while 18% and 20% report being in poor health in the *paid workers* and *mixed activities (volunteering)* groups respectively. That individuals in the *mixed activities (looking after the home)* group are in poorer health compared to the *mixed activities (volunteering)* group has implications for health inequalities at later ages, as those in poorer health in the early 50s are less likely to engage in volunteering and civic engagement which has been shown to be associated with improvements in health and wellbeing.⁴³ Therefore, this may contribute to widening health inequalities at later ages. This is especially important as active ageing, and partaking in volunteering and civic engagement, are promoted as strategies to improve population health at older ages. However, individuals who are in poorer health to begin with may not be able to get these benefits.

⁴³ Nazroo & Matthews 2012

Chart 17: Distribution of pathways by health



Distribution of pathways by health (n=3,319). Respondents were asked about their general state of health. Those who stated that they were in poor or very poor health at ages 50 to 55 have been categorised as having poor health.



Policy Implications

This research suggests that longer working lives may not be compatible with engagement in unpaid work, as individuals have limited time to allocate to paid work, provide care to family and acquaintances, look after the home, and partake in activities that are believed to be for health and wellbeing such as volunteering and civic engagement. Those individuals who have higher engagement in unpaid work are those less likely to work full-time at ages 55 to 70, and vice versa.

Addressing gender inequalities in unpaid work carried out in the home may enable more women to be in full-time employment for longer. While men are more likely to engage in full-time paid work, they are also less likely to engage in housework, as well as in informal care provision, volunteering and civic engagement. Policies that enable individuals to balance work and family demands should be considered if a more gender equal distribution of paid work at older ages is desired.

Socio-economic and health inequalities are also important when considering how individuals combine engagement in paid and unpaid work. Individuals in the *mixed activities (looking after the home)* group are more likely to be socio-economically disadvantaged, as determined by education levels, tenure and occupational social class. People classified in the *mixed activities (looking after the home)* pathway are also more likely to report poor health at some point between ages 50 to 55.

Conclusion

Three distinct groups were identified capturing variations in engagement in paid and unpaid work between the ages of 55 to 70. Those who are more likely to engage in full-time paid work are less likely to engage in unpaid forms of work, and for this group (45% of the sample), engagement with these unpaid activities does not increase as the probability of paid work reduces over time. Individuals in the other two groups (44% in the *looking after the home* group and 11% in the *volunteering* group) are more likely to engage in unpaid work to begin with, and also less likely to engage in full-time paid work from the start. Combinations of paid and unpaid activities are related to gender, socio-economic and health characteristics.

Differences in engagement in unpaid activities are associated with whether individuals work longer. This analysis suggests that for a substantial proportion of the population, paid and unpaid activities compete for people's time earlier in the lifecourse, establishing patterns that are then continued into mid and later life. It also suggests that prior labour market involvement and prior engagement in unpaid activities are important predictors of how these activities are combined from ages 55 to 70. Individuals, especially women, who are more engaged in unpaid work may not be able to increase their engagement in the paid labour market at ages 55 to 70, as they may have a limited amount of time available, and/or weaker labour market attachment.

Facilitating the combining of paid and unpaid activities across the lifecourse could enable individuals to engage in a mixture of paid and unpaid activities for longer, and encourage greater engagement with unpaid activities in mid- to later life. The data suggests that it may be unrealistic to expect those working longer in the paid labour market to also take on unpaid work, and that it is unlikely that those with little history of unpaid work will begin to undertake these activities in mid- and later life.

Chapter four: Working later and physical health

Summary

- The ability to work past State Pension Age depends on one's health. This is especially true for men. For every new allostatic load risk factor, men aged 65 years and older reduced their probability of being in paid work by 1% and their weekly hours of work by 0.4 hours.
- People's health on reaching State Pension Age and beyond depends on their labour market and family experiences earlier in the lifecourse. Mothers who took time out of the labour market have better disability and mortality outcomes than both mothers who were constantly employed and mothers who had little labour market engagement. Similarly, mothers who took breaks for family care had the best frailty outcomes at age 60. Among men, those who retired early (at age 49 or 60 instead of 65) were frailer at age 65 than those who kept working.
- There are no health benefits or disadvantages to working past State Pension Age. People who were still working after State Pension Age were healthier than those who were not. However, this appears to be a case of "reverse causation": those in poorer health left the labour market early, possibly because their health prevented them from working. Once we took people's earlier health status and their work histories into account, there was no difference in health between those who kept working after State Pension Age and those who did not.

Introduction

One of the concerns of the current move to raise the State Pension Age is the extent to which people's health may influence, and in turn be affected by the change in pension policy. This concern is addressed in this Chapter. First, new evidence on the health of people when they reach State Pension Age is described followed by how it declines in older age. This is followed by a discussion of findings on the ability to work beyond State Pension Age and the health consequences of working for longer.

The research described in this chapter uses data from ELSA, described in Chapter one. This high-quality multidisciplinary data is used to shed light on the relationship between working later in life and physical health. Specifically, data from interviews and nurse assessments were used to investigate people's perceptions of their own health as well as more objective measures of their physical state. The range of health measures are described in Box 4 and include: Self-rated general health (SRH), disability, a frailty index,⁴⁴ an allostatic load index,⁴⁵ somatic health,⁴⁶ and mortality.

⁴⁴ Searle et al. 2008

⁴⁵ Seeman et al. 1997

⁴⁶ Ploubidis & Grundy 2011

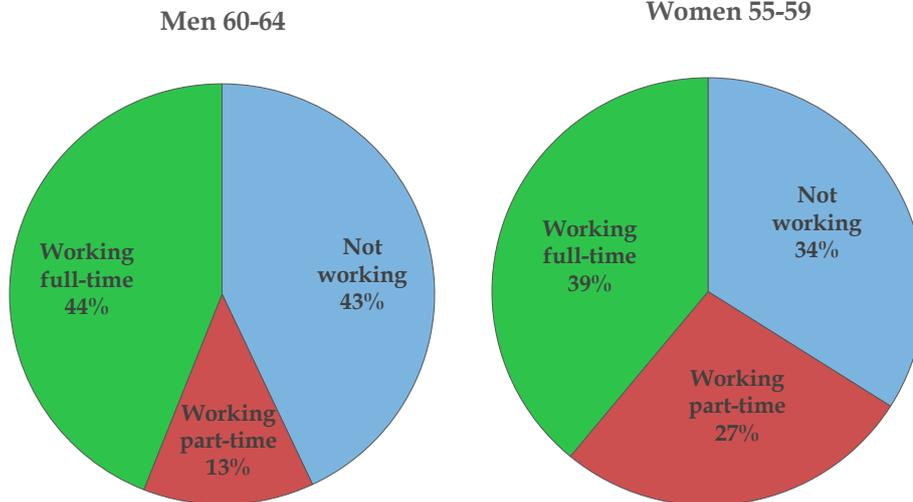
Box 4: About the health measures

- Self-rated general health (SRH) is measured on a five-point scale to the question “How is your health in general?”. It is commonly split into very good/good vs. fair/bad/very bad.
- Disability refers to difficulties with any activities of daily living (ADLs: e.g. dressing, bathing, eating) or instrumental activities of daily living (IADLs: e.g. preparing a hot meal, grocery shopping, using a telephone).
- Frailty describes physical decline or non-specific vulnerability in old age. The accumulation of a large number of indicators such as pain, chronic conditions, falls, fractures, cognitive deficiencies are combined into an index ranging from 0-1 with higher scores indicating greater frailty.
- Allostatic load measures the functioning of a range of body systems. With repeated exposures to stress and other psychosocial risks, the body’s ability to regulate various systems declines. The allostatic load index is a count from 0-8 of several measures that are outside of the normal range.
- Somatic health relates to the body and physical symptoms. A composite somatic health factor score was derived from measures of SRH, ADLs, long-standing illness, self-reported doctor diagnoses, mobility limitations and grip strength, with mean 0 and range -3 - +3.
- Mortality data, including cause of death and date, is documented in civil registration records and can be linked to surveys such as ELSA when members give their consent.

Using data from the 2014/15 ELSA survey, 57% of 60-64-year-old men work full- or part-time compared with 66% of women aged 55-59 (Chart 18)

For some, not working is the result of a voluntary choice to take early retirement. For others, the decision may have been prompted by poor health or by the lack of appropriate jobs for older workers.

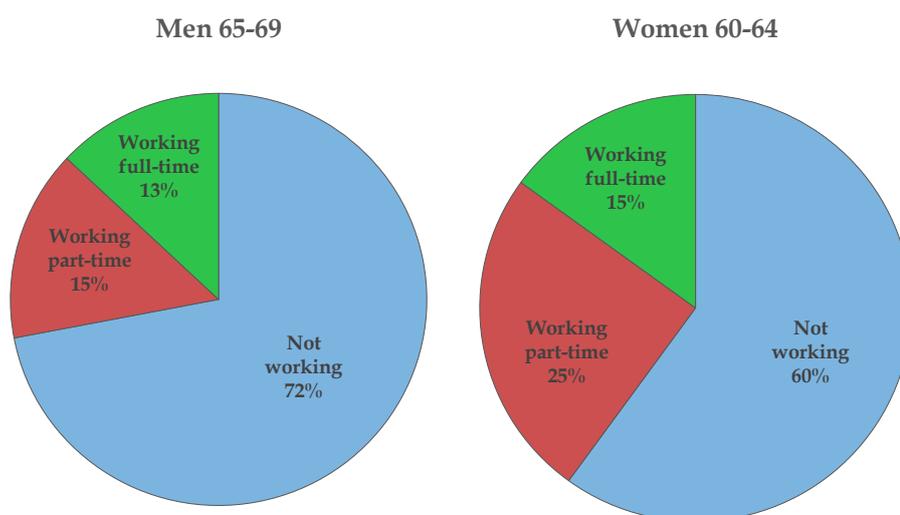
Chart 18: The majority of people are still working as they reach State Pension Age



Source: ELSA wave 7, 2014/15. Percentage of individuals within the specified age ranges.

The number of people who were still working at the time of the 2014/15 ELSA survey once they had reached State Pension Age dropped markedly (Chart 19); unpublished work by the team shows that only a small minority (4% of men and 2% of women) were still in work past 75 years of age.

Chart 19: Only a minority of people are still working once they pass State Pension Age



Source: ELSA wave 7, 2014/15. Percentage of individuals within the specified age ranges.

People’s health on reaching State Pension Age depends on their labour market histories⁴⁷

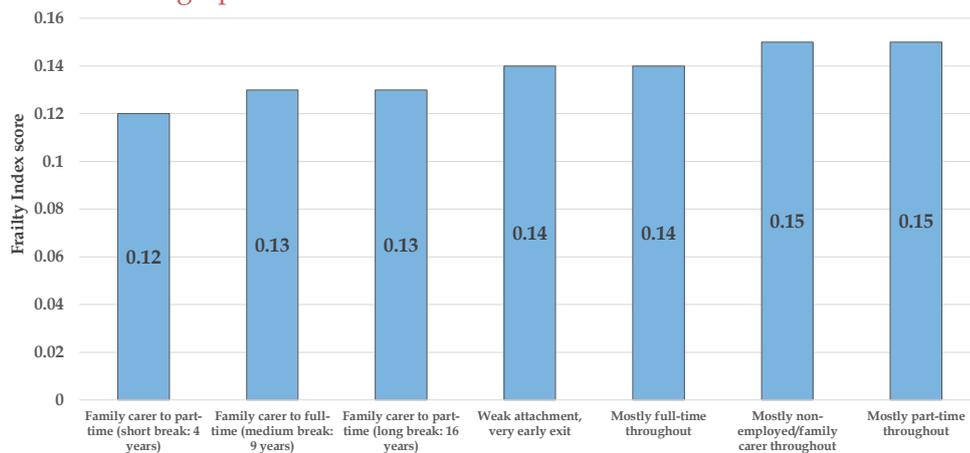
Frailty is a clinical syndrome of older age, associated with numerous poor health outcomes including illness, injury, disability, hospitalisation, institutionalisation and death. In 2010, 9% of British women and 4% of men aged 65-74 years old were found to be frail. The idea behind the Frailty Index assumes that with an accumulation of more deficits that commonly occur in older age, there is a greater likelihood of clinical frailty.

To understand more about the health impacts of work, this study examined the relationship between labour market histories before State Pension Age and changes in the Frailty Index thereafter. It asked whether, independent of other social, demographic and economic influences on health, labour market histories are linked to better or worse scores at State Pension Age and whether changes in Frailty Index scores differ as people grow older.

Experiencing distinct periods that focus on work and family care domains may be advantageous for women in terms of lessening their risk of future frailty after age 60. Independent of other factors, women who took short breaks from paid work had significantly lower Frailty Index scores than women who worked mostly full-time throughout. There is also a hint that any break for family care when children are young is beneficial for the health of women at State Pension Age (Chart 20). Women in the family carer to full-time, medium break and family carer to part-time, long break groups also had lower Frailty Index scores.

Chart 20: Women who take career breaks for family care have better health at State Pension Age (lower Frailty Index score)

Women’s predicted Frailty Index scores at age 60, independent of other social demographic and economic influences on health



Source: ELSA waves 2 (2004/05), and 6 (2012/13).

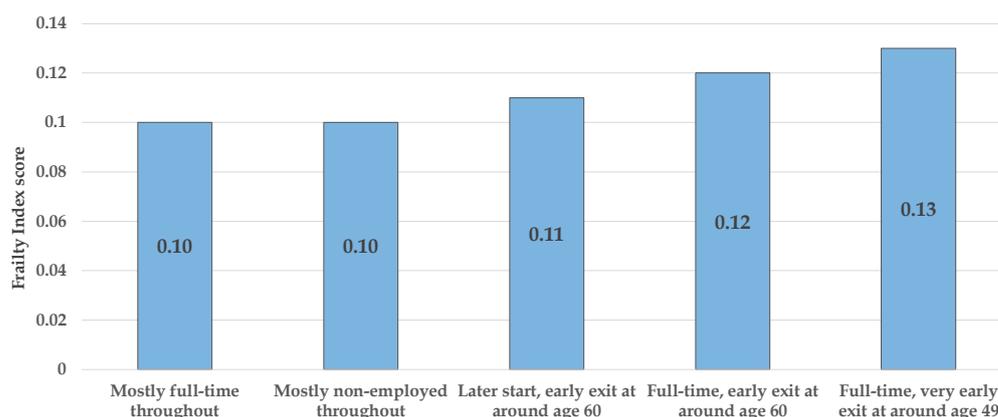
⁴⁷ Lu et al. 2016

Men who had worked full-time, but left paid work early at around age 49 or age 60 had higher Frailty Index scores at 65 years than men who had worked full-time throughout, independent of other social, demographic and economic influences on health (Chart 21). Men who stayed in education for longer and retired early might be expected to have the best health at State Pension Age, but this was not evident in the data. As these men had similar Frailty Index scores to the men who left school at the minimum school leaving age and who worked continuously until State Pension Age, it could be that hypothesise that those in the full-time throughout group are ‘selected’ for good health. In other words, it is only those with better health who were still in paid work at 64 after nearly 50 years of employment.

Chart 21: Men who exit the labour market earlier have poorer health at State Pension Age (higher Frailty Index scores)



Men’s predicted Frailty Index scores at age 65, independent of other social, demographic and economic influences on health



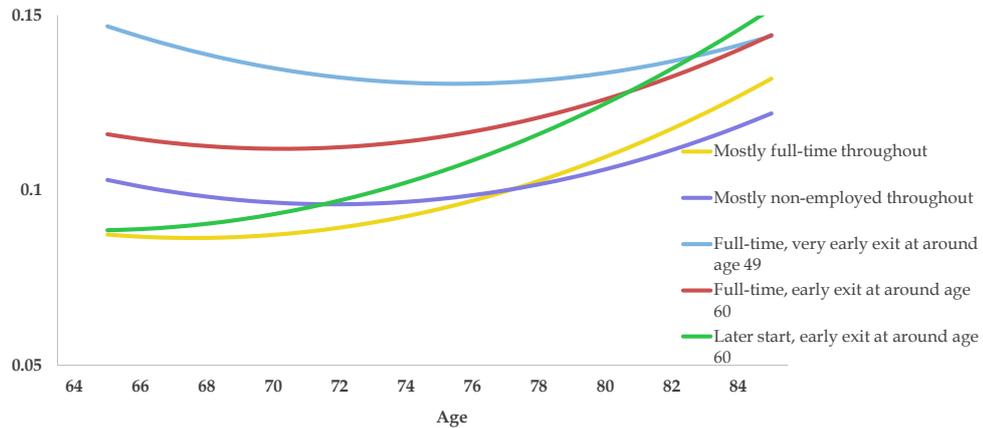
Source: ELSA waves 2 (2004/05), 4 (2008/09) and 6 (2012/13).

Health decline after State Pension Age is less dependent on labour market histories

Overall, there were few differences in the rate at which health declined across different labour market histories once other influences on health had been accounted for. Men who ceased work early (at either 49- or 60-years of age) had the highest Frailty Index scores, suggesting that poor health might have precipitated their exit from work (especially for the former group). Despite this, men who had worked until age 49 or age 60 had slower increases in their Frailty Index scores as they grew older than men who had worked full-time throughout (Chart 22). For men in poor health, it might be beneficial in the longer term to be able to leave paid employment before State Pension Age.

Chart 22: Health declines more slowly after State Pension Age for men who left work early

Men's predicted Frailty Index scores after age 65, independent of other social, demographic and economic influences on health

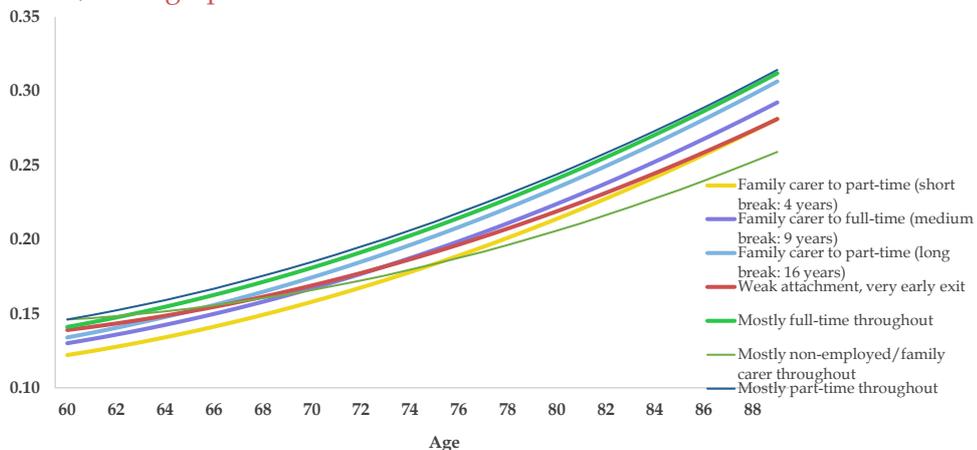


Source: ELSA waves 2 (2004/05), 4 (2008/09) and 6 (2012/13).

Frailty increased with age more slowly in women who were non-employed throughout than in women who had worked full-time throughout, after other social, demographic and economic influences on health had been accounted for (Chart 23). The mechanisms are unclear and are unlikely to be the same as for the men with slower increases in their Frailty Index scores.

Chart 23: After State Pension Age, health declines more slowly in women who were non-employed throughout working life

Women's predicted Frailty Index scores after age 60, independent of other social, demographic and economic influences on health



Source: ELSA waves 2 (2004/05), 4 (2008/09) and 6 (2012/13)

Distinct periods that focus on work and family care may be advantageous for mothers' health

In American mothers aged 55 years or more, lower mortality was found for those who returned to work after briefly staying home with children compared to non-workers, continuous workers, and those who delayed work re-entry.

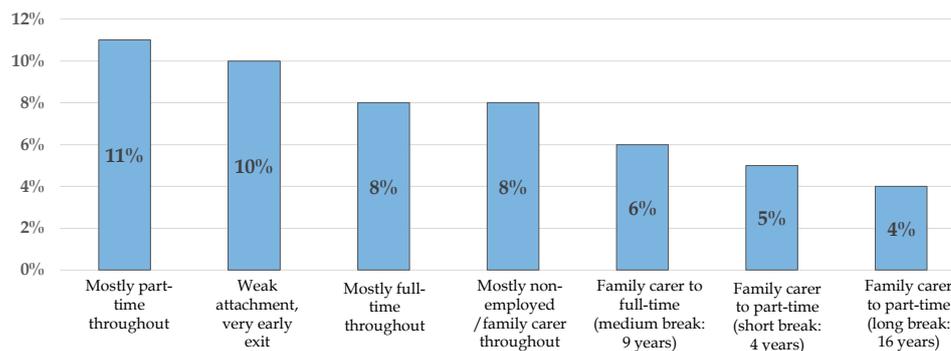
This study using data from a sample of ELSA mothers with work histories adds to this evidence from previous research on mortality in American mothers. In addition to mortality, we also considered disability, given its association with reduced quality of life and of its substantial contribution to the health and social care costs of ageing populations.

Mothers who worked mostly full-time throughout most of their working adult life were nearly 2.5 times more likely to die over a follow-up period of six years than women who returned to part-time work after a long career break for family care (Chart 24). Independent of a range of social, demographic and economic factors that were associated with labour market histories and predict mortality, these mothers were still at a two-fold increased risk of dying.

Chart 24: Combining work and family roles over time is better for mothers' life expectancy than combining roles at the same time



Probability of mortality, wave 3 (2006/07) to February 2012, by work family history for mothers over 59 years old in ELSA wave 3, independent of social, demographic and economic influences on health



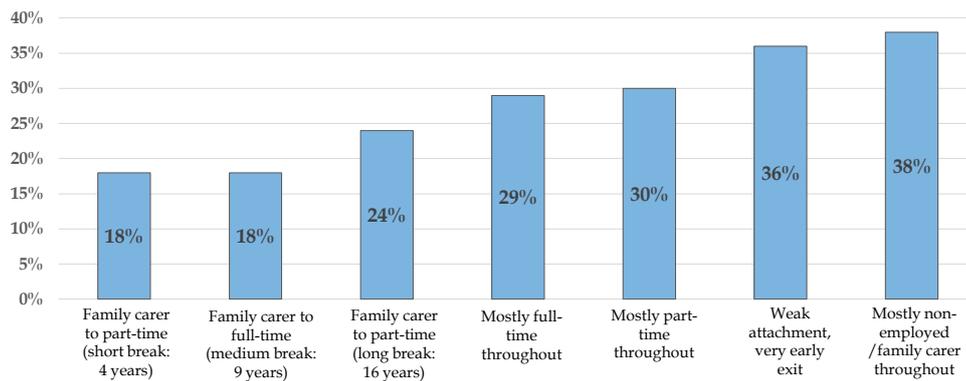
Mothers' work family histories also predicted disability after State Pension Age after taking other factors into account (Chart 25). Compared to mothers in the full-time throughout group, mothers who returned to part-time work following a short break or full-time work after a break for family care were approximately 67% less likely to have a disability in later life. But mothers who did not return

to work at all were at greater risk of disability (66% more likely) than mothers in the full-time throughout group.

Chart 25: Combining work and family roles for long periods of time increases the risk of disability in older age



Probability of disability by work family history group for mothers aged 59 years and older in ELSA wave 3, independent of social, demographic and economic influences on health



Disability measured at closest age to 60 among those who were 59+ in wave 3 of ELSA. For most women, this was wave 1 (2002/03) but for some this would have been wave 2 (2004/05) or wave 3 (2006/07)

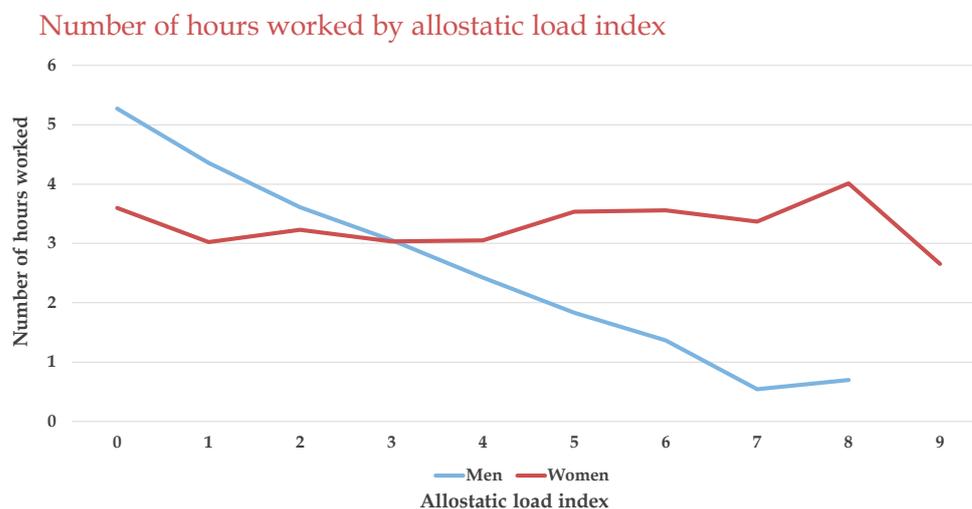
The ability to work past State Pension Age depends in part on one's health

Allostatic Load measures physiological dysregulation, the extent to which various body systems are operating outside of their optimal range. The underlying theory of Allostatic Load captures experiences which accumulate across the lifecourse rather than just focusing on snapshots of health at older ages. Allostatic Load has the advantages of being an objective measure of wear-and-tear of the body and being able to detect ill-health that may not be symptomatic.

Data from ELSA was used to explore whether changes in Allostatic Load predict participation in paid work and/or changes in the number of hours worked in people over State Pension Age, independent of social and economic factors that also influence working after State Pension Age.

Independent of other factors, men reduced their working hours by about 0.4 hours per week and their probability of being in work by about 1% for each additional allostatic load factor for which they were at risk (Chart 26). No similar reduction was observed for women. Surprisingly, self-rated general health neither affected hours worked nor the probability of being in work, nor did its inclusion in the analyses meaningfully change the association between Allostatic Load and working after State Pension Age. This suggests that the association is not being driven by perceptions of poorer health, but by objectively measuring poorer health.

Chart 26: When wear-and-tear on the body changes, men change the number of hours they work but women do not



ELSA waves 2 (2004/05), 4 (2008/09) and 6 (2012/13).

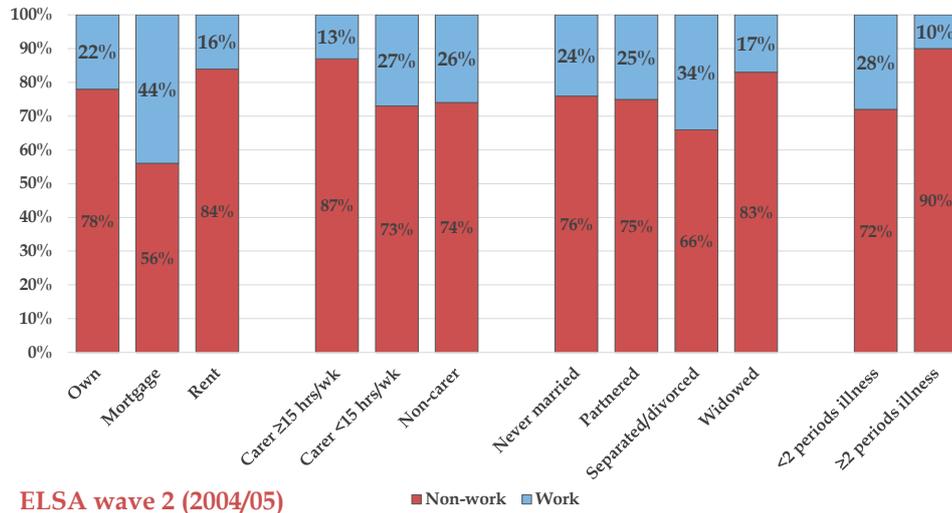
Working past State Pension Age is neither good nor bad for your health⁴⁸

Men and women in better health throughout their lives were more likely to be in work after State Pension Age, as were those who stayed on in education after age 18. Divorced or separated women and women with an outstanding mortgage were also more likely to stay in work. Caring for others reduced the likelihood of women being in paid work post State Pension Age (Chart 27).

⁴⁸ Di Gessa, Corna, Platts, Worts, McDonough, Sacker, Price & Glaser 2016

Chart 27: Decisions to work after State Pension Age are influenced by varied concerns

Proportion of people working post-State Pension Age by economic, social and health characteristics at State Pension Age



Prior work histories also predicted who worked past State Pension Age. Three quarters of older men and 30% of older women who were in employment beyond State Pension Age had worked full-time throughout most of their adult life up to State Pension Age. Women who took family care breaks but who were working as they approached State Pension Age were also more likely to stay in work at older ages.

If prior work and health histories are not taken into account, it appeared that both men and women had better somatic health scores if they worked past State Pension Age. However, once these histories are accounted for in multivariate models, better health was no longer linked with later life work. This means that those who work beyond State Pension Age were healthier to start with, and not as a result of continuing to work.

In further analyses, the type of work post State Pension Age was examined. There was no indication of better or worse health in older age being associated with full-time versus part-time work, sedentary versus physical work, or managerial versus routine or manual work, once work and health histories were included in the analyses.

Policy implications

The success of policies that raise the age of State Pension eligibility is likely to be affected by people's health across the lifecycle impacting on their ability to stay in the labour market for longer. Optimising and promoting health throughout the entire life span seems key to policies aimed at extending working lives.

If the long-term health of today's generation of women is to be maintained, then the findings suggest the importance of not penalising mothers who wish to undertake work and family roles sequentially across the lifespan.

Without special care, policies that raise State Pension Age could exacerbate existing inequalities in health and wealth in older adults.

Conclusion

Delaying State Pension eligibility may not be enough to encourage workers to remain in work. For men, health appears to be an important determinant of whether they will continue in work. In turn, health in later life is shaped by a variety of earlier events and circumstances which may include health earlier in life and, for women, alternative ways of combining work with family care. To enable workers to continue in paid employment in later life, it will be necessary to act across the lifecourse to ensure people experience good health when they approach State Pension Age.

Chapter five: Working later and mental health

Summary

- The relationships between non-employment and common mental disorder are investigated and described in a series of three national surveys of residents in England carried out in 1993, 2000 and 2007.
- Non-employment at all ages was associated with a higher prevalence of common mental disorder. Among 55 to 64 year olds in 2007, those out of the labour market had a 12% (men) or 13% (women) higher chance of having a common mental disorder than those in paid work. The largest difference in prevalence of common mental disorders between those in paid work and those not in the labour markets was a 42% difference for men and women aged 25 to 34.
- However, across all age groups, the associations of non-employment with common mental disorder were only apparent if the non-employment was reported as being for short- or long-term sickness. Non-employment for other reasons was not associated with common mental disorder.
- Associations between non-employment and common mental disorder were more consistent in men than women, increased in strength between 1993 and 2000 (but less consistently from 2000 to 2007), and were reflected in different common mental disorder symptom profiles across the working age range (with somatic complaints and worries about physical health in older age groups and with anxiety and panic symptoms in younger adults).

Introduction

Associations between employment status and mental health are well recognised,⁴⁹ but evidence is sparse on the relationship between paid employment and mental health in the years running up to State Pension Age compared to other working age groups, and mental health measures have often been limited in scope.⁵⁰

There has been no investigation into the stability over time in the relationship between paid employment and mental health measures either among those approaching State Pension Age or among working age groups. This is important because there is no reason to assume that the association between paid employment and mental health in any age group will remain static over time, as it might conceivably be influenced by wider regional or national contexts (e.g. economic outlook and expectations of employment). Temporal stability is an important consideration if survey findings are to be used as a basis for future policy, but this has received little or no investigation in people approaching State Pension Age.

⁴⁹ Ford et al. 2010

⁵⁰ Butterworth et al. 2006

The research discussed in this chapter is based on three national mental health surveys carried out over a 14 year period (Adult Psychiatric Morbidity Surveys of 1993, 2000 and 2007). The lower age limit for participation was 16 years for all three surveys, but the upper age limit varied: 64 years for the 1993 survey, 74 for the 2000 survey, and no upper limit for the 2007 survey. The surveys sought to use identical measures of common mental disorder and other critical factors to maximise the comparability of results.

Common mental disorder is identically determined in all three surveys from the revised Clinical Interview Schedule (CIS-R), a validated diagnostic instrument used in population surveys.⁵¹ It covers a range of symptoms including: somatic, fatigue, sleep problems, depression, depressive ideas, anxiety, phobias, panic, and obsessions. In 2007, 15% of men and women reported common mental disorder.⁵² This mental health measure is described in more detail in Box 5.

Box 5: About the mental health measures

Common mental health disorder:

- The primary outcome was ascertained identically in all three surveys from the revised Clinical Interview Schedule (CIS-R), which is a widely used, fully-structured questionnaire with stem and supplementary questions enquiring in detail about the following 14 symptoms in the past week: somatic complaints, fatigue, poor concentration/forgetfulness, sleep problems, irritability, health worry, depression, depressive ideas, general worry, anxiety, phobias, panic, compulsions and obsessions.
- Each symptom schedule generates a 0-4 or 0-5 score based on frequency, duration and severity in the preceding week.
- A summed CIS-R score of 12 or more is conventionally taken to indicate common mental disorder on the basis of the presence of significant neurotic symptoms of a level likely to impact on day-to-day functioning, cause distress, and be responsive to treatment.

In 55-64 year olds, an association with common mental disorder is only present for non-employment related to poor health and is not apparent in those citing other reasons for non-employment among those approaching State Pension Age⁵³

To understand more about the health impacts of work, this study investigated the association between employment status and common mental disorder and its stability over time focusing on the age groups approaching State Pension Age (ages 55 to 64 years) in England. In addition, we examined the association

⁵¹ Lewis et al. 1992

⁵² NHS HSCIC 2009

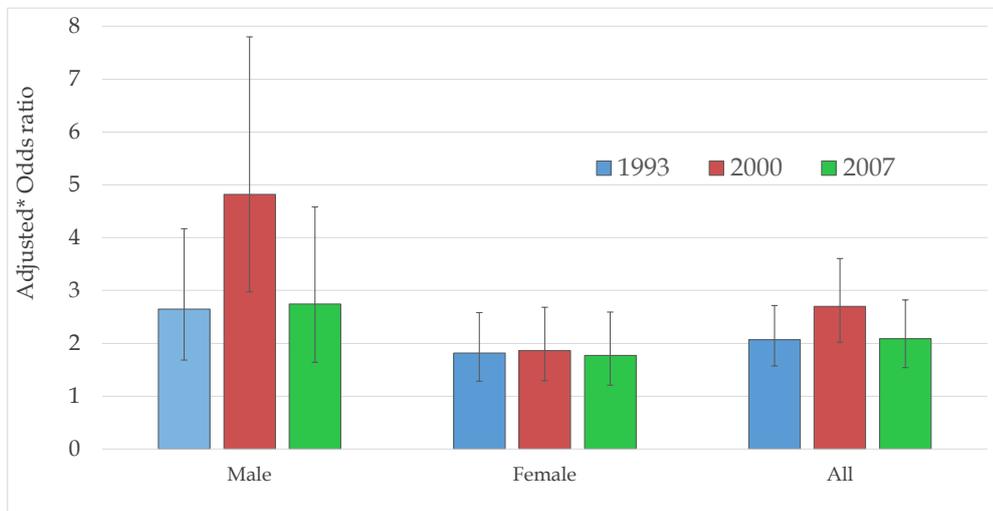
⁵³ Perera et al. [Forthcoming]

between reason-specific employment status (for health related or other reasons) and common mental disorder.

Respondents in the study were asked whether they had carried out any paid work in the week before the interview.⁵⁴ Those who did not report any paid work in the week prior to the interview were asked about the reasons for non-employment. The study distinguished between those not in work for health reasons (long-term or temporary inability to work; any health reason) and those not in work for other reasons (including studying, retirement, unemployment, or looking after the family/home).

As illustrated in Chart 28, after taking a number of other factors into account common mental disorder was more common in people aged 55-64 years who were non-employed. This was observed in all three surveys, but was stronger in men than women. As illustrated in Chart 29, this association with common mental disorder was only present for non-employment that was reported as due to sickness reasons. Non-employment for other reasons was not associated with common mental disorder. Both Chart 28 and Chart 29 indicate a particularly strong association for men in the 2000 survey.

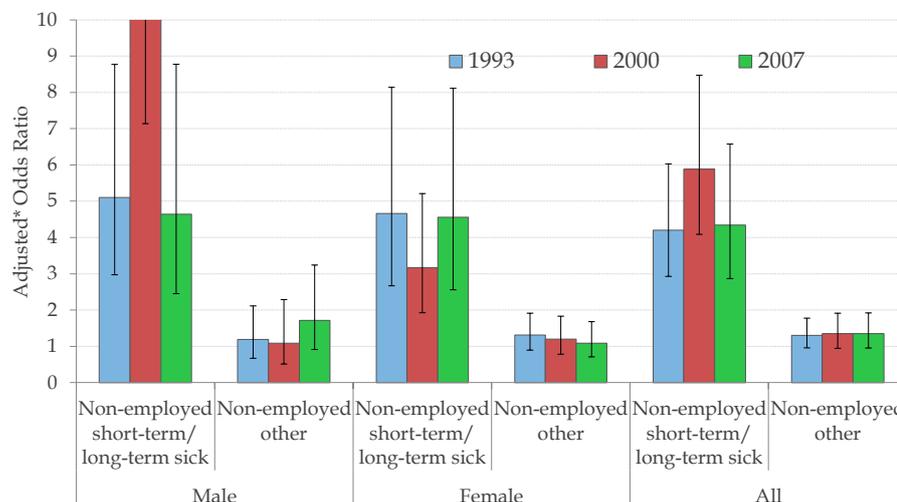
Chart 28: Association between non-employment and Common Mental Disorder in 55-64 year olds



* Adjusted for age, marital status, highest qualification, social class, tenure, serious debt, smoking status. Source: Adult Psychiatric Morbidity Surveys.

⁵⁴ Responses to further questions on income earned from employment or self-employment were used to cross-check employment status.

Chart 29: Association between reason for non-employment and Common Mental Disorder in 55-64 year olds



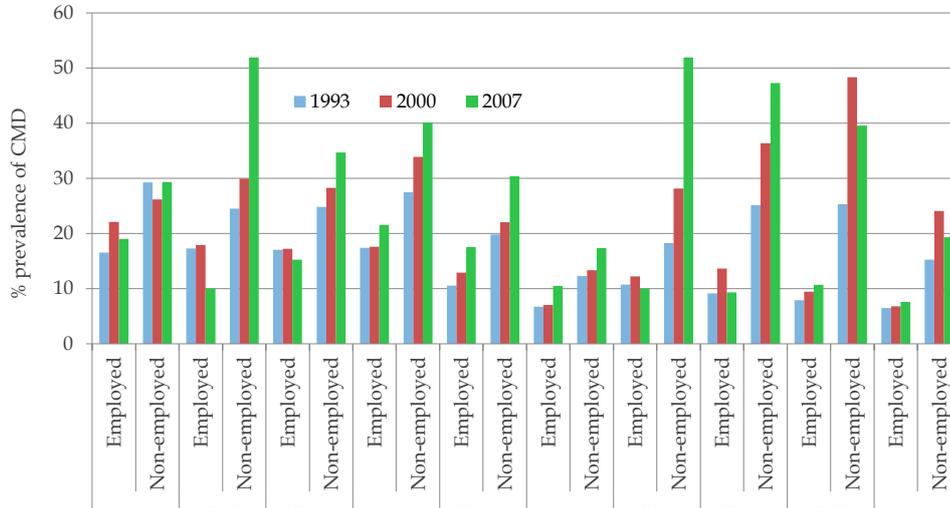
* Adjusted for age, marital status, highest qualification, social class, tenure, serious debt, smoking status. Reference group is those in paid employment. Source: Adult Psychiatric Morbidity Surveys.

The investigation of the association between employment as well as reason-specific employment and common mental disorder, and its stability over time was extended to include other age groups. Further analyses also included an investigation of associations of employment status and individual common mental disorder symptoms such as sleeplessness in working age groups. Finally, similar analyses were conducted focusing on ages 65-74.

For every working age group, gender and survey year, common mental disorder is consistently more common among people not in employment compared with those in employment (Chart 30)

For instance, common mental disorder prevalence in 2007 is 7% higher in non-employed compared to employed men at ages 16-24, 42% higher at 25-34, 36% higher at 35-44, 29% higher at 45-54, and 12% higher at 55-64 years. The same differences in women in 2007 are 10%, 42%, 19%, 19% and 13% respectively. Differences in prevalence are therefore wider in younger compared to older adults. The prevalences of common mental disorder (whether in the employed or non-employed groups) are higher in 2000 than 1993, but changes from 2000 to 2007 are less consistent.

Chart 30: Percentage prevalence of Common Mental Disorder among employed and non-employed by age, gender and survey year



Source: Adult Psychiatric Morbidity Surveys.

Associations between non-employment and common mental disorder are generally stronger and more consistent in men than women of working age, even when other potential explanations are taken into account (Chart 31)

In this respect, adjustments were made for demographic factors, economic markers and estimates of physical health status. When compared by age, the associations in men in the most recent (2007) survey are strongest in the youngest two age groups (16-24 and 25-34) and then become progressively weaker in older age groups; however, there are no consistent age trends obvious for men in 1993 or 2000, or in women in any of the survey years.

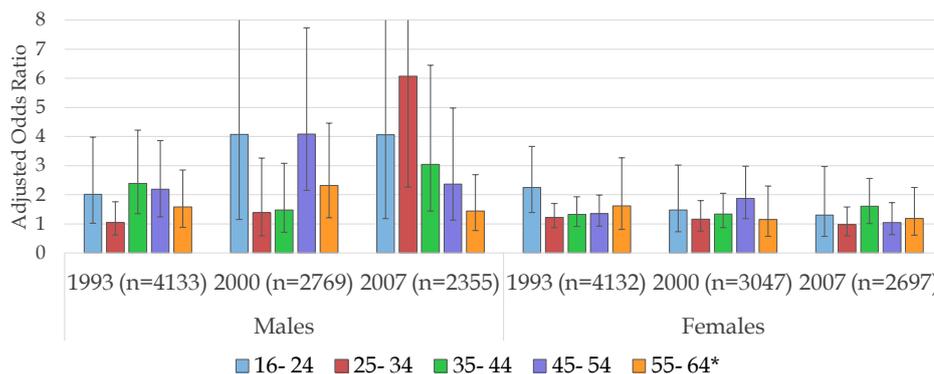
Considering survey year, in men there is a strengthening of the association (between non-employment and common mental disorder) from 1993 to 2007 in younger (16-34 years) groups, but less so in older age groups in men or for any age groups in women.

Chart 31: Adjusted odds ratios for association between non-employment and Common Mental Disorder in three survey years by age group



(adjusted for marital status, number of children, education, social class, housing tenure, smoking status, physical health consultations, difficulties in ADL)

*For females only 55-59 age group only



Source: Adult Psychiatric Morbidity Surveys.

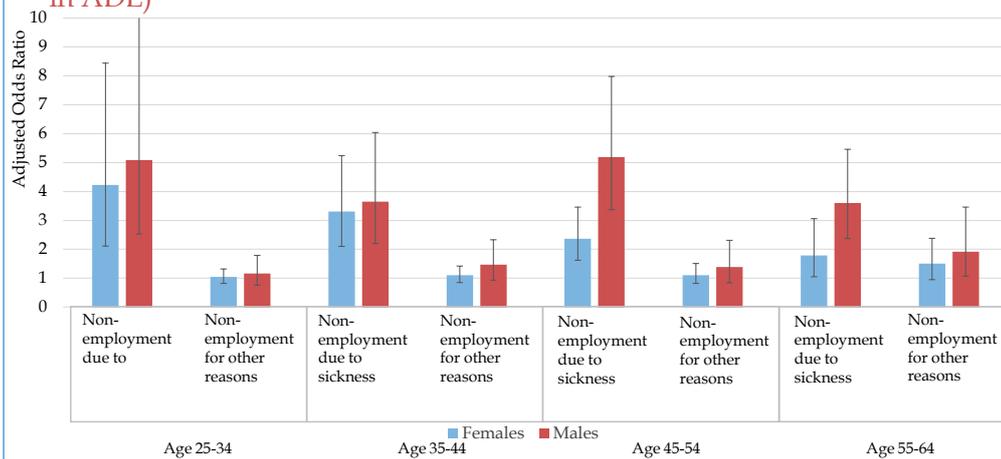
Across working ages, associations between non-employment and common mental disorder are much stronger when non-employment is reported as due to sickness, than when other reasons are given for non-employment (Chart 32)

It should be highlighted in mind that the reasons for sickness (e.g. mental vs. physical health) are not differentiated in the surveys. The association between non-employment for other reasons and common mental disorder becomes stronger in older age groups and is stronger for men than women at all working ages. The associations between health-related non-employment and common mental disorder is also stronger in men than women, particularly in the older (45+) age groups.

Chart 32: Adjusted odds ratios for associations between reason-specific non-employment and Common Mental Disorder in combined surveys by age and gender



(adjusted for marital status, number of children, education, social class, housing tenure, smoking status, physical health consultations, difficulties in ADL)



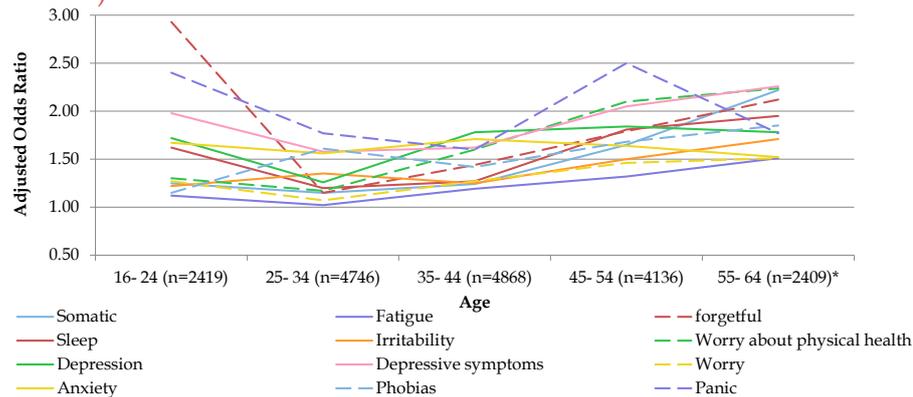
Source: Adult Psychiatric Morbidity Surveys.

Non-employment in the youngest age group is most strongly associated with forgetfulness, panic, depressive ideas, anxiety, depression and sleep difficulties. Of these, depressive ideas, sleep difficulties and forgetfulness remain strong in the oldest age group, joined by somatic complaints and worries about physical health. In the middle age groups non-employment is predominantly associated with anxiety and depression (Chart 33)

Evidence for differences in common mental disorder symptom profiles associated with non-employment in different age groups may reflect different reasons for non-employment: for example, somatic complaints and physical health worries in older age groups might reflect symptoms from the disorder which resulted in the non-employment.

Chart 33: Adjusted odds ratios for associations between non-employment and Common Mental Disorder subcomponents in combined surveys by age

(adjusted for marital status, number of children, education, social class, housing tenure, smoking status, physical health consultations, difficulties in ADL)



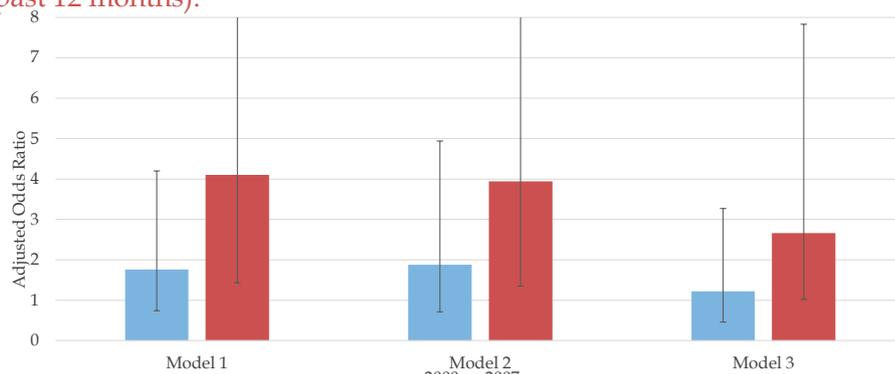
Source: Adult Psychiatric Morbidity Surveys.

Among people aged 65-74 years, the association between non-employment and common mental disorder was stronger in 2007 than 2000 even when other factors were taken into account (Chart 34)

Additional analyses were undertaken between employment status and common mental disorder and its stability over time for surveys conducted in 2000 and 2007 focusing on the oldest age group, 65-74 year olds represented in both surveys.

Chart 34: Odds ratios of non-employment association with Common Mental Disorder adjusted for various factors for 2 surveys among 65-74 year olds

(Model 1: Adjusted for age, gender and marital status; Model 2: Adjusted for Model 1+ education, social class, housing tenure; Model 3: Adjusted for Model 2+ smoking status, difficulties in ADL + seen a doctor in the past 12 months).



Source: Adult Psychiatric Morbidity Surveys.

For example, the Model 1 odds ratio was 1.76 in 2000, rising to 4.10 in 2007; this difference was still evident in the fully-adjusted Model 3 (odds ratios 1.22 and 2.66 respectively).

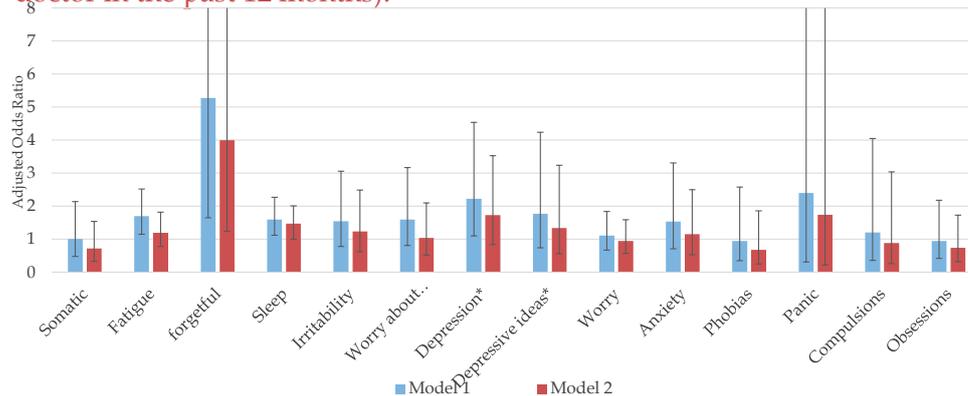
Non-employment is most strongly associated with cognitive complaints among 65-74 year age group (difficulties with memory and/or concentration) (Chart 35)

The Model 1 odds ratio for this symptom is 5.28, compared to 2.40 for panic, 2.23 for depression, 1.77 for depressive ideas and 1.70 for fatigue.

Chart 35: Odds ratio of non-employment association with Common Mental Disorder subcomponents in combined surveys among 65-74 year olds, successively adjusted



(Model 1: Adjusted for age, gender and marital status; Model 2: Adjusted for Model 1+ smoking status, difficulties in ADL and contact with a doctor in the past 12 months).



Source: Adult Psychiatric Morbidity Surveys.

Policy implications

Common mental disorder prevalence is highest in non-employed people of any age group, but this is particularly the case in men and in people whose non-employment is for reasons of sickness. This suggests scope for targeting mental health promotion – for example, through occupational health and/or primary care.

Associations between non-employment and common mental disorder in men, particularly younger men, seem to be becoming stronger in more recent years. Information from the most recent (2014) survey will help to clarify this.

The types of common mental disorder symptoms most associated with non-employment vary across working age groups, suggesting that health education may be required to ensure that mental health problems are most effectively identified in primary care, taking into account possible differences in presentation.

Findings suggest that mental health inequalities may be worsening over time with a strengthening association between non-employment and common mental disorder. Considering 65-74 year olds, mental health inequalities may also be increasing between people able or not able to continue in employment after retirement, but more recent information is required to confirm this. Further in-depth analysis might help to clarify reasons for the changes, to inform policy more effectively. This might include an investigation into changing reasons for non-employment, social attitudes to non-employed status, and support systems available for those out of work, particularly for health reasons, and particularly men. Policies around employment before and after State Pension Age need to be

carefully evaluated to ensure that mental health inequalities are not unwittingly perpetuated or worsened.

Conclusions

In all working age groups, there is a clear and independent excess prevalence of common mental disorder in people who are not in paid employment. However, this excess risk varies by age group, gender, time and the reason for non-employment. This suggests that non-employment itself does not have a constant impact, but instead is modified by other factors. The reason for non-employment is clearly important – the particular association with short- or long-term sickness might reflect a particular impact of health conditions causing the non-employment, might reflect the presence of common mental disorder prior to non-employment, or might reflect a post-hoc rationalisation of the reason for non-employment by people with enduring common mental disorder. The context for the non-employment – the reason for cessation of work, and perceived impact and future prospects of employment – may also be important in its effect on mental health, accounting for the stronger associations in men, in younger age groups and at a time of higher national prosperity (i.e. in 2000 compared to 1993). The differences across the working age range in common mental disorder symptoms associated with non-employment might reflect the underlying reasons for non-employed status (e.g. physical health problems becoming more prevalent in older age groups) but might also reflect a different profile of mental health disorders – again, indicating that non-employment is a heterogeneous stressor, affecting different individuals in different ways.

Chapter six: Pension accumulation and gender

Summary

- Women approaching retirement and those retired have much more varied lifecourses than men. For similar working lives, women accumulate far less pension than men because of differences in the lifecourse as well as gender and motherhood pay gaps. Under our modelled assumptions, a median earning woman who worked full-time from age 16 to State Pension Age with no breaks would accrue similar pension to a man earning at the 30th percentile for men's earnings. Importantly though, among women in their 70s in 2017, only 27% of women had worked full-time for most of their working lives.
- Those who were working full-time during decades of high aggregate earnings accumulated more pension than those who worked full-time during times of recession. For this reason by age 66, a median earning full-time working woman aged 65 in 2017 would have accumulated only half as much private pension (£51 a week) as a similar woman currently aged 55 (£96 a week).
- The impact of the new single tier State Pension is mixed for women depending on their circumstances. Compared with the previous system, accumulated State Pension is reducing for some women because they will no longer receive additional pension, but increasing for others because the new single tier pension is higher than the previous basic State Pension.
- About 73% of women in their 70s in 2017 had lifecourses that reflect long breaks from paid work (e.g. 10+ years) and/or long periods of part-time work (e.g. most of their working life, or working part-time until retirement after a break from paid work). Working part-time, even for lengthy periods, accumulates very little weekly private pension for women, even at median earnings. It is difficult to improve retirement income by additional years of part-time working. Better outcomes are achieved by delaying retirement than by returning sooner after breaks for childcare, but there are many impediments for women in working beyond State Pension Age.

Introduction

It is well established in research that women in later life have much lower incomes than men, and this is especially true for widows and divorcees. As 76% of women over 60 are either single, widowed or divorced when they die,⁵⁵ the ability of women to accumulate pension for their later life income is crucial to their wellbeing. In addition, there is also the erosion of widows' pension in both private and state systems to be considered.

The findings set out below are drawn from three Pensions Policy Institute Briefing Notes.⁵⁶ The labour market histories described in Chapter one were used

⁵⁵ Deaths registered in England and Wales (Series DR), released November 2016

⁵⁶ PPI Briefing Note Number 84; PPI Briefing Note Number 92; PPI Briefing Note Number 95

to understand key drivers of gender differences in pension accumulation across the lifecourse, and to estimate the potential size of these effects. Specifically, the labour market histories modelled here are drawn from those of women aged 60-69 and men aged 65-74 in 2006. These were women born between 1937 and 1946 (aged 71 to 80 in 2017) and men born between 1931 and 1941 (aged 76 to 86 in 2017). We consider what men and women with these patterns of work would accrue in terms of state and private pension under current and continuing pension systems. The assumptions used in the models are set out in Box 6.

The modelling takes into account the changes in the State Pension system in the UK from a basic State Pension and additional State Pension to a single tier pension.⁵⁷

Box 6: Assumptions in the models

- Those in paid work contribute to a Defined Contribution (DC) employer's pension scheme at 9% of earnings for every year they are in paid work from age 22 until they reach State Pension Age, and they purchase an individual level annuity at retirement. This has been used as a heuristic device and is likely to overstate actual contributions for those in DC pensions but understate contributions for those in Defined Benefit (DB) schemes.
- A long-term average fund growth of 6% (c.f. RPI inflation of 3%) and AMC of 0.5% on DC funds has been assumed.
- Median earnings and other percentiles have been estimated separately for men and women, based on historic gender specific earnings data.
- A motherhood pay penalty has been applied for those with children at the following rates (based on published research): 2% for the first child, 12% if there are two children, and 15% if there are three or more children, but regaining 1% of pay each year after the youngest child is 16.
- Pension income stated is estimated net of tax.
- Pension income is given in 2016 earnings terms.
- Part-time work is assumed to be 2 days per week.

Women's paid working lives are much more varied than men and they earn less

Among women in their 70s in 2017 (born 1937 to 1946), only 27% worked full-time throughout their working lives (Table 8). Approximately 73% of women in this age group have labour market histories that reflect long breaks from paid

⁵⁷ For more information about the changes to the pension system in the UK see The Pensions Primer: A guide to the UK pensions system

work (e.g. 10 years or more) and/or long periods of part-time work (e.g. most of their working life, or working part-time until retirement after a short or long break from paid work). Only 18% of women followed a medium length break from paid work with a long stretch of full-time work.

When combined with parental histories, under our modelled assumptions women’s varied labour market histories lead to considerable disparities in pension accumulation (Chart 36).⁵⁸ For example, women who engage in part-time work following a break from paid work (regardless of the length of the break) are much more heavily reliant on the State Pension for income in later life – more than 80% of their income. Women who are mostly not in the paid labour market (data not shown) will have even less private pension. Also, since the modelling in Chart 36 was based on median earners, about half of women will have accrued less than this, meaning that the State Pension will play an even greater role in their pension accumulation.

Table 8: Labour market histories of women aged 60-69, cohorts born 1937-46, ELSA wave 3 (2006/07)

Labour market histories	Proportion of women aged 60-69 (cohorts born 1937-46)
Mostly full-time throughout	27%
Mostly non-employed throughout	17%
Weak attachment, very early exit (at around age 49)	7%
Family carer to part-time work to State Pension Age (long break: 16 years)	12%
Family carer to part-time work to State Pension Age (short break: 4 years)	13%
Family carer to full-time work to State Pension Age (medium break: 9 years)	18%
Mostly part-time throughout (from about age 23)	6%

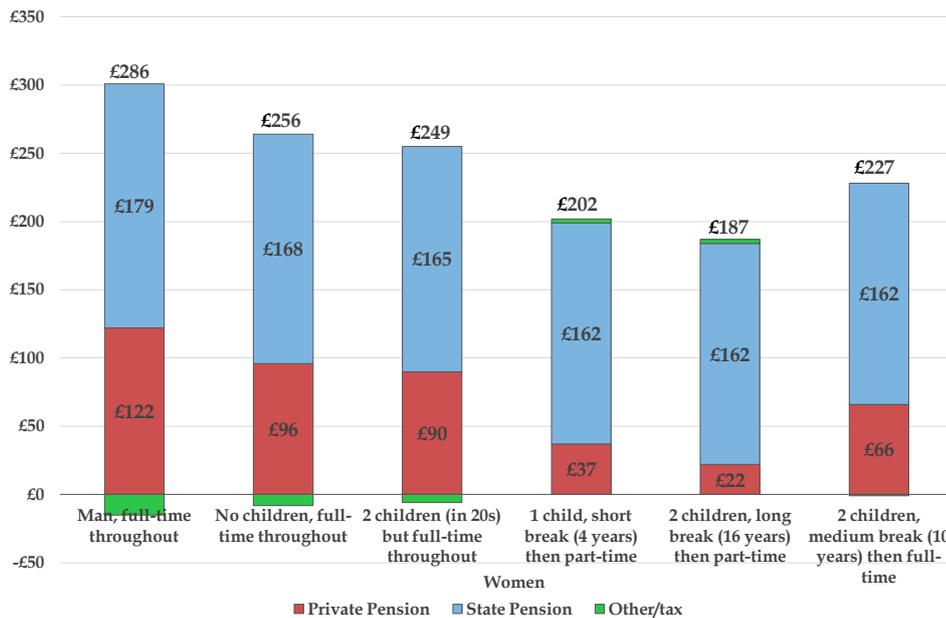
Women are also affected by the motherhood pay penalty. This pay penalty alone leads to a gap of about £7 a week (£364 a year) for a median earning woman with two children even if she takes no breaks from full-time paid work (Chart 36). In 2016 a median earning woman who has a medium length break (9 years) and returns to work full-time until State Pension Age has £6 a week less State Pension and £30 a week less private pension than a woman who works full-time throughout.

Women who work part-time fare much worse than women with more full-time work experience. It is not so much the length of the break from paid work, but rather the higher earnings from full-time work that play a greater role in the accumulation of pensions. However, a woman who went back to work full-time

⁵⁸ This chart focuses on median earners

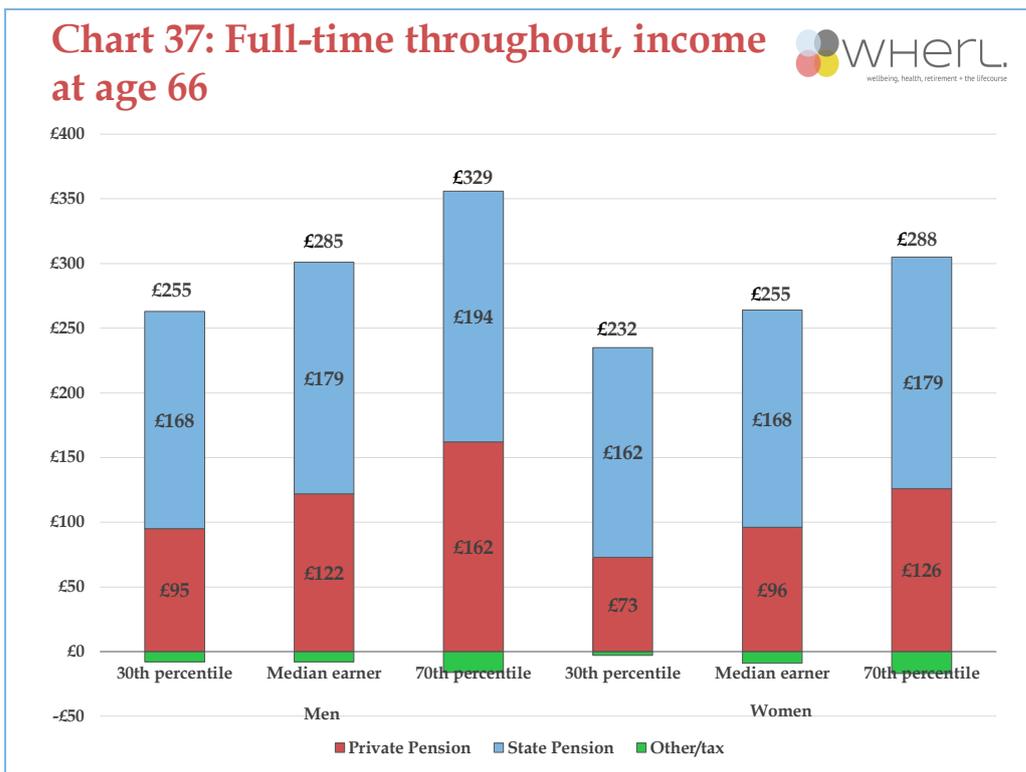
following a break from paid work still fares much worse than a woman who worked full-time and had no children, and did not take a break (with an estimated income of £227 a week compared with £256) It is also notable that a woman who earns median female earnings and works full-time throughout her working life ends up with a pension approximately 10%, or £30 a week/£1,560 a year, lower than a man who earns at male median earnings and works full-time throughout his life.

Chart 36: Median earners, income at age 66



Source: ELSA wave 3 (2006/07) and the PPI Individual Model

For similar working lives, women accumulate less pension income than men
 Where men and women may have similar labour market histories and earn at similar levels in their respective pay distributions, gender pay gaps still impact on pension accumulation (Chart 37). If the motherhood pay penalty were also taken into account here, these gaps would be even greater (as shown in Chart 36). Even for childless women a median earning woman working full-time would accumulate about the same pension as a man earning at the 30th percentile for men, and a woman earning at the 70th percentile would accumulate about the same pension as a median earning man (Chart 37). In 2016 earnings terms, a man earning at the 70th percentile accumulates about £40 a week/£2,080 a year more pension than a woman earning at her 70th percentile – about 14% more.

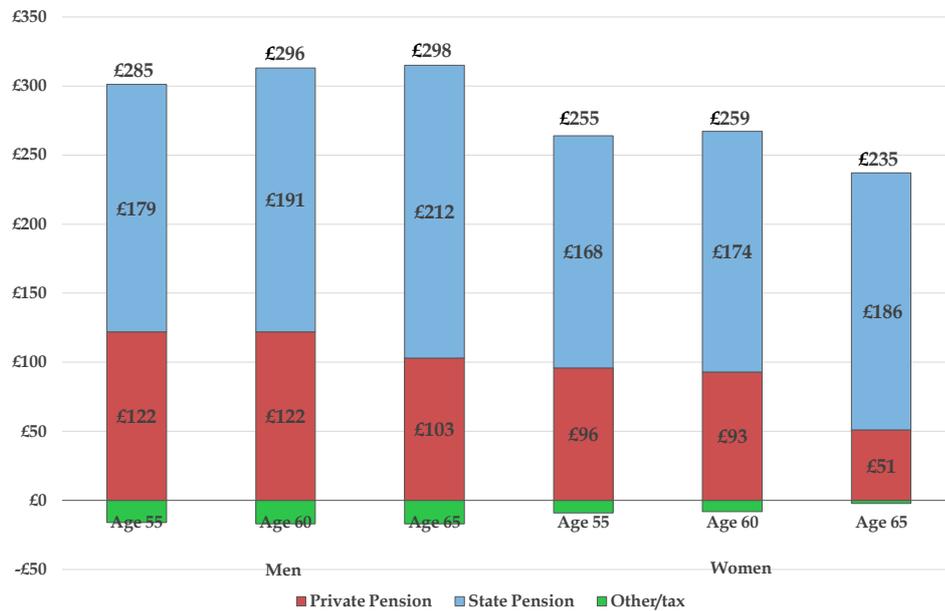


Cohort differences depend on when people worked as well as policy

Policy planning often ignores factors such as wage inflation or recessions, and can also be blind to the impact that policy changes may have on incomes in retirement. Men and women currently aged 65 who worked full-time at median earnings throughout their lives would receive less private pension income at age 66 than those currently aged 55 with a similar background and at the same age – simply because of living and working through different time points (Chart 38). This is in part because of living and working in different historical periods, and in part because of changes in State Pension policy for these cohorts. Those aged 65 in 2017 worked through a period of high inflation in the 1970s so that their pension contributions were based on much lower salaries than those who started work in the 1980s. Such differences in retirement income reflect varying economic cycles and employment environments across the lifecycle.

The modelling also shows that for these median earners, the value of the State Pension is steadily decreasing for men and women – a result of the abolition of the additional State Pension with the introduction of the new single tier pension (Chart 38). Ultimately the single tier State Pension will settle at what would be the equivalent of £162 in these charts.

Chart 38: Cohort differences, income age 66, median earners, full-time throughout

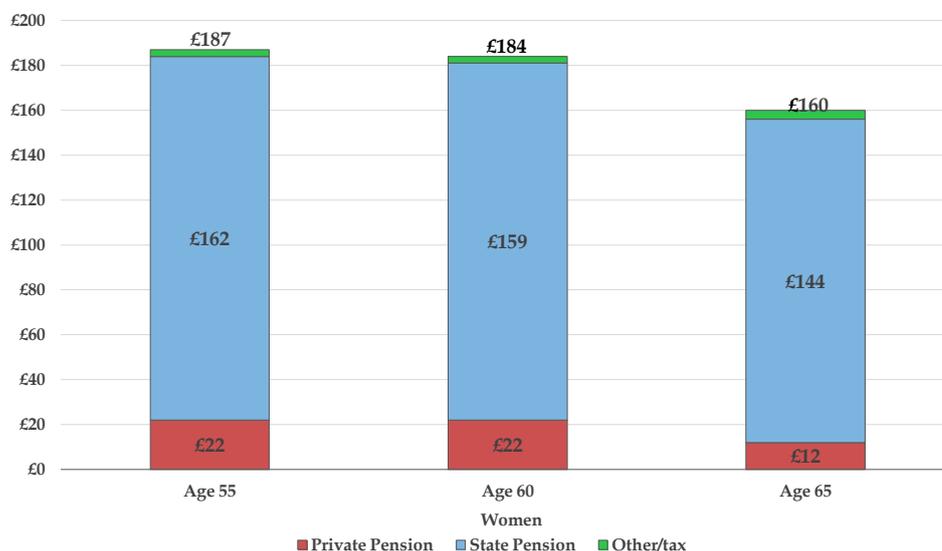



Source: ELSA wave 3 (2006/07) and the PPI Individual Model

The overall impact of the abolition of the additional State Pension is fairly clear for men – the younger cohorts will have less pension income overall, even though they will have accumulated more private pension than those currently aged 65. For women, the trend is reversed – the younger cohort, those currently aged 55, will have more pension than the 65 year old cohort. This is because of better private pension provision resulting from having worked in the period after wage inflation had been high. Lifetime earnings for women who experienced no breaks in full-time work and who were earning at the median have been relatively high which has led to the accumulation of some private pension. However, even for women who worked full-time throughout, the deterioration in State Pensions through the abolition of additional State Pension leaves them more vulnerable to macroeconomic influences that affect their private pension accumulation. While the lesser State Pension also impacts on men’s pensions they are less vulnerable because of their generally higher levels of accumulated private pension.

In contrast, for women who had a break from paid work and substantial periods of part-time work, younger cohorts are better largely because the new single tier pension will be a substantial *increase* on their State Pension accumulation (Chart 39). These women never accumulated much or any additional State Pension, and without much private pension either, the very low level of the basic State Pension before the introduction of the new single tier pension left them in a vulnerable financial position. For these women, the new State Pension has decreased their vulnerability, as long as it maintains its relative value.

Chart 39: Two children, 4 year break then part-time work, median earners, income age 66



Source: ELSA wave 3 (2006/07) and the PPI Individual Model

Long breaks and/or part-time work leave women with low private pension accumulation

The new single tier pension might protect women from poverty more than the former basic State Pension. However, even at median earnings, women with breaks in paid work and/or with long periods of part-time work struggle to accumulate the private pension that might help towards ensuring an adequate income in later life; this is even more so for women who earn below the median.

The question therefore arises whether it is a worthwhile personal or policy objective from a pension perspective to encourage women to return to work earlier, or to work longer hours, or whether it would be more beneficial instead to remain in paid work beyond State Pension Age, or indeed whether none of these scenarios helps very much. These scenarios were modelled for women using two of the labour market histories: those with a 16 year break from paid work who returned part-time until State Pension Age (approximately 18% of women in their 70s in 2017 had this pattern of work), and those who had a 9 year break from work and returned to work full-time until State Pension Age (again, approximately 18% of women in their 70s in 2017 had this pattern). The model assumes that the women are aged 60, and their respective pension income one year after retirement is explored. For the purpose of illustration, it is assumed that they were median earners throughout. The differences in pension income are all driven by differences in private pension accumulation, since the single tier pension is assumed to be stable.

Women who took a long break (16 years) followed by part-time work gained little in pension terms from returning to work a year earlier than otherwise, nor from working for another year after State Pension Age (although in both cases,

earnings for that year of paid work would be higher) (Table 9). Differences in private pension accumulated are only a pound or two per week. Returning to work five years earlier nets a £5 per week gain.

There is more potentially to be gained from remaining in paid work for five years beyond State Pension Age, with an additional £11 a week private pension. However there are many impediments for women in working beyond State Pension Age especially for this length of time. These include health, caring roles and difficulties in finding suitable employment, and an improvement of £11 a week may seem insufficient for five additional years of paid work beyond State Pension Age.

Table 9: Pension accumulation by women’s labour market histories

	Pension income (state and private) – median earner				
	Base projection	Returns to work a year earlier	Returns to work five years earlier	Retires a year after State Pension Age	Retires 5 years after State Pension Age (i.e. at 71)
16 year break followed by part-time work to State Pension Age	184	185	189	186	195
9 year break followed by full-time work to State Pension Age	228	231	241	231	248

The impact of additional years of work is slightly better for a woman who had 9 years out of the paid labour market but where this was followed by full-time work. The gains for one additional year, either before returning to work or working beyond State Pension Age, were £3 per week. Returning to work five years earlier (i.e. reducing to a five year break) would bring an additional £13 per week, whereas working five years beyond State Pension Age added £20 per week, though the above caveats apply.

The potential to increase pension income is greater for a median earning woman who returns to paid work after a 16 year break if she is able to work additional hours (Table 10). If she is able to change from two days a week to three days a week this would add £10 a week to pension income, and increase the percentage of pension income from private pensions from 12% to 16%. An increase to 4 days a week would yield about £20 a week more pension, and a change to full-time work, about £30 a week. This would lead to a situation where private pension was about a quarter of pension income. This exercise illustrates how difficult it is for part-time workers to accumulate private pension, even at median earnings,

and that pension adequacy is related to the higher earnings typically associated with longer working hours.

Table 10: Pension accumulation by women by number of days worked following a break from paid work

	Number of days worked per week after returning from 16 year break from paid work, median earner, income at 66				
	1	2	3	4	5
Pension income (state and private)	175	184	194	203	213
Percentage of income from private pension	7%	12%	16%	20%	24%

Policy implications

As with other research on gender issues in the workplace, tackling gender pay gaps and motherhood pay gaps (which are less well understood) is critical if women are to build private pension entitlement. Policymakers who are only interested in whether women are in the paid workforce or not, without taking into account how many hours and at what levels of pay, and how these years of paid work fit with prior labour market histories, are missing important elements of understanding pension outcomes.

For women, engagement in paid work is insufficient to have much impact on pension accumulation, unless it is full-time work over substantial periods of the lifecourse at reasonable levels of pay. This brings to the forefront issues about employment policy, flexible employment and job creating, but also policies to appropriately support childcare and care of adults and older people. These are all issues that impact heavily on whether it is financially beneficial in a family for women to undertake paid work, especially full-time work, as well as impacting on women’s desire and availability for paid work.

Since society continues to struggle with issues of equal pay, with providing an environment for well paid, full-time, pensionable employment, and the myriad problems in the child- and adult-social care systems remain, the State Pension continues to be a very important element of women’s pension income. When considering gender in pensions it is therefore important to consider policies that seek to support and maintain the State Pension given its importance in providing an income above poverty levels that keeps pace with earnings growth and inflation.

Conclusions

Understanding gender differences in the lifecourse remains crucial both for comprehending inequalities in income in later life and for evaluating pension policy from a gender perspective. It is not so much that women remain disadvantaged in pension accumulation, but rather what it is that drives these disadvantages, how they play out for different types of women and families, and what women’s lifecourses look like. A lifecourse that approximates long-term

full-time engagement with the paid labour market has so far been true for only about a quarter of women, and even these women will struggle to accumulate similar pensions to men because of gender and motherhood pay gaps. Long gaps and part-time work, both of which are ubiquitous in women's labour market histories, make it difficult for women to accumulate meaningful amounts of private pension. Yet with the levelling of the State Pension and the abolition of additional State Pension, the accumulation of private pension is becoming ever more critical for women.

Technical appendix: PPI individual model

The model

The individual projections are calculated using the PPI's Individual Model. This model produces illustrative projections of an individual's future income in retirement. This income includes benefits from the State Pension system and private pension arrangements, and can also include income from earnings and equity release. The model is best used to compare outcomes between different individuals, policy options, or other scenarios. The results are best used in conjunction with an appropriate counterfactual to illustrate the variables under test.

The individuals

The individual modelled is specified based upon an earnings and career profile. Saving behaviour for private pension accumulation is considered, as well as the behaviour at retirement. The career profiles are taken from the sequential analysis performed within the WHERL project.

The policy options

The policy option maps the pension framework in which the individual exists. It can accommodate the current system and alternatives derived through parameterisation. This allows flexing of the current system to consider potential policy options to assess their impact upon individuals under investigation. This area has the scope to consider the build-up of pensions in their framework, such as the auto-enrolment regulations for private pensions and the qualification for entitlement to state benefits.

The variations

The following variations have been considered:

- Age in 2016
- Earnings level (relative to age and gender)
- Career profiles
- Number of children
- Pension scheme type
- Extending working life

Acknowledgements and Contact Details

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