Wave 7

The Dynamics of Ageing

Evidence from the English Longitudinal Study of Ageing 2002–15

Editors:

James Banks
G. David Batty
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ELSA

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2002–15
(WAVE 7)

October 2016

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Published by

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The design and collection of the English Longitudinal Study of Ageing were carried out as a collaboration between the Department of Epidemiology and Public Health at University College London, the Institute for Fiscal Studies, NatCen Social Research, and the School of Social Sciences at the University of Manchester.

ISBN: 978-1-911102-21-2

Printed by
Printondemand-worldwide.com
9 Culley Court
Orton Southgate
Peterborough PE2 6XD

This report is dedicated to the memory of

Richard M. Suzman

Director, Division of Behavioral and Social Research
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9 August 1942 – 16 April 2015

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1. Introduction

G. David Batty *University College London*

Andrew Steptoe *University College London*

The age composition of our society continues to change profoundly

Life expectancy in older populations has been rising steadily for over half a century: in 1951, on average, a man aged 65 could expect to live to the age of 77. Today, he can expect to live to 86, and by 2050 to 91 (Department for Work and Pensions and The Rt Hon Steve Webb, 2015). In the UK, 15,000 people can currently describe themselves as a centenarian (Department for Work and Pensions and The Rt Hon Steve Webb, 2015). This continuing extension to life span has major demographic implications. From 2010 to 2030, it is anticipated that England will experience a 51% rise in the number of people aged over 65, and a doubling in those aged over 85 (House of Lords: Select Committee on Public Service and Demographic Change, 2013). A similar transition is predicted worldwide.

Narratives of these upward trends in survival are often couched in terms of societal burden when they should in fact be celebrated: the increased longevity of the population is one of the greatest achievements of the modern age, bearing testament to continuing improvements in public health and social care. The expansion of the age spectrum provides the potential to enhance opportunities for older people to make an even greater contribution to our society – one that has been hitherto poorly recognised – in supporting younger generations financially, practically and in the transmission of wisdom, in volunteering, and in active engagement with local and national political issues.

Inevitably, these demographic changes also raise the need for complex, high-level planning considerations in economic, health and social policy. For older people in the UK and elsewhere these include, but are not limited to, income security for older people, social protection, the prevention of impoverishment and social isolation in old age, access to quality health care, effective and affordable social care, the promotion of age-friendly environments that enable independent living, the prevention of discrimination, and securing the human rights of the ageing population. With susceptibility to specific chronic disease (cardiovascular disease, cancer, diabetes, dementias) and related states (cognitive, sensory and physical impairment) being age-dependent, the implications for health are also obvious.

A clear understanding of these ageing processes is a major challenge that requires a robust, reliable and multidimensional evidence base, which details the experience of people as they age in free-living populations. In contributing to this endeavour, the English Longitudinal Study of Ageing (ELSA) aims to provide data that are as relevant to understanding the causes of disease or disability at older ages as they are to understanding the determinants of social exclusion or economic disadvantage.

How can ELSA enhance our understanding of the ageing process?

Modelled on the US Health and Retirement Study as a major, ongoing, publically available longitudinal data set comprising individuals aged 50 or older, ELSA is similarly notable for the breadth of data it holds on an older English population. Since its initiation, its investigators have pioneered detailed assessments of wealth holdings, and it was the first study of its type in the world to collect a broad array of biomarkers longitudinally, to include extensive life-history measures, to introduce behavioural economic assessments of risk preferences, to include measures of experienced well-being, and to quantify the costs of social care in detail. ELSA is therefore unique among publically available data sets in providing a full battery of performance tests, anthropometric measurements, biomarkers and cognitive tests on a longitudinal basis alongside the detailed longitudinal socio-economic information. The period covered by the next phase of data collection in ELSA (2016–20) is one that will see an unusually wide range of new policies in the UK, which, together with global social, economic and demographic developments, will markedly impact on older people's lives.

Existing data and new collection

In this report, we describe findings from the latest phase of data collection – wave 7 – conducted between June 2014 and May 2015. In wave 7, information was collected from 9,666 participants in ELSA, including 8,249 'core' participants (age-eligible sample members who participated the first time they were approached to join the study; interviews were also conducted with partners who are not denoted as 'core sample' members). Figure 1.1 provides an overview of data collection for all existing waves of data collection in ELSA, with the number of core sample members and participants in nurse visits and various substudies depicted.

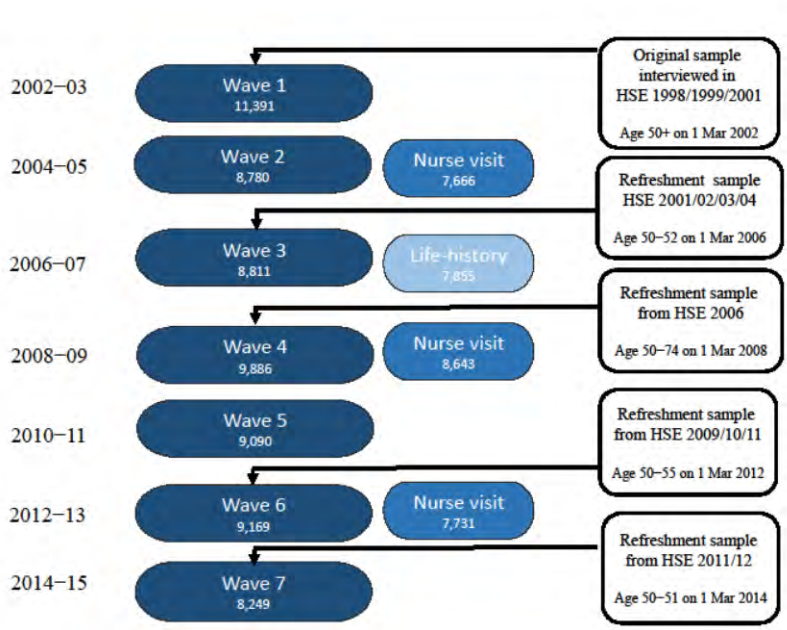
As we have described in previous reports, but it bears repetition here, conducting large-scale prospective research carries with it specific considerations, which include: the need for repeat measures of 'core' variables over numerous waves in order to explore trajectories in key characteristics; the need to move ever closer to harmonisation of measures with other studies internationally, notably the Health and Retirement Study (HRS); time constraints in data collection; the importance of ensuring that the protocol is not so extensive as to be prohibitively costly and burdensome for our study members; and the drive to assess new issues and concepts that are relevant to population ageing and that have not previously been included. In wave 7, we included a series of innovative measures that have broadened the scope of the study, including:

- self-reported hearing plus a new objective test of hearing acuity ('Hearcheck');
- more detailed enquiries on oral health;
- new questions on the use of electronic cigarettes;
- more detailed questions about Internet use;
- broader and high-resolution questions on cognitive function;
- new questions on how people feel about the neighbourhoods they live in;

- new questions on expectations and perceptions of the costs of social care.

It would be very difficult to cover all these new topics in the present report while providing information on important existing measures. Rather, we have structured the report around three substantive chapters that address important issues in the economic, social and health domains (Chapters 2, 3 and 4, respectively). These are coupled with a detailed set of tables (Chapters E, S and H) that summarise data collected in these domains, including cross-sectional analyses of wave 7 and longitudinal analyses of the study members who completed all seven waves of assessment. This is a convenient way of presenting more results than is possible within separate chapters, though there are still important topics that we have not been able to include. The topics of the three thematic chapters were selected during discussion with the representatives of the government departments that contribute to the funding of ELSA, and were chosen because of their importance to both policy and research.

Figure 1.1. Data collection in ELSA waves 1–7 (sample sizes are for the core sample)



Employment at older ages

The vital role played by the high-quality data from ELSA in policymaking is nowhere more apparent than in issues surrounding employment. By 2020, the Office for National Statistics predicts that people aged over 50 will constitute one-third of the working-age population. The importance of work at older ages to offset the economic burden of greater longevity is widely recognised, but the impact of pension and retirement policies and the relevance of ill-health and disability remain poorly understood. Chapter 2 provides a detailed analysis of labour market dynamics for people aged 50–69 over a longer time period and with greater precision than is possible with other UK cohort studies.

The results demonstrate a striking rise in employment rates between 2002 and 2014 in both men and women. In men, this can be linked to an increase in part-time work; in contrast, part-time work has remained relatively constant among women, indicating an increase in full-time employment. Interestingly, this increase in employment is particularly apparent among the least wealthy participants, where the increase in part-time work has been dramatic.

The detailed stratification that is possible within ELSA permits these patterns to be investigated in relation to age, marital status, educational attainment, health and disability as well as wealth. One interesting observation is that health does not appear to be a key determinant of changes in employment in this age group, though disability is. Not all health problems stop people from engaging in day-to-day activities, and that is the crucial issue. For example, the proportion of respondents in paid work was similar in those free of illness and in people with a long-standing illness, but was more or less halved in those whose health problems limited their activity. Yet it is among participants with limiting illness that the largest increases in paid work between 2002 and 2014 have been seen. This suggests that it is not that health is unimportant, but that the simple notion that older people stop work because of ill-health may not be correct.

The focus of Chapter 2 is on labour market transitions, where the unusually detailed measures available over seven waves of data collection are able to capture the complexity of trajectories in modern work. It is no surprise that the findings reflect a move away from the traditional model of a 'job for life' to a much more varied experience for older people, but this has seldom been characterised with such detail. Though a sizable proportion of men and women in their 50s remain in the same job, many change their jobs, move in and out of work, vary their hours of work, and switch between being employees and being self-employed. This is particularly apparent among people in their 60s, where fewer than one-third remain in the same job over a two-year period, with significant numbers changing jobs, moving out of work, and even returning to paid employment. Disability is again a crucial factor in explaining these patterns, reflecting a need to understand the factors underlying healthy life expectancy at older ages.

Understanding retirement

The research detailed in Chapter 3 highlights the importance of understanding retirement better. While retirement can and should be regarded as an active phase of life that provides renewed opportunities to continue contributing to society, the economic, social and health trajectories as an individual approaches retirement are as incompletely understood as are the myriad consequences of this major life event. Chapter 3 highlights the importance of opening the 'black box' of retirement, and understanding the varying processes involved in different types of retirement. Three major forms of retirement are distinguished: 'normal' retirement at the state pension age; 'involuntary' retirement because of one's own or another person's illness, or because of being made redundant; and 'voluntary' retirement. Predictors of the latter category are wide ranging and include being fed up with one's job, wanting to retire at the same time as one's partner, wanting to spend more time with the family, and so on. The context of retirement may be key: while

voluntary retirement appears to be broadly beneficial – for well-being, for health, for social engagement – enforced or involuntary retirement may have a detrimental impact.

The longitudinal analyses in Chapter 3 also show that preparation for retirement is a long-term process: many men and women begin reducing their hours of work up to 10 years before they actually retire. All these patterns are modulated by wealth, type of work, partner's involvement in the labour market, types of pension and health.

In analyses featured in Chapter 3, health was consistently shown to be an important predictor of voluntary and involuntary retirement, though in opposing directions. Thus, while study members reporting poor health were five times more likely to experience involuntary retirement, people in poor health were much less likely to enter voluntary retirement.

The socio-economic patterning of health and illness is a recurring theme in ELSA, and would appear to extend also to the prediction of major forms of retirement. Using socio-economic data from the wave prior to retirement, men who transitioned into involuntary retirement were most likely to be from the lowest (poorest) wealth category. In contrast, men who took voluntary retirement were more likely to be classified as affluent based on this indicator of wealth. Similar patterns of association were apparent for other indicators of social position in ELSA, such as occupational social class. For women, the observations made for men also appeared to hold true, although the socio-economic differentials across the three retirement groups were less pronounced.

Healthy life expectancy and mortality

Research from the Department of Work and Pensions indicates that among UK men and women over the age of 65 there has been a halving in the prevalence of low income[1] in the last two decades, from 28% in 1994–95 to 14% in 2013–14 (Shale et al., 2016). This welcome trend notwithstanding, around 1.6 million people in the UK continue to live in relative poverty (Shale et al., 2016). The impact of poor social circumstances on older people is not as well understood as it is for other sectors of society. On one level, it means that a significant proportion of older British citizens are excluded from full participation in social life; on another, despite universal health care and welfare support, there is a suggestion from existing research that low income may have marked deleterious effects on health and well-being, and that these are apparent across the full socio-economic spectrum (i.e. not merely confined to people living below the poverty line).

ELSA is unusually well placed to examine these issues. Not only are participants characterised for indicators of socio-economic position across the life course (education, occupational social class, income, wealth) but, with around 13 years of mortality surveillance, we are now in position to explore links with life expectancy and chronic disease outcomes with a greater degree of statistical power than has previously been possible. A central and ongoing

[1] Low income is defined as 60% or less of household equivalised median income, after housing costs.

debate in this field, which has important policy implications, is attempting to understanding how poverty is embodied (i.e. gets 'under the skin'), to influence health. The reverse process, with poor health leading to reductions in economic circumstances, is also relevant. One line of enquiry is to understand the extent to which higher rates of unfavourable health behaviours – cigarette smoking, harmful levels of alcohol intake, physical inactivity – are key in generating socio-economic gradients in illness.

Analyses described in Chapter 4 tell us that more basic educational attainment, manual occupations, and lower levels of income and wealth are all associated with markedly elevated rates of total and cardiovascular disease mortality. The fact that these indicators of socio-economic position capture present and past circumstances seems to suggest that accumulation of poverty across the life course is particularly important. Taking into account health behaviours seems to explain some of the socio-economic–mortality gradients, and may point to the efficacy of 'downstream' interventions, particularly risk factor modification, in diminishing these inequalities. More fundamentally and longer term, educational opportunities may also yield benefits.

In these analyses, as is commonplace in epidemiology, risk estimates are provided. In this context, we have described, for instance, the association between wealth and all-cause mortality, as study members in the lowest wealth tertile have almost three times the mortality risk of those in the wealthiest. While these statistics are useful aetiologically and have utility in understanding the population impact of poverty, from a policy perspective, estimates of life expectancy are perhaps more meaningful. In Chapter 4, the authors found that female advantage in life expectancy continues, with women expecting to live up to three years longer than men. Socio-economic inequalities in life expectancy were, however, apparent for both men and women such that the differential between ELSA participants in the top and bottom wealth tertiles in the estimated years expected to live at the age of 50 was around 12 years for good health, 8 years for disability-free life expectancy and 10 years for illness-free life expectancy.

Methodology

The fieldwork, sample design, response rates, content of the ELSA interviews and weighting strategies used in wave 7 are described in Chapter 5. A brief summary of the design is given here and in Figure 1.1. The original ELSA sample was drawn from households whose head was a participant in the Health Survey for England (HSE) in the years 1998, 1999 and 2001. Individuals were eligible if they were born before 1 March 1952 and were, at the time of the ELSA 2002–03 interview (i.e. ages 50 and over), still living in a private residential address in England. In addition, we interviewed partners under the age of 50, and new partners who had moved into the household since the HSE. The participants who were recruited for the first wave of ELSA or have since become partners of such people are known as Cohort 1.

Wave 2 of ELSA took place in 2004–05, and the core members and their partners were eligible for interview provided they had not refused any further contact after the first interview. In the third wave, in an effort to address the

problem of selection bias in longitudinal surveys due to study member attrition (for reasons of death, illness or lack of interest), we supplemented the original cohort with people born between 1 March 1952 and 1 March 1956 so that the ELSA sample would again cover ages 50 and over. The new recruits were sourced from the 2001–04 HSE years. Wave 4 took place in 2008–09 and the original cohort was supplemented with another refreshment sample of HSE respondents born between 1 March 1933 and 28 February 1958, taken from HSE 2006. The field work for wave 5 was carried out in 2010/11.

Data collection for wave 6 was conducted in 2012–13. In addition to the cohorts included in previous waves, we added a refreshment sample of individuals born between 1 March 1956 and 28 February 1962. They had previously participated in the HSE in 2009, 2010 or 2011. Again, both core members and their partners were interviewed, but the analyses in this report are largely based on data provided by the core members only.

The study sample for wave 7 was again augmented by new participants to ensure that we had adequate representation of people aged 50–52. These volunteers had taken part in HSE 2011 and 2012 and were born between 1 March 1962 and 28 February 1964.

We carried out a face-to-face interview and a self-completion assessment in all waves. In waves 2, 4 and 6, research nurses visited the homes of study members in order to collect blood samples and to take physical measurements. The fieldwork for wave 7 of ELSA began in June 2014 and was completed in May 2015.

The broad topics that have been covered in every wave include household composition, employment and pension details, housing, income and wealth, self-reported doctor-diagnosed diseases and symptoms, tests of cognitive performance and of gait speed, health behaviours, social contacts and selected activities, and measures of quality of life. As noted on page 2, new material was added in wave 7 so as to address a number of new issues.

Academic researchers, policy analysts and others interested in ageing research who are registered with the Economic and Social Data Service Archive can access the ELSA data sets, via the download service or via the online Nesstar software tool.

- ELSA data sets: www.esds.ac.uk/findingData/elsaTitles.asp
- ESDS Nesstar Catalogue: nesstar.esds.ac.uk/webview/index.jsp

Reporting conventions

The data collected during wave 7 feature in the present report, and the analyses in this report mostly use information from the core members of ELSA. The remaining data come from interviews with the partners of core members. Proxy interviews have been excluded, mainly because a much-reduced set of information is available for these people.

The cross-sectional analyses in the reference tables in Chapters E, S and H have been weighted for non-response, so that estimates should reflect the situation among people aged 50 and over in England. The longitudinal analysis tables use longitudinal weights, as described in Chapter 5.

Statistics in cells with between 30 and 49 observations are indicated by the use of square brackets. Statistics that would be based on fewer than 30 observations are omitted from the tables; the number eligible is given but a dash is placed in the cell where the statistic would otherwise be placed.

Future opportunities using ELSA data

The study is at the leading edge in both survey methodology and content, with new forms of data collection and new topics being introduced as the study progresses. The value of ELSA to research and policy increases as the longitudinal aspect is extended. Ultimately, however, the value of the study depends on its use by research and policy analysts, and their exploration of ELSA's rich multidisciplinary data set. For a list of publications and reports and other documentation concerning ELSA, please go to our web site: http://www.elsa-project.ac.uk/.

Acknowledgements

Data collection in ELSA would not take place without the efforts of a large number of people. The study is managed by a small committee chaired by Professor Andrew Steptoe and, for the data collection in wave 7, comprised of Professor James Banks, Dr G. David Batty, Dr Margaret Blake, Professor Sir Richard Blundell, Professor Sir Michael Marmot, Professor James Nazroo, Zoë Oldfield and Kirby Swales. The study administrator/scientist is Dr Nina Rogers. We would like to express our gratitude to Sheema Ahmed for her careful administrative work on the study. With regard to this report, particular thanks are due to Rachel Lumpkin for her fastidious copy-editing of the final manuscript and to Emma Hyman and Thomas Hauschildt for their continued guidance during the different stages of report preparation.

We recognise and greatly appreciate the support we have received from a number of different sources. We are mostly indebted to those people who have given up their time and welcomed interviewers and nurses into their homes on so many occasions. We hope that our participants will in future years continue to commit to ELSA, helping us to understand further the dynamics in health, wealth and lifestyle of the ageing population. Another vital ingredient to the success of the study is the commitment of the more than 300 dedicated interviewers and nurses involved in collecting the data.

ELSA is coordinated by four main institutions: University College London (UCL), the Institute for Fiscal Studies (IFS), the University of Manchester and NatCen Social Research. There is also close collaboration with colleagues at the University of East Anglia who are important researchers on the study.

The ELSA research team has been guided by two separate groups. First is a group of leading national and international consultants who have provided specialist advice. We are very grateful to this group, which includes Lisa Berkman (Harvard), Axel Börsch-Supan (Munich Center for the Economics of Aging), Nicholas Christakis (Yale), Hideki Hashimoto (University of Tokyo), Michael Hurd (RAND), Arie Kapteyn (University of Southern California), Hal Kendig (University of Sydney), David Laibson (Harvard), Kenneth Langa

(University of Michigan), John McArdle (University of Southern California), Johan Mackenbach (University of Rotterdam), David Melzer (Peninsula College of Medicine and Dentistry), Marcus Richards (UCL), Kenneth Rockwood (Dalhousie University), Johannes Siegrist (University of Dusseldorf), Paul Shekelle (RAND), James Smith (University of Southern California), Robert Wallace (University of Iowa), David Weir (University of Michigan) and Robert Willis (University of Michigan). Second is the advisory group to the study, which is chaired by Baroness Sally Greengross. Members over this period have included Michael Bury, Richard Disney, Emily Grundy, Ruth Hancock, Sarah Harper, Tom Kirkwood, Carol Propper, Tom Ross, Jacqui Smith, Anthea Tinker, Christina Victor, Alan Walker and representatives of the UK government funding departments.

Finally, the study would not be possible without the support of funders to the study. Funding for all seven waves of ELSA has been provided by the US National Institute on Aging, under the stewardship of Richard Suzman, and several UK government departments. The departments that contributed to wave 7 included the Department of Health, Department for Transport and Department for Work and Pensions. The UK government funding has been coordinated by the Economic and Social Research Council, and we are grateful for its role in the development of the study. We are particularly grateful to Riaz Ali, Rachel Conner, Tom Gerlach, Richard Goulsbra, Richard Hardcastle, Samuel Omolade, Andrew Scott and Jonathan White, all of whom have made valuable contributions to ELSA over this period. Members of the UK funding departments provided helpful comments on drafts of this report, but the views expressed in this report are those of the authors and do not necessarily reflect those of the funding organisations.

Sadly, Richard Suzman died as wave 7 data collection was underway. The Division of Behavioral and Social Research at the US National Institute on Aging has been unswerving in its support of ELSA, and we are most grateful to John Haaga, Richard Suzman's successor as director of the Division, and to John Phillips and Georgeanne Patmios.

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2. Employment and labour market transitions at older ages in England, 2002–03 to 2014–15

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The summary findings in this chapter are the following.

- Labour market participation rates have increased for older workers over the period 2002–03 to 2014–15, particularly for those in the five years on either side of the state pension age (SPA).
- Although the magnitudes differ (particularly when expressed in proportionate terms), these increases in labour market participation have been across the board; the aggregate trend is not just a result of trends in certain age groups, types of workers or types of work.
- The labour supply of older workers, as measured by total hours worked, has not increased so much, due to two factors: some of the increase in labour market participation has been part-time work, and the hours of full-time older workers have been constant or even falling.
- The inverted U-shaped relationship between wealth and employment still persists for those under age 60; it is the middle of the wealth distribution that has the highest rates of labour market participation. At older ages, however, the trend of increasing employment has been strongest for the lowest wealth group, such that by 2014–15 there were no longer any differences in employment rates by wealth group after age 60.
- Neither the cohort effects nor the age profiles in labour market participation match up with the equivalent cohort effects or age profiles for health and disability, suggesting that health alone cannot be the driver of recent changes in the labour market participation of older workers.
- There is considerable labour market mobility amongst older workers, particularly when looking at movements between jobs or between employment and self-employment rather than just entry and exit from paid work.
- Comparing the first half of our time period with the second, we see that the more recent period (2008–09 to 2014–15), whilst characterised by having higher rates of labour market participation of older workers overall, displays lower rates of labour market mobility at all ages. The mobility that does exist is also less related to both prevalence and onset of health and disability, suggesting those with worse health are now more able, or willing, to remain in their current jobs as they age.
- A key dimension of labour market transitions is changes in hours worked, whether these changes occur within the same job or as individuals move jobs or change employers. Although there are many job transitions made

without accompanying changes in hours worked, reductions in hours are strongly associated with job transitions, particularly so for low socio-economic status workers and those in poor health, who show less evidence of being able to vary hours without such employment changes.

- Looking at the 12-year job trajectories for those aged 50–59 in 2002–03, we see that the traditional model of older workers working in a single job after age 50, then exiting the labour market, entirely applies to around 40% of the cohort. Other types of trajectory involving job changes and spells in and out of the labour market are more common, and differentially so, according to education, wealth and disability.

2.1 Introduction

Work at older ages has become a central policy issue around the world as governments and individuals face up to the demographic and economic realities of population ageing, namely that, in the absence of huge increases in technological progress and productivity growth, individuals need to work for longer and/or save more during working life in order to preserve living standards in retirement. With this has come the realisation that there are many specific questions that need to be answered before appropriate policy measures can be designed in this area. As examples, such questions might include the following. How do statutory retirement or pension ages affect working decisions and what are the likely effects of changing them? What are the effects of economic incentives in pensions and disability benefits on work decisions at older ages? Will health and disability limit the extension of working lives (and, if so, for whom and by how much, and what might be done to mitigate these effects)? What consequences might longer working lives have for health and well-being? How should intergenerational and intragenerational fairness issues be incorporated into policy goals?

The demands that such questions place on the empirical evidence needed to inform policymaking are considerable. Primarily this is because there are likely to be extensive dynamic linkages between the ways in which different types of individual and household outcomes evolve with age – labour market transitions and trajectories will be inexorably tangled up with health changes, with such linkages running forwards and backwards potentially over the whole life course. Similar linkages are likely to connect both work and health to life-course trajectories and changes in education, productivity and skills, wealth and financial resources, and other household and family circumstances. In this situation, estimating robust causal relationships that could point to appropriate places for policy intervention is hugely complex. So, even just developing a better empirical understanding of the correlations between trajectories and transitions in the labour market and trajectories and transitions in other dimensions can be a useful first step.

The ELSA data now offer unique opportunities, within the UK context at least, to look at the evolution of work trajectories and other linked factors at older ages. Existing longitudinal data sets are characterised by only short follow-up (e.g. five quarters in the case of the Labour Force Survey (LFS)), relatively small samples of older adults (British Household Panel Study) or relatively

short time series to date (Understanding Society). Cohort studies in which members are at or approaching retirement age, i.e. the National Study of Health and Development (1946 cohort) and the National Child Development Study (1958 cohort), have information only on very specific dates of birth cohorts, who are interviewed somewhat infrequently with only limited wealth and pension information. Other studies that are often used for tracking trends over time (such as the Family Resources Survey, the Family Expenditure Survey and its various reincarnations, or the Health Survey for England) are cross-sectional in nature and hence cannot be used for looking at transitions or trajectories.

With seven waves of ELSA data now collected covering the 12-year period from 2002–03 to 2014–15 we are in a position to document many characteristics of employment transitions and trajectories at older ages in England for the first time, and the full interdisciplinary content of the ELSA survey and nurse visit content allows us to look at the links between these transitions and the other factors, such as health, wealth and education, described above. In particular, it is now possible to use the data to look at long trajectories (up to 12 years) for single cohorts and break these down for different types of individuals within those cohorts, or alternatively to look at how shorter-period transitions are distributed over the population and how the pattern of these transitions has been changing over time. This chapter presents new evidence in both of these dimensions, using both descriptive tables and descriptive multivariate models as well as considering broader time and cohort trends over the period.

The focus of the analysis in this chapter is specifically on paid employment, labour market participation and exit from the labour market; it does not look at self-assessed retirement status. The broader concept of 'retirement' may be important when exploring links with other factors such as well-being or even health; see Banks, Chandola and Matthews (2015) for a brief overview of possible theories and existing empirical evidence, or Chapter 3 of this report (Matthews and Nazroo, 2016) for recent descriptive evidence from the ELSA data used here. However, there are myriad factors that may determine, and be determined by, whether someone considers themselves retired; it is not the aim of this chapter to shed light on this. Similarly, when we look at employment changes and exits we do not look at whether such changes are perceived by individuals as voluntary or involuntary. Whilst there is good information in the ELSA questionnaire to allow researchers to look at both these topics, it would make the analysis that follows excessively lengthy and unwieldy. Instead, we just focus on understanding the raw patterning of objectively defined labour market activities as individuals age. That is, we describe paid labour market participation regardless of whether individuals consider themselves retired whilst still working, and regardless of whether they consider themselves as retired or not when not working.

Similarly, the evidence in this chapter does not look at the specific role of specific institutions or institutional incentives, such as pension eligibility ages or the financial incentives implicit in pension systems or disability benefits. Again, this not because such factors are not important – pension incentives are a known cause of labour market exit (e.g. Gruber and Wise, 2004) and the age at which people can start claiming state-funded pensions has well-documented

effects on employment (Mastrobuoni, 2009; Staubli and Zweimüller, 2013; Cribb, Emmerson and Tetlow, 2014; Atalay and Barrett, 2015). Instead, the approach of this chapter is to step back and look at the overall labour market dynamics of those aged 50–69, regardless of issues surrounding retirement or pensions (i.e. given all the various institutional factors that we currently have in place). The analysis in the chapter seeks to document as cleanly as possible the overall working patterns in the older age group, how these correlate with education, wealth, health and disability, and how these patterns have been changing with age and over time. The one institutional factor we do consider, on a descriptive level at least, is the SPA, because this has been changing over time for women in recent years of our sample and the evidence cited above (e.g. Cribb, Emmerson and Tetlow, 2014) suggests that this may have effects over and above the changes in pure economic incentives associated with the reform. As such, if there are changes over time within our sample, it is important to look at how our understanding of these changes differs according to whether, and if so how, we control for this.

Even within objectively defined labour market outcomes, there are many outcome measures that could be of interest. One key distinction to draw is between those relating to the extensive margin (whether individuals work at all) and the intensive margin (how many hours are worked). When studying the labour supply of older workers, it is clearly important to know about both margins (and there are many other questions where this would also be true) but the debate around 'extending working lives' has typically focused solely on the extensive margin. Instead, this chapter takes a mixture of approaches and uses a mixture of outcomes. Labour market participation is an important outcome in its own right, and so a large part of the analysis looks at trends in participation or transitions in and out of the labour market. However, an emphasis is also placed on understanding the degree to which there may be labour market mobility occurring within the set of older workers who continue to participate in the labour market. These might be transitions from one job to another or from one employer to another, changes in hours worked (whether within the same job or from one job to the next) or movements between employment and self-employment. Such outcomes are important to understand, not just because of the importance of quantifying older workers' labour supply. They may also be part of the mechanism by which certain types of older workers can stay in the labour market for longer, they may display different patterns (across time and across types of individuals) to those observed in labour market participation, and they may have consequences for the links between work and other outcomes.

The first part of the analysis that follows looks at trends in employment and in the amount and type of work that is going on at older ages, focusing on time trends and cohort age profiles. Subsequent analysis looks at different types of labour market transitions, how these are associated with baseline health and other characteristics, and how they are related to the onset of health conditions and disability at older ages. Additionally, a set of models looks specifically at the issues of changes in hours of work for those who stay in the labour market.

2.2 Methods

The first part of this chapter looks at time trends in labour market outcomes of older workers over the seven waves of ELSA between 2002–03 and 2014–15, with a considerably more detailed breakdown than previous ELSA reports, both in terms of the outcome variable – instead of looking at just working versus not-working, the chapter considers issues such as part-time work, self-employment, multiple jobs and total hours of work – and in terms of splits by covariates. These calculations, whether presenting time trends by age group or age profiles by date of birth cohort, treat the data as a time series of cross-sections. The timing of each wave of ELSA data is such that fieldwork typically begins in May and runs through to April the following year. So, for example, the wave 1 ELSA data are referenced as 2002–03 and wave 2 as 2004–05, etc.

The second part of the chapter looks at employment transitions and trajectories and exploits the longitudinal structure of the ELSA data. Typically, this analysis uses two-year transitions (i.e. the sample of all individual-level pairs of observations that are one wave apart). The key characteristics referenced in the tables, whether used to define the sample or as categorical variables, relate to the 'baseline' wave and the transition is measured between baseline and follow-up in the subsequent wave (approximately, but not exactly, two years later). For the majority of the analysis, all two-year transitions are retained in the sample of interest, regardless of whether the individual participated in other waves of the study over the 12-year period and regardless of whether that individual came from the original ELSA wave 1 sample or any of the refreshment cohorts that were subsequently added. The longer 12-year trajectory analysis in Section 2.6 uses only the balanced panel sample of individuals who were present in all seven waves.

The key variables and concepts in the analysis are defined as follows.

Time

Much of the analysis in the chapter either treats individual waves (years) of data separately, or pools transitions over the entire 12-year period. In order to analyse whether the nature of transitions is changing over time, a two-part sample split is constructed and used in some of the analysis. The first half of the sample contains transitions with a baseline year of 2002–06 (i.e. transitions made between ELSA waves 1–3 and waves 2–4). The second half of the sample contains transitions with a baseline year of 2008–12 (i.e. beginning in waves 4–6 and ending in waves 5–7).

Cohort

Four cohorts are constructed, each covering a four-year date of birth period, and taken together these span the distribution of cohorts in ELSA moving through the 50–69 window. For each of these cohorts, the average age in each wave can be calculated and used as a way of indexing average labour market participation or other outcomes. Two central cohorts are followed through all of the seven waves. The first is those born in 1941–44 (who are aged 57–61 in ELSA wave 1 and age 70–73 in wave 7) and the second is those born in 1947–50 (aged 52–55 in ELSA wave 1 and age 64–67 in wave 7). An older cohort

born in 1935–38 is also included in the analysis. These individuals were first observed in ELSA wave 1 at age 64–67 but are only included in our analysis up to wave 4, at which point they were aged 70–73. Finally, a younger comparison cohort is also included, born in 1953–56. These were first observed in wave 4 (age 52–55) and followed until age 58–61 at wave 7.

Age

Individuals are grouped into five-year age bands according to age on the date of interview, and most tabulations and models work with the sample aged 50–69 (or aged 50–69 at baseline if the model is longitudinal). Occasionally, broader age groupings are indicated

State pension age

An indicator is constructed to capture whether the individual is over the SPA at the time of interview. Over the course of the time period of this analysis, SPA was 65 for men and 60 for women hitting the SPA prior to wave 5, gradually rising to 62 for the cohorts of women arriving at the SPA at wave 7. For this last group of women, the SPA indicator is constructed precisely according to the month and year of birth rather than approximately by wave/time. A separate indicator is then constructed for all individuals to capture whether they cross their own specific SPA between waves.

Labour market outcomes

The main measure of labour market participation is whether the individual did any paid work in the month prior to the interview. Within this group, subcategories are also analysed according to whether the individual's main job is as an employee or self-employed, whether the main job is full-time (defined as hours worked in the main job greater than 35 hours per week) or part-time, and whether or not the individual had more than one job in the previous month. For the purpose of looking at hours of work, we look at hours of work in all jobs together, and those with multiple jobs are defined as those for whom total hours of work are greater than hours of work in the main job.

Education

The education variable used is highest formal educational qualification achieved as opposed to years of schooling, partly due to differences in the compulsory school leaving age for the cohorts in our sample. The low education group is defined as those with no qualifications or less than O levels (or equivalent). This group accounts for 38.5% of those aged 50–69 over the seven waves. The medium education group is defined as those with O levels or equivalent (29.0% of those aged 50–69 over the sample period) and the high education group is defined as those with A levels or higher (32.5% of those aged 50–69).

Wealth

Three equal-sized wealth 'terciles' are created using total net non-pension wealth, i.e. a definition of wealth that includes housing wealth and any financial assets and nets off any outstanding mortgage debts or other financial debt. Wealth terciles are constructed *within* the relevant age group for analysis, so when the full sample is being considered, individuals are placed into a

wealth group according to whether their family unit has a level of wealth that is in the bottom third, the middle third or the top third of all those aged 50–69 in that wave. When five- or ten-year age breakdowns are used, individuals are placed into terciles according to the relevant age band.

Health

Although the ELSA data could be used to construct very detailed measures of health in multiple dimensions, or alternatively a very precise single index capturing multidimensional health variation, the summary health measure used here is the simple self-reported measure of long-standing illness (included only from wave 2 onwards). The three categories are: (i) no long-standing illness (49.0% of those aged 50–69 over the sample period); (ii) has a long-standing illness that is not limiting (21.2% of those aged 50–69 over the sample period); (iii) has a limiting long-standing illness (29.8% of those aged 50–69 over the sample period).

Disability

Much as with health, the ELSA data could support a highly detailed modelling of the dynamics of disability and disability benefit entitlement, partly because of the vast number of self-reported disability measures, coupled with objective performance assessments carried out in the nurse visits. Constructing such a measure is well beyond the scope of this chapter, however, and instead we base our definition on the index of disability used in Banks, Blundell and Emmerson (2015). This index aims to capture variation in the dimensions of self-reported disability that are measured consistently in all waves of the ELSA questionnaire and that overlap with the dimensions of health and disability that are assessed as part of the work capability assessment for disability benefits.[2] The resulting index can therefore be constructed for every wave and it takes a value between 0 and 12, depending on how many of the indicators are reported. For the purposes of our analysis, the sample is split into three groups: those with no disability (46% of those aged 50–69 over the sample period), those with 'mild' disability, which is defined as one or two reported indicators (34.4% of those aged 50–69 over the sample period) or those with a moderate level of disability or worse, defined as three or more indicators (22.6% of those aged 50–69). Table 2A.1 reports a detailed distribution of the underlying health index for those aged 50–69 over the sample period, with a breakdown by men and women.

[2] Specifically, the 12 indicators are: whether the individual has difficulty sitting for two hours; getting up from a chair after sitting; walking; climbing one flight of stairs; picking up a 5p coin; reaching or extending arms above shoulder level; lifting or carrying weights over 10 lbs; measures of eyesight (when using lenses or corrective devices) at near and at far distances; incontinence; depressive symptoms (CES-D score greater than or equal to 4); and whether the individual has previously left work because it was too tiring or stressful.

2.3 Time trends in labour market activity at older ages

The upper panel of Table 2A.2 shows the strong rise in employment rates of ELSA sample members aged 50–69 from 2002–03 to 2014–15. It is immediately apparent that this rise has been occurring for all age groups and for both men and women, albeit to differing degrees. Most striking, in proportionate terms at least, are the rises in labour market participation for those in the five years immediately after the SPA – the proportion in paid work has almost doubled for men aged 65–69 and has increased by almost 50% for women aged 60–64. However, there have also been steady rises in the participation of those between 50 and the SPA, which, coupled with changes in the relative sizes of different age groups considered here, have meant that the overall rates of paid work for the 50–69 age group have gone up by six percentage points for both men (from 59% to 65%) and women (from 48% to 54%) over the period 2002–03 to 2014–15.

As an aside, it is worth putting these recent trends into a longer-term context, as other studies have done using data from the LFS (coupled with the Family Expenditure Survey in certain years), which can be used to track the fraction in paid work by age and gender back to the early 1970s; for a recent example, see Banks, Emmerson and Tetlow (2016). Whilst the fraction of those aged 65–69 in work has in fact been increasing steadily since the mid-1990s, it has only in the most recent year returned to the levels observed in 1975. For men aged below 65, the proportion in work is still considerably below that observed in the earliest years of LFS data. As an example, in 1975 labour market participation rates were 90% for those aged 55–59 and 80% for those aged 60–64 (Banks, Emmerson and Tetlow, 2016), which are 10 and 20 percentage points, respectively, higher than the rates observed even in the most recent wave of ELSA data. For women, the picture is rather different – by 2002, the fraction of women aged between 50 and 59 in the labour market was already higher than any previous year observed in the LFS and within a couple of years the same was also true for women aged between 60 and 69.

This trend of recent increases in labour market participation of older adults is now well documented both in the UK and in other OECD countries; see Chandler and Tetlow (2015) for a summary. Indeed, the overall pattern of an increase in participation since the mid-1990s is remarkably similar in many countries, as shown by Wise (2016a). Whilst it is encouraging that the evidence in the ELSA data shows the same patterns, and indeed it matches very well both the levels and trends observed in the LFS over the relevant period, the main contribution of the ELSA data is not to document such aggregate trends but rather to offer the ability to break down the trends and analyse them in considerably more detail. Before doing this, however, we first look at the degree to which this increase in paid work represents an increase in total labour supply of older workers, once we take account of the fact that older individuals are more likely to work part-time than other workers and that this, itself, may have been changing over time.

The lower panel of Table 2A.2 shows what fraction of those observed working are in part-time employment in each wave of ELSA data, using the same age–

gender breakdown. This fraction has remained rather constant for women, but has risen for men (most strikingly for men aged 60–64, but from 15% to 20% for all men aged 50–69). This relative increase in part-time work will have, to some extent, offset the increases in paid work documented in the upper panel of Table 2A.2.

A different measure of labour supply might therefore be the number of hours of paid work per week. This can be analysed either just for those in paid work or for the group of older workers as a whole. In addition, with such a measure we can also consider hours of work supplied in all jobs, whereas the part-time work evidence presented above only applies to the 'main job', as is conventional in labour market analyses, and thus does not factor in the possibility of multiple jobs. Overall trends in hours worked are presented, using the same year–age–gender breakdown, in Table 2A.3.

Looking at the labour supply of older workers as measured by hours per week, as opposed to labour market participation, the story is a little more nuanced than that discussed previously. Overall labour supply has increased for men aged 50–69 since 2002–03 but only by 0.6 hours (36 minutes) per week – an increase of 2.3 per cent. This average hides, considerably, heterogeneity by age. Hours per week for male workers aged 60–69 have stayed broadly constant, such that the average hours per week supplied by those aged 60–69 has increased by almost around three and a half hours per week, due to the increasing likelihood that those in this age group are workers. However, hours per week have been falling for male workers aged 50–59, to an extent that has almost equalled (for those aged 55–59) and more than offset (for those aged 50–54) the increase in their labour market participation. As a consequence, average hours of paid work supplied have fallen for men aged 50–54 and have stayed relatively constant for men aged 55–59.

Hours of work have stayed much more constant for female workers than for their male counterparts over the sample period, and have increased for many subgroups, with the consequence that the average hours of work for each five-year age group have risen over time. As a result, the labour supply of women aged 50–69, taken as a single group, has risen by almost two hours per week – an increase of 12.8%.

Of course, whether one is more interested in trends in labour market participation or total hours of labour supplied will depend on the research or policy question at hand. For the purposes of this chapter, as discussed in the introduction above, we follow the prevailing tenor of the policy and scientific debate surrounding 'extending working lives' and focus on participation in the labour market. So, in the analysis that follows, we begin by breaking down labour market participation trends in more detail, before moving on to look at transitions and flows in and out of work at older ages, and then returning to the issue of hours of work and role they might play.

Tables 2A.4 and 2A.5 show the trends in the proportions of men and women in paid work, broken down by education level and by marital status. These are presented for completeness, as they show relatively well-known trends that are apparent in the LFS or other purely economic data sets and statistics. There are two key features of these tables worth mentioning. First, increases in labour market participation can be observed at all levels of education for both men

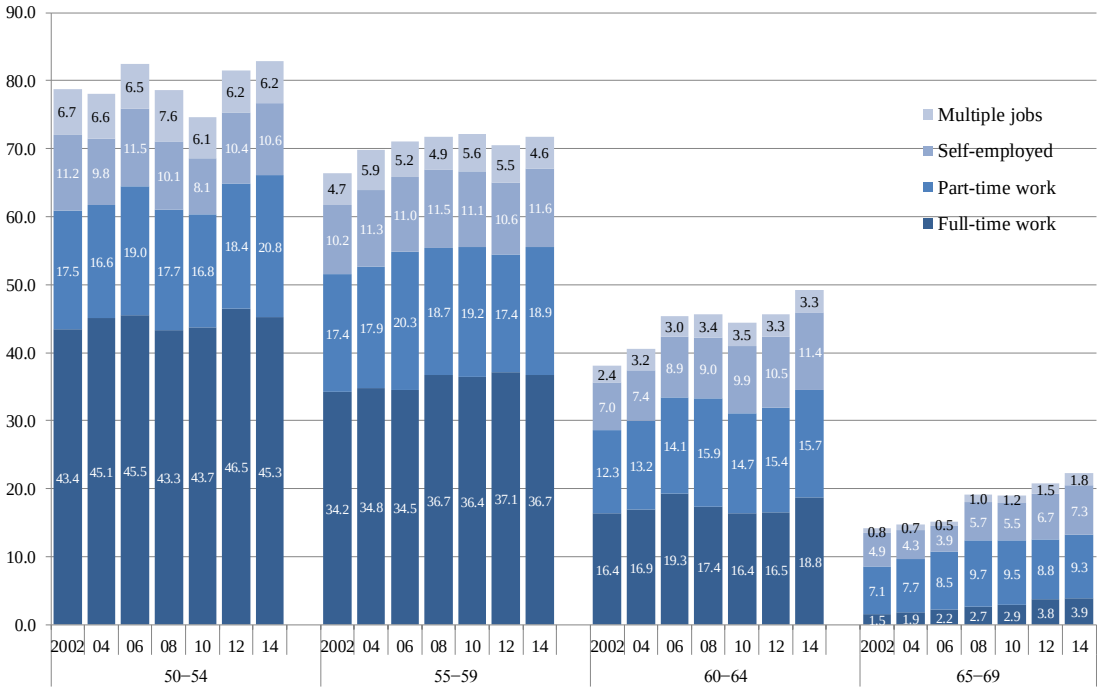
and women. Second, whilst the same is true for age groups broken down by marital status, the increases are not substantial enough to close the labour market participation gap between single and married men. Unlike single women, whose labour market participation is comparable to their married counterparts at all ages, single men are still considerably less likely to be in work than married men and this gap has increased since 2002, particularly for those aged over 60.

Taking advantage of the interdisciplinary nature of the ELSA data, we can also break down these trends by health and wealth. Table 2A.6 presents trends in labour market participation by age, gender and level of long-standing illness. Most apparent from this table is that there are relatively minor differences between those without long-standing illnesses and those who have long-standing illnesses that do not limit activity. Whilst this is perhaps unsurprising given the nature of this particular (self-reported) health measure, it does highlight the fact that there are many older workers who are able and willing to work despite the presence of health conditions. The group with the worst health – those with long-standing illnesses that do limit activities in some way – show considerably lower rates of labour market participation at all ages in all years. Looking at time trends, however, there are markedly higher rates of paid work for the worst health group at the end of the period compared to the beginning, particularly so for men aged 55–59 whose participation rates have increased from 38% to 57%. Within each age group, however, the trends have been far from steady, with each series exhibiting some considerable fluctuations from wave to wave around the increasing trend. Whilst part of this may be due to small sample sizes, particularly in the younger age groups with the worst health, a full analysis of the potential structural and cyclical causes of changes in employment for older adults with the worst health, which might also include an exploration of the role of employer and cultural changes as well as legislative changes over the period, is an important topic for future research.

The final breakdown of these time trends in labour market participation is by wealth, and in this case we also break down the paid work by type of work, namely whether the respondent is in full-time work, part-time work, self-employment or some combination of multiple activities. Figure 2.1 presents these trends for the 50–69 age group treated as a single group and Figures 2.2a and 2.2b look at the age groups 50–59 and 60–69 separately, with each age group split into wealth terciles on the basis of net housing wealth and financial assets, as discussed in Section 2.2.

The increasing proportion, particularly in the age group 60–69, of those in paid work is immediately apparent in Figure 2.1, which also shows that this increase after age 60 has been driven by increases in all the non-full-time work categories, namely part-time work, self-employment and the fraction with multiple jobs. By far the majority of work taking place post-SPA is either part-time work or self-employment, although this fraction has fallen over time (84% of those in work at ages 65–69 were in either part-time work or self-employment in 2002, compared to 75% in 2014).

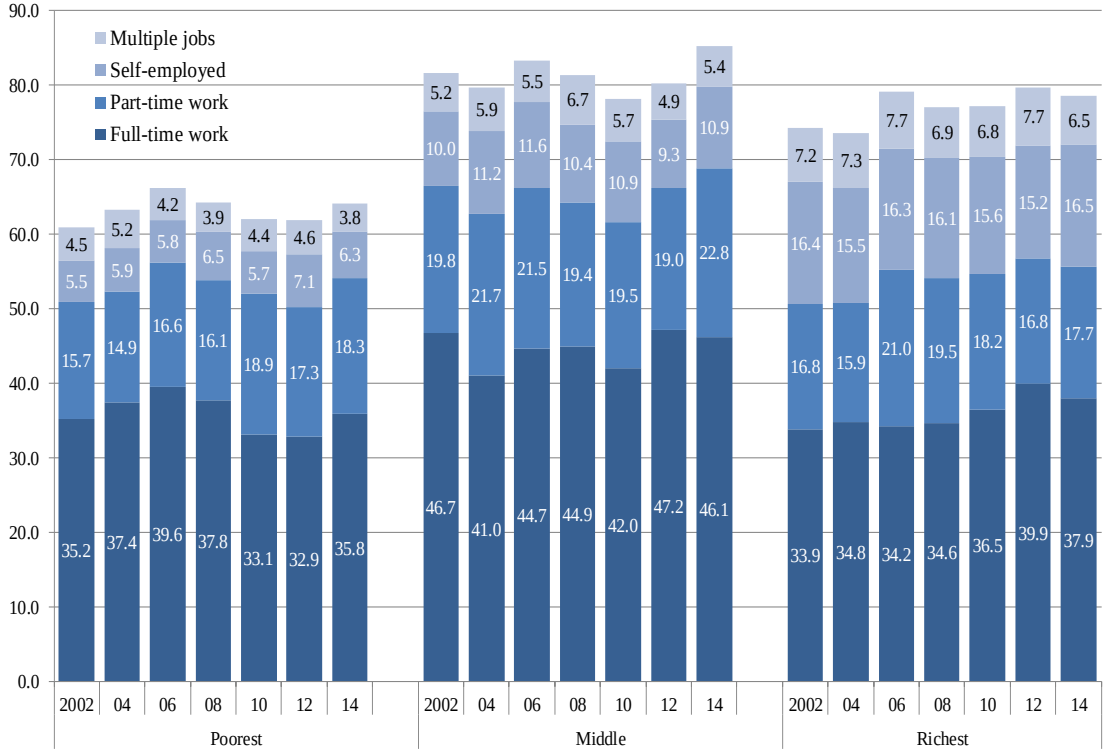
Figure 2.1. Proportion in work, and type of work, by age and year



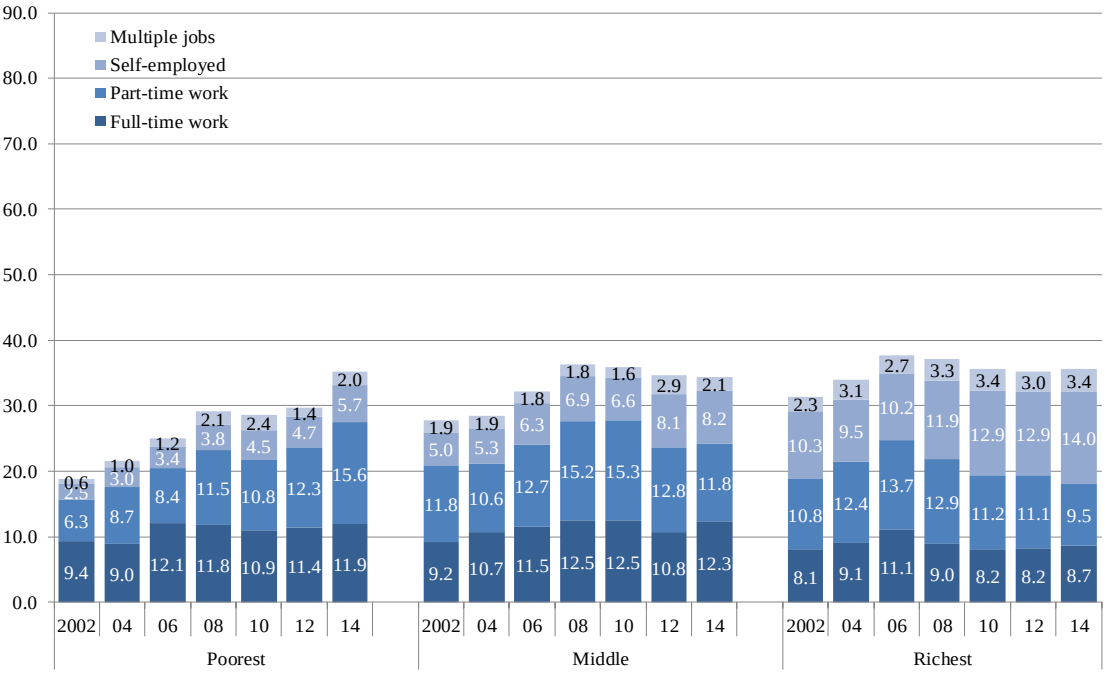
When looking at the breakdown by wealth, we can see that the inverse U-shaped cross-sectional relationship between wealth and labour market participation, first observed in the ELSA wave 1 cross-section report (Banks and Casanova, 2003), is still apparent for those aged 50–59. At these ages, the increases in participation that have occurred over the 12-year period have been spread across all types of employment activity, such that the basic picture and patterns by wealth are rather unchanged, even if the levels of participation are slightly higher. This is in contrast to the trends for those over 60, however, where there has been a strong rise in overall participation rates (and particularly part-time work) for the poorest wealth tercile, such that the proportion working is now similar to that in the two richer groups. At the same time, there has been a clear increase in self-employment for all three wealth terciles at these older ages.

Figure 2.2. Proportion in work, and type of work, by wealth and year

a) Ages 50–59



b) Ages 60–69



2.4 Cohort age profiles

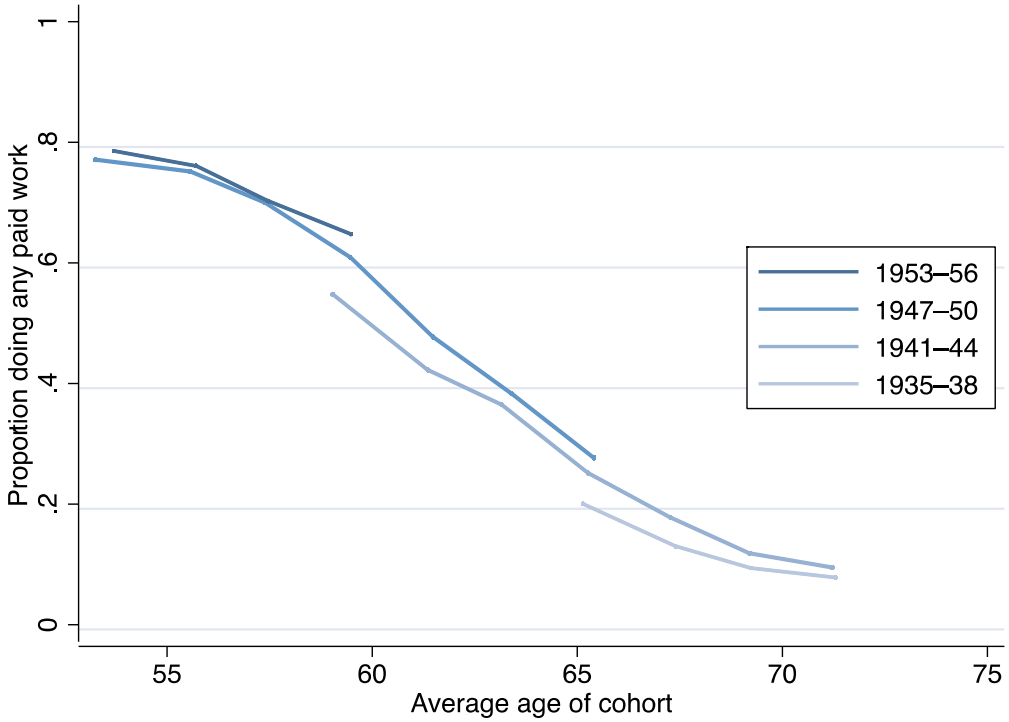
Before analysing individual labour market transitions and trajectories, we present a brief cohort-level analysis aimed at illustrating how the time trends by age group observed in the previous section can be better understood in terms of cohort and age effects, and relating these cohort and age effects in labour market participation to cohort effects in health and disability. We focus on four date-of-birth cohorts, as described in Section 2.2, which, taken together, span the distribution of generations born between 1935 and 1956. In order to make the analysis that follows as clear as possible, Figure 2.3a simply presents the age profiles of employment for each of these four cohorts, with men and women pooled together into one group for each cohort. The patterns in employment rates are clear: each cohort displays the falling profile of employment with age as individuals within that cohort gradually exit the labour market. However, there are also clear differences between cohorts observed at similar ages. Each of the four cohorts is more likely to be observed working at a given age than their predecessors, although the differences between the two most recent cohorts – those born in 1947–50 and those born 1953–56 – is smaller than those observed between earlier cohorts. In order to check that these age patterns and cohort effects are not being driven by selective attrition in the ELSA study (e.g. with those more (or less) likely to work being less (or more) likely to agree to follow-up interviews), we can also construct these cohort figures on the 'balanced panel' sample of only those individuals in each cohort who have participated in all waves of the study to date.[3] Figure 2.3b presents the same age profiles by cohort for the balanced panel sample and shows similar patterns.

Figure 2.4 plots these cohort age profiles separately for men and women, and also looks at profiles of hours and part-time work. The top panels present the profiles for the fraction in any employment and the fraction in part-time employment, while the bottom panels show profiles for the average hours of work in the cohort as a whole (lower sets of lines) and for the workers within that cohort (upper sets of lines). The top panels of Figure 2.4 show contrasting patterns for men and for women. For men, the cohort effects in overall employment rates are large amongst the oldest three cohorts – of the order of 10 percentage points – whereas there are no observable differences between the two youngest cohorts. At the same time, it can be seen that whilst part-time work rises slightly with age, these profiles also display cohort effects with each of the three older cohorts being less likely to be observed in part-time work than their younger counterparts. For women, the cohort effects are apparent across all cohorts, the fraction in part-time work declines with age and the cohort effects in part-time work are less apparent than those for any work, suggesting that younger cohorts are increasingly more likely to be observed in full-time work at a given age.

[3] More precisely, in this case we select individuals who have participated in all seven waves of ELSA for the two central cohorts that are plotted at seven different ages in the figure, and we select individuals from the oldest and youngest cohorts that have participated in all four relevant waves (i.e. waves 1–4 for the oldest cohort and waves 4–7 for the youngest cohort).

Figure 2.3. Age profiles of employment, by four-year date of birth cohort
Employment rates by age and cohort, 2002–03 to 2014–15

a) All respondents



b) Balanced panel

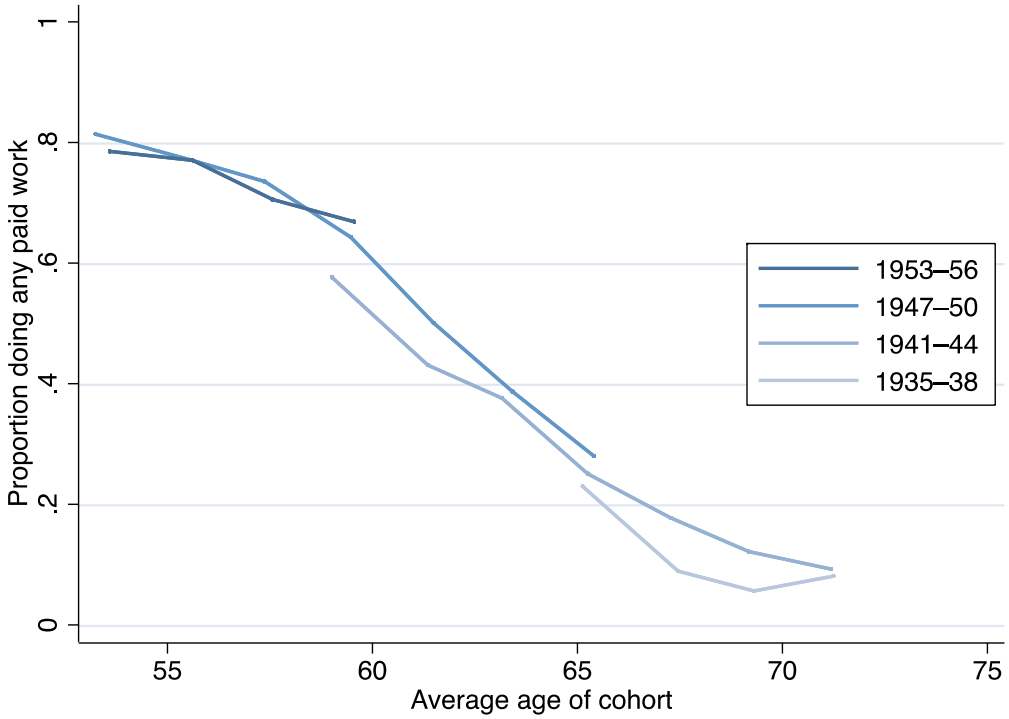
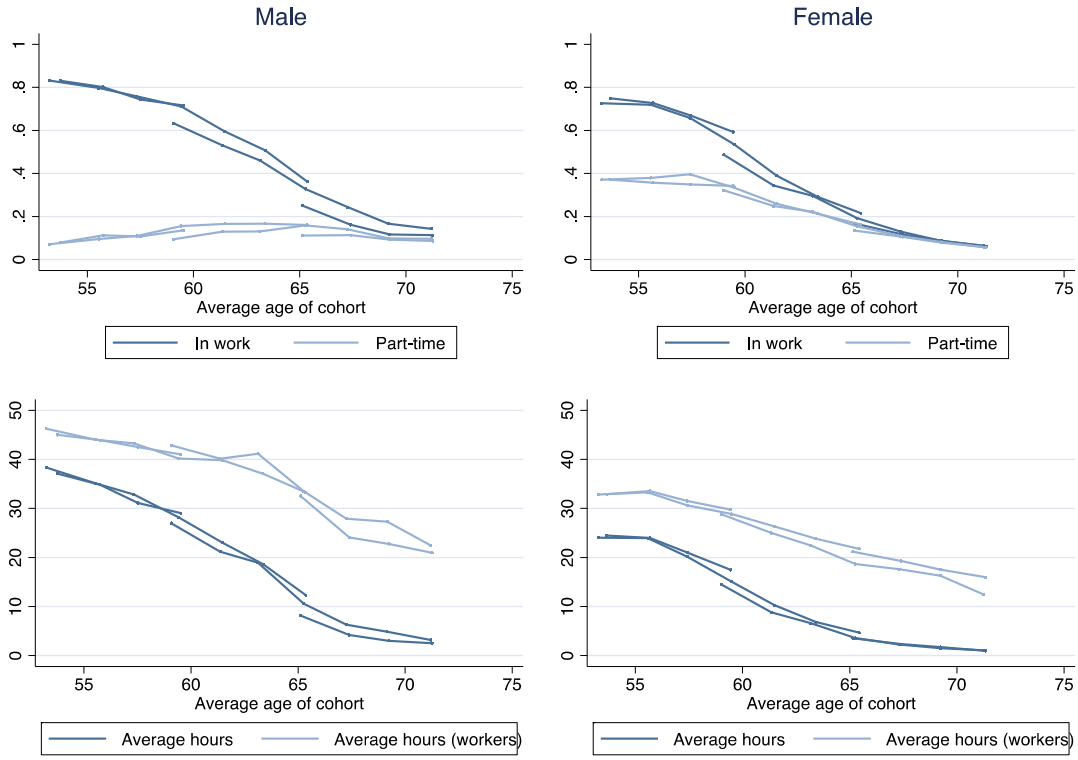


Figure 2.4. Age profiles of work and hours, by four-year date of birth cohort

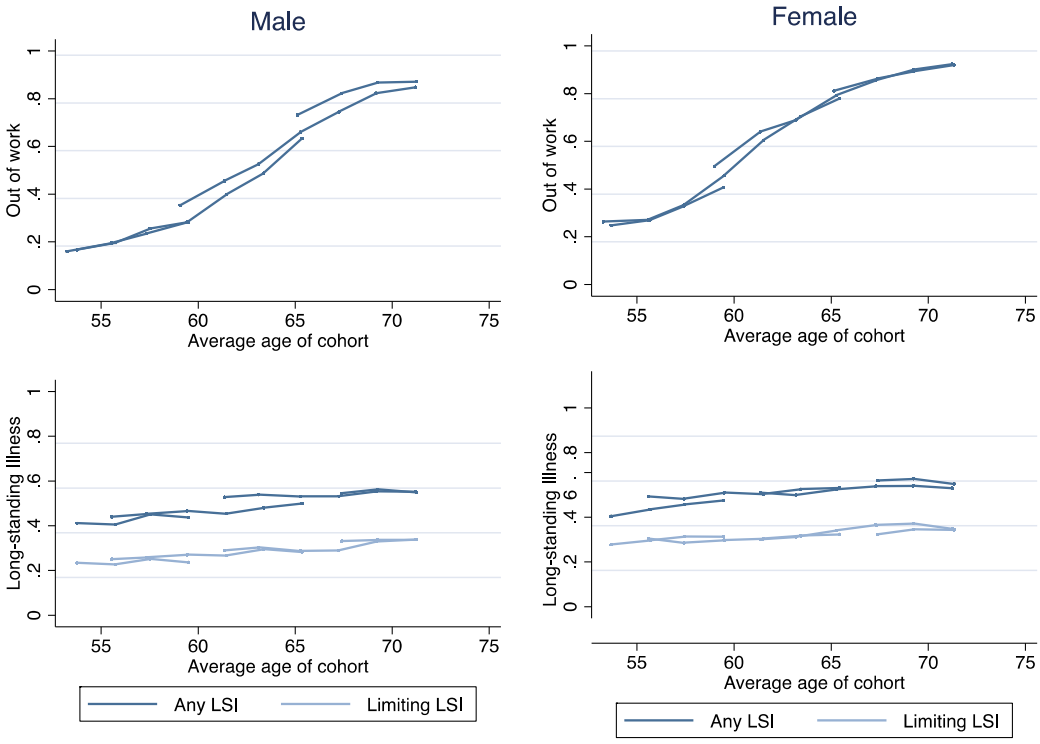


In Figure 2.5, we look at how cohort profiles in work compare to the cohort profiles for health. The upper panels of the figure plot the fraction not working, whilst the lower panels plot the fraction with any long-standing illness and those with limiting long-standing illness. Whilst one might not expect a 'one-to-one' relationship, as there have been other factors affecting the cohorts as they age, comparison of the health profiles and employment profiles suggests a simple story of health being a limiting or driving factor in labour market participation is unlikely to be able to rationalise the data.[4] Taking men as an example, the oldest two cohorts have different fractions observed out of the labour market at older ages, despite the fact that levels of long-standing illness (whether limiting or not) are similar for the two cohorts. Also, the youngest cohort has the same levels of labour market participation as their predecessor despite a lower prevalence of long-standing illness. Additionally, and more strikingly, when comparing the shapes of the age profiles for each cohort, there are marked differences between the shapes of the employment and health profiles even for ages well before, or immediately after, the SPA – as an example, the fraction out of work rises steadily between ages 54 and 62 despite there being relatively little change in health for each

[4] A full and detailed model of the causes of the increased labour market participation of older workers, and the role of improvements in health relative to other factors (and potential interaction effects between such factors) is an important topic for research but well beyond the scope of a descriptive chapter such as this. ELSA data can support such an analysis at the individual level, or cohort-level data could be used from multiple data sources, but in either case the identification of causal effects is demanding. International comparisons may offer some potential value in this respect as discussed in Wise (2016b).

cohort. For women, the cohort effects in health and in work are more aligned but the shapes of the age profiles for health and for labour market participation are still rather different.

Figure 2.5. Age profiles of out-of-work and health, by four-year date of birth cohort

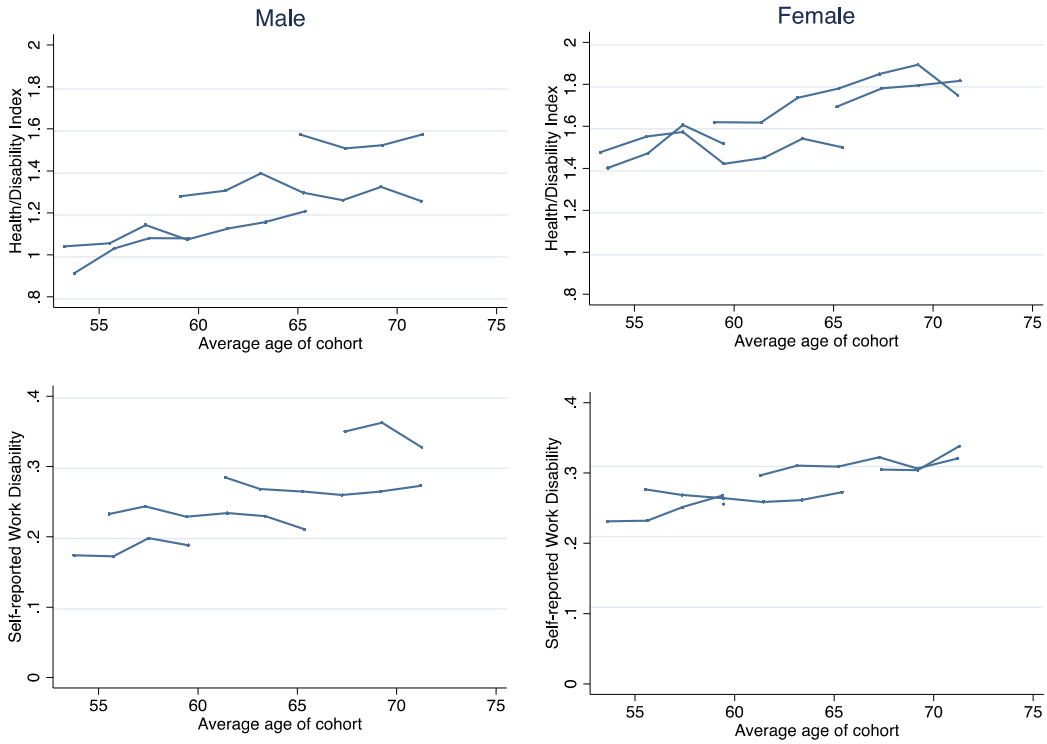


To indicate that this relationship is not simply a consequence of our choice of health measure, Figure 2.6 plots the cohort age profiles for two alternative measures of disability (each only available from wave 2 onwards), which might be thought to be even more tightly related to the ability to work. The bottom panels show the proportion of each cohort self-reporting a work disability (i.e. confirming that they have a health condition that limits the type or amount of work they can do) and the top panels plot the average level of the disability index. While the scales of the two variables are different (both to each other, and to that for long-standing illness in the previous figure), the cohort differences and age profiles show very similar patterns.

The key message from these figures – that the change in employment at older ages across and within cohorts does not appear to be caused by poor health alone – is in keeping with the findings of Banks, Emmerson and Tetlow (2016). Considering a slightly different age group (aged 55–74), they use ELSA data to estimate a 'counterfactual' employment rate for current older people, with the intention of demonstrating what employment would be seen among the group if health were the only factor affecting their employment rate. These counterfactuals are constructed using employment rates seen amongst other groups of people who could be viewed as in 'similar' health. Loosely speaking, one method uses those observed in earlier years with the same mortality rates, and a second method uses those observed in the same

year who have a similar level of health (defined by conditions including doctor-diagnoses of numerous health conditions, difficulties with mobility and activities of daily living, depressive symptoms, smoking behaviour and body mass index) but at a younger age. The precise amount of additional work capacity estimated depends on the method and comparison year chosen, but for all methods the estimates are positive and they are often large, suggesting a substantial additional work capacity amongst today's older age groups, if one is to judge capacity to work on health alone. Put differently, and in keeping with a broad interpretation of our discussion of Figures 2.5 and 2.6, whilst employment rates have increased they have not done so at a rate that has 'kept up' with improvements in health, particularly for men.

Figure 2.6. Age profiles of disability, by four-year date of birth cohort



Of course, this is not to say that all those whose health means that they *could* work *should* work: some may well prefer to choose to retire. Nor is it to say that health does not matter – the estimates of Banks, Emmerson and Tetlow (2016) also suggest that there is a significant minority (never less than 14% of those aged 55–74) for whom health does indeed limit their capacity to work. In addition, individual-level changes in health may well be associated with employment transitions and trajectories even if they are not the entire explanation. It is to the modelling of these relationships that we turn to in the next section.

2.5 Two-year employment transitions

Whilst the time trends and cohort in employment by age shown in the previous sections display interesting and important patterns, particularly when broken

down by health and wealth (as ELSA data are uniquely able to do), the real value of the ELSA data and sample design is the ability to follow individuals over time as they age. The labour market is one of the places where it is particularly important to study transitions and trajectories, so this longitudinal aspect of the data is crucial. Examples of key questions where such analysis is informative are: (i) the degree to which those in (or out) of the labour market are permanently, as opposed to temporarily, in such a state; (ii) the degree to which secular increases in labour market participation over time are due to later exits, greater re-entry at older ages, more flexibility in job-to-job transitions or changes in hours for older workers; (iii) the link between labour market transitions at older ages and self-reported retirement status, which may change at different times and for different reasons.

The analysis described in this section begins by documenting the pattern of two-year labour market transitions for five-year age groups, with analysis split by socio-economic status and health measures as in the previous sections. It also looks at how the two-year transitions are related to changes in health at different ages before moving on to look at longer (12-year) trajectories. In addition, to reflect the time trends observed in the previous analysis, we introduce another sample split and look at the differences between the first half of our sample period (2002–03 to 2008–09) and the second half (2008–09 to 2014–15). With more older workers in the labour market, there are potentially different patterns in labour market transitions in the latter part of our sample. In addition, this post-2008 period was somewhat different to the pre-2008 period in terms of the economic and institutional environment for older workers – the financial crisis and subsequent austerity and public-sector spending cuts had affected aggregate economic conditions, the nature of disability benefits was changing with the full roll out of the Employment Support Allowance replacing Incapacity Benefit, and it was also the period when the female SPA began to rise.

There are many types of labour market transitions that could be investigated, and this chapter can realistically only focus on a small subset. Because one important issue is understanding the nature of transitions for those remaining in the labour market, as opposed to just looking at entry and exit, we include a category of the transition variable to capture those who change jobs (where this is defined as any change in job – changing job but with the same employer, changing job but with a different employer, moving to self-employment from being an employee, or vice versa). When looking at the effects of changes in health, we also consider a two-dimensional transition variable combining this measure with an indicator of whether hours of work change.

Table 2A.7 describes the basic patterns in employment transitions by age in each half of our sample. As an example of how to read the table, 63.7% of men aged 50–54 observed in the 2002–03 to 2006–07 period were working in exactly the same job in both the baseline year and also when followed up two years later (i.e. in the period 2004–5 to 2008–09), 16.3% were still working but had changed job, 5.6% were working at baseline but not at follow up, 1.9% were not working at baseline but were in paid work at follow up, and 12.5% were not working in either of the two waves.

Even in this most simple of all possible descriptive analyses, we see interesting patterns emerging. A substantial fraction of older workers are moving around in the labour market (i.e. changing jobs between waves), although this fraction falls with age and is lower for women than for men. Exit rates increase with age as would be expected, and particularly rapidly so if expressed relative to the size of the three groups in work at baseline rather than the entire age group. Looking at re-entry rates, we see that roughly 2% of those aged 50–69 move into the labour market in each two-year period. Whilst this proportion is similar in absolute terms for the different age and gender groupings, it represents substantially different probabilities of moving into work for those who are out of the labour market at baseline. For example, in the first time period of the sample, 1.9 percentage points of the 14.4% of men aged 50–54 who were out of the labour market at baseline were in the labour market when followed up two years later. This represents a 13.1% probability of entry for this group compared to, say, a 4.7% probability of re-entry for men aged 60–64 in the same time period or a 2.6% probability for men aged 65–69.

Turning to the differences between the 2002–03 to 2008–09 time period and the 2008–09 to 2014–15 period, the increase in labour market participation documented in previous tables is most apparent by looking at the fraction in the 'remain out of work' group, which fell markedly for all groups over the age of 55. However, Table 2A.7 also shows that the large majority of this increase in labour market participation is a result of all age groups being more likely to stay in their jobs, rather than increased entry or reduced exit rates. Indeed, the likelihood of job-to-job transitions was actually lower for all age–gender groups in the second half of the sample. Put simply, there was more labour market participation but less labour market mobility in the second half of the sample period.

Tables 2A.8 and 2A.9 repeat this analysis (although with the whole sample treated as one time period) splitting the sample by socio-economic status – education and wealth, respectively – as well as by age and gender. Whilst there is considerable labour market mobility for all groups, the lowest socio-economic status group – those with low education or in the lowest wealth tercile – were considerably more likely to be out of work in both waves. Taking this into account, while the exit and entry rates of the lower and higher socio-economic status groups may be comparable in absolute value, in relative terms the less educated and less wealthy are less likely to re-enter the labour market if out of work, more likely to exit the labour market if in work and less likely to change jobs if in work. These differences are more marked for men than for women.

In Tables 2A.10 and 2A.11, a parallel analysis is carried about by health and disability, respectively. As with the prior cross-sectional analysis, these tables indicate that the substantive differences in labour market transitions are between those with the worst health or disability and the rest of the population; the level and nature of labour market transitions for people with mild disability or non-limiting long-standing illness are similar to those for people with no health conditions or disabilities. One would expect less labour market participation and less labour market mobility for those with the worst health, but Tables 2A.10 and 2A.11 also show that the level of labour market mobility

in these worst health groups is far from zero. As an example, of the order of 6% of men and 4% of women aged under 60 with limiting long-standing illness, and who are out of work at baseline, are observed in paid work two years later, and around 17% of the men in this group who are in work at baseline are observed to remain in the labour market but move jobs over the following two years.

Exploring this relationship in more detail, and given the potentially key role of disability in labour market transitions and the policy and scientific interest in such relationships, Tables 2A.12 and 2A.13 look at employment transitions when individuals have onsets of new disabilities and conditions rather than just classifying them according to the prevalence of existing conditions. Once again, we split the sample into first and second six-year time periods and focus only on the set of those observed in work at the baseline wave. Because we are now looking at potentially smaller groups (i.e. those with an onset of disability between waves), we need to use broader age categories in order to retain sufficient sample size. Rather than use a 10-year age split as in previous cross-sectional analysis, we instead subdivide the sample according to whether or not the individual was below the SPA at both baseline and follow-up, thus implicitly using different age breakdowns for men and women. The tables also break down the within labour market transitions not only according to whether there is a job change but also according to whether the individual is observed reducing their hours of work between waves.

Unsurprisingly, the labour market exit rate of those experiencing an onset of moderate disability is highest for all age and gender groups and this is true for both the first and the second time periods within our sample, particularly so for those under the SPA. Once again, however, we see that labour market exit rates are comparable for those with no onset of disability and those with an onset of mild disability. Even amongst those with onsets of moderate disability, the proportion who are observed remaining in work, in some form or other, is substantial. In the post-SPA age group, we see relatively more labour market mobility and changes in hours of work amongst those who do not exit than we do in the younger age groups, but this is a common feature of all the groups, not particularly apparent amongst those with particular types of disability onset.

To close this section, and motivated by the analysis above, Tables 2A.14 and 2A.15 report the findings from multivariate models of labour market transitions, which allow us to understand the independent effects of age, time, the prevalence of disability and the onset of new disabilities. We use a multinomial logit model estimated for all those observed working at the baseline wave, with the base category being defined as the individual remaining in the same job (whether at the same or different hours) two years later. The two other possible outcomes modelled are changing jobs (regardless of changing hours) and exiting the labour market entirely. The numbers reported in Tables 2A.14 and 2A.15 are the relative risk ratios from the estimated model, along with 95% confidence intervals on those risk ratios. So, as an example, a value of 1.167 for the ‘male’ variable in the ‘move jobs’ column, for example, would indicate that, holding the other variables constant, men are estimated to be 1.167 times more likely than women to be observed moving jobs (in comparison to staying in the same job).

Table 2A.14 presents estimates of this labour market transition model over the whole sample period with time dummies introduced to capture time effects in the average transition probabilities. The secular decline in both job-to-job mobility and in rates of labour market exit can be clearly seen, with the later time dummies having lower relative risk ratio in each of the outcomes of interest. Holding other things constant, men are more likely to move jobs when they cross the SPA than are women; both men and women are more likely to exit the labour market at the time when they cross the SPA age and this effect is stronger for men than for women. Those in self-employment at baseline are significantly less likely to move jobs and also significantly less likely to exit; those in part-time employment are no more or less likely to move jobs, but more likely to exit.

Finally, with regard to health, the prevalence of poor health or disability is not associated with an increased likelihood of moving jobs although the onset of new disabilities is correlated with around a 30% increase in the chance that individuals move jobs.[5] The relationship between health and exit is stronger however – those in work who already have poor health or moderate disability are more likely to be observed leaving work, and those with the onset of new disabilities or limiting long-standing illnesses have a substantially increased likelihood of labour market exit.

Table 2A.15 splits this analysis by the two broad time periods within our sample to examine whether the SPA, health and disability coefficients are different in each part of the sample. Whilst many patterns are the same, there is no difference between men and women in the types of transition that happen when crossing the SPA in the second half of the sample. In addition, the association of health with both job movements and labour market exits is weaker in the later time period, both in terms of the magnitudes of the relative risks associated with these variables and the statistical significance of the estimated effects.

Hours transitions and job changes

To conclude our analysis of two-year transitions, we move away from the focus on exit from the labour market and movements from job to job, and consider instead the factors associated with changes in hours worked for those who remain in the labour market. As discussed previously, if older workers would prefer to work fewer or more flexible hours, because of their health conditions, caring responsibilities or for any other reason, then it is interesting to know the extent to which such changes can be accommodated, either within existing jobs or by changing jobs whilst staying in the labour market.

In order to investigate the correlations between job and hours transitions in more detail, we switch to a multivariate descriptive framework. This will allow us to examine the differences, both between subgroups and between types of job changes, whilst controlling for other potential confounding variables, and it will also allow us to investigate the statistical significance of the various effects. We draw on a specification originally implemented by

[5] This measure of onset treats each one element of the disability index equally. More detailed research could consider the onset of disabilities individually to see which ones, if any, were more associated than others.

Blundell, Brewer and Francesconi (2008) in their study of labour supply adjustments of single parents in the UK. More specifically, we regress an indicator variable capturing whether an individual reduces their hours of work between waves on indicator variables capturing job changes, employer changes, movements to self-employment, and a set of covariates capturing demographic circumstances, education, wealth, health and disability, the physical nature of the baseline job, and a complete set of time dummies. We estimate the model for the ELSA sample as a whole and then for various subsamples in order to investigate potential interactions between the job transition variables and other covariates.

Table 2A.16 presents the series of models, each estimated on the sample (or relevant subsample) of individuals who are observed working at both baseline and follow-up two years later.[6] The first column of the table shows that, other things equal, those moving jobs are 12 percentage points more likely to reduce their hours worked than those who do not move jobs. Those who move jobs and simultaneously change employer are 18 percentage points more likely to reduce hours worked, and for those moving to self-employment that difference is 24 percentage points.

The strong association between moving job and changing hours of work is present for all different types of sample in other columns of the table, although the coefficients are larger for those in the worst health. The 'additional' effects of employer or self-employment changes vary according to which type of sample is considered but are less apparent for the poor health samples. Looking at other coefficients in the table, which relate to on-the-job reductions in hours (i.e. holding employment transitions constant), there is evidence of hours of work changing when individuals cross the SPA; similarly, those with the highest levels of education and wealth are also more likely to reduce their hours worked in their current job than are those with lower socio-economic status. Finally, those in the most physically demanding jobs show a higher likelihood of reducing hours between waves whilst remaining in the same job. In the spirit of Blundell, Brewer and Francesconi (2008), we can interpret these models as being related to hours flexibility on the job – the relative lack of significant effects on health and disability variables, and the relative importance of the job transition variables, suggests that those with poor health or disability do not have much opportunity to reduce their hours without changing jobs.

2.6 Twelve-year retirement trajectories

Rather than pool all two-year transitions together, the ongoing follow-up longitudinal design of ELSA also allows us to group transitions by respondent and to create 12-year trajectories of labour market participation that can be characterised into different types as these individuals move through the retirement age window. With only a 12-year survey period, there is a limit to

[6] The specification reported here uses an indicator variable taking the value 1 if hours were reduced by five or more per week, and 0 otherwise. Qualitatively similar results are found using different thresholds for changes in hours, or indeed using a continuous measure of changes in hours, so such models are not presented here.

how granular or definitive such an analysis can be, so we focus on one particular age group – those who were aged 50–59 in ELSA wave 1 (2002–03), and who were followed up in each subsequent wave such that they were aged 62–71 in wave 7 (2014–15). As this is the balanced panel, we observe seven potential labour market transitions for each individual, which can then be used to characterise different types of long-run trajectory.[7]

The distribution of long-run trajectory types is summarised in Table 2A.17. Taking men as an example, 14% of men in this cohort were out of work for the entire 12-year period, 25.9% were in work for the whole period and, of that group, 15.4 percentage points (i.e. 59.4%) changed jobs at some point in the 12-year window. Almost half the group exited work over the period, and of that half almost 20 percentage points exited work having changed jobs at some point prior to exiting. Finally, 11% of the group displayed what we call a 'complex' trajectory, i.e. involving entry into the labour market at some point, possibly combined with job changes or labour market exits at other points in the 12-year window. In comparison, amongst women we see high fractions out of work in all periods and lower fractions in the mobility groups (i.e. those changing jobs whilst staying in the labour market or changing jobs prior to exiting the labour market).[8]

Figures 2.7, 2.8 and 2.9 illustrate the distribution of these trajectory types by baseline levels of education, disability and wealth with analysis done separately for men and women. Taken as a group, these figures show that the longer labour market trajectories are characterised by greater differences between the groups than are the shorter two-year transitions presented in the previous section, albeit with such differences being qualitatively similar to those observed in the two-year transitions. One can immediately see the increased job-to-job mobility in the better-off groups of men with higher education or wealth, the sharp differences in 'always out of work' across the wealth and health distributions and the relatively lower labour market mobility of women compared to men with similar levels of health, wealth or education. Rather surprisingly, the fraction with complex trajectories including some kind of re-entry to the labour market in the 12-year period is somewhat similar – around 10 percentage points – across all of the various subgroups; this is not a characteristic particularly common (or uncommon) to different types of older worker.

[7] Note that these trajectories will still be affected by 'right censoring', i.e. the fact that later ages have not been observed for all individuals yet and such ages may in future yield returns to work or (more likely) exits and/or job transitions. As such, this is an incomplete picture of the full retirement trajectory of this group but one that is still considerably better than looking at shorter transitions or trajectories, and will get better as the ELSA study continues. Given that we want to break down the sample by education, wealth and health, however, it is not sensible to use a smaller but more homogeneous age group, such as the 55–59 age group, where there would be (potentially) less right censoring.

[8] Whilst the analysis here focuses on a 10-year birth cohort for reasons of sample size when considering subgroupings of the cohort, it is also possible to focus on smaller date-of-birth windows when considering fewer covariates and hence focus more tightly on a group around retirement age. For example, if one were to look just at the five-year cohort of those aged 62–66 in 2014, who will have been observed since age 50–54 in 2002–03, one finds that only 8.7% of men and 16.4% of women (12.9% overall) have never worked over the 12-year period.

Figure 2.7. Distribution of employment trajectory types by gender and education, 2002–03 to 2014–15

Individuals aged 50–59 in 2002–03

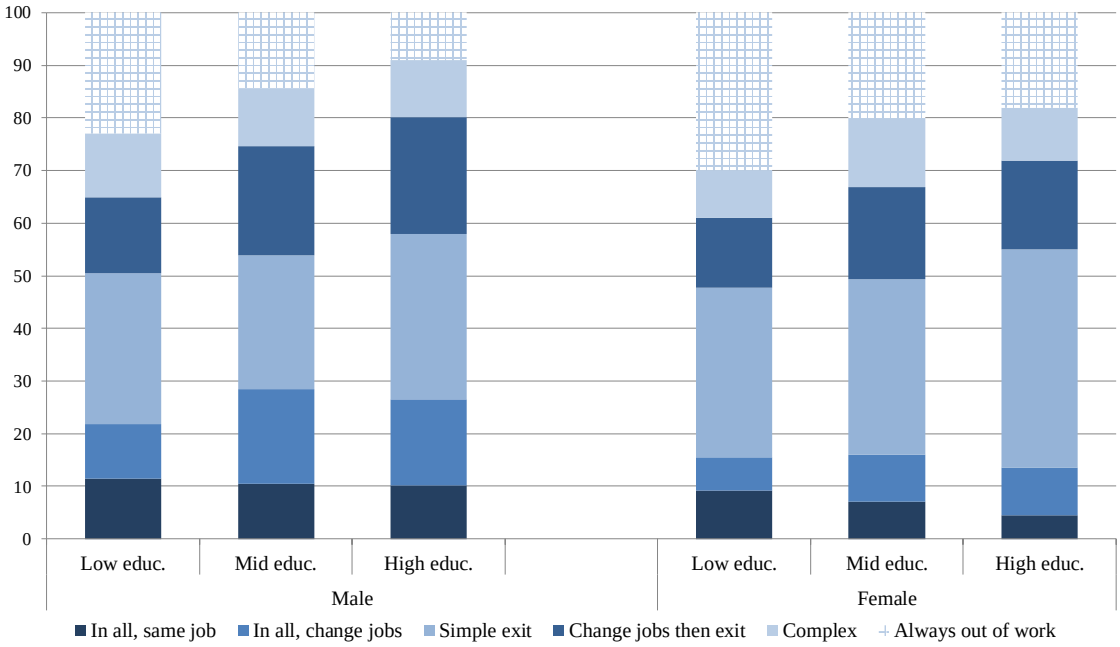


Figure 2.8. Distribution of employment trajectory types by gender and initial wealth level, 2002–03 to 2014–15

Individuals aged 50–59 in 2002–03

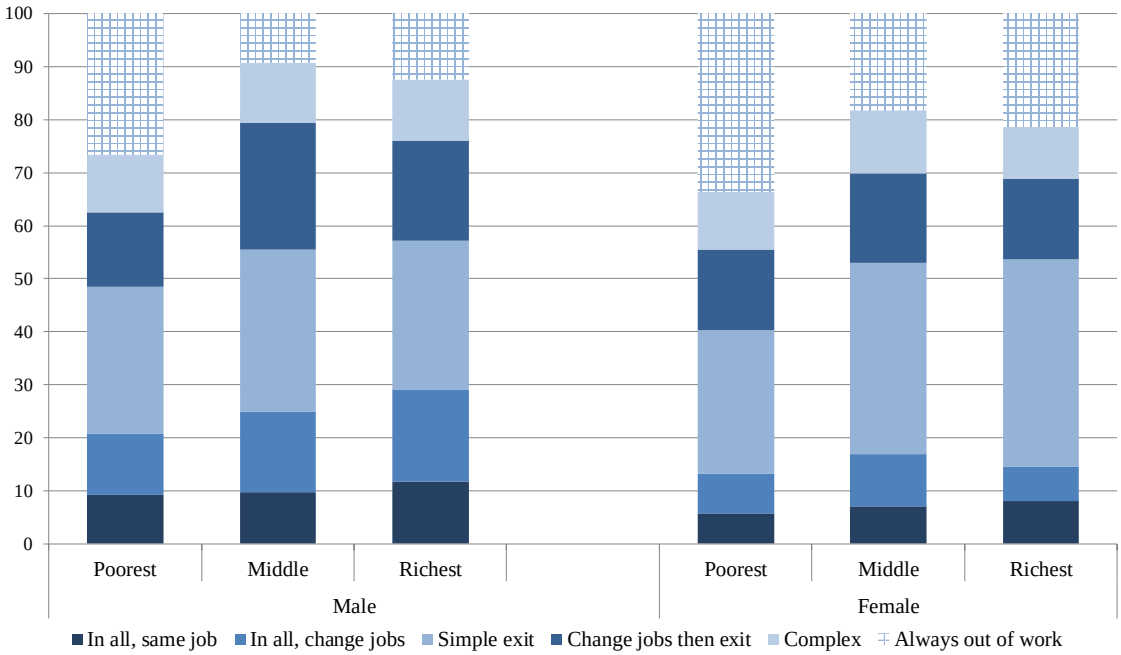
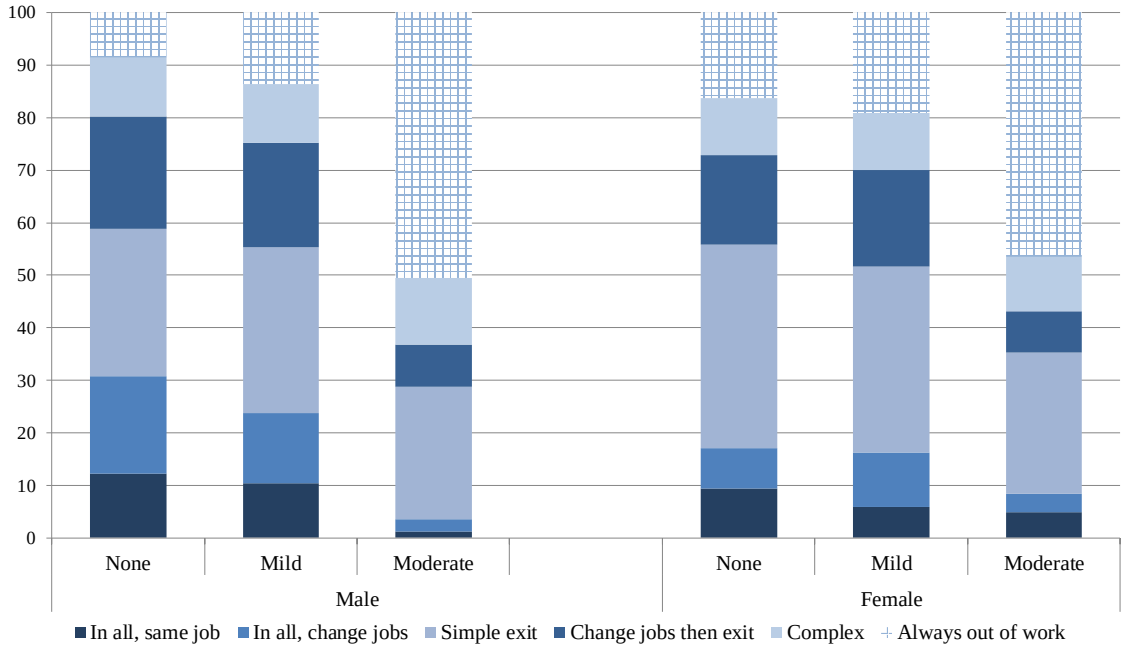


Figure 2.9. Distribution of employment trajectory types by gender and initial disability level, 2002–03 to 2014–15
Individuals aged 50–59 in 2002–03



Focusing further on Figure 2.9, which shows the breakdown by baseline disability level, the groups with mild and moderate disabilities at baseline (ages 50–59) are perhaps of particular policy interest. Once again, the difference between these two groups is immediately apparent. The vast majority (86% of men and around 80% of women) of those with mild disabilities are in work at some point over the 12-year period. In comparison, around half of those with moderate or worse disabilities are never in paid work over the 12-year period. Nevertheless, this indicates that half of those with such disabilities are observed working at some point in the 12-year window, with a substantial number of those observed to enter the labour market having previously been out of work. Finally, for those with moderate or worse disabilities, we actually see higher fractions of women than men being 'permanently' in work.

Looking at these trajectories slightly differently, we can consider how many of this cohort move into retirement in what might be called the traditional way – holding a single job from their 50s onwards and then exiting the labour market entirely – as opposed to displaying a trajectory with some kind of job transition and/or movement back into the labour market at these older working ages. Such an analysis can only be incomplete given that we do not observe the entire trajectory for the cohort, but we proceed by first restricting the sample to just those in the cohort who are observed in work at some point in the 12-year period. We then define as 'traditional' trajectories those who have the same job in all waves and those who have the same job prior to a single labour market exit. The remaining groups – those changing jobs, those

changing jobs and then exiting, and those with some re-entry – are labelled as 'non-traditional' trajectories.[9]

Table 2A.18 shows how the cohort divides into the 'traditional' and 'non-traditional' retirement trajectory types. On average, around half the cohort are in each group – demonstrating once more the degree of labour market mobility amongst older workers in their 50s and older as they approach their retirement. The fraction in the non-traditional group is higher for married men, those in the medium education group, full-time employees and those with no disabilities at baseline. The non-traditional group is correspondingly smaller for the other types of individuals, particularly so for married women, those with low education, and those observed in part-time work and in self-employment at baseline. Put differently, these latter groups are more likely to remain in their current jobs rather than move around prior to retirement.

As many of these factors may be correlated, Table 2A.19 presents a related multivariate analysis of the same data. We estimate two logistic models for whether the retirement trajectory is non-traditional, with and without the disability variables, and the table presents odds ratios and associated confidence intervals. Few of the variables are significant, suggesting that, when controlling for other factors, the non-traditional retirement trajectories (and, by extension, the traditional retirement trajectories) are equally likely across many of the wealth, education and health groups. The only exceptions are those in the lowest education group (less than O levels) and those initially in self-employment or part-time work, who are all significantly less likely to move jobs or move in and out of the labour market at older ages.

2.7 Conclusions

The evidence in this chapter has shown large increases in labour market participation at older ages in England over the last 12 years, and these increases have not been particularly due to increases in certain groups, or in particular types of work. As always, looking deeper into the data tells a more nuanced story. Hours of work have not increased as much as participation, particularly so for certain groups of older workers, and despite trends in participation being positive for all groups, there are still large and systematic differences in both the probability and the nature of work between individuals with different characteristics. Such differences across types of individual are also particularly apparent when looking at labour market transitions and labour market mobility. For many types of older working-age individuals, labour market trajectories are now considerably more complex than the traditional model (of working in the same job after age 50 and then retiring and doing no further work) might suggest. Also, the nature and patterning of labour market transitions and mobility at older ages seem to have changed between the first

[9] These are only imperfect estimates due to the censored nature of the trajectories but we can hypothesise about the potential biases. Individuals in the traditional group may move jobs in the future prior to exiting, or might re-enter in the future. In both cases, these individuals would end up with non-traditional trajectories, whereas it is impossible for an individual in the non-traditional group to move the other way. So, in this sense, the traditional group as currently defined is actually an overestimate of the true final outcome.

and second halves of the sample period over which the ELSA study has been carried out to date.

The analysis in this chapter has been entirely descriptive, even if multivariate frameworks and models have been used in places. However, given the prior absence of data such as these in England, we feel it still provides considerable insight into the nature of labour market outcomes for older workers in England in recent years. The analysis paints a general picture of considerable labour market flexibility and activity, albeit one in which there are substantial inequalities. The natural next step will be for researchers to move on to investigate more specific research questions relating to the causes or consequences of the employment changes documented here. Having more tightly defined questions will also allow (and require) researchers to work with more granular samples and empirical specifications and to use the detailed ELSA data to create specific measures of health, disability and pension arrangements relating to the hypotheses in question and the mechanisms to be studied. The descriptive analysis shown here has pointed to the potential for the ELSA data, when coupled with the institutional and time trends in England, to provide a strong basis for such research. As the ELSA study continues, its value in this dimension will only increase – future waves of ELSA will bring more time periods to look at, more cohorts to compare with their predecessors at similar ages, more transitions and longer trajectories within each cohort, all of which will add to our understanding of this hugely important set of issues.

Acknowledgements

The author is grateful to the US National Institute on Aging and the consortium of UK government funders for funding the ELSA study. Co-funding for this particular research is also gratefully acknowledged from the Economic and Social Research Council (ESRC) through the Centre for the Microeconomic Analysis of Public Policy at the Institute for Fiscal Studies, grant number RES-544-28-5001. The author is grateful to Rowena Crawford, Carl Emmerson, Zoë Oldfield and representatives from the Department for Work and Pensions for helpful comments and discussions. Responsibility for any errors is the author's alone.

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Appendix 2A

Tables on employment and labour market transitions

Table 2A.1. Distribution of disability index

Number of indicators	Male, aged 50–69	Female, aged 50–69	All, aged 50–69
None			
0	*51.3*	*41.5*	*46.0*
Mild			
1	23.0	23.3	23.1
2	9.7	12.5	11.2
	32.7	*35.8*	*34.4*
Moderate			
3	5.3	7.4	6.4
4	3.2	4.8	4.1
5	2.4	3.7	3.1
6	3.2	4.8	4.1
7	2.4	3.7	3.1
8+	1.6	2.1	1.9
	18.0	*26.6*	*22.6*
	100.0	*100.0*	*100.0*

Table 2A.2. Proportion of workers in any paid work or in part-time work, 2002–03 to 2014–15: by age and gender

Year	Male					Female				
	50–54	55–59	60–64	65–69	Male 50–69	50–54	55–59	60–64	65–69	Female 50–69
(a) In any paid work										
2002–03	83.5	72.8	47.5	15.9	58.9	75.5	61.1	29.7	13.0	48.0
2004–05	83.0	74.0	51.0	17.7	56.0	73.5	66.3	30.8	12.5	44.8
2006–07	87.2	75.6	55.6	18.0	61.4	78.3	66.4	35.2	12.1	49.4
2008–09	83.6	77.3	55.9	23.1	62.2	73.9	66.2	5.6	14.1	48.8
2010–11	79.7	76.7	56.0	24.0	57.2	74.4	68.4	35.7	14.3	44.3
2012–13	85.2	74.0	56.8	26.8	62.3	76.7	70.6	38.0	15.9	51.5
2014–15	85.3	80.1	58.8	27.2	64.8	81.5	66.7	42.6	17.9	54.1
(b) In part-time work										
2002–03	8.1	12.4	23.9	63.7	15.4	52.8	57.2	75.6	89.4	59.6
2004–05	7.6	15.0	26.4	71.0	20.2	50.9	57.2	75.9	91.1	61.4
2006–07	9.9	13.3	25.4	68.3	18.3	49.3	61.8	71.3	90.2	60.7
2008–09	11.3	15.6	27.9	66.4	21.1	47.2	55.8	75.5	88.9	59.1
2010–11	9.0	17.0	27.5	62.1	24.4	48.9	53.9	72.2	88.1	61.1
2012–13	9.6	14.8	28.5	58.0	20.1	47.6	53.5	72.7	85.2	57.0
2014–15	12.1	12.6	28.0	57.9	19.9	50.4	56.4	69.4	81.1	58.0

Table 2A.3. Average weekly hours of work (all jobs/all jobs, workers only), 2002–03 to 2014–15: by age and gender

Year	Male					Female				
	50–54	55–59	60–64	65–69	Male 50–69	50–54	55–59	60–64	65–69	Female 50–69
(a) All jobs										
2002–03	38.5	32.4	19.4	4.7	25.7	25.2	19.2	8.2	2.6	14.9
2004–05	37.1	32.2	19.8	5.1	23.3	25.0	21.2	7.7	2.5	13.6
2006–07	39.6	32.7	22.5	5.0	26.0	26.5	20.3	8.7	2.4	14.9
2008–09	37.3	32.5	22.0	6.3	25.5	24.8	21.0	9.7	2.6	14.9
2010–11	33.3	32.7	22.3	7.2	23.1	25.2	22.3	9.5	2.9	13.3
2012–13	38.1	32.6	22.0	8.8	26.2	26.1	22.7	10.0	3.4	16.0
2014–15	35.9	34.0	23.0	8.5	26.3	27.5	21.4	11.5	3.9	16.8
(b) All jobs, workers only										
2002–03	46.0	44.4	39.7	28.9	43.4	33.1	30.6	25.8	17.6	30.3
2004–05	44.4	43.1	38.6	25.7	41.1	33.8	31.6	24.2	18.5	29.9
2006–07	45.2	43.1	40.5	25.6	42.1	33.6	30.3	24.4	18.1	29.8
2008–09	44.7	42.0	39.2	26.9	40.9	33.5	31.5	26.6	17.8	30.4
2010–11	41.8	42.5	39.7	28.9	40.2	33.9	32.3	25.6	19.4	29.6
2012–13	44.6	43.9	38.2	31.3	41.7	33.9	32.0	25.9	20.6	30.8
2014–15	42.0	42.3	38.5	30.0	40.2	33.7	31.9	26.8	21.2	31.0

Table 2A.4. Proportion in any paid work by age, gender and education level

Year	Male					Female				
	50–54	55–59	60–64	65–69	Male 50–69	50–54	55–59	60–64	65–69	Female 50–69
Low education										
2002–03	79.4	64.8	45.1	11.6	48.2	66.8	55.7	26.5	10.7	39.2
2004–05	78.8	68.5	45.6	12.9	46.5	64.5	61.1	26.6	11.8	37.0
2006–07	76.7	64.5	43.7	14.0	46.8	65.7	56.5	30.7	9.2	37.6
2008–09	75.6	68.5	48.4	18.2	51.1	60.2	54.7	28.9	11.5	36.5
2010–11	77.9	66.8	50.8	19.3	48.7	70.1	58.8	28.2	14.2	35.6
2012–13	75.2	71.0	55.6	23.6	54.3	61.3	63.8	34.0	15.7	40.6
2014–15	77.4	80.0	55.5	25.8	57.9	65.6	59.8	44.9	15.1	43.2
Medium education										
2002–03	81.3	75.2	50.6	21.8	63.9	80.0	64.4	31.9	19.4	57.1
2004–05	82.2	72.3	57.3	24.1	60.6	74.0	67.3	33.1	10.4	50.4
2006–07	89.8	74.9	65.4	19.6	66.4	80.7	71.7	34.9	13.2	56.2
2008–09	85.0	76.6	58.3	29.7	66.8	77.5	69.6	41.2	17.4	56.4
2010–11	82.0	81.0	60.6	29.5	63.1	74.3	72.3	41.0	14.3	49.9
2012–13	82.8	67.9	58.0	26.4	62.9	77.4	72.5	41.3	15.9	55.6
2014–15	84.8	80.9	60.5	29.1	66.0	85.9	72.4	40.7	21.4	59.4
High education										
2002–03	88.4	80.4	49.3	21.7	68.9	84.7	69.5	36.2	15.0	58.7
2004–05	86.5	80.8	54.6	21.3	64.1	87.6	74.9	39.6	17.5	56.2
2006–07	91.0	82.4	60.1	21.6	69.0	87.9	72.6	42.9	18.5	59.8
2008–09	89.3	83.9	62.6	25.3	69.2	86.1	76.9	40.6	16.9	59.6
2010–11	78.6	81.6	57.5	25.9	61.1	79.6	76.8	42.0	14.4	51.2
2012–13	91.1	80.8	57.5	30.5	68.1	88.0	77.1	39.1	16.1	60.5
2014–15	91.1	79.8	61.6	28.1	65.0	92.3	67.3	42.2	18.2	55.0

Table 2A.5. Proportion in any paid work by age, gender and marital status

Year	Male					Female				
	50–54	55–59	60–64	65–69	Male 50–69	50–54	55–59	60–64	65–69	Female 50–69
Single										
2002–03	66.0	55.1	38.0	9.5	43.7	70.4	59.0	30.9	13.4	42.2
2004–05	61.9	56.8	41.1	15.3	41.8	70.9	59.1	31.8	9.6	38.0
2006–07	65.0	59.8	39.8	11.5	44.4	73.3	57.1	31.3	11.8	42.7
2008–09	67.3	61.1	40.6	19.0	48.2	73.6	60.0	32.5	17.5	45.0
2010–11	57.1	52.0	43.9	19.7	41.9	67.9	65.0	34.2	17.3	42.7
2012–13	68.8	56.0	41.3	16.3	48.5	63.2	72.1	32.0	16.8	47.3
2014–15	63.4	63.8	41.2	15.5	49.4	72.9	63.7	41.7	20.1	50.1
Married										
2002–03	87.0	76.9	49.7	17.6	62.4	77.0	61.7	29.3	12.8	50.0
2004–05	87.1	77.9	53.2	18.4	59.4	74.2	68.4	30.5	13.9	47.1
2006–07	92.8	79.1	59.3	20.0	65.6	80.1	69.2	36.5	12.3	51.9
2008–09	88.6	80.9	59.7	24.2	65.8	74.0	68.1	36.7	12.5	50.2
2010–11	88.4	82.7	58.9	25.1	61.1	76.2	69.6	36.2	13.1	44.8
2012–13	89.9	80.4	60.0	29.5	66.1	81.9	70.0	40.1	15.6	53.0
2014–15	91.8	85.6	63.0	30.1	69.1	84.0	67.9	43.0	17.1	55.6

Table 2A.6. Proportion in paid work, 2002–03 to 2014–15: by age, gender and health

Year	Male					Female				
	50–54	55–59	60–64	65–69	Male 50–69	50–54	55–59	60–64	65–69	Female 50–69
No long-standing illness										
2004–05	91.5	89.5	63.0	23.0	69.7	80.0	77.2	38.8	15.6	54.7
2006–07	93.6	87.9	66.0	22.4	72.7	88.2	78.0	46.7	16.7	62.1
2008–09	91.4	86.5	67.1	31.2	73.7	84.9	79.3	44.1	20.3	60.9
2010–11	87.3	88.0	70.0	30.8	70.2	87.2	80.2	42.8	20.9	55.2
2012–13	95.2	84.1	68.9	34.1	75.2	85.1	81.2	44.5	19.7	61.5
2014–15	93.0	86.1	69.3	35.5	75.4	87.1	78.3	50.8	21.0	64.1
Has long-standing illness, not limiting										
2004–05	94.0	85.7	59.5	19.7	63.1	81.6	75.7	40.0	14.3	50.2
2006–07	92.9	86.7	66.1	24.8	68.6	81.7	81.4	32.5	13.2	53.1
2008–09	94.3	90.0	68.4	25.3	70.1	79.5	72.4	41.4	12.5	51.9
2010–11	89.0	85.2	60.1	23.0	59.8	91.0	77.7	40.5	14.2	48.9
2012–13	89.5	86.1	57.2	27.4	63.9	85.0	86.5	41.3	16.6	54.7
2014–15	92.3	90.0	63.0	31.3	69.2	88.6	78.7	46.8	17.8	55.6
Has limiting long-standing illness										
2004–05	51.8	38.3	25.6	10.0	28.5	49.2	44.8	14.4	7.7	26.9
2006–07	62.6	44.7	34.8	6.6	36.0	52.4	34.9	18.3	6.6	26.1
2008–09	57.0	49.3	31.5	11.2	36.6	47.4	40.1	19.3	7.3	27.9
2010–11	49.8	43.6	32.1	15.3	32.0	40.1	40.9	21.5	6.4	24.5
2012–13	46.8	45.1	36.0	16.6	35.1	53.8	42.2	26.2	10.5	32.6
2014–15	46.9	57.2	32.9	11.9	35.5	62.2	42.1	26.0	14.1	35.5

Table 2A.7. Two-year employment transitions, by age, gender and broad time period, 2002–03 to 2014–15

		2002–03 to 2008–09			2008–09 to 2014–15		
		Male	Female	All	Male	Female	All
Age 50–54	Remain in same job	63.7	57.5	60.3	64.8	62.0	63.3
	Change job	16.3	14.1	15.1	14.5	10.5	12.3
	Exit paid work	5.6	5.7	5.6	4.9	5.0	5.0
	Enter paid work	1.9	2.6	2.3	2.1	2.1	2.1
	Remain out of work	12.5	20.1	16.7	13.7	20.4	17.4
Age 55–59	Remain in same job	54.1	42.8	47.9	59.5	50.8	54.7
	Change job	13.2	9.1	10.9	8.7	7.0	7.8
	Exit paid work	8.0	12.9	10.7	9.2	11.6	10.5
	Enter paid work	2.6	2.0	2.3	3.0	1.8	2.4
	Remain out of work	22.2	33.2	28.2	19.6	28.7	24.7
Age 60–64	Remain in same job	29.1	18.4	23.3	36.3	22.8	28.8
	Change job	8.0	4.5	6.1	6.5	2.7	4.4
	Exit paid work	14.7	10.1	12.2	15.2	11.8	13.3
	Enter paid work	2.3	2.0	2.2	1.8	2.1	2.0
	Remain out of work	45.9	65.1	56.2	40.2	60.6	51.5
Age 65–69	Remain in same job	9.1	6.4	7.7	16.8	9.1	12.7
	Change job	2.1	1.5	1.8	1.7	0.8	1.2
	Exit paid work	7.5	4.9	6.1	8.5	5.7	7.0
	Enter paid work	2.1	1.3	1.6	1.6	0.9	1.2
	Remain out of work	79.1	86.0	82.8	71.3	83.5	77.9

Note: Columns may not sum to 100 due to rounding. Sample is all individuals aged 50–69 in ELSA waves 1–6 who were also observed in the subsequent wave two years later. ‘Change job’ is defined as moving to a new job with the same employer, moving to a new employer or moving between employee and self-employed.

Table 2A.8. Two-year employment transitions, by age, gender and education, 2002–03 to 2014–15

		Low education		Medium education		High education	
		Male	Female	Male	Female	Male	Female
Age 50–54	Remain in same job	59.1	50.0	61.4	60.3	68.6	66.7
	Change job	12.7	10.2	18.5	14.0	15.5	14.7
	Exit paid work	6.0	6.2	4.0	5.1	6.1	5.1
	Enter paid work	2.1	2.7	1.6	2.5	1.9	2.1
	Remain out of work	20.2	31.0	14.6	18.2	7.8	11.4
Age 55–59	Remain in same job	50.8	40.0	55.3	49.1	61.5	52.3
	Change job	9.3	7.6	11.7	8.7	11.9	8.0
	Exit paid work	8.0	11.1	8.3	12.0	9.0	14.3
	Enter paid work	2.4	2.0	3.7	2.1	2.4	1.7
	Remain out of work	29.5	39.3	20.9	28.1	15.1	23.7
Age 60–64	Remain in same job	30.4	17.7	36.9	23.2	33.4	23.4
	Change job	5.2	2.5	6.6	3.5	9.1	4.9
	Exit paid work	14.4	9.6	15.1	11.8	15.4	12.5
	Enter paid work	1.5	1.8	2.2	1.7	2.3	3.0
	Remain out of work	48.4	68.5	39.2	59.8	39.9	56.2
Age 65–69	Remain in same job	10.1	6.9	14.3	8.0	16.2	9.5
	Change job	1.3	1.0	2.7	1.2	2.1	1.3
	Exit paid work	7.1	4.6	9.4	5.7	8.1	6.5
	Enter paid work	1.3	0.9	1.7	1.1	2.6	1.2
	Remain out of work	80.2	86.6	71.9	83.9	71.0	81.4

Note: Columns may not sum to 100 due to rounding. Sample is all individuals aged 50–69 in ELSA waves 1–6 who were also observed in the subsequent wave two years later. ‘Change job’ is defined as moving to a new job with the same employer, moving to a new employer or moving between employee and self-employed.

Table 2A.9. Two-year employment transitions, by age, gender and wealth, 2002–03 to 2014–15

		Poorest		Middle		Richest	
		Male	Female	Male	Female	Male	Female
Age 50–54	Remain in same job	53.9	48.9	68.7	65.4	68.2	62.8
	Change job	12.5	12.6	18.7	14.8	15.7	11.4
	Exit paid work	5.3	4.3	5.7	6.2	5.2	5.9
	Enter paid work	1.9	3.3	1.8	1.8	2.0	2.2
	Remain out of work	26.4	30.9	5.1	11.8	9.0	17.7
Age 55–59	Remain in same job	47.4	41.9	62.8	49.6	58.8	48.5
	Change job	9.2	7.4	12.3	9.2	11.5	7.6
	Exit paid work	6.6	10.5	10.0	13.2	8.8	13.1
	Enter paid work	2.8	1.7	2.2	2.1	3.3	1.9
	Remain out of work	33.9	38.5	12.8	25.8	17.6	28.9
Age 60–64	Remain in same job	28.7	19.5	36.7	20.9	33.9	22.4
	Change job	5.3	3.1	8.3	3.0	7.8	4.2
	Exit paid work	12.5	8.4	17.2	13.2	15.0	11.4
	Enter paid work	2.0	1.8	2.2	2.2	2.0	2.2
	Remain out of work	51.5	67.2	35.6	60.7	41.4	59.7
Age 65–69	Remain in same job	8.9	6.2	12.3	7.5	18.1	9.9
	Change job	1.4	0.6	2.5	1.3	1.8	1.4
	Exit paid work	6.6	4.7	9.2	5.0	8.2	6.2
	Enter paid work	1.8	0.7	1.4	1.1	2.3	1.4
	Remain out of work	81.3	87.8	74.6	85.2	69.6	81.0

Note: Columns may not sum to 100 due to rounding. Sample is all individuals aged 50–69 in ELSA waves 1–6 who were also observed in the subsequent wave two years later. Wealth groups are defined within each five-year age band. ‘Change job’ is defined as moving to a new job with the same employer, moving to a new employer or moving between employee and self-employed.

Table 2A.10. Two-year employment transitions, by age, gender and health, 2004–05 to 2014–15

		No long-standing illness		Long-standing illness, not limiting		Long-standing illness, limiting	
		Male	Female	Male	Female	Male	Female
Age 50–54	Remain in same job	70.8	69.2	70.9	61.0	43.8	37.7
	Change job	16.1	13.1	18.2	18.0	8.5	8.9
	Exit paid work	5.5	4.3	3.0	4.2	6.0	7.6
	Enter paid work	2.0	2.3	1.4	2.7	3.5	2.2
	Remain out of work	5.5	11.2	6.4	14.1	38.2	43.7
Age 55–59	Remain in same job	67.3	57.8	64.7	56.3	32.0	27.5
	Change job	12.2	9.6	12.7	9.1	8.0	4.2
	Exit paid work	8.3	12.2	8.7	12.9	7.1	10.9
	Enter paid work	2.4	2.0	2.8	1.6	3.1	1.7
	Remain out of work	9.8	18.5	11.1	20.0	49.8	55.6
Age 60–64	Remain in same job	42.6	28.1	39.2	23.4	18.8	11.5
	Change job	7.9	3.3	8.2	5.5	4.5	1.8
	Exit paid work	16.8	12.7	15.0	11.0	11.6	8.5
	Enter paid work	2.2	1.9	1.9	2.6	1.4	1.7
	Remain out of work	30.6	54.0	35.8	57.5	63.8	76.5
Age 65–69	Remain in same job	19.2	11.6	14.3	8.6	7.7	3.8
	Change job	2.4	1.5	2.4	0.5	1.0	0.5
	Exit paid work	8.9	6.2	9.7	5.2	5.6	4.6
	Enter paid work	1.6	1.2	2.4	1.2	1.3	0.5
	Remain out of work	67.9	79.5	71.1	84.5	84.4	90.6

Note: Columns may not sum to 100 due to rounding. Sample is all individuals aged 50–69 in ELSA waves 2–6 who were also observed in the subsequent wave two years later. ‘Change job’ is defined as moving to a new job with the same employer, moving to a new employer or moving between employee and self-employed.

Table 2A.11. Two-year employment transitions, by age, gender and disability, 2002–03 to 2014–15

		None		Mild (1–2 indicators)		Moderate (3+ indicators)	
		Male	Female	Male	Female	Male	Female
Age 50–54	Remain in same job	69.6	67.6	65.7	62.1	28.1	32.4
	Change job	17.2	12.8	15.4	15.7	8.1	8.2
	Exit paid work	4.8	4.4	6.0	6.2	7.2	6.5
	Enter paid work	1.8	2.6	1.9	1.9	2.6	2.9
	Remain out of work	6.6	12.5	10.9	14.1	54.0	50.0
Age 55–59	Remain in same job	64.1	54.3	58.1	50.5	25.3	24.2
	Change job	12.2	8.5	12.2	9.3	4.2	5.2
	Exit paid work	8.2	13.8	10.4	12.1	6.0	9.6
	Enter paid work	2.9	2.5	2.6	1.8	2.3	0.9
	Remain out of work	12.5	20.9	16.6	26.3	62.2	60.1
Age 60–64	Remain in same job	40.9	26.2	32.1	21.5	12.1	10.6
	Change job	8.3	4.0	7.8	3.7	2.4	2.0
	Exit paid work	15.6	12.2	17.0	12.8	9.2	6.4
	Enter paid work	2.1	2.0	2.5	2.5	1.0	1.5
	Remain out of work	33.2	55.6	40.5	59.5	75.3	79.6
Age 65–69	Remain in same job	16.7	11.4	13.3	7.4	4.4	3.6
	Change job	2.6	1.5	1.6	1.3	0.7	0.3
	Exit paid work	9.1	6.5	8.9	5.3	3.3	3.7
	Enter paid work	2.3	1.8	1.6	0.9	1.1	0.3
	Remain out of work	69.2	78.8	74.6	85.1	90.5	92.2

Note: Columns may not sum to 100 due to rounding. Sample is all individuals aged 50–69 in ELSA waves 2–6 who were also observed in the subsequent wave two years later. ‘Change job’ is defined as moving to a new job with the same employer, moving to a new employer or moving between employee and self-employed.

Table 2A.12. Employment transitions by disability onset type, by gender and broad time period, 2002–03 to 2014–15
Individuals under SPA in both waves

	Same job, same hours	Same job, cut hours	New job, same hours	New job, cut hours	Exit
Male					
Baseline 2002–03 to 2006–07					
No onset	59.4	13.0	12.2	5.2	10.3
Mild onset	55.3	13.2	13.9	6.9	10.6
Moderate onset	37.6	12.1	12.1	10.3	27.9
All	*57.9*	*13.0*	*12.4*	*5.7*	*11.1*
Baseline 2008–09 to 2012–13					
No onset	63.2	11.9	8.2	4.5	12.2
Mild onset	55.4	13.5	9.3	8.4	13.5
Moderate onset	50.4	11.8	4.2	3.4	30.3
All	*61.8*	*12.1*	*8.1*	*4.9*	*13.1*
Female					
Baseline 2002–03 to 2006–07					
No onset	62.4	10.3	13.1	4.6	9.6
Mild onset	61.4	9.9	15.7	5.3	7.7
Moderate onset	56.0	6.6	13.7	5.4	18.5
All	*61.8*	*10.0*	*13.5*	*4.7*	*10.0*
Baseline 2008–09 to 2012–13					
No onset	67.6	10.6	6.8	4.5	10.5
Mild onset	64.8	11.2	6.9	3.9	13.3
Moderate onset	61.9	7.1	9.5	4.8	16.7
All	*67.0*	*10.5*	*7.0*	*4.4*	*11.2*

Note: Sample is all individuals working in the baseline wave and also interviewed two years later. ‘Mild onset’ indicates a change in the health disability index from 0 to 1 or 2. ‘Moderate onset’ indicates a change in the health disability index from 0, 1 or 2 to 3 or more. Rows may not sum to 100 due to rounding.

Table 2A.13. Employment transitions by disability onset type, by gender and broad time period, 2002–03 to 2014–15
Individuals crossing SPA between waves or over SPA at baseline

	Same job, same hours	Same job, cut hours	New job, same hours	New job, cut hours	Exit
Male					
Baseline 2002–03 to 2006–07					
No onset	28.9	13.4	5.3	7.1	45.4
Mild onset	30.5	10.2	7.0	3.9	48.4
Moderate onset	21.6	11.8	3.9	3.9	58.8
All	*28.7*	*12.8*	*5.5*	*6.5*	*46.6*
Baseline 2008–09 to 2012–13					
No onset	40.7	15.8	2.5	3.9	37.1
Mild onset	39.9	17.3	3.6	5.4	33.9
Moderate onset	29.7	18.8	1.6	3.1	46.9
All	*40.0*	*16.2*	*2.6*	*4.1*	*37.2*
Female					
Baseline 2002–03 to 2006–07					
No onset	40.7	12.7	6.6	4.5	35.5
Mild onset	39.1	14.1	5.2	4.4	37.1
Moderate onset	29.4	11.2	7.0	8.4	44.1
All	*39.6*	*12.8*	*6.4*	*4.8*	*36.4*
Baseline 2008–09 to 2012–13					
No onset	46.6	12.6	3.9	2.5	34.3
Mild onset	43.7	11.1	5.6	3.6	36.1
Moderate onset	39.3	10.7	1.6	5.7	42.6
All	*45.7*	*12.3*	*4.0*	*2.9*	*35.1*

Note: Sample is all individuals working in the baseline wave and also interviewed two years later. ‘Mild onset’ indicates a change in the health disability index from 0 to 1 or 2. ‘Moderate onset’ indicates a change in the health disability index from 0, 1 or 2 to 3 or more. Rows may not sum to 100 due to rounding.

Table 2A.14. Multinomial logit model of two-year labour market transitions, 2002–03 to 2014–15

	Move jobs Relative risk ratio (95% CI)	**Exit paid work** Relative risk ratio (95% CI)
I (wave 2 baseline, *t* = 2004–05)	1.086 (0.930; 1.268)	**0.616** (0.529; 0.719)
I (wave 3 baseline, *t* = 2006–07)	**0.799** (0.685; 0.933)	**0.693** (0.597; 0.803)
I (wave 4 baseline, *t* = 2008–09)	**0.645** (0.549; 0.757)	**0.643** (0.557; 0.743)
I (wave 5 baseline, *t* = 2010–11)	**0.512** (0.425; 0.616)	**0.600** (0.516; 0.697)
I (wave 6 baseline, *t* = 2012–13)	**0.547** (0.457; 0.655)	**0.534** (0.457; 0.623)
Male	**1.167** (1.044; 1.304)	0.975 (0.880; 1.080)
Age	1.126 (0.955; 1.329)	**1.826** (1.636; 2.038)
Age^2	0.999 (0.997; 1.000)	**0.996** (0.995; 0.997)
Crosses SPA	0.911 (0.731; 1.136)	**2.241** (1.932; 2.598)
Male * crosses SPA	**1.884** (1.367; 2.596)	**1.357** (1.088; 1.693)
Medium education	1.122 (0.994; 1.267)	0.958 (0.862; 1.065)
High education	1.117 (0.991; 1.260)	1.036 (0.934; 1.149)
Part-time at baseline	0.952 (0.852; 1.064)	**1.667** (1.517; 1.833)
Self-employed at baseline	**0.442** (0.383; 0.511)	**0.649** (0.583; 0.722)
Standing job at baseline	**0.843** (0.753; 0.943)	0.994 (0.900; 1.098)
Physical job at baseline	**0.846** (0.753; 0.952)	0.950 (0.854; 1.056)
Long-standing illness	1.113 (0.976; 1.270)	0.960 (0.852; 1.080)
Has limiting long-standing illness	1.118 (0.952; 1.314)	**1.585** (1.390; 1.807)
Has mild disability	1.104 (0.990; 1.231)	**1.114** (1.009; 1.229)
Has moderate disability	1.135 (0.943; 1.367)	**1.501** (1.291; 1.744)
Onset of long-standing illness	1.151 (0.940; 1.410)	1.020 (0.848; 1.228)
Onset of limiting long-standing illness	0.944 (0.771; 1.154)	**1.359** (1.158; 1.595)
Onset of mild disability	**1.312** (1.137; 1.515)	**1.205** (1.055; 1.376)
Onset of moderate disability	**1.356** (1.103; 1.668)	**1.863** (1.578; 2.200)

Note: Sample is all ELSA respondents in work at baseline wave (ELSA waves 1–6) who are observed in the subsequent wave two years later (*N* = 16,627). Relative risk ratios are expressed relative to the base outcome of remaining in the same job; 95% confidence intervals are shown in parentheses. Numbers in bold indicate relative risk ratios significantly different to 1 at the 95% level.

Table 2A.15. Multinomial logit models of two-year labour market transitions by broad time period

	Move jobs Relative risk ratio (95% CI)	**Exit paid work** Relative risk ratio (95% CI)
Model 1: 2002–03 to 2008–09		
Male	1.109 (0.961; 1.280)	0.966 (0.834; 1.120)
Crosses SPA	0.814 (0.623; 1.064)	**2.303** (1.905; 2.784)
Male * crosses SPA	2.874 (1.893; 4.365)	**2.042** (1.492; 2.797)
Medium education	1.092 (0.937; 1.273)	0.918 (0.791; 1.065)
High education	1.056 (0.906; 1.230)	0.932 (0.804; 1.081)
Part-time at baseline	1.008 (0.874; 1.163)	**1.641 (**1.433; 1.879)
Self-employed at baseline	**0.454 (**0.378; 0.546)	**0.757 (**0.650; 0.881)
Standing job at baseline	0.873 (0.757; 1.008)	1.071 (0.929; 1.235)
Physical job at baseline	0.906 (0.780; 1.053)	1.081 (0.929; 1.258)
Has long-standing illness	1.060 (0.879; 1.277)	0.911 (0.752; 1.105)
Has limiting long-standing illness	**1.325 (**1.061; 1.655)	**1.745 (**1.412; 2.157)
Has mild disability	1.085 (0.945; 1.246)	1.095 (0.952; 1.260)
Has moderate disability	1.135 (0.900; 1.430)	**1.723 (**1.404; 2.115)
Onset of long-standing illness	1.201 (0.898; 1.606)	0.999 (0.734; 1.359)
Onset of limiting long-standing illness	1.083 (0.821; 1.428)	**1.689 (**1.316; 2.168)
Onset of mild disability	**1.225 (**1.019; 1.472)	1.188 (0.983; 1.434)
Onset of moderate disability	**1.471 (**1.141; 1.897)	**2.107 (**1.677; 2.647)
Model 2: 2008–09 to 2014–15		
Male	**1.271 (**1.065; 1.518)	0.997 (0.865; 1.149)
Crosses SPA	1.144 (0.774; 1.691)	**2.251 (**1.765; 2.871)
Male * crosses SPA	1.160 (0.685; 1.965)	0.966 (0.694; 1.344)
Medium education	1.190 (0.972; 1.456)	1.001 (0.860; 1.166)
High education	**1.231 (**1.013; 1.497)	1.152 (0.995; 1.334)
Part-time at baseline	0.862 (0.721; 1.030)	**1.699 (**1.486; 1.943)
Self-employed at baseline	**0.433 (**0.343; 0.546)	**0.557 (**0.479; 0.648)
Standing job at baseline	**0.801 (**0.667; 0.961)	0.933 (0.811; 1.073)
Physical job at baseline	**0.761 (**0.629; 0.922)	**0.827 (**0.711; 0.961)
Has long-standing Illness	1.177 (0.977; 1.418)	0.998 (0.858; 1.161)
Has limiting long-standing illness	0.967 (0.760; 1.229)	**1.553 (**1.311; 1.840)
Has mild disability	1.131 (0.945; 1.352)	1.130 (0.982; 1.301)
Has moderate disability	1.144 (0.834; 1.568)	**1.269 (**1.014; 1.587)
Onset of long-standing illness	1.106 (0.832; 1.469)	1.030 (0.816; 1.300)
Onset of limiting long-standing illness	0.843 (0.625; 1.136)	1.187 (0.961; 1.465)
Onset of mild disability	**1.463 (**1.163; 1.840)	**1.224 (**1.013; 1.477)
Onset of moderate disability	1.193 (0.827; 1.720)	**1.633 (**1.279; 2.085)

Note: Sample is all ELSA respondents in work at baseline wave (ELSA waves 1–6) who are observed in a subsequent wave two years later (N = 16,627). Relative risk ratios are expressed relative to the base outcome of remaining in the same job; numbers in parentheses are 95% confidence intervals. Numbers in bold indicate relative risk ratios significantly different to 1 at the 95% level. Each model also includes relevant wave dummies, age and age-squared (coefficients not presented).

Table 2A.16. Linear probability models of whether an individual reduces hours of work

	All	2002–2008	2008–2014	Male	Female	LSI	LLSI	Mild dis.	Mod. dis.	Standing job	Physical job
Moves jobs	0.12***	0.08***	0.16***	0.12***	0.12***	0.11**	0.17***	0.12***	0.19***	0.11***	0.16***
	0.02	0.02	0.02	0.02	0.02	0.03	0.04	0.03	0.06	0.03	0.03
Moves employer	0.06***	0.06**	0.08*	0.06*	0.07*	0.09*	0.01	0.06	–0.04	0.08*	0.02
	0.02	0.02	0.03	0.03	0.03	0.04	0.05	0.03	0.06	0.04	0.04
Moves to self-employed	0.12***	0.11**	0.13**	0.11**	0.14***	0.00	0.23**	0.03	0.16	0.07	0.00
	0.03	0.03	0.04	0.04	0.04	0.07	0.08	0.05	0.09	0.05	0.06
Age-50	0.04***	0.05**	0.02	0.01	0.07***	0.03	0.01	0.03*	–0.01	0.04*	0.00
	0.01	0.01	0.02	0.01	0.02	0.02	0.03	0.02	0.03	0.02	0.02
(Age-50)	–0.00**	–0.00**	0.00	0.00	–0.00***	0.00	0.00	0.00	0.00	–0.00*	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crosses SPA	0.11***	0.11***	0.11***	0.19***	0.11***	0.05	0.23***	0.14***	0.12*	0.11***	0.15***
	0.02	0.02	0.03	0.02	0.02	0.04	0.05	0.03	0.05	0.03	0.04
Male * crosses SPA	0.07**	0.06	0.09*			0.15**	–0.09	0.07	0.15	0.07	0.04
	0.03	0.04	0.04			0.06	0.07	0.04	0.09	0.05	0.05
Male	0.01	0.02	0.01			0.00	0.03	0.02	0.03	0.01	0.01
	0.01	0.01	0.01			0.02	0.02	0.01	0.03	0.01	0.02
Married	–0.02*	–0.02	–0.02	–0.03	–0.01	0.00	–0.02	–0.01	–0.03	–0.03	–0.03
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.03	0.02	0.02
Medium education	0.00	0.00	0.00	–0.01	0.02	–0.01	–0.02	0.01	0.00	0.00	0.01
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.03	0.02	0.02
High education	0.04***	0.04***	0.04**	0.01	0.08***	0.05**	0.04	0.07***	0.08*	0.07***	0.05**
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.03	0.02	0.02
Medium wealth	0.01	0.00	0.02	0.01	0.01	0.00	0.00	–0.01	–0.04	0.02	0.02
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.03	0.02	0.02

Table 2A.16. (continued)

High wealth	0.04***	0.03*	0.05***	0.04**	0.04**	0.03	0.05	0.02	0.01	0.06***	0.05**
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.02	0.03	0.02	0.02
Has long-standing illness (not limiting)	–0.01	–0.02	–0.01	–0.01	–0.01			–0.01	–0.01	0.01	–0.01
	0.01	0.01	0.01	0.01	0.01			0.02	0.04	0.02	0.02
Has limiting long-standing illness	0.02	0.04	0.00	0.01	0.02			0.01	0.04	0.01	–0.01
	0.01	0.02	0.02	0.02	0.02			0.02	0.03	0.02	0.02
Has mild disability	0.01*	0.01	0.02	0.02*	0.00	0.02	0.02			0.00	0.03*
	0.01	0.01	0.01	0.01	0.01	0.02	0.02			0.01	0.01
Has moderate disability	–0.02	–0.05**	0.02	0.00	–0.03	–0.02	0.03			–0.03	–0.02
	0.01	0.02	0.02	0.02	0.02	0.03	0.03			0.02	0.03
Standing job	0.02*	0.01	0.04**	0.01	0.03*	0.04*	–0.01	0.01	–0.02		
	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.03		
Physical job	0.04***	0.04***	0.03*	0.02	0.05***	0.05**	0.00	0.05**	0.00		
	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.01	0.03		
Constant	0.08***	0.09***	0.06*	0.15***	0.03	0.04	0.14**	0.08**	0.10*	0.09***	0.13***
	0.02	0.02	0.02	0.02	0.02	0.04	0.05	0.03	0.05	0.03	0.03
N	13,235	7,078	6,157	6,918	6,317	2,486	1,652	4,696	1,125	3,905	3,770

Note: The sample is all individuals in work at baseline wave and subsequently interviewed at a further wave. Each column represents the same model run on a different subsample. All specifications also include time/wave dummies and a dummy variable to capture whether the subsequent wave at which the individual is observed is more than two years from the baseline wave. The omitted (base) category is a single female aged 50 with low education, low wealth, no long-standing illnesses or disabilities, and a sedentary job. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Table 2A.17. Distribution of employment trajectory types, 2002–03 to 2014–15 for individuals aged 50–59 in 2002–03

	Male	Female	All
Trajectory type			
Always out of work	14.3	23.2	19.2
In work, same job throughout	10.5	7.1	8.6
In work all waves, changes jobs	15.4	7.9	11.3
In work (same job) then exit	28.9	35.2	32.4
In work (changing jobs) then exit	19.6	15.8	17.5
Complex – some re-entry observed	11.3	10.7	11.0
	100.0	*100.0*	*100.0*

Note: The sample is all ELSA wave 1 respondents who are interviewed continuously through to wave 7 (2014–15). Columns may not sum to 100 due to rounding.

Table 2A.18. Retirement trajectory type, 2002–03 to 2014–15 for individuals aged 50–59 at baseline and not permanently out of work by various baseline characteristics

	Non-traditional	Traditional
All aged 50–59 at baseline	49.3	50.7
Single male at baseline	47.7	52.3
Single female at baseline	48.9	51.1
Married male at baseline	55.1	44.9
Married female at baseline	43.8	56.2
Low education	43.7	56.3
Medium education	53.2	46.8
High education	50.0	50.0
Full-time employee at baseline	57.8	42.2
Part-time employee at baseline	38.8	61.2
Self-employed at baseline	35.3	64.7
Low wealth at baseline	50.3	49.7
Medium wealth at baseline	51.4	48.6
High wealth at baseline	47.1	52.9
No disability at baseline	55.9	44.1
Mild disability at baseline	51.5	48.5
Moderate disability at baseline	46.5	53.5

Note: The sample is all ELSA wave 1 respondents who are interviewed continuously through to wave 7 (2014–15) excluding those who are out of work in all waves. Traditional trajectory is defined as in work in the same job throughout, or in a single job then continuously not working. Non-traditional trajectory is defined as some kind of job change and/or movement in to labour market within the period.

Table 2A.19. Logistic models of 'non-traditional' versus 'traditional' retirement

	Odds ratio (95% CI)	Odds ratio (95% CI)
Male	1.002 (0.607; 1.655)	0.996 (0.602; 1.648)
Married at baseline	0.903 (0.635; 1.286)	0.897 (0.630; 1.277)
Married Male at baseline	1.453 (0.839; 2.517)	1.468 (0.847; 2.543)
Low education at baseline	**0.721** (0.554; 0.938)	**0.726** (0.558; 0.946)
High education at baseline	0.801 (0.623; 1.030)	0.805 (0.626; 1.035)
Low wealth at baseline	0.962 (0.716; 1.291)	0.967 (0.719; 1.300)
High wealth at baseline	0.905 (0.714; 1.146)	0.906 (0.715; 1.148)
Mild disability at baseline		1.084 (0.867; 1.354)
Moderate disability at baseline		0.888 (0.613; 1.285)
Self-employed at baseline	**0.469** (0.346; 0.636)	**0.470** (0.347; 0.637)
Part-time work at baseline	**0.688** (0.537; 0.882)	**0.690** (0.538; 0.884)

Note: The sample is all ELSA wave 1 respondents who are aged 50–59 in 2002–03, interviewed continuously through to wave 7 (2014–15) excluding those who are out of work in all waves. The table presents results from two separate logistic models with and without disability measures; numbers in parentheses are 95% confidence intervals. In each case, the dependent variable is an indicator of non-traditional versus traditional retirement trajectory, as defined in Table 2A.18.

3. Retirement, well-being, engagement and social status

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The cross-sectional analysis in this chapter shows that:

- Around three-quarters of men and women over state pension age (SPA) were retired in 2014–15. Around two-thirds of people under SPA were still working.
- Around a quarter of women under SPA and one in ten women over SPA described their economic status as 'other' and the majority of these individuals reported that they look after home or family.
- Around three-quarters of the ELSA sample had a partner in 2014–15. The majority of retired respondents had retired partners, and the majority of employed respondents had working partners.
- Only a small proportion of individuals reported doing some paid work as well as being retired but men, both under and above SPA, were around twice as likely as women to report doing so.
- All people over SPA worked fewer hours than people under SPA, and men in both categories worked more hours than women.
- Men over SPA were around three times more likely than women over SPA to work in professional or managerial roles.
- Changes in employer were much less commonly reported among all people over SPA than under SPA.
- Men and women over SPA were less likely to be contributing to private pensions than men and women under SPA.

The longitudinal analysis in this chapter shows that:

- The number of retired people rose steadily for men and women between the period 2002–03 and 2014–15.
- As both men and women approached retirement, they gradually worked fewer hours, became slightly less likely to work in routine or manual occupations and were less likely to change employer.
- Reasons for retirement have remained reasonably stable between 2002–03 and 2014–15 for both men and women. There are similar rates of people reporting that they retire involuntarily, voluntarily and because they have reached SPA, at around a third each.
- At the wave of data collection prior to retirement, around half of respondents who went on to retire involuntarily were in the poorest two wealth quintiles, and over half who retired voluntarily were in the richest

two quintiles. The majority of people who later retired involuntarily were not contributing to private pensions.

- Self-reported health showed strong associations with retirement type. Between two-thirds and half of people who took voluntary retirement had either excellent or very good health at the wave prior to retirement. Two-fifths of people who took involuntary retirement had poor or fair health.
- In the years before and after retirement, those who retired voluntarily had the highest levels of well-being and social engagement, those who retired involuntarily had the lowest and those who retired normally fell between the two.
- Social engagement declined in the years leading up to retirement and increased again once retirement had occurred, independently of retirement type.
- Involuntary retirement was associated with decreases in social status, and voluntary and normal retirement were associated with increases. Higher levels of social engagement were consistently related with higher social status, regardless of retirement type.

3.1 Introduction

Understanding the retirement circumstances of the older population is an important aspect of encouraging successful ageing. Previous research has worked to estimate effects of different forms of retirement, often providing evidence that early retirement can be beneficial to well-being when individuals choose to leave the workforce voluntarily, when it is affordable and when the individual can continue to participate in socially meaningful activities (Herzog and House, 1991; Drentea, 2002; Scherger, Nazroo and Higgs, 2011). Conversely, retirement that is not taken in optimal circumstances has shown associations with poorer well-being. Early workforce exit due to individuals' own ill health is associated with detrimental effects on various health and well-being outcomes (Mein et al., 2000; Butterworth et al., 2006). Retirement taken due to the illness of a spouse or close family member has also been associated with negative effects on health and well-being (Dentinger and Clarkberg, 2002; Evandrou and Glaser, 2004). Similarly, redundancy is typically associated with a sudden onset of poorer mental well-being and temporary loss of income (Gallo et al., 2006).

There are various mechanisms through which the type of retirement may affect well-being. Activity theory maintains that participation in socially meaningful roles, such as those provided by employment, are essential for well-being across the life course (George, 1993). Similarly, continuation theory proposes that sustained engagement in productive and meaningful roles after retirement is associated with better well-being and health (Atchley, 1989). However, retirement taken on the basis of ill health or disability is likely to be linked to factors that make any sort of continuation of these roles outside of employment harder for the individual to achieve (Hershey, Henkins and Van Dalen, 2007). Similarly, redundancy in later life is associated with fewer opportunities to return to the workforce, or with a return to poorer roles,

forcing the individual to stop participating in such activities; leaving work to care for a relative similarly reduces the time in which these replacement activities can be carried out (Couch, 1998). Conversely, retirement taken in better health and favourable financial positions is likely to better enable to individual to remain engaged in meaningful activities and social participation.

Disengagement theory (Hochschild, 1975) proposes that retirement is seen as an expected part of the life course and that retirement taken at the normal time is easily replaced with the opportunity to participate in rewarding leisure activities, many of which promote better physical, mental and cognitive ageing (Drentea, 2002; Bound and Waidmann, 2007). Similarly, a cultural-institutional approach maintains that retirement taken at the time expected by society leads to better well-being than retirement taken before or after SPA (Börsch-Supan and Jürges, 2009).

Evidence suggests that the retirement transition differs according to gender (Moen, 1996; Kim and Moen, 2002). Men have traditionally been linked to a stronger attachment to the workforce, and so unexpected work exit might be particularly detrimental to well-being (Kim and Moen, 2002; Davey and Szinovacz, 2004) especially if they retire before their spouse (Davey and Szinovacz, 2004). Women, however, tend to work for shorter continuous periods over the life course and so, being less attached individuals, find the transition out of work easier (Han and Moen, 1999; Kim and Moen, 2002). Similarly, women's employment is likely to be of a lower grade than men's, again making the transition out of work easier (Elder and Schmidt, 2004).

This chapter is structured as follows. Section 3.2 outlines the key definitions used throughout the chapter and the methods of analysis used. Section 3.3 shows cross-sectional information on economic activity and the characteristics of retirement and employment in 2014–15 using wave 7 of the ELSA data. Section 3.4 examines the change in employment characteristics of those who are approaching retirement, and Section 3.5 considers these characteristics as predictors of whether an individual retires normally (at SPA) or retires involuntarily or voluntarily before SPA. Section 3.6 moves on to consider the impact of these different types of retirement on well-being, examining patterns of well-being over the entire retirement transition period on the basis of retirement type. Finally, Section 3.8 uses a path analysis to investigate how associations between well-being and retirement type might be mediated by changes in social status following retirement.

3.2 Methods

3.2.1 Sample

Two different samples from ELSA are used in the analysis. The cross-sectional descriptive analysis presented in Section 3.3 uses core sample members who were aged 55–69 at wave 7 in 2014–15. The longitudinal analysis presented in Sections 3.4, 3.5 and 3.6 uses core sample members who responded to all seven waves of data. All analyses are weighted to correct for non-response using the wave 7 cross-sectional and longitudinal weights accordingly.

3.2.2 Definition of key variables

Retirement and employment

Respondents are asked to best describe their current economic situation from a list of retired, employed, self-employed, unemployed, permanently sick or disabled, and looking after home or family. The data contain additional categories for 'other not codeable' responses and spontaneous responses of 'semi-retired'. These respondents are not included in the analysis. Respondents are classed as being retired if they report that they are retired in answer to this question. They are classed as being employed if they state they are either employed or self-employed. Some of the initial descriptive analysis additionally includes a category of those with an 'other' economic status, which includes those reporting that they are unemployed, permanently sick or disabled, or looking after home or family.

Type of retirement

The longitudinal analysis focuses on the idea of 'retirement type', which is a three-category variable derived from responses to the question of what reason led the respondent to retire. Two key variables cover this area in the ELSA data, one asking why those who retired at or after SPA took retirement, and another asking reasons for taking early retirement when an individual retired before reaching SPA. The two variables were merged so that between early and SPA reasons there were a total of 15 potential responses. These responses were recoded to form three key types of retirement: normal, involuntary and voluntary. Responses were coded as follows:

- Normal retirement – this category is comprised only of people who reported that they retired because they reached SPA.
- Involuntary retirement – this category is comprised of respondents who gave the following reasons for retirement: own ill health, ill health of another, made redundant, or could not find another job.
- Voluntary retirement – this category is comprised of respondents who gave the following reasons for retirement: spend more time with family, enjoy life while still young, fed up with job and wanted a change, retire at the same time as partner, retire at a different time to partner, give the younger generation a chance, could afford to or were offered reasonable terms to retire.

Two other possible response categories were included in the original variables – life event and other – but as it is not possible to determine whether these respondents retired involuntarily or voluntarily, they are excluded from the coded variable.

Table 3.1 shows the distribution of respondents across the types of retirement (core sample aged 55–69 at wave 7).

Table 3.1. Frequency of respondents in each category of retirement type (all core members who retire at any wave from wave 2 of ELSA onwards)

	All people	Men	Women
Normal retirement	756	267	489
Involuntary retirement	733	332	401
Voluntary retirement	715	280	435

Employment characteristics

The cross-sectional analysis examines the employment characteristics of those still working at wave 7 of the ELSA data, and the longitudinal analysis examines individual employment characteristics as risk factors for retirement type. The following employment characteristics are referred to.

- Hours worked is an ordinal variable that asks respondents how many hours they work per week in their main job, excluding meal breaks but inclusive of any paid overtime. Response categories are <16 hours, 16–29 hours and 30 or more hours.
- Employment type is measured using a three-category variable of the National Statistics socio-economic classification (NS-SEC). The three employment types identified by this variable are *managerial and professional*, *intermediate* and *routine and manual*.
- A recent change in employer is measured using a binary variable that asks the respondent whether or not they still work for the same employer they reported working for at the previous wave.
- Pension contribution is measured using a three-category variable to show whether or not the respondent contributes to a defined benefit pension, whether or not they contribute to a defined contribution pension or whether they make no pension contributions.
- Partner's employment status is derived using the household and individual identifier to match partners in the ELSA data. The original variable, asking respondents to best describe their current economic situation, is applied to each partner and is again collapsed into three categories to show those who report that they are retired, employed or 'other'. An additional category is added to the variable to identify ELSA members who report having no partner when asked about their marital and cohabiting status.
- Descriptive tables identify whether or not the respondent reports that they carried out some paid work within the last month. This is a binary variable.

Well-being

The analysis concerning the impact of type of retirement on well-being focuses on four key outcomes.

- *Depressive symptoms*: An eight-item version of the CES-D score (Radloff, 1977) is used to measure symptoms of depression. The lowest possible score is 0, representing no symptoms of depression, and the highest

possible score is 8, where the respondent has the highest number of symptoms of depression.

- *Satisfaction with life*: The Satisfaction with Life scale (Diener et al., 1985) asks respondents to rate how satisfied they are with five aspects of their life, including having achieved important goals and how ideal their life is. Response options for each question range from strongly agree to strongly disagree on a seven-point Likert scale. Scores range from the lowest possible life satisfaction (5) to the highest possible satisfaction (35).
- *Quality of life*: A psychometrically validated 15-factor version of the original 19-item CASP scale (Vanhoutte, 2014) is used to measure quality of life. The scale covers areas such as feelings of control, pleasure, enjoyment, meaning, sociability, happiness, opportunity and satisfaction. The respondent is asked to rate their response to each question (e.g. 'I look back on my life with a sense of happiness') with one of the options, 'often', 'sometimes', 'not often' or 'never'. The poorest possible quality of life is reflected by a score of 0, and the highest possible quality of life is reflected by a score of 45.
- *Social engagement*: A continuous measure of social engagement is included in the spline analysis. A respondent's social engagement score is derived from a set of eight binary variables asking whether the respondent is a member of various civic and social organisations, including a political party, neighbourhood watch group, church or religious group, charitable association, educational or evening class, social club, sports club or exercise class, or any other organisation. A respondent belonging to no organisations has a score of 0, and a respondent belonging to all possible organisations has a score of 8. The same measure of social engagement is used as a mediating variable in the path analysis, but also includes an extra potential score point if the respondent reports having volunteered at least once in the last year.

The final part of the chapter considers the effects of retirement on subjective social status. A respondent's subjective social status is measured by means of a 'ladder', on which the individual is asked to 'rate' himself comparative to others. A rating of 10 indicates the respondent feels he has the highest possible social status, and a rating of 0 indicates the lowest.

3.2.3 Classificatory measures

Socio-demographic

- Age is grouped into six categories: 50–54, 55–59, 60–64, 65–69, 70–74 and 75 and over.
- Gender is controlled for in all analyses.

Socio-economic

- Wealth is measured using household-level non-pension wealth. This includes all financial assets, property, assets of any businesses owned at the household level and any other physical assets. The measure is net of debt, including mortgages. The variable is grouped into quintiles, ranging from 1 representing lowest wealth to 5 representing the highest.

Health

- Self-reported health is measured using a five-point Likert scale question of how the respondent rates their overall health, with the possible response options being ‘excellent’, ‘very good’, ‘good’, ‘fair’ and ‘poor’.

3.2.4 Analysis

There are five types of analysis included in the chapter.

The first section uses cross-sectional analysis to compare the characteristics of those who are retired and employed among core sample members who have responded to waves 1–7 and who are aged 55–69 in 2014–15.

The second section examines the employment characteristics and types of retirement of core sample members who have responded to all seven waves of ELSA and who retire at some point from wave 2 onwards, therefore providing information on employment characteristics for at least one wave prior to becoming retired.

The third section uses multinomial logit models to generate relative risk ratios predicting retirement type on the basis of an individual’s employment characteristics prior to retirement. Models also control for age, gender, wealth and health.

The fourth section uses piecewise spline models with random slopes to examine the impact of retirement type on well-being. The method allows us to examine whether a rate of change in well-being in the period before retirement changes significantly once retirement has occurred, as well as whether the point of entering retirement is associated with a sudden change in well-being.

Finally, the fifth section uses path analysis to examine how the impact of retirement type on well-being is mediated by the impact of retirement type on subjective social status.

3.3 Cross-sectional analysis: retirement status and later-life employment characteristics in 2014–15

This section of the chapter focuses on core sample members who have responded to waves 1–7 of ELSA, exploring the characteristics of those who report that they are either retired or employed/self-employed in 2014–15.

The section focuses on 4,847 individuals aged between 55 and 69 at wave 7. Table 3.2 demonstrates that individuals within this age group are reasonably distributed across all categories of economic activity, to enable further analysis of their retirement and employment characteristics.

Table 3.2. Economic activity information by age group in 2014–15

Age group	Economic activity in 2014–15		
	Retired	Employed	Other
50–54	17	660	134
55–59	133	896	223
60–64	714	864	217
65–69	1,354	341	105
70–74	1,180	83	73
75–79	1,058	35	76
80–84	646	6	50
85–89	522	2	36

3.3.1 Economic activity of people aged 55–69 in 2014–15

Figure 3.1 shows the economic status of men and women in 2014–15, by gender and by whether or not they are above or below SPA. Around a fifth of men and one in seven women under SPA are retired, compared with around three-quarters of individuals over SPA. Among those under SPA, a higher proportion of women report their economic status as 'other' than those who report themselves as retired (23% and 15%, respectively). However, among men, a higher percentage state that they are retired than those who report belonging to an 'other' economic activity category (20% and 12%, respectively).

Figure 3.1. Economic activity by gender and by SPA in 2014–15

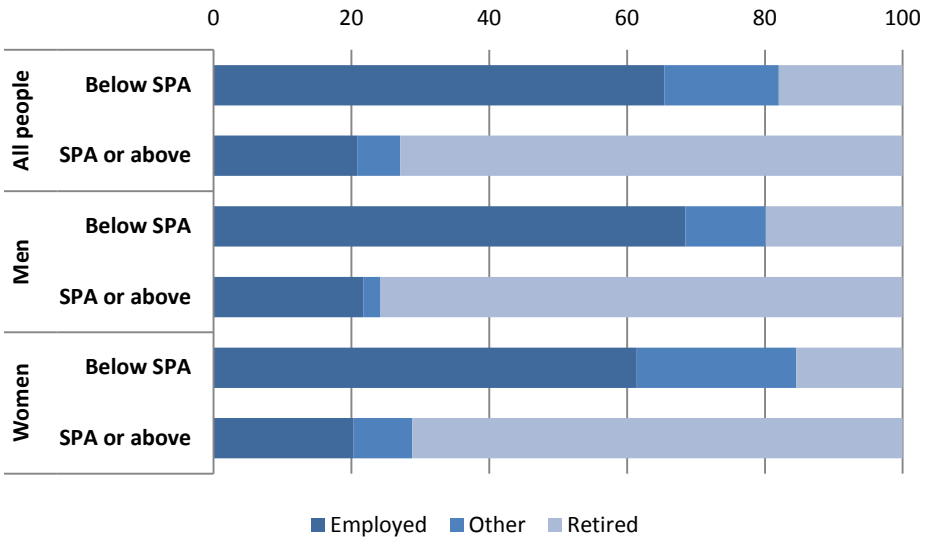
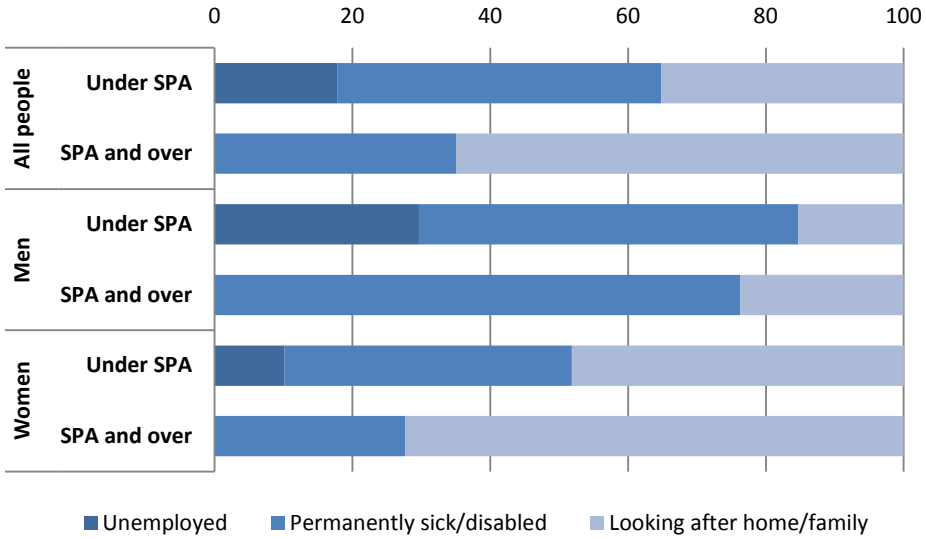


Figure 3.2 focuses on just those individuals who report belonging to an 'other' economic activity group, showing the percentages reporting unemployment, permanent sickness or disability, and looking after home or family, by SPA and by gender.

Figure 3.2. Economic activity of respondents not employed or retired, by SPA and gender, 2014–15



There are large differences on the basis of gender with regards to how those reporting an 'other' economic category in 2014–15 define themselves. Under SPA, over half of men who do not consider themselves employed or retired report that they are permanently sick or disabled, compared with two-fifths of women (55% compared with 42%). Only a third as many women as men under SPA report being unemployed (10% and 30%, respectively). Almost half of women below SPA who do not consider themselves employed or retired report their economic activity as looking after home or family (48%), compared with just 15% of men. Over three-quarters of men of SPA and above who are not employed or retired report that they are permanently sick or disabled, compared with just over a quarter of women (76% and 28%, respectively). Conversely, almost three-quarters of women in this category report that they are looking after home or family (72%), compared with less than a quarter of men (24%).

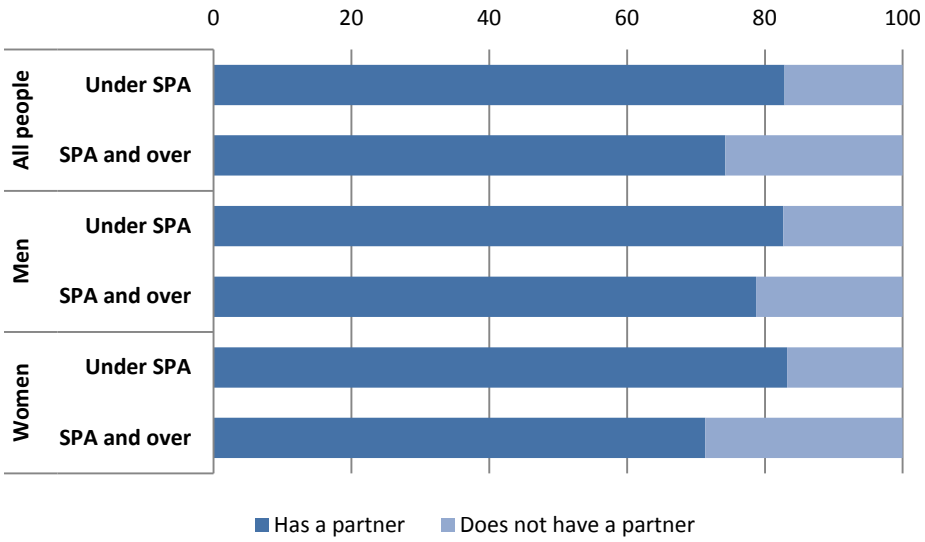
3.3.2 Characteristics of employment and retirement for people aged 55–69 in 2014–15

Partner's economic activity

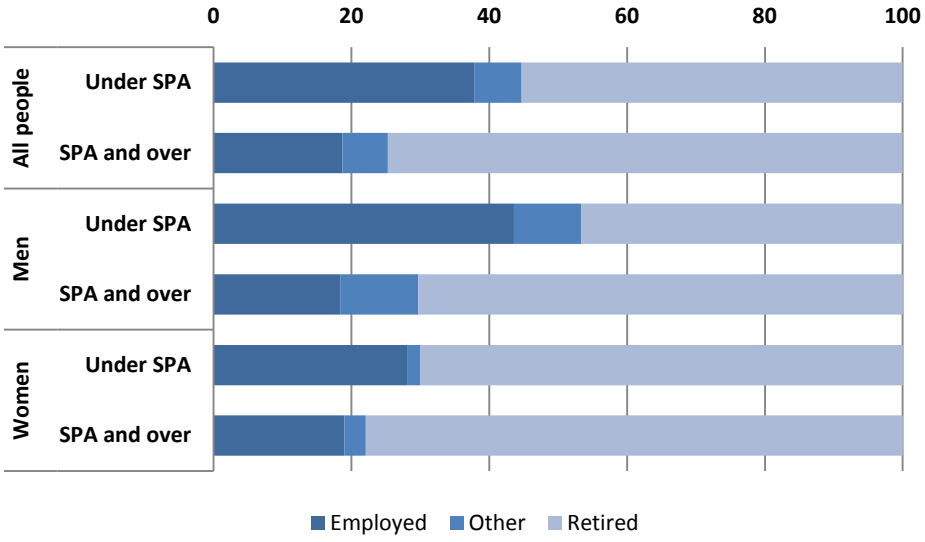
Figure 3.3a shows whether or not a respondent has a partner, regardless of their economic activity, Figure 3.3b shows the economic activity of the partners of respondents who report that they are retired and who have a partner in 2014–15, and Figure 3.3c shows the economic activity of the partners of respondents who report that they are employed and have a partner in 2014–15.

Figure 3.3. Economic status of respondent's partner by SPA and gender, 2014–15

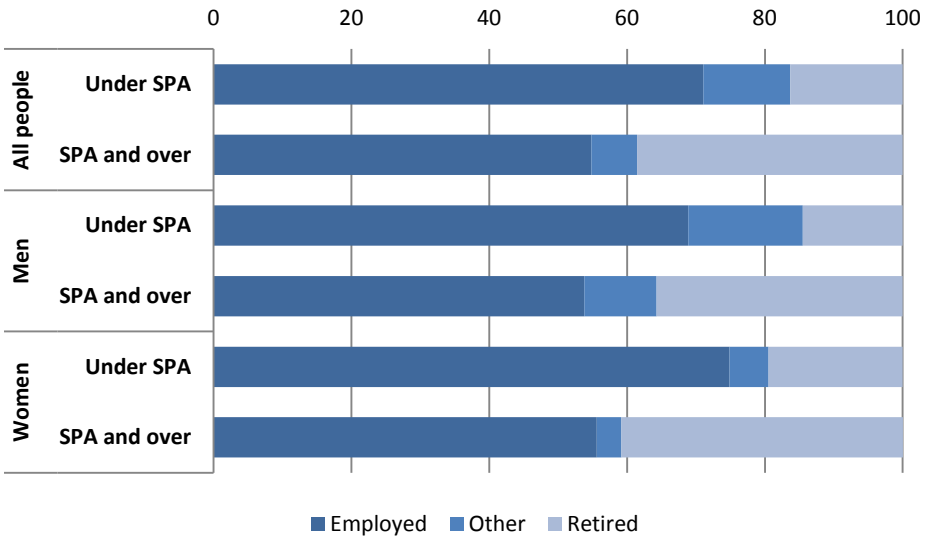
a) Whether or not respondent has a partner



b) Economic activity of partners of retired respondents



c) Economic activity of partners of employed respondents



Over four-fifths of all retired people under SPA have a partner in 2014–15. Among those over SPA, less than three-quarters of women have a partner (71%) compared with almost four-fifths of men (79%).

Of retired respondents who do have a partner, in almost all cases the majority of partners report being retired. The exception is among men under SPA, where a relatively even proportion of partners report retirement and employment, with 10% reporting that they belong to an 'other' category. Among all retired people over SPA, three-quarters of their partners are also retired. However, 11% of the partners of men over SPA report belonging to an 'other' economic category, in contrast to just 3% of partners of women over SPA.

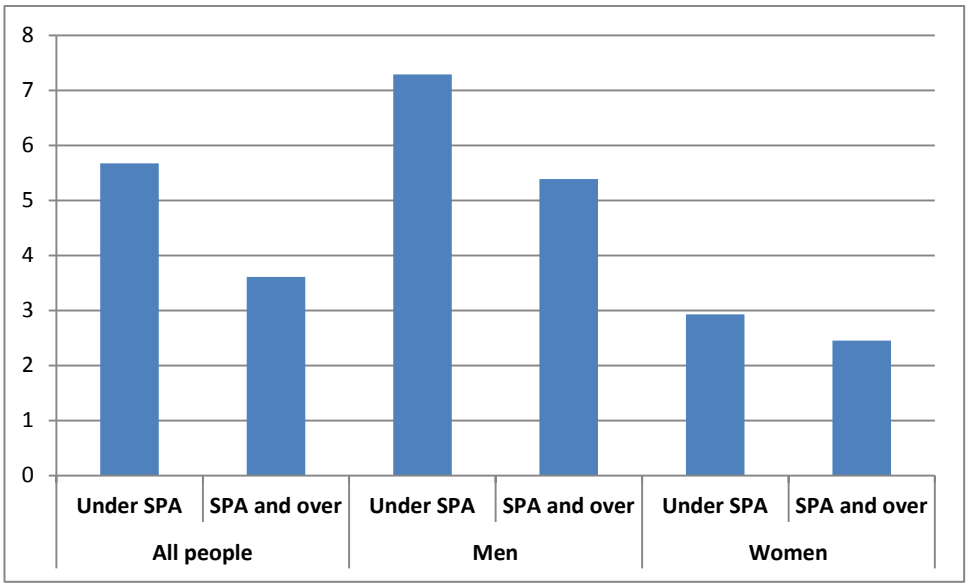
Among respondents who report that they still work in 2014–15, the majority of partners also report employment. Relatively similar proportions of men and women over SPA have working partners (54% and 56%, respectively). Three-quarters of employed women under SPA have a working partner (75%), as do over two-thirds of men under SPA (69%). Among people both under and above SPA, the partners of men are more likely to report belonging to an 'other' category. Over one in seven partners of men under SPA report their economic status as 'other' (17%) compared with just 6% of women's partners in this age group. Among people over SPA, men's partners are almost three times more likely to report an 'other' economic status than women's partners (11% and 4%, respectively).

Retiring and participation in paid employment

Figure 3.4 shows the proportion of ELSA respondents who report that they have retired, but who also report that they have participated in paid work in the last month.

Only a small percentage of people reported that they participated in paid employment in the last month in 2014–15 while being retired. However, roughly twice as many men than women report working while being retired, both before and after SPA.

Figure 3.4. Participation in paid work in the last month among retired respondents by SPA and gender, 2014–15



Workplace characteristics

The following section examines the employment characteristics of those who report that they are either employed or self-employed at wave 7 of the ELSA data.

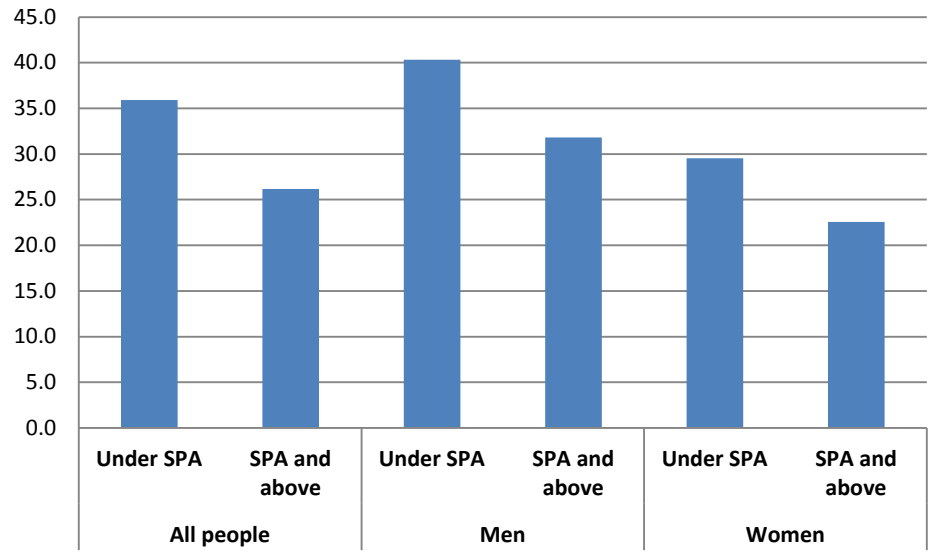
Figures 3.5a–3.5d show the employment characteristics of people aged 55–69 who are still working at wave 7 of ELSA, by SPA and by gender.

In 2014–15, the average number of hours worked by all people under and above SPA is 36 and 26, respectively. Men under SPA work an average of ten hours more than women under SPA. Above SPA, this difference is an average of nine hours. Employed men aged over SPA in 2014–15 work around two hours more per week than women who have not yet reached SPA.

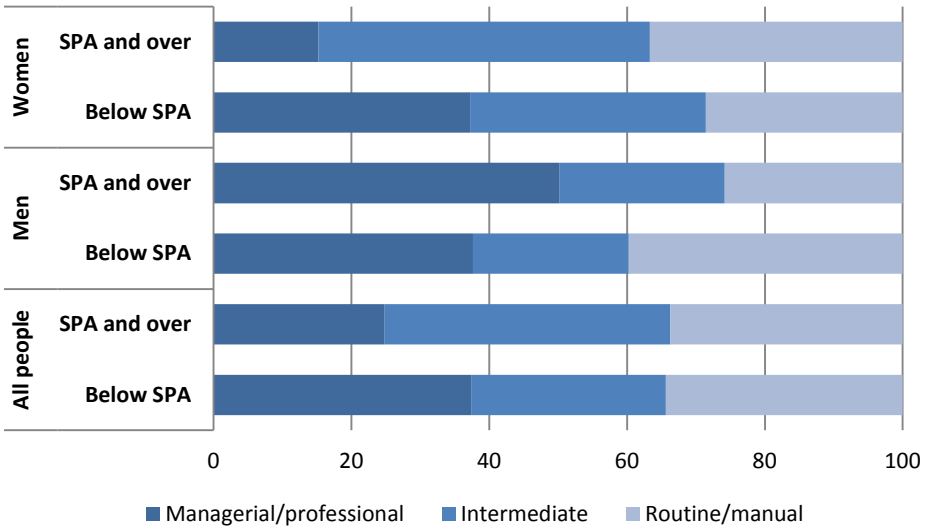
There are 50% of men working at SPA and over in 2014–15 who report doing so in managerial or professional roles. This is in contrast to just 15% of women working at SPA and over. The majority of women working beyond SPA are in intermediate roles (48%) Further analysis of the intermediate NS-SEC category, presented in Table 3.A1, shows that the majority of men and women who fall in the intermediate NS-SEC category describe their occupation as non-professional 'own accounts' (58% and 43%, respectively), but that three times as many women than men in intermediate occupations work in administrative roles (34% compared with 11%) and 16% of women in intermediate roles work in sales or services. Between a third and two-fifths of employed women aged over SPA report working in routine or manual employment (37%), while among men this proportion is just over a quarter (26%).

Figure 3.5. Characteristics of employment for people aged 55–69 by SPA and by gender, 2014–15

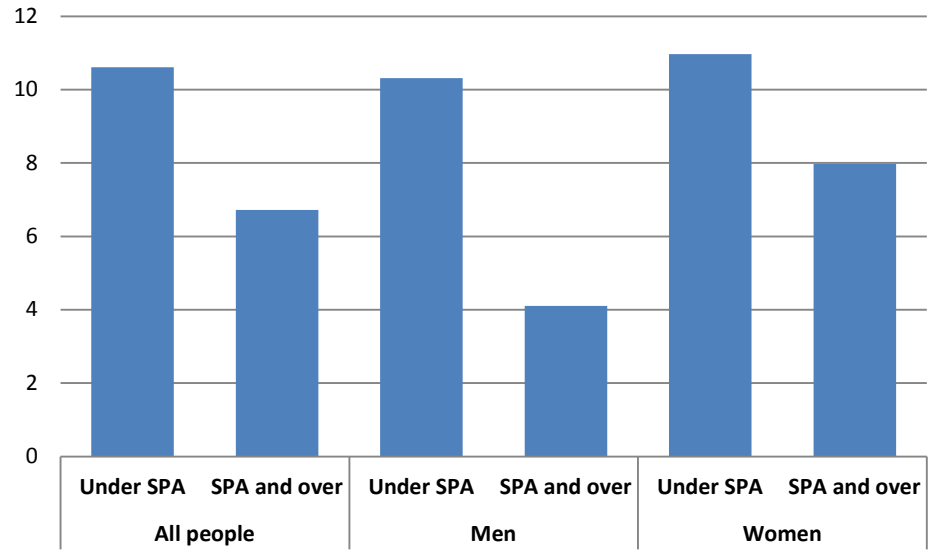
a) Mean hours worked



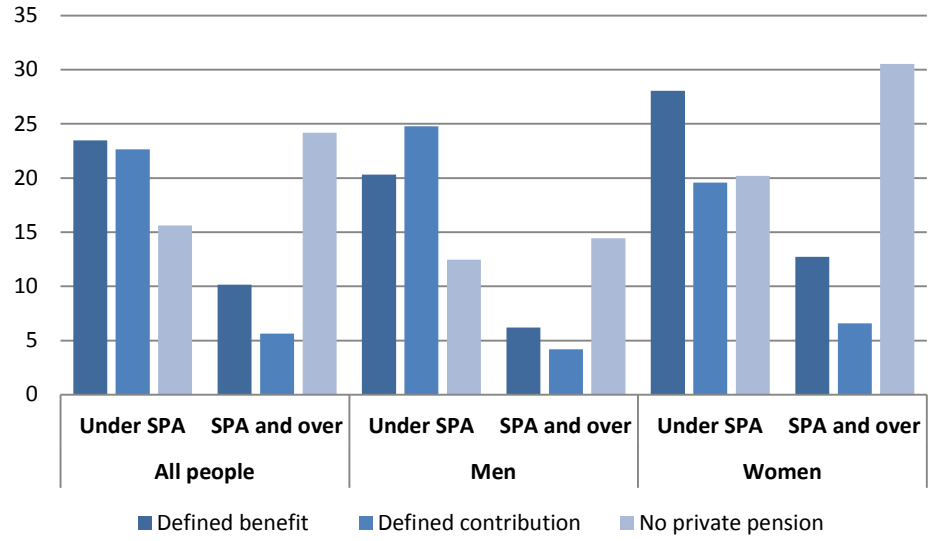
b) Type of employment (NS-SEC)



c) Change of employer since wave 6



d) Pension contribution



All working people are less likely to report changing employer if they are over SPA than if they have not reached SPA. Men under SPA are over twice as likely to report that they have changed employer since wave 6 (2012–13) than men over SPA (10% compared with 4%). Women over SPA are also twice as likely to report a recent change of employer than men over SPA (8% and 4%, respectively).

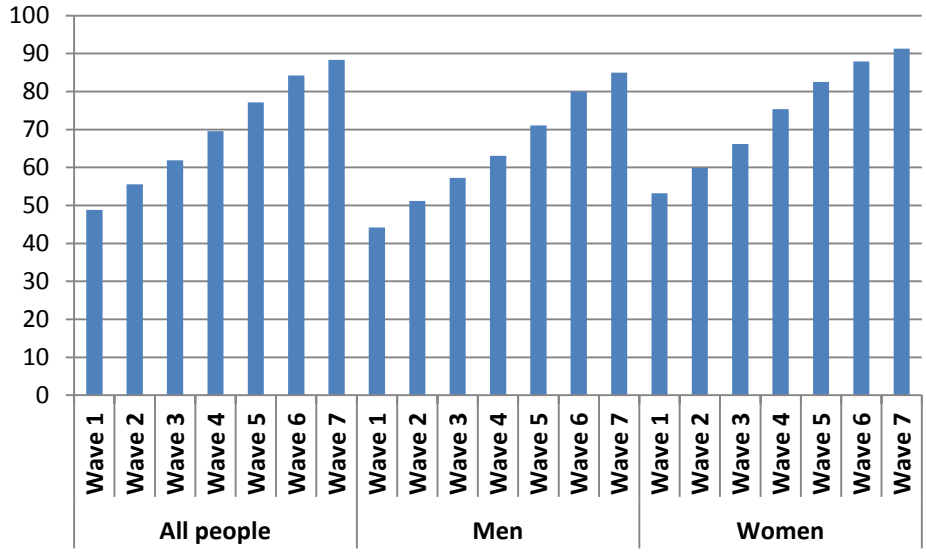
Among men and women, workers over SPA are more likely to report that they do not contribute to any private pension than to report that they contribute to a defined benefit or defined contribution pension. This is particularly prevalent among women, with almost a third (31%) stating that they do not contribute to a pension, compared with just 13% belonging to a defined benefit scheme and 7% belonging to a defined contribution scheme. Employed men under SPA, however, are twice as likely to contribute to a defined contribution pension as to make no private pension contribution (25% and 12%, respectively), and a fifth report contributing to a defined benefit pension. Women under SPA are also most likely to be contributing to a defined benefit pension (28%), with a fifth reporting that they have a defined contribution pension and another fifth reporting that they do not currently pay into any pension scheme.

3.4 Population change in economic activity and employment characteristics over the approach to retirement between 2002–03 and 2014–15

This section of the chapter focuses on all individuals who retire at some point between waves 2 and 7 of ELSA, providing at least one but up to six waves of information on employment characteristics prior to the wave at which they become retired. The proportion of respondents classifying themselves as employed or retired at each wave of ELSA is shown in Figure 3.6 by gender.

At the start of the ELSA survey, an approximately equal percentage of people reported being employed and retired (49% and 51%, respectively). Men were slightly more likely to report being employed than retired (56% and 44%, respectively), but women were slightly more likely to report being retired than employed (53% and 47%, respectively). The percentage of people who are retired increases steadily across each wave of data between 2002–03 and 2014–15. By 2014–15, only 12% of all people state they are working. Men are more likely to be working in 2014–15 than women, with 15% reporting employment, compared with just 9% of women.

Figure 3.6. Percentage of retired respondents at each wave by gender, 2002–03 to 2014–15



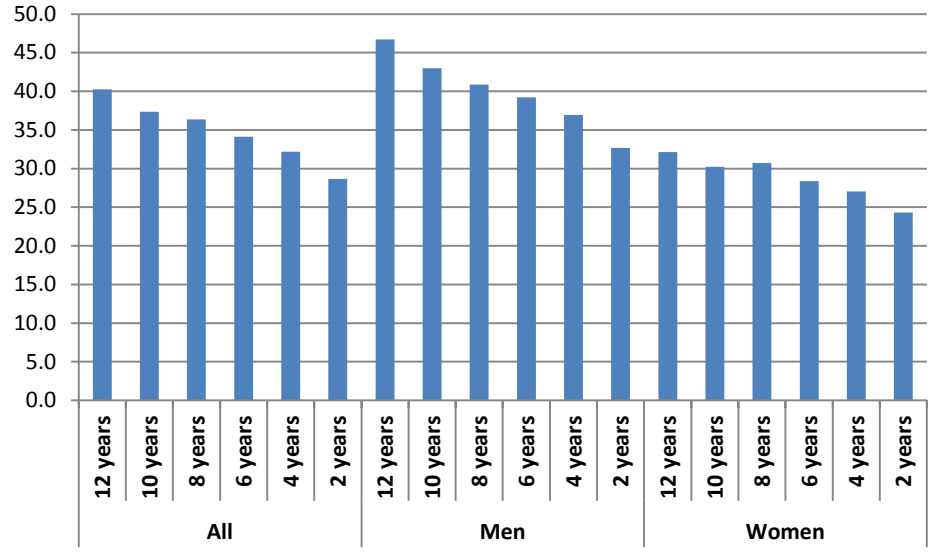
3.4.1 Changes in employment characteristics in the years prior to retirement between 2002–03 and 2014–15

This subsection of the report focuses on 2,425 core sample members who respond to each wave of ELSA, who retire at any point from wave 2 onwards, and who provide information on their employment characteristics at the wave prior to reporting that they are retired. This subsection examines some of the changes in work-related factors during the individual's approach to retirement. Trends in changes to these factors over time are then discussed in relation to predictors of retirement type and the subsequent impact of this on mental and social well-being.

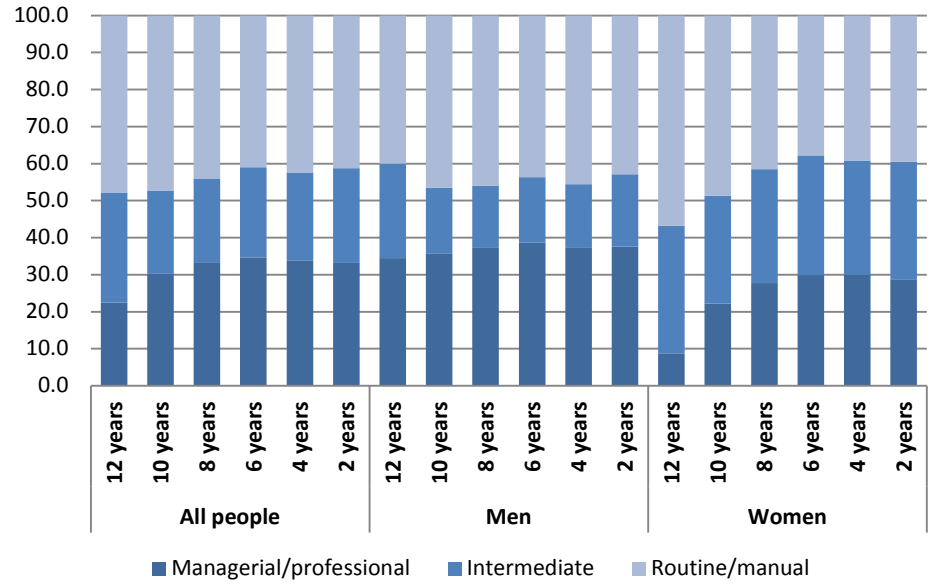
Figures 3.7a–3.7c show changes in employment characteristics of respondents prior to retirement. Information is included for all waves each individual has responded to, prior to the wave at which they first state they are retired. So, for example, a respondent who states they have retired at wave 3 will have two waves (four years) of their employment characteristics included in the analysis, and a respondent who states they have retired at wave 7 will have six waves (12 years) of relevant employment data.

Figure 3.7. Employment characteristics in the years prior to retirement by gender, 2002–03 to 2014–15

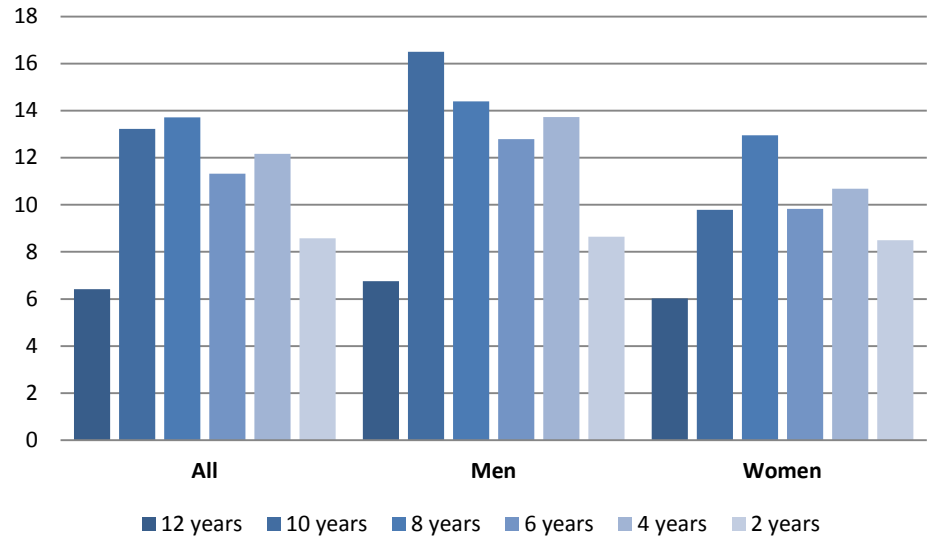
a) Mean hours worked



b) Type of employment (NS-SEC)



c) Change of employer



The mean number of hours worked by all people decreases as retirement approaches. Between 2002–03 and 2014–15, women continuously work fewer hours than men. Despite the gradual decrease over time, in the two years prior to retirement, men are still working a greater number of hours than women who are 12 years away from retirement (33 and 32 hours, respectively).

As retirement nears, the proportion of men and women working in professional or managerial roles increases slightly. At two years prior to retirement, almost two-fifths of men (38%) and 29% of women are working in these roles. Similarly, there is a slight decrease in the proportion of people working in routine or manual roles as retirement approaches, with around two-fifths of men and women reporting work in these occupational types two waves prior to retirement. This change is particularly noticeable among women, who see a steady decrease from 57% working in routine roles 12 years prior to retirement, to around 38% six years prior to retirement, when levels flatten out across the remainder of the working period. Women consistently report intermediate roles more frequently than men.

For men and women, there is a peak in changing employer around eight to ten years before retirement. There are 17% of men and 10% of women who change employer ten years prior to retirement, compared with 9% of men and 8% of women two years prior to retirement. Men are more likely to change employer than women across the entire 12-year period before retirement occurs.

3.4.2 Population change in type of retirement

This subsection examines changes in reason for retirement, first between 1980 and 2014–15, and then between the seven waves of ELSA individually, from 2002–03 to 2014–15. The graph of retirement type in Figure 3.8 allows us to observe changing retirement patterns as the ELSA sample ages, and to see whether reasons for retirement have changed over time for men and women individually. Information on respondents' reasons for retirement and year of

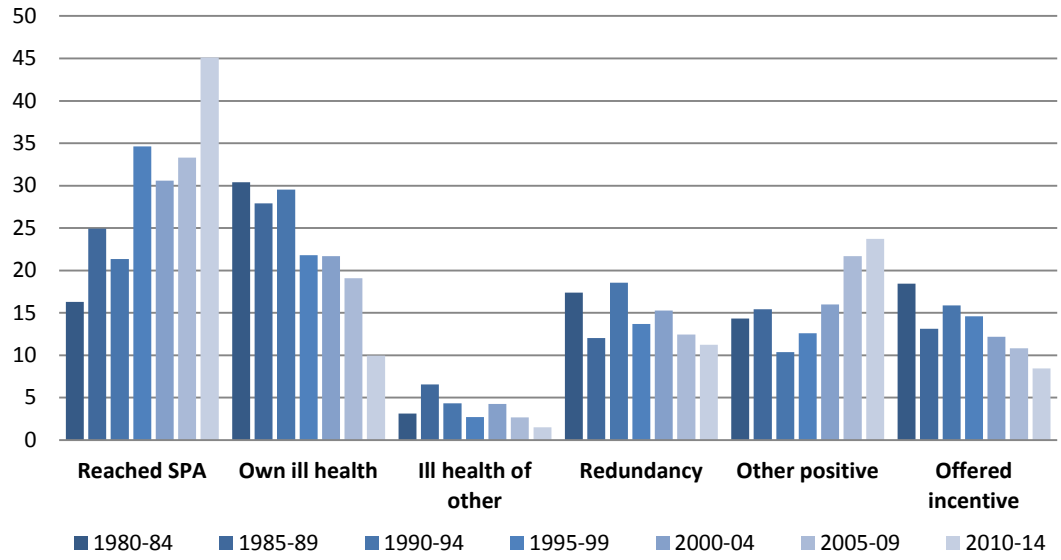
retirement was combined so that patterns of retirement reasons could be examined prior to the start of the ELSA data collection in 2002–03.

Change in type of retirement between 1980 and 2014–15

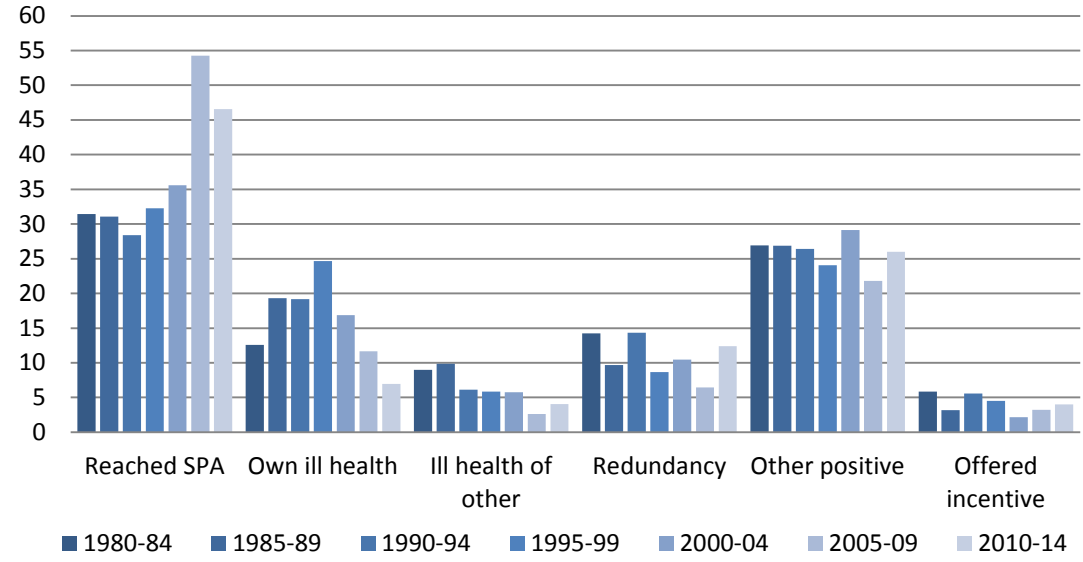
Figure 3.8 shows respondents' reasons for retirement between 1980 and 2014–15. The variable shown includes six categories. 'Reached SPA', 'Own ill health', 'Ill health of other' and being offered reasonable incentives to retire were kept as original categories because of the high frequency of cases. Redundancy and being unable to find another job were merged into one category because of the small number of respondents reporting the latter, and

Figure 3.8. Population change in reason for retirement between 1980 and 2014–15

a) Men



b) Women



other positive reasons for voluntary retirement, such as to enjoy life while young enough and retiring with a partner, were grouped together. It is worth noting that in the earliest time periods shown in Figure 3.8, there were very few respondents of SPA, explaining the initial lower rates of people reporting that they retired for this reason. The mean age of respondents in each time period is shown in parentheses in the legend.

Between 1980 and 1995, men reported their own ill health as the main determinant for retirement over any other reason. From 1995 onwards, as higher numbers of the ELSA sample start to reach SPA, 'Reached SPA' is the most commonly reported reason for retirement. For women, 'Reached SPA' is the most commonly reported reason for retirement across the studied period. Retiring due to ill health is consistently reported less among women than men, but rates gradually rise between 1980 and 1999 before steadily decreasing again. However, with the exception of the period 1995–99, when the proportion of women retiring due to ill health peaks, retiring for other positive voluntary reasons is the second most commonly reported reason for retirement among women. Within each time period, around a quarter of women report that they retired for this reason. Within each period for men, this figure is around 15%, until 2005 when positive voluntary reasons become the second most commonly reported reason for men's retirement, after reaching SPA. Rates of retiring due to the ill health of another have always been low, although more commonly reported among women, and over time the proportion of people reporting this as their determinant of retirement decreases. Men are consistently more likely than women to report redundancy or being unable to find another job as a reason for retirement. Finally, within each period, men are at least twice as likely, and sometimes more than three times as likely, as women to report retiring because they were offered a reasonable incentive.

Change in reason for retirement, 2002–03 to 2014–15

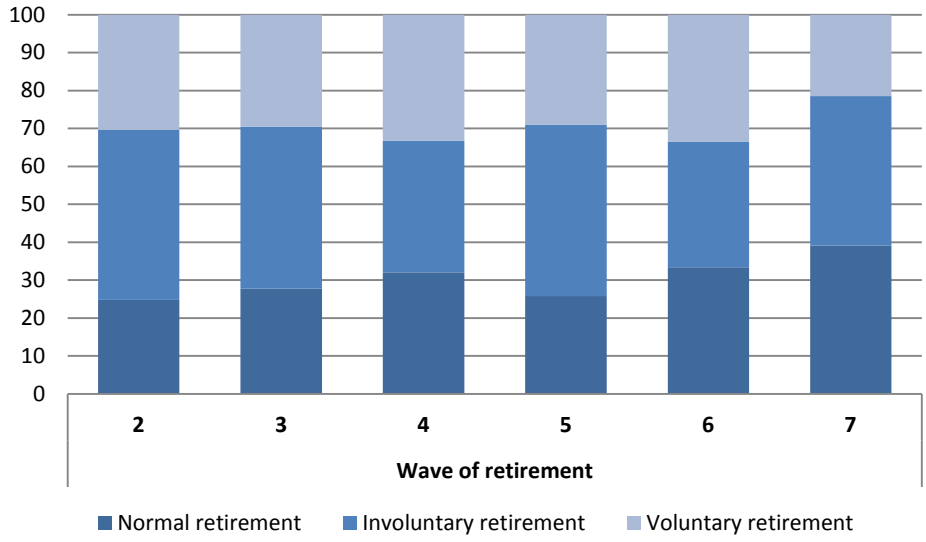
Figures 3.9a–3.9c show the reasons for retirement by wave of retirement for core ELSA sample members who retire between waves 2 and 7 of the data. Graphs are displayed separately for the entire sample, men and women.

There is reasonable stability across all types of retirement for the ELSA sample as a whole, with between 27% and 39% of respondents reporting each reason for retirement at each wave. However, there is greater variation in reason for retirement when examined on the basis of gender. Around two-fifths of men who retire at waves 2 and 3 (between 2002 and 2004–05) and who retire at wave 5 (2010–11) report doing so involuntarily. This is in comparison to around a quarter of men at these waves reporting that they retired because they reached SPA. Involuntary retirement is the most commonly reported reason for retirement at five of the six waves studied for men (the exception being those who retired at wave 6, where an equal proportion of men retired for each of the three reasons). In contrast, involuntary retirement is never the most commonly reported reason for retirement among women. Similarly, voluntary retirement is never the most commonly reported reason for retirement among men. At all waves, apart from wave 3 (2004–05), the majority of women report that they retire because they reach SPA (around 35%–40%).

Figure 3.9. Population change in reason for retirement, 2002–03 to 2014–15

a) All respondents

b) Men



c) Women

3.5 Employment-related predictors of retirement type, 2002–03 to 2014–15

This section examines predictors of the three types of retirement outlined previously: normal (when the respondent has reached SPA), involuntary and voluntary. Associations between employment characteristics prior to retirement and the type of retirement then taken are investigated, as are the associations between the type of retirement and the key socio-demographic, socio-economic and health factors.

3.5.1 Associations between individual characteristics and retirement type

Socio-demographic characteristics

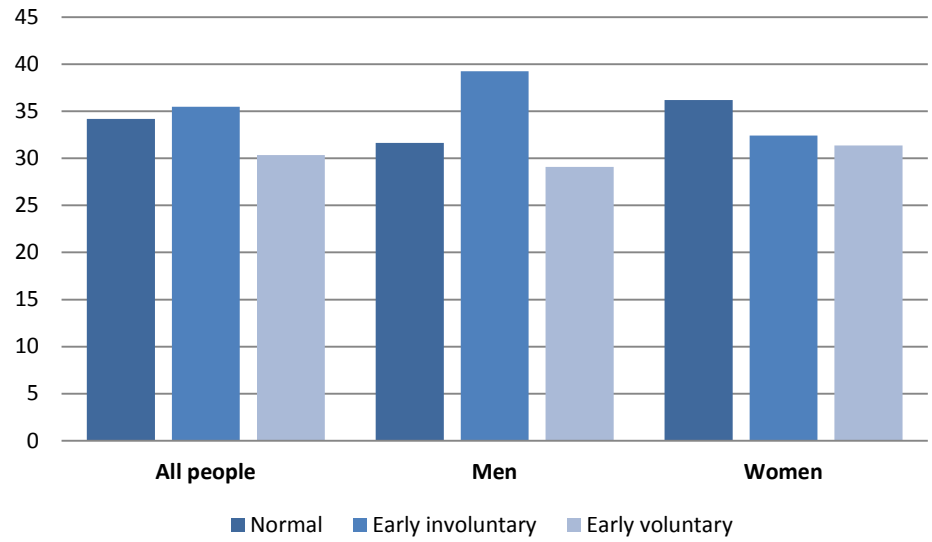
Figures 3.10a and 3.10b show the associations between type of retirement and socio-demographic characteristics: gender and age. Mean age is measured at the time of retirement, and wealth and health are measured at the wave prior to the wave at which the respondent reports that they have retired.

Reasonably similar proportions of men and women retire for all three key reasons. However, the majority of women reported that they retired because they reached SPA, yet the most commonly reported retirement type among men is involuntary. Women are slightly more likely to retire for voluntary reasons than men although, again, the difference is small.

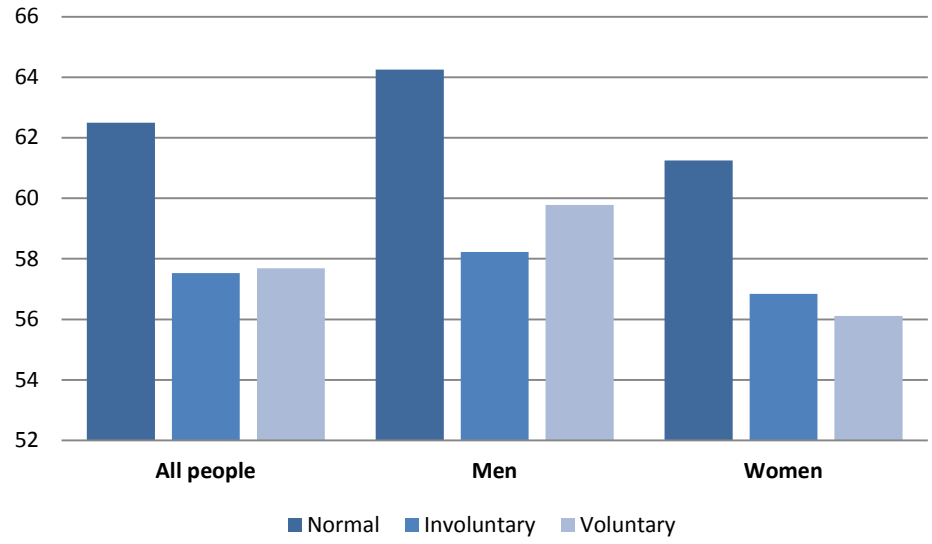
The mean age of men who report normal retirement is just over 64 years. For women, the mean age is just over 61 years (women's SPA was 62 at wave 7). Men who retire for involuntary reasons do so at a slightly younger age than men who take voluntary retirement (58 and 60 years, respectively), but women who take voluntary retirement are slightly younger than those who retire involuntarily (56 years compared with 57 years).

Figure 3.10. Associations between individual characteristics and retirement type by gender

a) Gender



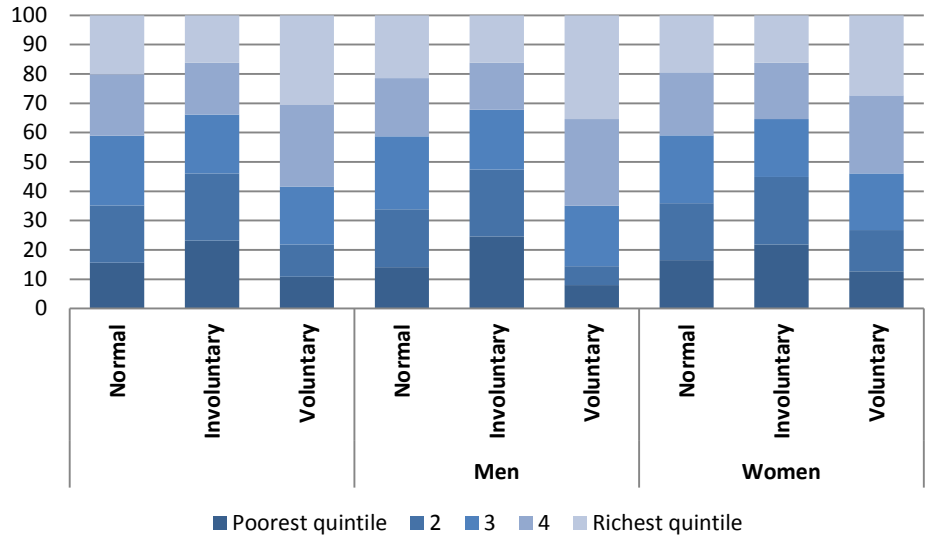
b) Mean age



Socio-economic characteristics

Figure 3.11 shows the proportion of men and women belonging to each wealth quintile by retirement type.

Figure 3.11. Wealth quintile at the wave prior to the wave of retirement, by retirement type and gender



Strong associations exist between wealth prior to retirement and the type of retirement taken at the following wave. Normal retirement appears to be associated with middle levels of wealth, involuntary retirement with lower levels of wealth and voluntary retirement with the highest levels of wealth. Respondents who retire at SPA most frequently report that they belong to the middle wealth quintile, with a general decline in the association as wealth both increases and decreases. Involuntary retirement is associated with a gradient relationship with decreasing wealth, at similar rates for both men and women. Likewise, voluntary retirement is associated with a gradient relationship with increasing levels of wealth for all people, with this relationship particularly pronounced among men.

Employment characteristics

This subsection uses information on respondents' employment characteristics at the wave prior to the wave at which the respondent first reported that they were retired.

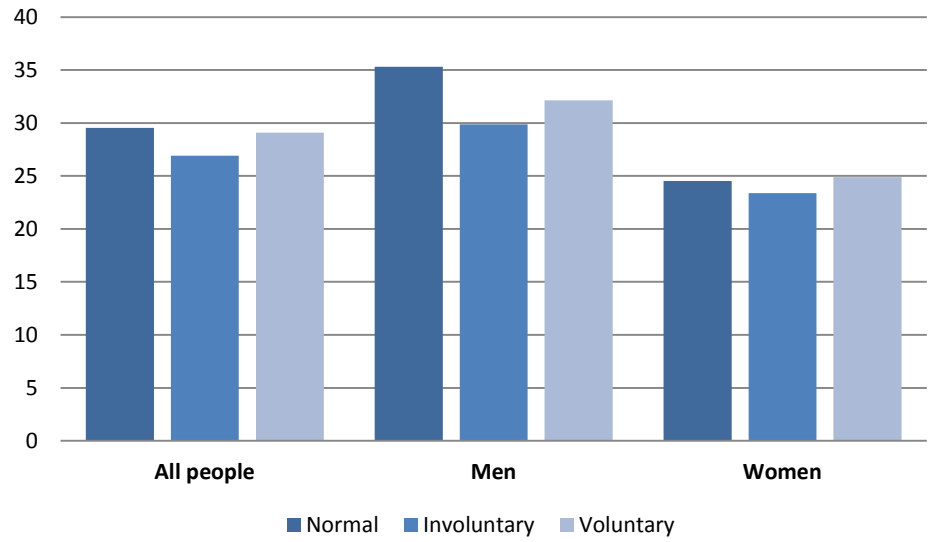
Figures 3.12a–3.12e show the employment characteristics of respondents by the type of retirement they take at the following wave.

Among all people, those who retire involuntarily work the fewest hours at the wave prior to the one at which they leave the workforce. Men who retire normally work more hours than those who retire voluntarily (35 compared with 32), but women who retire normally work the same number of hours as those retiring voluntarily (25 hours).

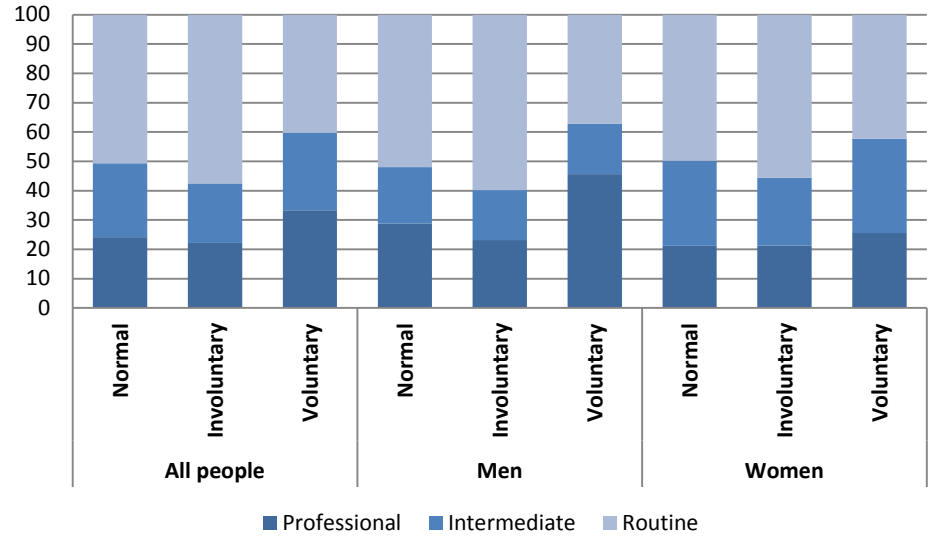
In all instances, except for men who retire voluntarily, the majority of people retire from routine or manual occupations; men who retire voluntarily are most likely to retire from professional or managerial occupations.

Figure 3.12. Retirement type and employment characteristics prior to retirement

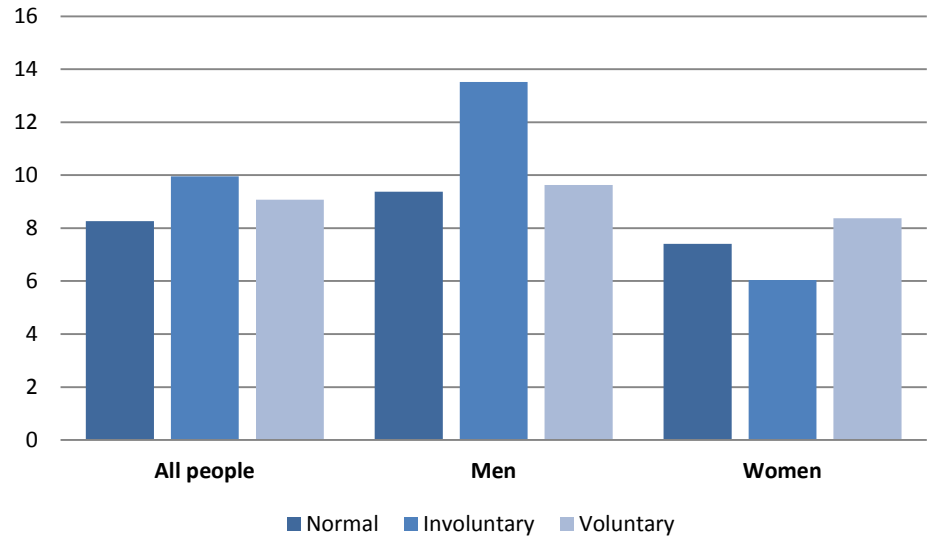
a) Mean hours



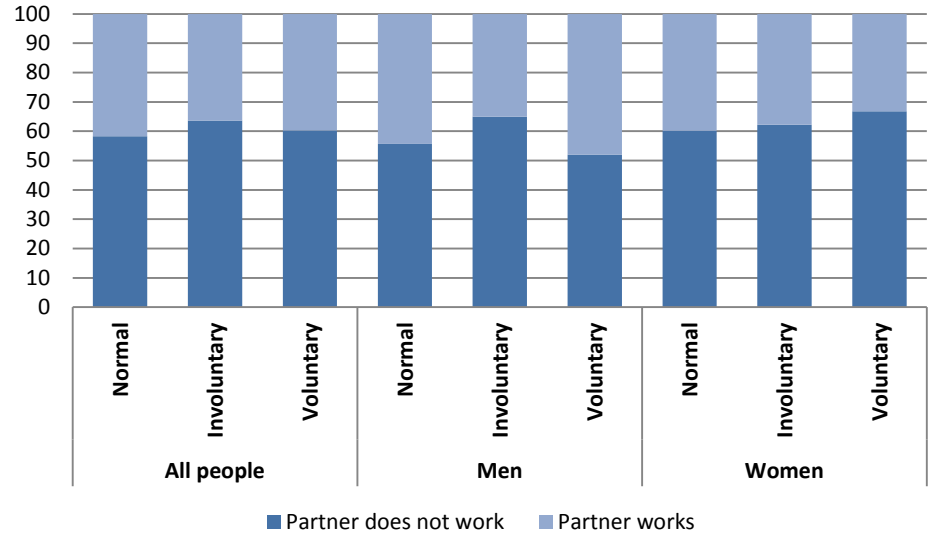
b) Employment type



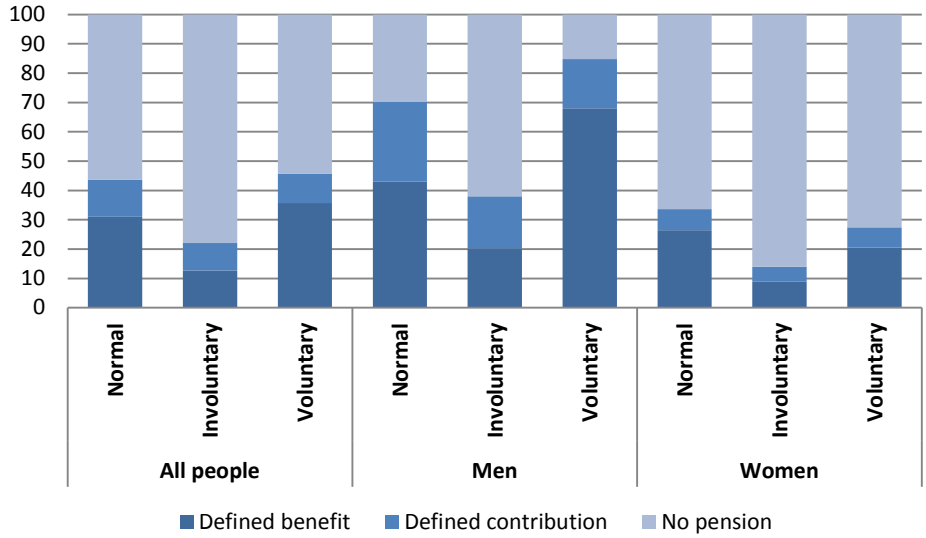
c) Change of employer (at wave prior to retirement)



d) Partner's economic activity



e) Pension contribution



Among men, those who retire involuntarily are most likely to report a recent change in employer. Over twice as many men in this category report a change in employer at the wave prior to their retirement than women who retire involuntarily (14% and 6%, respectively). Women are more likely to have reported a change in employer if they eventually retired voluntarily, although the differences are small (8% compared with 7% for normal retirement and 6% for involuntary retirement).

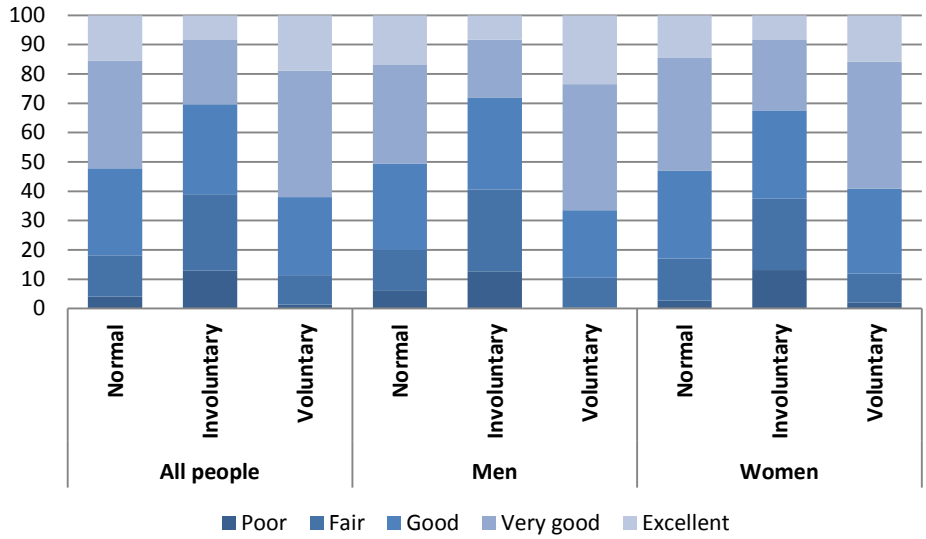
A reasonably stable majority of all people across retirement types have a partner who is not in the workforce at the wave prior to the one at which the respondent becomes retired. The proportion is lowest among men who retire voluntarily, yet highest among women who retire voluntarily (52% and 67%, respectively).

Defined benefit pensions are reported more than defined contribution pensions, and overall are more frequently observed among those who retire normally or voluntarily. Men are consistently more likely to have either type of pension than women. This is most noticeable among men who retire voluntarily, with 85% contributing to a private pension, compared with just 27% of women. Involuntary retirement, among both men and women, appears to be associated with an increased likelihood of making no pension contributions, with 86% of women who retire involuntarily and 62% of men reporting at the wave prior to retirement that they are not a member of a private pension scheme.

Self-reported health

Figure 3.13 shows the associations between self-reported health at the wave prior to retirement and the type of retirement the respondent eventually reports.

Figure 3.13. Self-reported health (wave prior to wave of retirement) by retirement type and gender



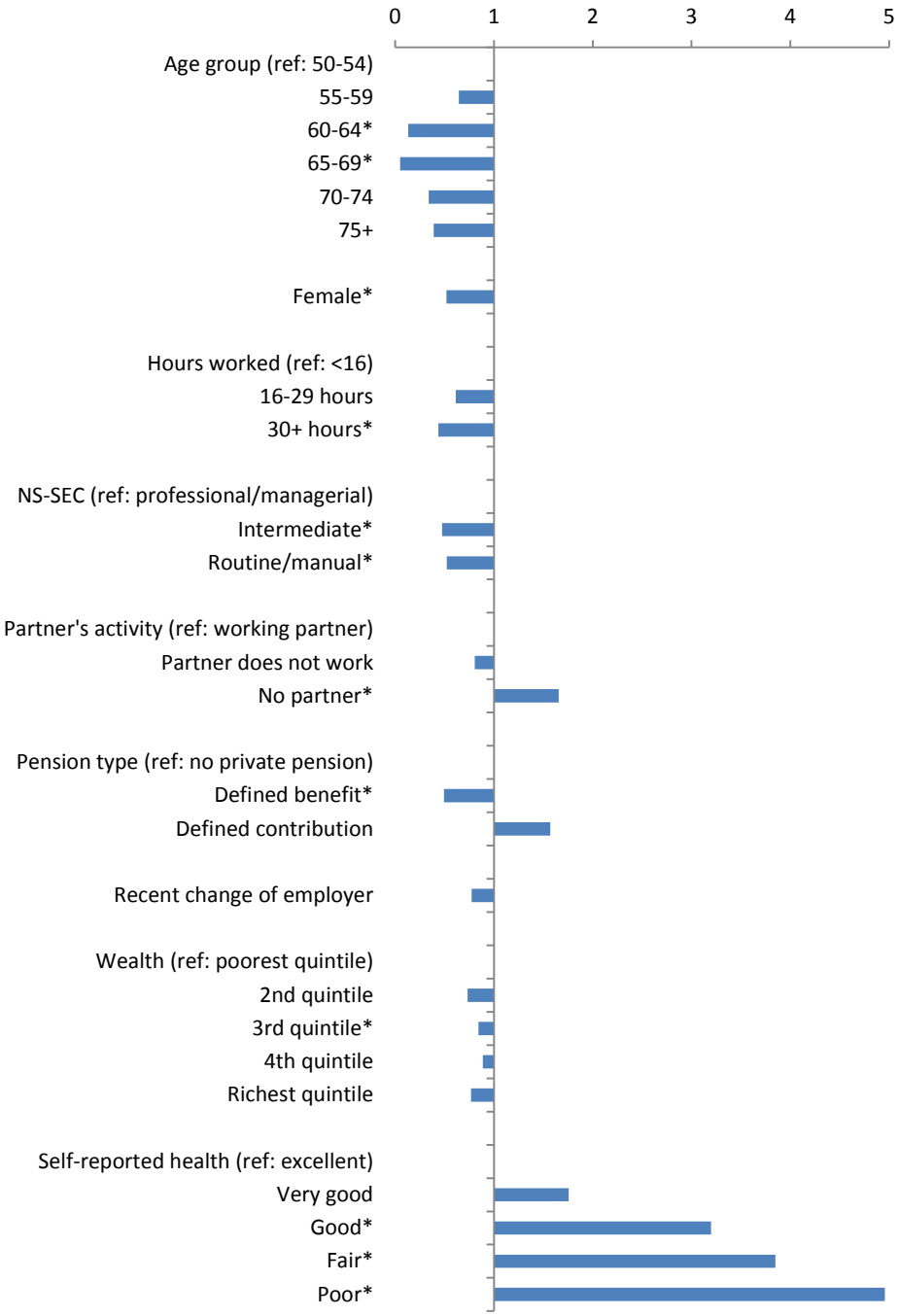
Associations between the different types of retirement and self-reported health are similar for men and women. Men and women who retire at SPA or who retire voluntarily are most likely to report very good health, in comparison with men and women who retire involuntarily, who are most likely to report good health. Voluntary retirement is associated with very good self-reported health to a greater extent than normal retirement, particularly among men. For example, 43% of men who retire voluntarily report very good health, compared with 34% of men who retire normally and report very good health. These figures are 43% and 39% for women. The poorest level of health is reported more among people who retire involuntarily than those who retire for other reasons (13% for men and women).

3.5.2 Predictors of retirement type

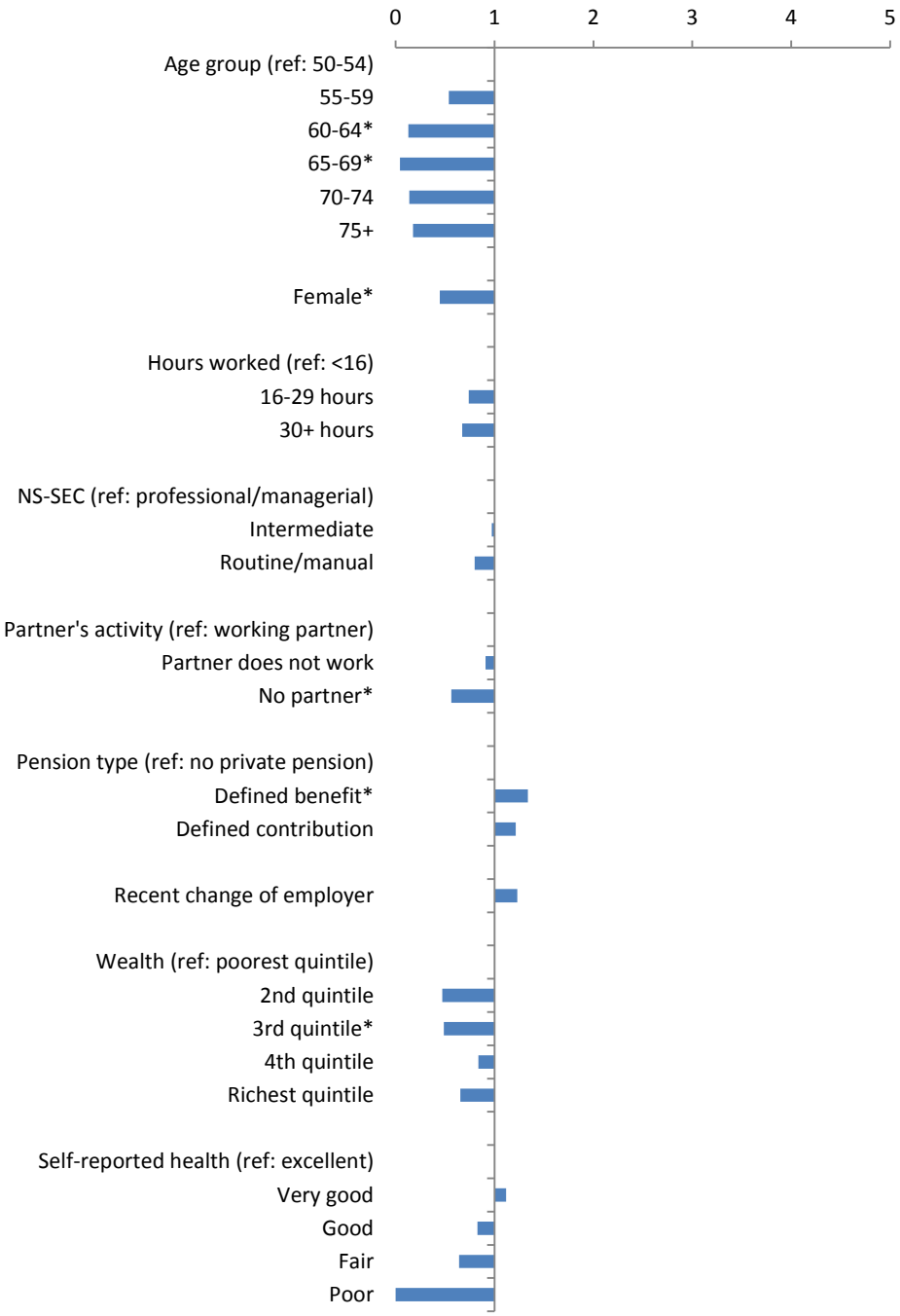
This subsection uses the socio-demographic, economic, health and pre-retirement employment characteristics to predict individuals' retirement type. Wealth, health and work-related factors are measured at the wave prior to the one at which the individual retires. Core sample members are included in the analysis if they retired at some point between waves 2 and 7 (between 2004–05 and 2014–15), therefore providing relevant information at the wave before reporting that they have retired.

Figure 3.14. Results of multinomial logit model predicting retirement

a) Involuntary retirement (in reference to normal retirement)



b) Voluntary retirement (in reference to normal retirement)



Multinomial logit models are used to predict retirement type. Results are presented in Figures 3.14a and 3.14b, with predictors of involuntary and voluntary retirement shown in reference to normal retirement at SPA. All models are weighted using the wave 7 longitudinal weight. Significant effects are marked with an asterisk, and the full model coefficients can be found in appendix Table 3.A2.

Relative to men, women are significantly less likely to retire involuntarily, and instead are more likely to retire normally once SPA is reached.

A higher number of hours worked is associated with a decreased likelihood of reporting involuntary retirement in comparison to normal retirement. For those who work 30 or more hours per week, the likelihood of becoming involuntarily retired is significantly lower and the respondent is more likely to retire normally. Relative to belonging to professional or managerial occupation types, working in intermediate or routine and manual roles is associated with a decreased risk of involuntary retirement and a greater likelihood of normal retirement. Having no partner, rather than a working partner, is also associated with an increased likelihood of involuntary retirement in comparison to normal retirement. Having a defined benefit pension, rather than a defined contribution pension or no pension, is associated with a lesser likelihood of involuntary retirement and a greater likelihood of normal retirement.

Wealth prior to retirement does not show any significant associations with involuntary retirement when compared with normal retirement, but health prior to retirement does. As self-reported health declines, involuntary retirement becomes increasingly likely in comparison to normal retirement. Compared with someone with excellent self-reported health, someone who considers their health to be either good or fair is at least three times more likely to retire involuntarily, and someone with poor health is 4.5 times more likely to retire involuntarily than because they reached SPA.

Compared with the reference age group of 50–54, people aged between 60 and 74 are significantly less likely to retire voluntarily than to retire normally at SPA. Women are also significantly less likely to take voluntary retirement than to take normal retirement. Having no partner, compared with having a working partner is associated with a decreased likelihood of taking voluntary retirement over normal retirement. In other words, individuals without a partner are less likely to choose to retire for positive reasons than to retire because they reach SPA. Having a defined benefit pension, rather than a defined contribution pension or no private pension, is associated with an increased likelihood of voluntary retirement instead of normal retirement. Finally, belonging to the middle wealth quintile, in reference to the richest wealth quintile, is associated with a lesser likelihood of retiring voluntarily and a greater likelihood instead of retiring at SPA.

3.6 Consequences of retirement type on well-being

This section explores the impact of retirement type on four aspects of mental and social well-being: depression (CES-D), satisfaction with life, quality of life (CASP-15) and social and civic engagement. Models are estimated for the core sample members of ELSA who have responded to every wave and who retire at some point from wave 2 (2004–05) of ELSA onwards, reporting a reason for retirement and information on their economic status at the wave prior to retirement. Analyses consist of 15,239 observations taken from a sample of 2,177 individuals. Data are weighted using the wave 7 longitudinal weight.

3.6.1 Model specification

Piecewise linear spline models are fitted for each well-being outcome, by retirement type. Models are specified so that a significant change in well-being at the point of entering retirement can be measured, and also so that rates of change in well-being can be identified within the categories of retirement type. All models control for age, gender and wealth at wave 1 (2002–03) as time-invariant covariates, and for wave of data collection to control for period effects, and self-rated health as a time-varying covariate. Models are run using the xtreg command in STATA 12.

Table 3.3 shows the frequency of individuals at each centred wave across the retirement period.

Table 3.3. Frequency of individuals with data at each wave centred on retirement, by retirement type

Waves prior to and following retirement (0)	SPA retirement	Involuntary retirement	Voluntary retirement	Frequency
–6 (12 years)	126	116	98	340
–5 (10 years)	287	237	249	773
–4 (8 years)	432	378	371	1,181
–3 (6 years)	569	501	493	1,563
–2 (4 years)	656	614	605	1,875
–1 (2 years)	743	725	709	2,177
0	743	725	709	2,177
1 (2 years)	617	609	611	1,837
2 (4 years)	456	488	460	1,404
3 (6 years)	311	347	338	996
4 (8 years)	174	224	216	614
5 (10 years)	87	111	104	302

3.6.2 Associations between well-being, retirement type and socio-demographic factors

Table 3.4 shows the results of initial stepwise regression models of retirement type and socio-demographic factors on the four well-being outcomes of interest. Significant associations are shown in bold font.

In the fully-adjusted model, compared with SPA retirement, retiring involuntarily is significantly associated with higher CES-D scores and lower quality of life scores of over half a point (0.6, $p < 0.05$). Retiring voluntarily is associated with CES-D scores almost half a point lower than for those retiring normally (–0.4, $p < 001$), satisfaction with life scores two points higher (2.0, $p < 0.001$) and higher quality of life scores (1.7, $p < 0.001$). Involuntary retirement is associated with a reduction in social engagement and voluntary retirement with an increase, although neither of the coefficients is significant. Including wealth in the model (model 3) changes the association between voluntary retirement and social engagement non-significantly. However, health appears to have the greatest influence on explaining significant

associations, with a large reduction in the magnitude of all coefficients, and the effect of involuntary retirement on satisfaction with life and social engagement becoming non-significant after its inclusion in the model (model 4).

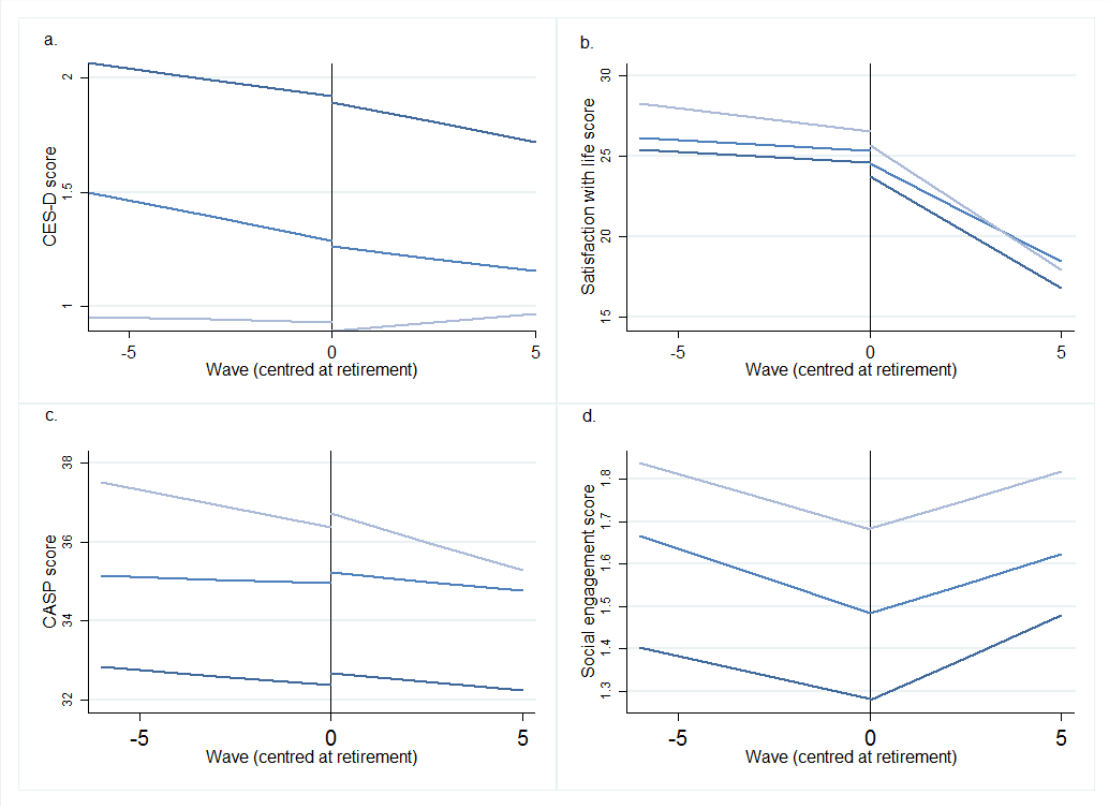
Table 3.4. Results of regression of retirement type and socio-demographic factors on well-being (difference in well-being between retirement and the wave prior to retirement)

	CES-D	SWLS	CASP	Social engagement
Model 1: raw associations				
Retirement type (ref: SPA retirement)				
Involuntary retirement	**0.418**	**–0.889**	**–1.890**	**–0.199**
Voluntary retirement	**–0.357**	**0.799**	**1.455**	**0.195**
Model 2: model 1 + age and gender				
Involuntary retirement	**0.475**	**–0.870**	**–1.992**	**–0.196**
Voluntary retirement	**–0.335**	**0.752**	**1.361**	**0.190**
Model 3: model 2 + wealth				
Involuntary retirement	**0.413**	**–0.776**	**–1.780**	**–0.113**
Voluntary retirement	**–0.202**	**0.530**	**0.818**	0.041
Model 4: model 3 + self-reported health				
Involuntary retirement	**0.178**	–0.216	**–0.766**	–0.050
Voluntary retirement	**–0.128**	**0.346**	**0.535**	0.023
Model 5 (fully-adjusted model): model 4 + wave				
Involuntary retirement	**0.165**	0.228	**–0.561**	–0.075
Voluntary retirement	**–0.369**	**2.009**	**1.694**	0.039
Age group (reference 50–54)				
55–59	0.016	–0.181	**–0.544**	0.030
60–64	–0.059	**0.625**	0.079	**0.122**
65–69	0.002	**0.523**	**–1.164**	–0.016
70–74	0.117	**0.870**	–0.549	**0.133**
75+	**0.406**	**0.991**	**–2.469**	0.005
Female	**0.467**	**–0.368**	0.116	**–0.051**
Wealth	**–0.182**	**0.374**	**0.697**	**0.266**
Self-reported health	**0.619**	**–1.026**	**–2.433**	**–0.125**
Wave	**–0.041**	**–1.687**	**–0.210**	**–0.041**

3.6.3 Change in well-being over the retirement transition period by retirement type

Figures 3.15a–3.15d show the results of the spline models, demonstrating change in well-being over time on the basis of retirement type. Graphs are centred at the wave of retirement for each individual. Lines before the centre of the graph show the rate of change in well-being in the years leading up to retirement, and lines after the centre of the graph show the rate of change in well-being following retirement. Where lines break at the centre of the graph, a sudden change in well-being at the point of entering retirement is illustrated. All models are adjusted for age, gender, wealth and self-reported health.

Figure 3.15. Trajectories of well-being over the retirement period by retirement type, 2002–03 to 2014–15



Retirement type and CES-D score

Figure 3.15a shows changes in CES-D score over the retirement transition period on the basis of retirement type. Mid-blue lines show patterns for respondents who retire because they have reached SPA, light blue lines show patterns for those who retire voluntarily and dark blue lines are for those who retire involuntarily. A lower CES-D score reflects fewer symptoms of depression. The lowest scores across the entire transition period are observed among those who retire voluntarily, and the highest are among those who retire involuntarily.

The vertical line in the centre of the graph allows us to examine whether or not there is a sudden change in CES-D score at the point at which retirement is

reached. For each group of retirees, there appears to be a small decrease in CES-D score at the wave at which retirement is reported. However, this drop in score is not significant (see Table 3.5).

For all individuals, there is a small decline in CES-D score over time as retirement approaches. After retirement, the CES-D score continues to decline for both those who retire normally and those who retire involuntarily. The change in the rate of decline is not significantly different after retirement. Figure 3.14a shows that after retirement, despite an initial drop in CES-D score, those who retire voluntarily see a small increase in depression score.

Retirement type and satisfaction with life

Figure 3.15b shows changes in satisfaction with life score over the retirement transition period, by retirement type. Higher scores indicate better satisfaction with life. Until around five years following retirement, those who retire voluntarily report the highest satisfaction scores. At around five years post-retirement, life satisfaction is reported equally among those who retired voluntarily and those who retired normally. Individuals retiring involuntarily continuously report the lowest satisfaction with life scores, across the entire retirement transition period.

For each group of retirees, the start of retirement appears to be associated with a sudden drop in satisfaction with life. These declines in satisfaction are significant ($p = 0.01$).

Regardless of retirement type, individuals report a similar pattern of satisfaction with life across the retirement transition period. Prior to retirement, life satisfaction declines slowly over time, but once retirement is reached, the rate of decline increases for all retirement types, and this change in rate is significant ($p < 0.001$).

Retirement type and CASP score

Figure 3.15c shows changes in CASP score over the retirement transition period, by retirement type. Individuals who retire voluntarily report the highest quality of life before and after retirement, individuals who retire involuntarily report the poorest quality of life before and after retirement, and those retiring normally report the comparative intermediate level continuously.

The change in intercept at the wave of reaching retirement demonstrates that, regardless of reason, retirement is associated with an increase in quality of life. This increase in score is significant ($p < 0.001$). However, quality of life decreases steadily over the retirement transition period, and after the initial increase at the point of retirement, rates continue to decline at a similar rate to that prior to retirement.

Retirement and social engagement

Figure 3.15d shows changes in social engagement over the retirement transition period, by retirement type. Again, those who retire voluntarily report the highest levels of social engagement prior to and following retirement, and those retiring involuntarily report the lowest.

Figure 3.15d shows that regardless of reason, becoming retired is not associated with a sudden change in levels of social engagement. Rather, in the

lead up to retirement, individuals see a gradual decline in social engagement, but afterwards see a gradual increase. Rates of this decline before retirement and increase after retirement are similar over time. For those who retire voluntarily and normally, by ten years (five waves) post-retirement, levels of social engagement have returned to the levels observed ten years prior to retirement. For those who retire involuntarily, the level of social engagement observed ten years prior to retirement is regained by around seven years after retirement. The changes in engagement pre- and post-retirement are significant ($p < 0.001$).

Table 3.5. Intercept and slope values before and after retirement

	CES-D		**SWLS**		**CASP**		**Social engagement**	
	Coeff.	Diff. (*p*)	Coeff.	Diff. (*p*)	Coeff.	Diff. (*p*)	Coeff.	Diff. (*p*)
Intercept 1	–0.429		**35.676**		**40.299**		1.168	
Intercept 2	–0.505	0.185	**34.893**	0.001	**41.204**	0.000	–0.041	0.404
Slope 1	–0.038		**1.220**		0.125		**–0.007**	
Slope 2	–0.070	0.131	**–0.314**	0.000	0.280	0.055	**0.054**	0.000

Note: Intercept 1 is the mean well-being score at the start of the study period, and intercept 2 is the mean at the wave of becoming retired. Slope 1 is the mean rate of change in well-being prior to retirement, and slope 2 is the mean rate of change in well-being after retirement.

3.7 Associations between retirement type, social engagement, perceived social status and well-being

This section again examines the impact of retirement type on well-being, but this time in relation to how such effects are mediated by changes in social engagement and perceived social status. The same sample of ELSA core members is used and path analysis models are run in order to investigate these associations. Here, the measure of social and civic engagement includes the same score outlined in previous sections, but it is also inclusive of an extra score point if the individual reports that they have participated in voluntary work at least once in the last year.

Models are run separately for each type of retirement well-being, and results are presented in Table 3.6. Retirement (measured at time t) and pre-retirement well-being (measured at time $t - 1$) are included as exogenous variables with the covariance between the two estimated. As the spline models showed a sudden change in well-being at the wave of becoming retired, the impact of retirement type on the pathways is measured by inclusion of social engagement, perceived social status and well-being variables captured at the same wave as the wave at which the individual retired. All models are weighted using the wave 7 longitudinal weight.

Table 3.6 (panels a–c) shows the results of the path analysis by retirement type. The first part of each panel shows the direct effects of retirement type on the two variables that are not estimated directly in the path model: the unmediated effect of retirement type on well-being and the unmediated effect of retirement type on perceived social status. The second part of each panel shows the mediated relationship between retirement type and well-being. The first association presented is that for the relationship between retirement and social engagement, the second is that for the relationship between social engagement and social status, and the third is for the association between social status and well-being. The final effect shown is the mediated effect of retirement type on well-being, via social engagement and then social status. Models control for baseline well-being. Significant effects are shown in bold font.

Table 3.6. Results of path analysis on effects of retirement type mediated by social engagement and perceived social status

	Normal	Involuntary	Voluntary
a) CES-D score			
Direct effects			
Retirement on well-being	**–0.181**	**0.354**	**–0.154**
Retirement on perceived social status	–0.919	**–2.562**	**3.537**
Indirect effects			
Retirement–social engagement	0.008	**–0.259**	**0.241**
Social engagement–social status	**1.378**	**1.928**	**1.678**
Social status–well-being	**–0.017**	**–0.016**	**–0.016**
Total indirect effect	*0.000*	*0.008*	*–0.006*
b) Satisfaction with life			
Direct effects			
Retirement on well-being	–0.740	–0.093	**0.880**
Retirement on perceived social status	–0.640	–1.429	**2.196**
Indirect effects			
Retirement–social engagement	0.074	**–0.344**	**0.247**
Social engagement–social status	**0.987**	**1.659**	**1.295**
Social status–well-being	0.011	0.011	0.010
Total indirect effect	*0.001*	*–0.006*	*0.003*
c) Quality of life			
Direct effects			
Retirement on well-being	0.265	**–0.833**	**0.517**
Retirement on perceived social status	–1.566	–1.061	**2.698**
Indirect effects			
Retirement–social engagement	0.055	**–0.249**	**0.181**
Social engagement–social status	0.438	**0.524**	0.447
Social status–well-being	**0.063**	**0.062**	**0.061**
Total indirect effect	0.002	–0.008	0.005

Panel (a) of Table 3.6 shows that the direct effect of retirement on the CES-D score is significant, regardless of retirement type. Normal and voluntary retirement are associated with a decrease in depressive symptoms, and involuntary retirement is associated with an increase. The direct association between normal retirement and social status is not significant, but involuntary retirement is associated with a significant reduction in social status of 2.5 points, and voluntary retirement with a significant increase of 3.5 points. Similarly, the second part of panel (a) shows that normal retirement has no significant association with social engagement, but involuntary retirement is associated with a significant reduction in engagement, while voluntary retirement is associated with a significant increase in engagement. In all instances, the direct association between social engagement and social status is significant and positive, with those who retire involuntarily observing the largest increase in social status if they increase their level of social engagement. Higher social status is in turn associated with fewer depressive symptoms to a similar degree across all retirement types. The total mediated association displayed at the end of panel (a) of Table 3.6 shows, overall, that the path between retirement, social engagement, social status and CES-D score leads to fewer symptoms of depression for those retiring voluntarily, but more for those retiring involuntarily. There is no overall association with normal retirement.

Panel (b) of Table 3.6 shows the same results for satisfaction with life. Here, only voluntary retirement is directly associated with a significant change in satisfaction with life score, with those choosing to retire outside of SPA seeing an increase of almost one score point. Again, voluntary retirement is the only retirement type significantly directly associated with social status, where an increase of over two points can be observed. The second part of this panel shows that normal retirement has no significant association with levels of social engagement, but involuntary retirement is again associated with a significant decrease, and voluntary retirement with a significant increase. Again, social engagement is significantly and positively associated with social status, independently of retirement type. The effect of social status on satisfaction with life, however, is small and not significant. The overall mediated effects at the end of this panel show an ultimate association with poorer life satisfaction among those who retire involuntarily, and better life satisfaction among those who retire voluntarily. The mediated effect of normal retirement is positive, but again the smallest in magnitude.

Panel (c) of Table 3.6 shows direct and mediated effects of retirement type on quality of life. Normal retirement has no significant direct effect on quality of life, but involuntary retirement is associated with a significant decrease and voluntary retirement with a significant increase. Voluntary retirement is also directly associated with an increase in social status of over 2.5 points.

Again, the final part of this panel shows stronger mediated associations between involuntary and voluntary retirement and quality of life than normal retirement. Involuntary retirement has a direct negative effect on levels of social engagement, and voluntary retirement has a direct positive effect. Only those retiring involuntarily see a significant increase in social status if their level of social engagement is higher. Social status is significantly associated with a better quality of life for each group of retirees. Finally, the mediated

effects again demonstrate an overall association between involuntary retirement and lower quality of life, and voluntary retirement and better quality of life. The mediated effect of normal retirement is positive but the smallest in magnitude.

3.8 Conclusions

Previous research has indicated that retirement type can influence well-being in later life and that better circumstances surrounding retirement are associated with successful ageing. Conversely, retirement in non-favourable conditions, such as when it is forced because of illness or the inability to find another job, has been associated with poorer well-being in later life. The research presented within this chapter has shown that retirement type has a long-lasting association with well-being, which expands across the retirement transition period, from personal and workplace characteristics in the approach to retirement as well as after retirement.

In 2014–15, the majority of ELSA respondents over SPA were retired and the majority of those under SPA were still working. A much higher proportion of women than men reported an 'other' economic status. Of women who did report an 'other' economic status, the majority reported that they looked after home or family. Men were more likely to report permanent illness or unemployment.

Economic activity appeared to be strongly associated with a partner's economic activity, with the majority of people still working having a partner who still worked, and the majority of retired respondents having a retired partner. Retired men were much more likely than retired women to report that they also participated in recent paid work.

In 2014–15, men worked a greater number of hours in their main jobs than women. Employed men over SPA were most likely to report working in managerial or professional roles, while women over SPA were more likely to be working in intermediate occupations. A recent change in employer was reported far more among people under SPA than people over SPA. Contributing to a private pension was much less likely among respondents who were over SPA, and a high proportion of women over SPA reported having no private pension at all.

As would be expected, the percentage of retired respondents increased steadily across the data period. In the approach to retirement, respondents reduced the number of hours they worked, but men continuously worked a greater number of hours than women. There was a slight reduction in people working in routine and manual jobs as retirement approached, and changes in employer also became less frequent.

A reasonably similar proportion of men and women retired at SPA, involuntarily and voluntarily between waves 2 and 7 of ELSA (2004–05 to 2014–15), directly from employment at the previous wave. However, the work characteristics of these retirees varied on the basis of their retirement type. Retiring involuntarily or voluntarily was associated with younger age groups. Almost half of people who retired involuntarily fell into the poorest two

wealth quintiles at the wave prior to retirement, whereas over half of those who retired voluntarily fell into the richest two wealth quintiles. Involuntary retirement was associated with slightly fewer hours worked in the wave prior to workforce exit and with a reduced likelihood of reporting making contributions to a private pension. Over half of people who retired voluntarily reported excellent or very good self-reported health at the wave prior to retirement, compared with around two-fifths of people who retired involuntarily reporting poor or fair health.

Retirement type showed different relationships with well-being across the retirement transition period. Both before and after the occurrence of retirement, those who retired voluntarily saw the best mental well-being and highest rates of social engagement, those who retired involuntarily saw the poorest levels of well-being and social engagement, and those who retired at SPA fell between the two. However, well-being generally declined over the retirement period. Social engagement showed an interesting trajectory, with rates declining as retirement neared, but rising again and returning to its original levels after it had occurred.

Finally, this chapter has demonstrated how the effects of retirement type on well-being are mediated by social engagement and changes in social status. Voluntary retirement was continuously associated with a direct positive effect on social status, while involuntary retirement showed a negative relationship. However, increased social engagement continuously showed associations with higher social status. Again, normal retirement fell between the two. The effects of retirement on well-being, mediated by the effects of retirement on social status, continued to demonstrate negative associations with involuntary retirement and positive associations with voluntary retirement, although indirect effects became much smaller than the direct effects of retirement on well-being. Mediated associations with SPA retirement were positive but very small.

If retirement type has important implications for well-being across the retirement period, then policymakers should aim to focus on those most at risk of the adverse effects of involuntary retirement in order to ensure that transitions into retirement, and the circumstances following retirement, are as favourable as possible. This should involve targeting those with socio-economic, health and employment characteristics most likely to be associated with early workforce exit due to long-term illness, unemployment and redundancy. Ensuring that these individuals can become or remain socially engaged following retirement may help to offset some of the detrimental effects of unfavourable retirement terms.

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Appendix 3A

Table 3A.1. Breakdown of 'intermediate' NS-SEC category by gender, 2014–15

Role description	All people	Male	Female
Clerical/administrative	24.5	11.3	33.8
Sales/services	14.4	11.6	16.3
Technical/auxiliary	4.8	5.0	4.6
Engineering	2.4	5.9	0.0
Employers in small organisations (non-professional)	2.9	4.3	1.9
Own account workers (non-professional)	49.3	57.5	43.5
Own account workers (agriculture)	1.8	4.4	0.0

Table 3A.2. Results of multinomial model showing predictors of retirement type

	Involuntary retirement	Voluntary retirement
Age group (ref: 50–54)		
55–59	0.643	0.536
60–64*	**0.130**	**0.128**
65–69*	**0.050**	**0.042**
70–74	0.338	0.139
75+	0.388	0.175
Female*	**0.520**	**0.445**
Hours worked (ref: <16)		
16-29 hours	0.612	0.739
30+ hours*	**0.438**	0.671
NS-SEC (ref: professional/managerial)		
Intermediate*	**0.473**	0.973
Routine/manual*	**0.522**	0.799
Partner's activity (ref: working partner)		
Partner does not work	0.804	0.907
No partner*	**1.654**	**0.561**
Pension type (ref: no private pension)		
Defined benefit*	**0.494**	**1.338**
Defined contribution	1.570	1.215
Recent change of employer	0.772	1.230
Wealth (ref: poorest quintile)		
2nd quintile	0.733	0.473
3rd quintile*	**0.843**	**0.487**
4th quintile	0.886	0.838
Richest quintile	0.767	0.655
Self-reported health (ref: excellent)		
Very good	1.755	1.117
Good*	**3.197**	0.828
Fair*	**3.850**	0.640
Poor*	**4.956**	0.000

Note: Significant associations are shown in bold font.

4. Socio-economic differences in healthy life expectancy and mortality among older people in England

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Key points arising from this chapter are:

- In this chapter, we utilise mortality data from a 12-year surveillance of ELSA participants, and divide our analyses into those pertaining to healthy life expectancy and risk of cause-specific mortality.
- Although the well-documented female advantage in health expectancy continues, these gender differences were modest, with women expecting to live up to three years longer in good health than men.
- At the ages of 50 and 65 years, there was clear evidence of socio-economic inequalities in all four indicators of socio-economic position (occupational social class, income, wealth and education) and our three indicators of health expectancies (healthy life expectancy, disability-free life expectancy and illness-free life expectancy)
- The greatest disparities across the three measures of health expectancy were found for the socio-economic indicators of wealth and income.
- Thus, the health expectancy differential between the top and bottom wealth tertiles in the estimated additional years expected to live in good health at the age of 50 was around 12 years, eight years for disability-free life expectancy, and ten years for illness-free life expectancy.
- At age 50, men and women in the top wealth tertile could expect to spend more than 76% of their remaining years of life free from illness, over 80% of their remaining life in good health, and over 90% of their remaining life free from disability. The corresponding proportions for those in the poorest wealth group are 58% free from illness, just over 60% in good health and approximately 85% free from disability.
- By the age of 85 years, these socio-economic differentials in health expectancies had largely attenuated.
- Socio-economic inequalities in all-cause and cardiovascular disease mortality were more pronounced by wealth than education, occupational social class and income.

- Among the possible factors explaining the socio-economic status–mortality gradient are lifestyle factors, such as smoking, alcohol consumption and physical activity.
- As such, these factors explained 38%–45% of the socio-economic (all four measures) differentials in all-cause mortality among people aged 50–59 years and 44%–77% among those aged 60–69 years.
- Functional capability (limitations in activities of daily living and reduced cognitive ability) explained up to 38% of the association between the four socio-economic measures and all-cause mortality among those aged 50–59 and up to 69% among those aged 60–69.
- To conclude, our findings show that socio-economic inequalities in healthy life expectancy and mortality are still marked in this contemporary population of older men and women.

4.1 Introduction

The significance of socio-economic factors for health at older ages is a key research theme in ELSA. Socio-economic factors were shown to predict mortality and life expectancy over a four-year follow-up to wave 3 (Nazroo et al., 2008). Since that report, there has been a substantial accumulation of new data on health and mortality (around 2,500 deaths among core members from wave 1 up to early 2013) so affording us the opportunity for a more comprehensive and statistically powerful set of analyses.

Socio-economic status and healthy life expectancy

Between 2000 and 2050, the proportion of the world's population over 60 years is expected to double from about 11% to 22% (World Health Organization, 2011). Life expectancy continues to increase, but concerns have been expressed that increases in healthy life expectancy are not keeping pace with those in life expectancy, leading to an expansion of time with morbidity (Robine and Michael, 2004). Therefore, it is important to measure not only life expectancy but also health expectancy, the number of additional years of life spent in favourable states of health or without disability. Health expectancies have value for monitoring time trends and inequities in population health because they combine data on both mortality and morbidity. Furthermore, while there are striking socio-economic differences in life expectancy, the extent to which these also exist in healthy life expectancy remains unclear.

Studies from France (Cambois et al., 2011), Germany (Kibele, Jasilionis and Shkolnikov, 2013) and the UK (Matthews, Jagger and Hancock, 2006) show that there are social-class inequalities in healthy life expectancy, such that people in the poorest social circumstances have the shortest healthy life expectancy. Similarly, a recent systematic literature review of studies among older populations revealed inequalities in healthy life expectancy by education and socio-economic classes across different countries (Pongiglione, De Stavola and Ploubidis, 2015). The extent to which inequalities in healthy life expectancy at older ages differ according to different measures of socio-economic status (SES) has yet to be fully investigated in England.

Socio-economic status and mortality

In England and Wales in 2003, it was estimated that 2.3 million years of life were prematurely lost among people aged 30–59 as a result of socio-economic inequalities (Marmot et al., 2010), while inequality-related deaths in the European Union in 2004 amounted to approximately 707,000 (Mackenbach, Meerding and Kunst, 2011). Observational evidence suggests that lower socio-economic position is strongly associated with adult mortality (Marmot and Shipley, 1996; Mackenbach et al., 2008) including mortality from cardiovascular disease (Huisman et al., 2005; Addo et al., 2012) and most (Woods, Rachet and Coleman, 2006; Mackenbach et al., 2008) but not all types of cancer (Pappas et al., 1993; Menvielle et al., 2008). Importantly, it is also the case that these various SES–mortality gradients exist across the full socio-economic spectrum, not being confined solely to individuals classified as poor at the lowest end of the continuum (van Rossum et al., 2000). In these studies, SES is measured using a variety of indicators such as education, occupational social class and income, and while the direction of the mortality gradient is invariably the same across these different indices, there is some evidence of heterogeneity in the magnitude of these associations. For instance, prior analyses of ELSA data showed that wealth was a more powerful predictor of mortality than education and occupational social class (Demakakos et al., 2015).

Taken together, the general paucity of research in older age groups (Huisman et al., 2013) means that several important questions remain, including whether the socio-economic gradient in mortality apparent in middle-aged populations continues into older age, and how lower SES is embodied (‘gets under the skin’) to cause an increase in mortality risk.

This chapter is divided into two parts. In the first part (Section 4.3), we focus on socio-economic differences in healthy life expectancy. Using longitudinal data from ELSA, we explore whether people are surviving longer in good health or poor health, and the relative importance of wealth, income, education and occupational social class for healthy life expectancy at older ages. In the second part (Section 4.4), by using survival models, we explore in detail the relationship between SES (wealth, income, education and occupational social class) and mortality, seeking to identify which factors explain the link between SES and mortality.

4.2 Methods

4.2.1 Mortality

Mortality was ascertained for consenting study members (97.5% of eligible participants) by linking ELSA study members to the UK National Health Service mortality registry up to March 2013. This provides information on broad causes of death (cardiovascular disease, cancer, external causes of death).

4.2.2 Socio-economic measures

Social class

Occupational social class is defined using the three categories of the National Statistics socio-economic classification (NS-SEC): managerial and professional occupations, intermediate occupations, routine and manual occupations. This is based on the household reference person, who is either the person responsible for owning/renting, or responsible for the accommodation, or the person with the highest income in the case of joint householders. Taking this approach, it is possible that a woman is the household reference person.

Wealth

We used total non-pension wealth, which is reported at the family level and is defined as the sum of net financial wealth, net physical wealth and net housing wealth. To form wealth groups, we order all ELSA sample members according to the value of their total (non-pension) family wealth and we divide the sample into three sized groups, referred to as tertiles.

Income

Total income is defined net of taxes and is the sum of employment income (including income from self-employment), private pension income, state pension income, other state benefit income (excluding housing benefit and council tax benefit), asset income and any other income. Total income is summed across family members (where a family is defined as a couple or a single person and any children aged under 18 they may have who are living at home) to obtain family income. To form income groups, we order all ELSA sample members according to the value of their total family income and we divide the sample into three sized groups, referred to as tertiles.

Education

We defined three categories of education: low, medium and high. Low education is defined as leaving full-time education at or before compulsory school-leaving age. Medium education is defined as leaving full-time education after compulsory school-leaving age and before age 19 and/or obtaining A levels. High education is defined as leaving full-time education at age 19 or above and/or obtaining a college degree.

4.3 Healthy life expectancy by age, gender and socio-economic status

In this section, we examine health expectancies across the four different measures of SES (social class, wealth, income and education). In doing so, we compute analyses separately for men and women and we report healthy life expectancies at early old age (50 years), at normal retirement age (65 years) and at old age (85 years). Health expectancy is defined using three health expectancy outcomes: 1) healthy life expectancy using self-rated health; 2) disability-free life expectancy based on the presence of one or more activity of

daily living (ADL) and instrumental activity of daily living (IADL); 3) illness-free life expectancy using limiting long-standing illness.

4.3.1 Methods

Waves 1–6 were used to estimate healthy life expectancies using multi-state life table models. The sample size at wave 1 consisted of 10,814 core members with complete and valid data on the four SES measures and on self-rated health, limiting long-standing illness, ADLs and IADLs.

Analyses were conducted for the three measures of health (self-rated health, disability and limiting long-standing illness). The general self-rated health measure was dichotomised into those reporting that they had 'excellent', 'very good' or 'good' health (referred to throughout as 'good' health), contrasted with those who reported that they had 'fair' or 'poor' health. The measure of disability used self-reported information on ADLs and IADLs; this was dichotomised into those reporting none (favourable) contrasted with those reporting one or more (referred to throughout as disability-free life expectancy). The limiting long-standing illness measure consisted of combined responses to an enquiry about the presence of a long-standing illness and, as a follow-up, whether the illness limited the respondent in any way (referred to throughout as illness-free life expectancy). For these three measures of health, there were four possible transitions between these health states: healthy to unhealthy (onset), unhealthy to healthy (recovery), healthy to deceased, and unhealthy to deceased. Age-specific transition probabilities by gender and SES were estimated from multinomial logistic models with age (in years), gender and socio-economic position as covariates. Healthy life expectancy from age 50 was then calculated based on these estimated transition probabilities using a stochastic (micro-simulation) approach (Cai et al., 2010). Individual trajectories for a simulated cohort of 100,000 people were generated with distributions of covariates at the starting point based on the observed prevalence by age, gender and SES. Healthy life expectancies from age 50 were then calculated as the average from these trajectories for each SES measure and gender. Computation of standard errors and 95% confidence intervals (25^{th} and 95^{th} percentiles) for these multi-state life table estimates was performed using a bootstrap method with 500 replicates for the whole analysis process (multinomial analysis and simulation steps). In addition, we report the proportion of healthy life expectancy, computed as health life expectancy divided by total life expectancy (healthy + unhealthy life expectancy). All analyses were conducted in SAS 9.2 using the SPACE (Stochastic Population Analysis of Complex Events) program designed to analyse transition data from longitudinal surveys (Cai et al., 2010). This program uses the stochastic (i.e. micro-simulation) approach to estimate healthy life expectancy.

4.3.2 Healthy life expectancy according to self-rated health

The estimates of healthy life expectancy based on self-rated health for each measure of SES are given in Tables 4A.1–4A.4 in the appendix to this chapter.

As anticipated, overall, women have a life expectancy advantage over men at all ages; however, the differences in healthy life expectancy across the socio-economic groups are very similar between the genders. Men aged 50 in routine

and manual occupations could expect to live another 18 years in good health, whereas those in managerial and professional occupations could expect to live for a further 25 years, a seven-year advantage. These differentials in healthy life expectancy across social groups diminish at the ages of 65 and 85. For example, from 85 years of age, men in routine/manual occupations can expect to live almost three years in good health compared to nearly four years for men in managerial and professional occupations (Table 4A.1).

Women aged 50 in intermediate occupations and in managerial and professional occupations could expect to live a further 19 years and 25 years in good health, respectively. The social gradient in healthy life expectancy is lower at the ages of 65 and 85, but the advantage in terms of more years of life spent in good health remains for women in managerial and professional occupations.

In Figure 4.1, we show the proportion of remaining life that people can expect to spend in good health by age, gender and social class. At the age of 50, men and women in intermediate occupations and in managerial and professional occupations could expect to spend more than 76% of their life in good health, whereas the corresponding figure for men and women in routine and manual occupations was 67%.

Healthy life expectancies by wealth tertiles are depicted in Table 4A.2 in the appendix. The gap in healthy life expectancy between those in the lowest and highest wealth tertiles is over 11 years in both men and women at the age of 50, eight years at the age of 65 and two years at the age of 85. There is also a clear gradient in the proportion of life that men and women could expect to live in good health according to wealth, as illustrated in Figure 4.2. Men and women in the highest wealth tertile can expect to spend over 68% of their remaining life in good health at the age of 85, while at the age of 50 it is over 80%. The corresponding figures for study members in the lowest wealth tertile are 50% and 60%.

Results for healthy life expectancy by income show a similar pattern as those by wealth (see Table 4A.3 in the appendix). As shown in Figure 4.3, men and women in the highest income tertile can expect to spend over 80% of their remaining life in good health at the ages of 50 and 65. Women in the lowest income tertile can expect to live approximately 60% or more of their life in good health, which is true at all ages, whereas for men the corresponding figures are 63% at the age of 50 and 57% at the ages of 65 and 85.

From our analyse, we found that men with a more basic educational attainment could expect to survive a further 19 years in good health from the age of 50, compared to 23 years and 26 years for men in the medium and high education categories, respectively. For women, the corresponding figures are 20 years, 25 years and 28 years. The gradient in healthy life expectancy by education is less pronounced at older ages for both men and women, where we observed a difference of around five years between those in high and low education categories expected to live in good health at the age of 65, and a difference of less than two years at the age of 85 (see Table 4A.4 in the appendix).

Figure 4.1. Proportion of remaining life spent in good health by social class

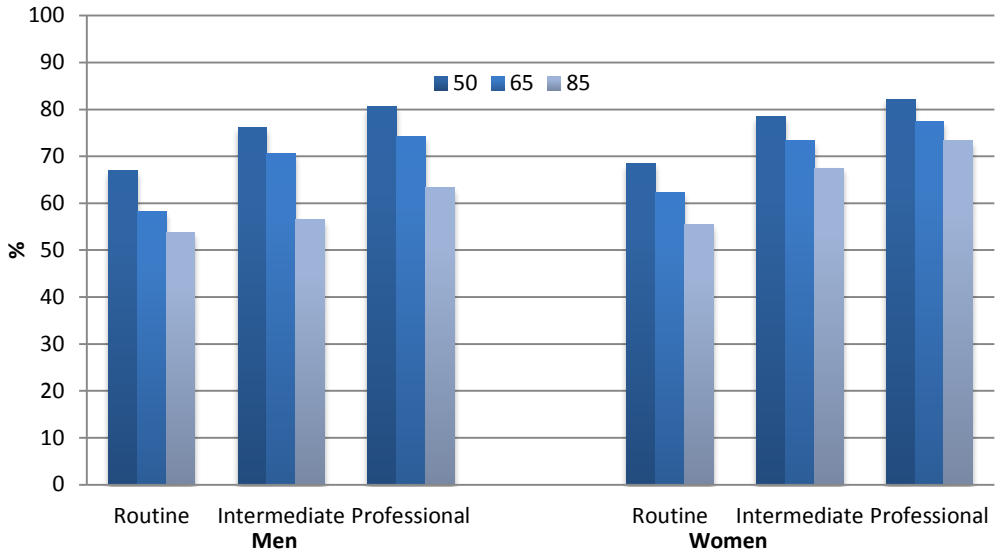
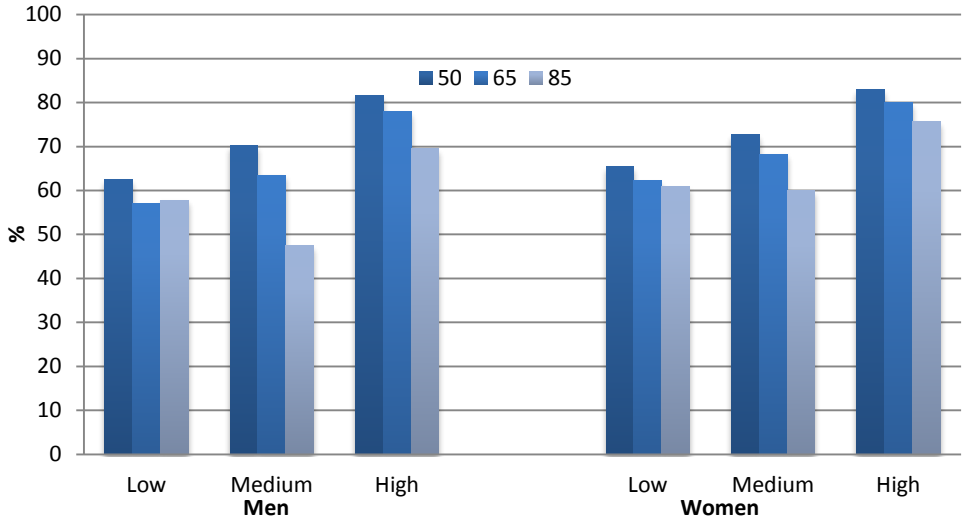


Figure 4.2. Proportion of remaining life spent in good health by wealth



Men and women in the highest and medium education categories can expect to spend over 70% of their remaining life in good health at the ages of 50 and 65 (Figure 4.4) in contrast to men and women in the low education category, where corresponding proportions were about 60% for men and women aged 65.

Figure 4.3. Proportion of remaining life spent in good health by income

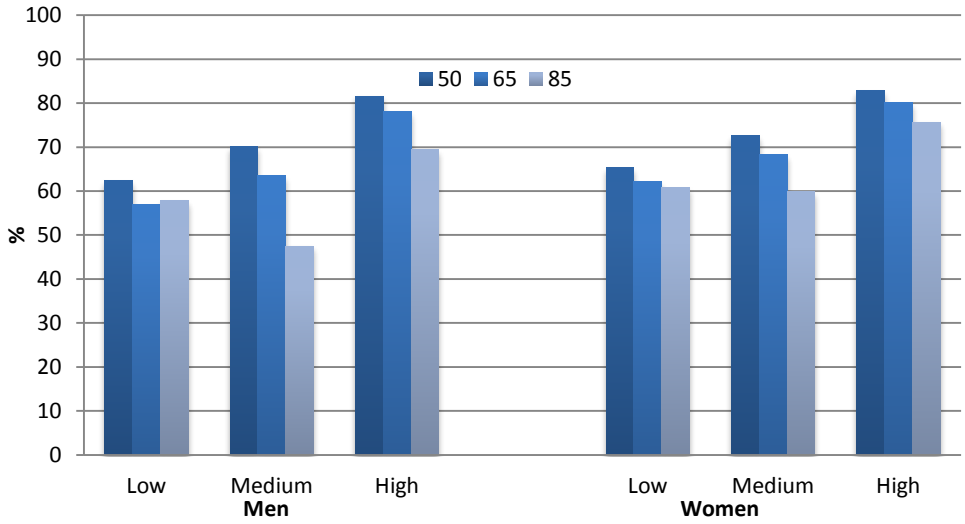
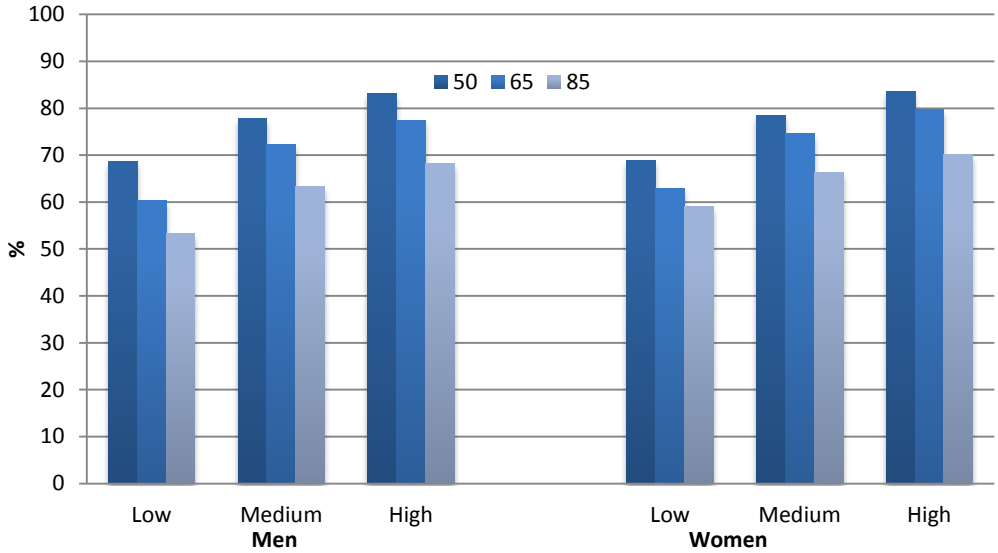


Figure 4.4. Proportion of remaining life spent in good health by education



4.3.3 Disability-free life expectancy

Disability-free life expectancy results according to the four measures of SES are given in Tables 4A.5–4A.8 in the appendix. Men and women in managerial and professional occupations could expect to live a further 30 years free from disability at the age of 50, which diminishes to approximately 15 years at the age of 65 and three years at the age of 85. Social class differences in the proportion of additional years of life expected to be spent without a disability are more marked at older ages. For example, at the age of 50 years, men in manual and routine occupations and those in managerial and professional occupations can expect to spend respectively 89% and 93% of their remaining life disability-free; whereas at the age of 85 the corresponding figures are 39% and 54%. In general, women compared to men can anticipate having a slightly lower proportion of remaining life free from disability at all

ages and in all occupational social class categories (Figure 4.5). This finding is consistent with ONS statistics on disability-free life expectancy at age 65 for 2012–14 (ONS, 2016).

At the ages of 50 and 65, men and women in the highest wealth tertile can expect to live around eight years longer free from disability than those in the bottom wealth tertile (see Table 4A.6 in the appendix). This differential in additional years of healthy life is less pronounced at the age of 85, with a difference between high and low wealth tertiles of two years or less. Men and women in the top wealth tertile can expect to spend more than 85% of their remaining life free from disability at the age of 65, whereas for people in the bottom wealth tertile the corresponding figure is just under 70% (Figure 4.6).

Similar patterns to those found for wealth tertiles are found in disability-free life expectancy by income tertiles. At the ages of 50 and 65, men and women in the highest income tertile can expect to live on average five to six years longer free from disability than those in the bottom income tertile (see Table 4A.7 in the appendix). The difference reduces to one year at the age of 85. Men and women in the middle and top income tertiles can expect to spend over 75% of their life free from disability at the ages of 50 and 65. At the age of 85, men in the highest income tertile can expect to spend 58% of their life free from disability, whereas women only 42%. It is possible that men who survive longer are, in general, in better health (i.e. reporting fewer limitations with ADLs and IADLs), compared to women who tend to live longer but report more of these limitations.

Figure 4.5. Proportion of remaining life spent free of disability by social class

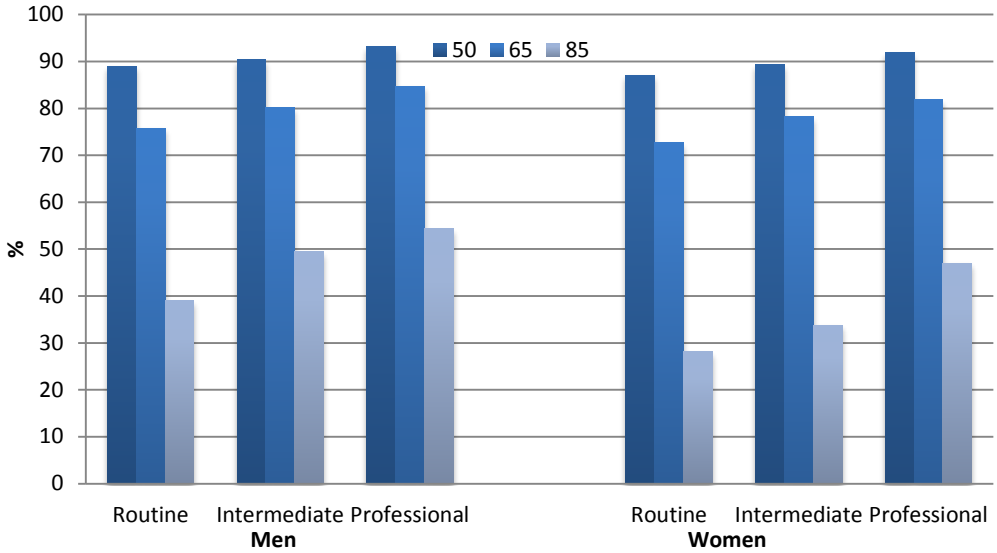


Figure 4.6. Proportion of remaining life spent free of disability by wealth

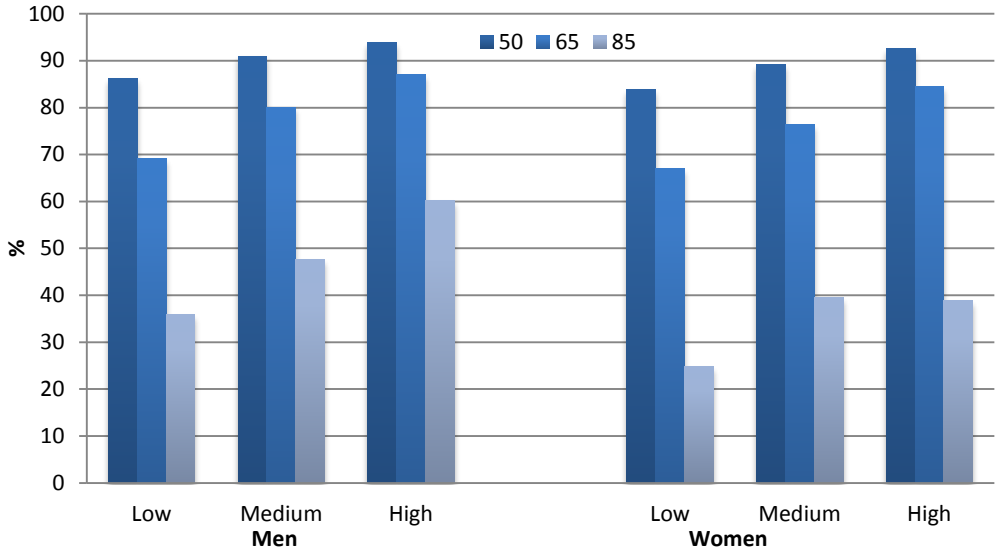
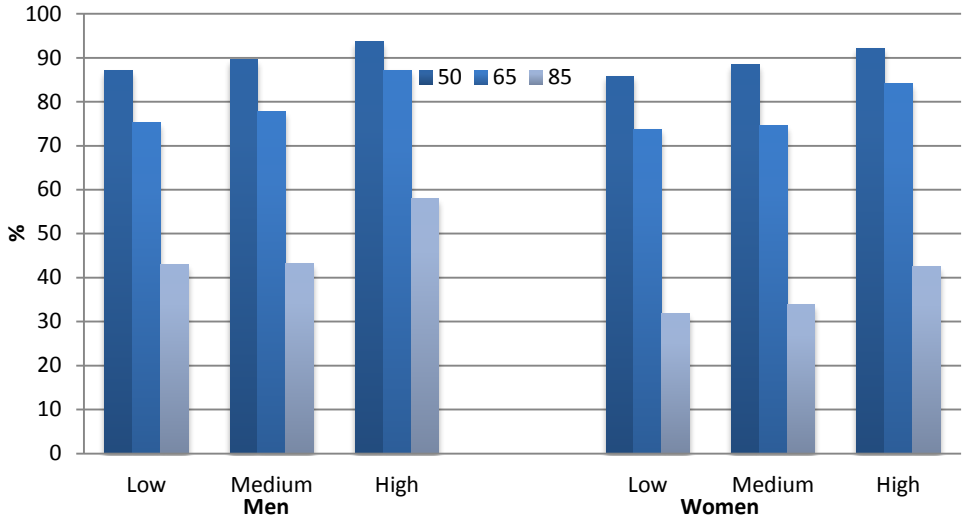
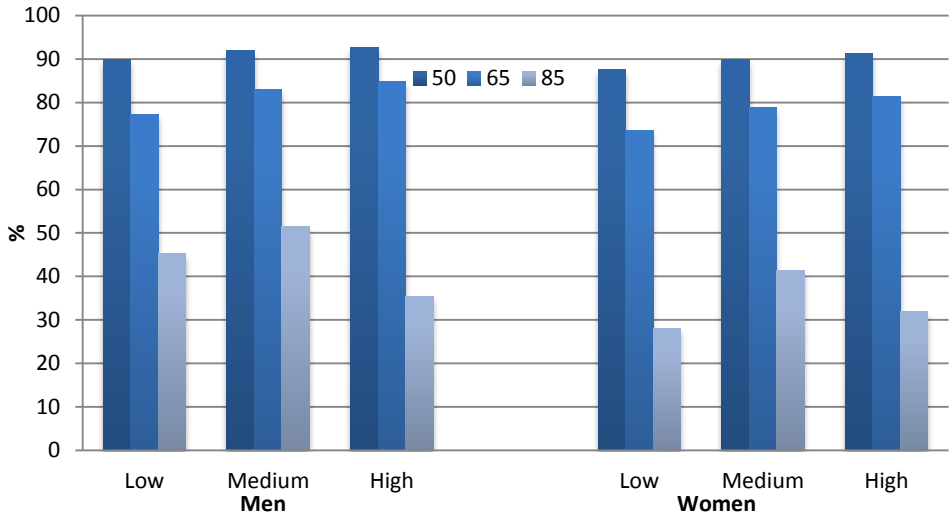


Figure 4.7. Proportion of remaining life spent free of disability by income



The gradient in additional years of disability-free life expectancy is less marked by education categories (see Table 4A.8 in the appendix). At the age of 50, men and women in the lowest education group are likely to live an average of 26 and 28 years longer without disability compared to 30 and 32 years in men and women, respectively, in the highest education category. At the age of 65, similar differences are apparent, but the number of additional years expected to be lived free from disability is halved. The proportion of remaining years expected to be spent free from disability is similar for men and women at all ages and in all education categories, with the exception of women at the age of 85 in the lowest and medium education categories, who can expect to spend a considerably lower proportion of remaining life free from disability compared to men.

Figure 4.8. Proportion of remaining life spent free of disability by education



4.3.4 Illness-free life expectancy

In this subsection, we present life expectancy estimates according to limiting long-standing illness, referred to as illness-free life expectancy, for each of the SES measures (see Tables 4A.9–4A.12).

Men in manual and routine occupations can expect to live a further 18 years, eight years and two years free from a limiting long-standing illness at the ages of 50, 65 and 85 years, respectively. The corresponding figures for men in intermediate occupations are 21 years, 11 years and 3 years, and for those in managerial and professional occupations they are 23 years, 12 years and 3 years. A similar social class gradient in illness-free life expectancy can be seen among women, although they have higher illness-free life expectancy than men at all ages and in all social class occupations (Table 4A.9).

There is a clear social class gradient in the proportion of remaining life spent without illness, for both men and women at the ages of 50 and 65 (Figure 4.9).

Wealth differentials in illness-free life expectancy are presented in Table 4A.10. For both men and women, there were disparities in the bottom wealth tertile and the top wealth tertile in the number of additional years they were expected to live without limiting long-standing illness at ages 50 and 65, which attenuated at the age of 85. For example, the difference in the years they are expected to live without illness between those in the bottom wealth tertile and those in the top is 10 years among men and women at the age of 50 and seven years for men and six years for women at the age of 65. The difference reduces to less than two years at the age of 85. Men and women in the middle and top wealth tertiles can expect to spend over 60% of their remaining life without illness at the ages of 50 and 65, whereas for men and women in the bottom wealth tertile the proportion is below 60% (Figure 4.10).

Figure 4.9. Proportion of remaining life spent without illness by social class

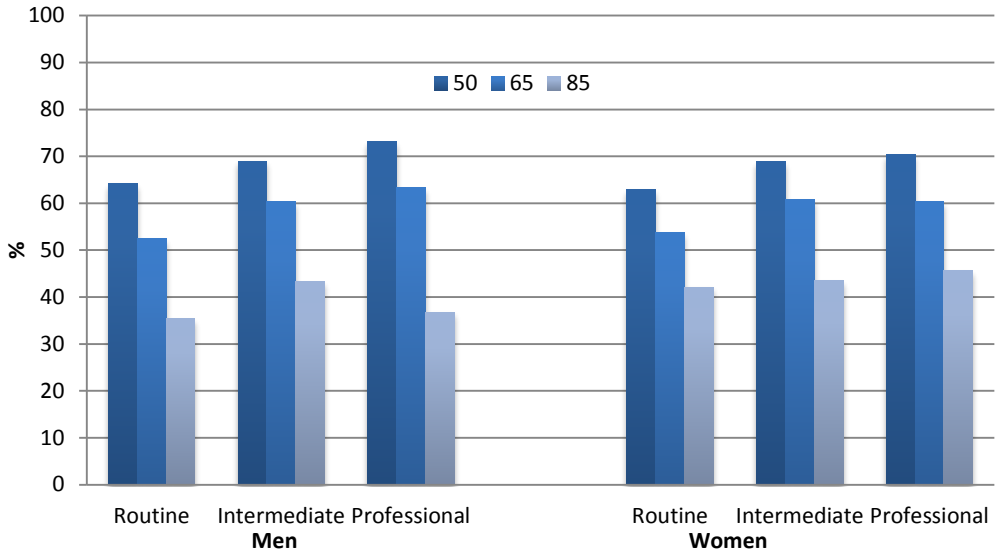
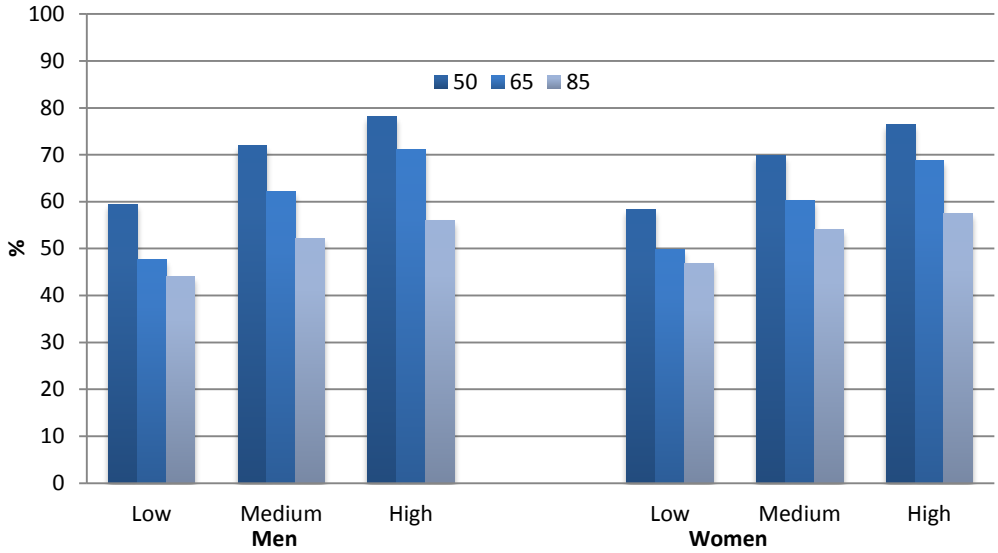


Figure 4.10. Proportion of remaining life spent without illness by wealth



Estimates of illness-free life expectancy according to income tertiles can be found in Table 4A.11. A similar trend to that apparent for wealth is seen for income. Differences in illness-free life expectancy between low and high income tertiles were eight years at the age of 50 and four to five years at the age of 65. Men and women in the top income tertile can expect to live more than 75% of their remaining life without illness at the age of 50, and those in the middle income tertile 68% at the age of 50 and just over 58% at the age of 65 (Figure 4.11). The social gradient in the proportion of remaining life spent illness-free is less clear at the age of 85. For example, men and women in the medium income tertile can expect to live 36% and 52% of their life without

illness, whereas the corresponding figures for those in the bottom income tertile are 52% and 51% respectively.

At the age of 50 years, men in the medium and high education groups could expect to live an additional 22 years and 24 years illness-free, respectively, whereas for those in the lowest education category the corresponding value was 18 years. At the age of 65, the number of years they are expected to live without illness drops to 8, 11 and 13 for men in the low, medium and high education categories, respectively. Among women, at the age of 65, the corresponding figures are 9, 12 and 14 in the low, medium and high education categories, respectively. At the age of 85, men and women in the two highest education strata could, based on our analyses, anticipate surviving a further three years and four years without illness, whereas men and women in the lowest education category can expect to live two years and three years without a limiting long-standing illness. At the age of 50, men and women in the highest education category can expect to spend over 70% of their remaining life without illness (Figure 4.12).

Figure 4.11. Proportion of remaining life spent without illness by income

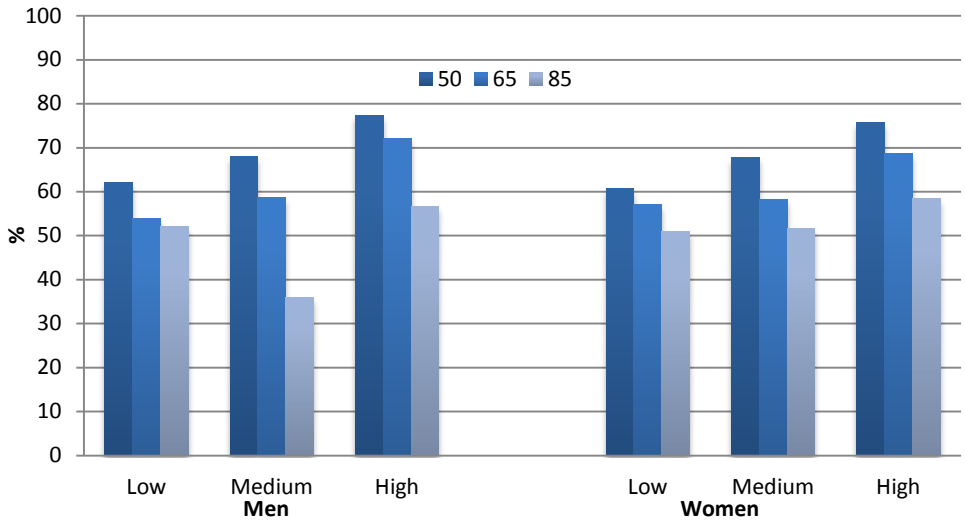
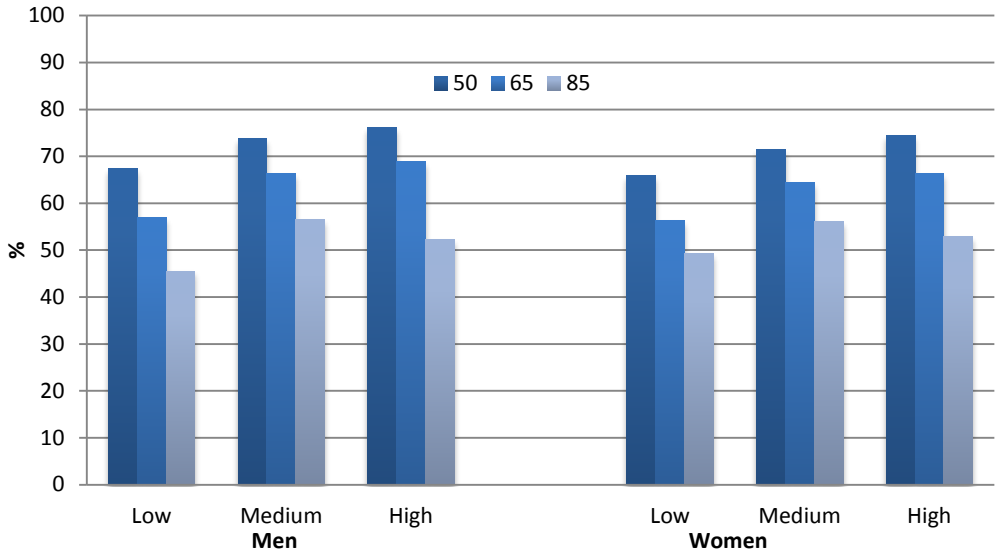


Figure 4.12. Proportion of remaining life spent without illness by education



4.3.5 Conclusions

Using six waves of data and vitality status records up to 2013 for ELSA core members aged 50 and over at wave 1, we explored socio-economic differences in health expectancies using three health indicators: healthy life expectancy, disability-free life expectancy and illness-free life expectancy. For each socio-economic factor, we found clear evidence of socio-economic inequalities in health expectancies at the age of 50 and 65. These were apparent for both men and women and across all health measures. Socio-economic differences in health expectancy were less marked by age 85. Compared to men and women in low socio-economic groups, those in high socio-economic groups could expect to live an additional one to two years in good health. These findings are in line with the age-as-leveller hypothesis, stating that the effect of socio-economic disparities in health widen over most of the life course until early old age, followed by convergence in later life (Beckett, 2000).

Social class differences were similar across the three measures of health expectancy: healthy, disability-free and illness-free. The difference in health expectancy between those in professional and managerial occupations and those in manual and routine occupations was, at the age of 50, seven years for healthy life expectancy, five years for disability-free life expectancy and five to seven years for illness-free life expectancy. The corresponding figures for those at the age of 65 were five years for healthy life expectancy, four to five years for disability-free life expectancy and three to four years for illness-free life expectancy

The greatest disparities across the three measures of life expectancy were found by wealth and income. The difference between those in the top and bottom wealth tertiles in the estimated years they are expected to live in good health at the age of 50 was 11 years for men and 12 years for women, 8 years for disability-free life expectancy and 10 years for illness-free life expectancy.

The differences reduced at the age of 65 to seven to eight years for both men and women.

The difference between those in the highest education category and those in the lowest in disability-free life expectancy was four years at the ages of 50 and 65 for both men and women. The corresponding figures for healthy life expectancy according to self-rated health were eight years and five years at the ages of 50 and 65, respectively, for both men and women.

For all socio-economic measures, disability-free life expectancy was longer than healthy and illness-free life expectancies. For example, disability-free life expectancy at age 50 for those in managerial and professional occupations and for those in the highest education category was 30 years for men and 32 years for women; the corresponding figures for those in the top income and wealth tertiles were 31 years for men and 33–34 years for women. Among the highest socio-economic groups, healthy life expectancy and illness-free life expectancy tended to be about five years shorter than disability-free life expectancy at age 50. For example, healthy life expectancy at age 50 was 25 years for men and 27 years for women in managerial and professional occupations.

At the ages of 50 and 65 years, health expectancy was shortest for those in the bottom wealth tertile: men and women in the bottom wealth tertile could expect to live an additional 15 years in good health at the age of 50 and six years at the age of 65. Figures for illness-free life expectancy were similar (15 years and six years).

We found that women could expect to live more years in good health than men in the same socio-economic group; however, gender differences in health expectancy were not large, on average between one and three years. For all health measures, there was a socio-economic gradient in health expectancies for both men and women.

Although this is the first study in England to explore socio-economic differences in healthy life expectancy using a large nationally representative sample of people aged 50 and over living in England, and using several indicators of SES as well as three health measures, our findings are overall in accordance with existing studies of socio-economic inequalities in healthy life expectancy that show, irrespective of the measure used, that those in the least advantaged groups have the lowest healthy life expectancy (Jagger et al., 2008; Pongiglione et al., 2015).

The main strength of the analyses reported here is the use of longitudinal data to calculate healthy life expectancy using multi-state life table models. The main drawback is that the analysis is based on core participants aged 50 and over at wave 1; comparisons with more recent cohorts could not be made due to the short follow-up on mortality available for these individuals.

To conclude, we have shown that socio-economic disparities in health expectancy persist in early old age and attenuate at the age of 85; the socio-economic gaps are wider by wealth and income, especially for disability-free life expectancy.

4.4 Socio-economic status and mortality

In this section, we explore in detail the relationship between four measures of SES and mortality by age groups (50–59, 60–69 and 70+). In order to understand how low SES is embodied, as discussed, we assess the contribution of chronic conditions (heart disease, stroke, cancer, lung disease and hypertension), lifestyle factors (smoking, physical activity and alcohol consumption), functional capacity (ADL, IADL and cognitive function) and mental health (depression) in explaining socio-economic influences on mortality.

4.4.1 Methods

Sample

The analytic sample of this section included 10,226 ELSA participants, out of the 11,391 core members from wave 1. We excluded 362 proxy or partial interviews, 451 participants who did not consent to mortality linkage, and 304 with missing values in any of the variables used in the analyses. In the present analyses, our endpoints were mortality from all causes, cardiovascular disease-related mortality and cancer-related mortality. A total of 2,388 deaths occurred over a mean follow-up time of 10.9 years (median 10.4 years).

Covariates

To examine which characteristics of the population might explain the observed associations, we adjusted our models for a series of covariates, which are known to be associated with both SES and mortality. We first estimated age- and gender-adjusted hazard ratios (model 1), which were then further adjusted for:

- chronic diseases (heart disease, stroke, cancer, chronic lung disease and hypertension) (model 2);
- functional capabilities (any ADL limitation and IADL limitation; cognitive ability: delayed recall of ten words memory test) (model 3);
- lifestyle–behavioural factors (smoking: never, ex-smoker, current smoker; physical activity: vigorous-, moderate- or mild-intensity physical activity at least once a week or physically inactive; frequency of alcohol consumption: daily or almost daily, on a weekly or monthly basis, never or almost never) (model 4);
- elevated depressive symptoms (defined using a score of ≥ four symptoms on the eight-item dichotomous response scale Center for Epidemiological Studies – Depression (CES-D)) (model 5).

Finally, we estimated the hazard ratios (HRs) after adjustment for all these factors simultaneously (model 6). To quantify the contribution of covariates to generating an association between SES and mortality, we computed the percentage change in HRs (Δ) relative to the most basic model (age and gender) using the following formula:

$$\log HR = 100*(\beta \text{ Model } 1 - \beta \text{ Model } 2 + \text{covariates}) / \beta \text{ Model } 1,$$

where $\beta = \log(HR)$ (Stringhini et al., 2011).

Methods of analysis

We used Cox proportional hazard regression to produce hazard ratios with accompanying 95% confidence intervals (CIs) as our estimate of the association between the four socio-economic position measures (wealth, occupational social class, education, and income, described in Section 4.2.2) and cause-specific mortality. We stratified our analyses according to the following three age groups: 50–59, 60–69 and ≥70 years. We ascertained that the proportional hazards assumption was not violated by the use of plots of the Nelson–Aalen cumulative hazard estimates and the Schoenfeld residuals test.

4.4.2 Wealth and mortality

In study members aged <70, after adjustment for age and gender, the association between wealth and all-cause mortality is strong and persistent, with those in the lowest wealth tertile having almost three times the mortality risk of those in the wealthiest tertile (Table 4A.13). Among participants aged ≥70, the corresponding risk is lower, such that men and women in the lowest wealth tertile experienced a 50% greater risk compared to those in the top tertile. Adjustment for lifestyle factors (smoking, physical activity and alcohol consumption) results in substantial attenuation in the hazard ratios: from 2.9 to 1.9 in people aged 50–59, from 3 to 1.8 in the 60–69 group and from 1.5 to 1.3 in those aged ≥70, representing an attenuation of over 37%. Baseline chronic conditions such as heart disease, stroke, cancer and lung disease attenuated the mortality risk by 16% in people aged <70 years in the lowest tertile of wealth; such adjustment has no impact among study members aged ≥70 years. Among participants in the lowest wealth tertile, adjustment for functional capability (limitations in ADLs and reduced cognitive ability) leads to 38% attenuation in the mortality risk for those aged ≥70 and around one-quarter among those aged <70 (30% for those aged 50–59 and 27% for those aged 60–69, respectively).

The hazard ratios for participants in the top wealth tertile compared to those in the lowest reduce to 2.5 (95% CI: 1.8; 3.5) for those aged 50–59, to 2.7 (95% CI: 2.1; 3.5) for those aged 60–69 and to 1.5 (95% CI: 1.8; 3.5) for those aged ≥70 after adjusting for depression, representing an attenuation of approximately 11% in the youngest age group and 6% in the oldest age group. Adjustment for all covariates explains almost 57% of the observed differences between participants in the poorest and the wealthiest tertiles among those aged <60, more than 63% among those aged 60–69, and just over 52% among those aged ≥70. Nevertheless, the association remains significant in all three age groups for participants in the lowest wealth tertile who report a higher mortality risk compared to those in the high wealth tertile.

The association of wealth with cardiovascular disease mortality is much stronger than that apparent for all-cause mortality and is also graded in all age groups (Table 4A.14). In analyses of participants aged 50–59, those who were in the lowest wealth tertile experienced eight times the risk of death from cardiovascular disease compared those in the wealthiest tertile. The strength of this association diminishes in the older age groups: the hazard ratio of people aged 60–69 was 4 (95% CI: 3.2; 9.2) and that of people aged ≥70 was 1.8 (95% CI: 1.5; 2.2). Adjustment for all covariates explains a considerable

proportion of the risk in mortality: slightly over 40% of the difference in the mortality risk between the two extreme wealth categories in the youngest age group, approximately 52% in the 60–69 age group, and 38.5% in the oldest age group. Lifestyle factors attenuate the mortality risk of participants aged 50–59 in the lowest wealth tertile by approximately 33%, 28% for those aged 60–69, and 26% for those aged ≥70. Depression explains only a small amount of the cardiovascular disease mortality risk, while for functional capability the corresponding figure is 30% among participants aged ≥70.

The association between wealth and cancer mortality is weaker than in analyses featuring cardiovascular disease mortality as the endpoint of interest, and is apparent only among participants aged <70 (see Table 4A.15). Specifically, the hazard ratio of participants aged 50–59 in the lowest wealth tertile is 1.6 (95% CI: 1.1; 2.5) higher than those in the wealthiest tertile; the hazard ratio of those aged 60–69 is 1.7 (95% CI: 1.2; 2.4).

4.4.3 Occupational social class and mortality

The associations between social class and all-cause mortality and cardiovascular disease mortality are statistically significant at conventional levels but of a lower magnitude and less robust to adjustment compared to those reported above for wealth. The relationship between social class and all-cause mortality is graded across the socio-economic continuum among study members aged 50–59 (Table 4A.16). In this age group, the hazard ratio for participants in routine and manual occupations is 1.8 (95% CI: 1.3; 2.5) and among those in intermediate occupations, it is 1.6 (95% CI: 1.2; 2.3) compared to those in highest occupational social group. Similarly, participants in routine and manual occupations report higher mortality risks compared to those in managerial and professional occupations (hazard ratio 1.6 for those aged 60–69 and hazard ratio 1.3 for those aged ≥70 years). Adjustment for lifestyle factors and functional capability attenuates these relationships by over one-third, while the impact of controlling for chronic conditions and depression is modest.

We find a strong association between social class and cardiovascular disease mortality, especially among those aged <70 years after adjustment for age and gender (Table 4A.17). In the younger age group, we see a threshold effect such that study members in the intermediate and lower social classes report similar risk of death from cardiovascular disease relative to those in managerial and professional occupations. The hazard ratio for people in manual and routine occupations compared to those in managerial and professional occupations is 2 (95% CI: 1.3; 3.4) in those aged 60–69, representing double the mortality risk, and 1.5 in those aged ≥70 (95% CI: 1.2; 1.8). Adjustment for all covariates leads to attenuation in risk of 53% in those aged 50–59, 76% in those aged 60–69 and 58% in those aged ≥70.

4.4.4 Education and mortality

Educational attainment is also related to risk of death from all causes (Table 4A.18). In the youngest age group (aged 50–59), the hazard ratios for those in the medium and low educational groups are 1.9 and 2.6, respectively, compared to those in the high education group. Among those aged 60–69, the comparable hazard ratios are 1.2 and 1.6, respectively, representing a mortality

risk of less than double. Among those aged ≥70, the risk of dying is also significantly higher for those in the low education group compared to those in the highest. For those in the lowest education group, adjustment for lifestyle factors results in a reduction in the risk of mortality of 38% in those aged 50–59, 77% in those aged 60–69 and 42% in those aged ≥70. After adjusting for all covariates, the association between education and mortality in those aged 60–69 was no longer significant.

Among those aged <70, the associations between education and cardiovascular mortality are statistically significant only for those in the low education group compared to those in the high education group, whereas no differences were found between people in the medium education group compared to those in the highest group (Table 4A.19). Full adjustment leads to a 40% risk reduction for those aged 50–59 and to 73% mortality risk reduction for those aged 60–69. Among those aged ≥70, the association between education and cardiovascular mortality was weak and non-significant, most likely due to low statistical power.

4.4.5 Income and mortality

There is a clear graded association between income and all-cause mortality adjusted for age and gender at all ages (see Table 4A.20). Among those aged ≥70, there was no clear pattern in the relationship between income and mortality. The age- and gender-adjusted hazard ratios for those in the lowest income tertile compared to those in the highest are 2.6 (95% CI: 1.9; 3.6) among people aged 50–59 and 2 (95% CI: 1.6; 2.6) among those aged 60–69. Adjustment for functional capability (ADL/IADL and cognitive function) contributes to a reduction in the risk of mortality of 37% and 35% in those aged 50–59 and 60–69, respectively, whereas the corresponding figures for lifestyle factors are 39% and 56%. After adjusting for all covariates, the reduction in mortality risk is 62% in those aged 50–59 and 79% in those aged 60–69.

Income is also strongly associated with cardiovascular mortality in people aged <70 years (see Table 4A.21). In participants aged 50–59, those in the lowest income tertile had more than four times increased risk of dying of cardiovascular causes compared with those in the high income tertile (age- and gender-adjusted hazard ratio 4.2 (95% CI: 2.2; 8.2)); the corresponding hazard ratio for those aged 60–69 was 3 (95% CI: 1.8; 5.2). Adjustment for functional capability reduces the hazard ratios by 39%–40%, whereas adjustment for lifestyle factors reduces the hazard ratios by 47% for those aged 50–59 and by 39% for those aged 60–69.

4.4.6 Conclusions

We have shown that the relationship between SES and mortality differs by age groups and that socio-economic differences become progressively less pronounced in those aged ≥70.

Among the four socio-economic measures used, we found that wealth is more strongly associated with all-cause and cardiovascular mortality than education, occupational social class and income. The measure of wealth used in this

chapter encompasses assets and net worth, carrying with it information on individuals' current and past socio-economic circumstances.

Among the possible factors linking SES and all-cause mortality, lifestyle factors, such as smoking, alcohol consumption and physical activity, may be part of an indirect mechanism. Lifestyle factors attenuated the association between the four socio-economic measures and all-cause mortality by 38%–45% among people aged 50–59 and by 44%–77% among those aged 60–69. Functional capability explained up to 38% of the association between the four socio-economic measures and all-cause mortality among those aged 50–59 and up to 69% among those aged 60–69. At all ages, chronic diseases explained approximately a quarter of the association between the four socio-economic measures and all-cause mortality, whereas depression explained approximately 15%.

Less clear results were obtained for cardiovascular disease mortality. In general, among those aged 50–59, lifestyle factors explained the greatest proportion of association between the four socio-economic measures and cardiovascular mortality (up to 47%), whereas among those aged 60–69, in addition to lifestyle factors, functional capability was also a strong factor, explaining up to 55% of the mortality risk.

Lastly, in terms of specific causes of death, it is clear that socio-economic position (and in particular wealth) was more strongly associated with cardiovascular mortality than cancer mortality. The wealth inequalities in cardiovascular disease mortality were marked and persisted after statistical adjustment for explanatory factors. The association between wealth and cancer mortality was weaker and observed only among participants aged <70.

To conclude, findings from ELSA show that socio-economic inequalities in healthy life expectancy and mortality are still marked in this contemporary population of older men and women. Our markers of socio-economic position capture both present and past circumstances, and this implicates the life course in generating these inequalities. While efforts to reduce these differentials can always be intensified at a policy level, they should continue to be based on a broad front, including educational opportunities that should begin pre-adulthood. 'Downstream' interventions, particularly risk factor modification (smoking, physical inactivity), may also have an impact on ameliorating these inequalities.

Acknowledgement

Jenny Head's input to the section on healthy life expectancy was supported by the Economic and Social Research Council (grant ES/K01336X/1) under the ERA-AGE2 initiative.

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Appendix 4A

Tables on socio-economic status and mortality

Table 4A.1. Healthy life expectancy by age, gender and occupational social class

	Social class		
	Routine	Intermediate	Professional
Men			
At the age of 50			
Estimate in years	17.9	22.2	24.8
95% CI	(17.0; 18.8)	(21.2; 23.3)	(23.8; 25.6)
At the age of 65			
Estimate in years	8.4	11.7	13.1
95% CI	(7.9; 9.0)	(10.9; 12.6)	(12.3; 13.6)
At the age of 85			
Estimate in years	2.6	3.0	3.7
95% CI	(2.0; 3.0)	(2.2; 3.6)	(3.1; 4.3)
Women			
At the age of 50			
Estimate in years	20.1	25.0	27.4
95% CI	(19.1; 20.9)	(24.1;26.1)	(26.3; 28.3)
At the age of 65			
Estimate in years	10.4	13.7	15.4
95% CI	(9.9; 11.0)	(13.1; 14.6)	(14.6; 16.0)
At the age of 85			
Estimate in years	3.1	4.3	5.1
95% CI	(2.6; 3.7)	(3.8; 4.8)	(4.2; 5.7)

Note: Healthy life expectancy is based on ‘excellent’, ‘very good’ or ‘good’ self-rated health.

Table 4A.2. Healthy life expectancy by age, gender and wealth tertiles

	Wealth tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	15.1	21.5	26.3
95% CI	(13.8; 15.9)	(20.8; 22.5)	(25.3; 27.0)
At the age of 65			
Estimate in years	6.6	11.0	14.3
95% CI	(6.1; 7.4)	(10.4; 11.7)	(13.5; 14.9)
At the age of 85			
Estimate in years	2.2	3.1	4.2
95% CI	(1.7; 2.8)	(2.3; 3.8)	(3.6; 4.9)
Women			
At the age of 50			
Estimate in years	17.2	24.1	28.7
95% CI	(15.9; 18.2)	(23.0; 25.1)	(27.7; 29.4)
At the age of 65			
Estimate in years	8.5	13.0	16.5
95% CI	(8.0; 9.3)	(12.3; 13.9)	(16.0; 17.3)
At the age of 85			
Estimate in years	3.0	4.3	5.1
95% CI	(2.5; 3.4)	(3.6; 4.9)	(4.3; 5.9)

Note: Healthy life expectancy is based on 'excellent', 'very good' or 'good' self-rated health.

Table 4A.3. Healthy life expectancy by age, gender and income tertiles

	Income tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	16.4	19.6	25.3
95% CI	(15.5; 17.8)	(18.7; 20.6)	(24.5; 26.3)
At the age of 65			
Estimate in years	8.4	9.9	14.0
95% CI	(7.8; 9.0)	(9.3; 10.6)	(13.4; 14.9)
At the age of 85			
Estimate in years	2.9	2.5	4.2
95% CI	(2.4; 3.4)	(1.7; 3.2)	(3.4; 4.9)
Women			
At the age of 50			
Estimate in years	19.0	22.2	27.7
95% CI	(18.1; 20.3)	(21.0; 23.1)	(26.9; 28.8)
At the age of 65			
Estimate in years	10.5	12.1	16.0
95% CI	(9.9; 11.1)	(11.4; 12.8)	(15.4; 17.0)
At the age of 85			
Estimate in years	3.6	3.7	5.3
95% CI	(3.2; 4.1)	(3.0; 4.4)	(4.4; 6.2)

Note: Healthy life expectancy is based on 'excellent', 'very good' or 'good' self-rated health.

Table 4A.4. Healthy life expectancy by age, gender and education

	Education		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	18.7	23.1	26.4
95% CI	(17.6; 19.5)	(22.0; 24.1)	(25.1; 27.7)
At the age of 65			
Estimate in years	8.9	12.3	14.1
95% CI	(8.4; 9.5)	(11.5; 13.1)	(13.4; 15.4)
At the age of 85			
Estimate in years	2.6	3.5	4.2
95% CI	(2.1; 3.2)	(2.6; 4.1)	(2.9; 5.4)
Women			
At the age of 50			
Estimate in years	20.3	25.1	28.2
95% CI	(19.1; 21.1)	(24.1; 26.0)	(27.0; 29.9)
At the age of 65			
Estimate in years	10.7	14.1	16.3
95% CI	(10.0; 11.3)	(13.4; 14.7)	(15.4; 17.8)
At the age of 85			
Estimate in years	3.4	4.3	5.0
95% CI	(3.0; 3.9)	(3.8; 4.9)	(4.1; 6.2)

Note: Healthy life expectancy is based on ‘excellent’, ‘very good’ or ‘good’ self-rated health.

Table 4A.5. Disability-free life expectancy by age, gender and occupational social class

	Social class		
	Routine	Intermediate	Professional
Men			
At the age of 50			
Estimate in years	25.3	27.7	30.0
95% CI	(24.6; 26.1)	(26.6; 29.0)	(29.2; 31.0)
At the age of 65			
Estimate in years	11.3	13.6	15.3
95% CI	(10.5; 11.9)	(12.3; 14.4)	(14.5; 16.1)
At the age of 85			
Estimate in years	1.8	2.6	3.1
95% CI	(1.4; 2.2)	(1.8; 3.4)	(2.2; 3.8)
Women			
At the age of 50			
Estimate in years	27.5	30.5	32.4
95% CI	(26.5; 28.3)	(29.5; 31.2)	(31.2; 33.4)
At the age of 65			
Estimate in years	12.7	15.2	16.9
95% CI	(11.6; 13.2)	(14.5; 16.1)	(15.7; 18.0)
At the age of 85			
Estimate in years	1.5	2.1	3.2
95% CI	(1.2; 1.9)	(1.6; 2.7)	(2.3; 4.3)

Note: Disability-free life expectancy is based on no limitations with ADLs and IADLs.

Table 4A.6. Disability-free life expectancy by age, gender and wealth tertiles

	Wealth tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	23.3	27.7	30.9
95% CI	(22.3; 24.2)	(26.9; 28.9)	(30.2; 31.8)
At the age of 65			
Estimate in years	9.3	13.4	16.5
95% CI	(8.6; 10.3)	(12.7; 14.4)	(15.7; 17.3)
At the age of 85			
Estimate in years	1.6	2.6	3.6
95% CI	(1.2; 2.1)	(1.8; 3.2)	(2.7; 4.3)
Women			
At the age of 50			
Estimate in years	25.1	30.0	33.4
95% CI	(24.1; 26.1)	(29.3; 31.0)	(32.4; 34.4)
At the age of 65			
Estimate in years	10.8	14.8	18.2
95% CI	(10.0; 11.7)	(14.1; 15.5)	(17.3; 19.1)
At the age of 85			
Estimate in years	1.3	2.6	2.7
95% CI	(1.0; 1.8)	(1.9; 3.3)	(2.0; 3.4)

Note: Disability-free life expectancy is based on no limitations with ADLs and IADLs.

Table 4A.7. Disability-free life expectancy by age, gender and income tertiles

	Income tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	24.7	26.6	30.3
95% CI	(23.4; 25.5)	(25.7; 27.6)	(29.1; 31.3)
At the age of 65			
Estimate in years	11.3	12.5	16.1
95% CI	(10.5; 11.8)	(11.6; 13.3)	(15.1; 17.1)
At the age of 85			
Estimate in years	2.0	2.2	3.3
95% CI	(1.5; 2.6)	(1.5; 2.8)	(2.5; 4.5)
Women			
At the age of 50			
Estimate in years	27.0	29.1	32.8
95% CI	(25.9; 28.0)	(28.1; 30.3)	(31.7; 34.0)
At the age of 65			
Estimate in years	13.0	13.9	17.7
95% CI	(12.3; 13.8)	(13.0; 14.7)	(16.5; 18.8)
At the age of 85			
Estimate in years	1.9	2.1	2.8
95% CI	(1.5; 2.4)	(1.6; 2.7)	(2.0; 4.1)

Note: Disability-free life expectancy is based on no limitations with ADLs and IADLs.

Table 4A.8. Disability-free life expectancy by age, gender and education

	Education		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	26.1	28.9	30.1
95% CI	(25.3; 26.9)	(28.0; 29.7)	(28.8; 31.3)
At the age of 65			
Estimate in years	11.9	14.4	15.8
95% CI	(11.2; 12.7)	(13.7; 15.3)	(14.8; 17.0)
At the age of 85			
Estimate in years	2.2	2.8	2.0
95% CI	(1.5; 2.8)	(2.0; 3.6)	(1.2; 3.1)
Women			
At the age of 50			
Estimate in years	28.0	30.6	32.4
95% CI	(27.1; 28.8)	(29.7; 31.3)	(30.7; 33.8)
At the age of 65			
Estimate in years	13.0	15.3	17.0
95% CI	(12.3; 13.8)	(14.4; 16.2)	(15.6; 18.5)
At the age of 85			
Estimate in years	1.6	2.7	2.2
95% CI	(1.2; 2.0)	(2.0; 3.5)	(1.6; 3.2)

Note: Disability-free life expectancy is based on no limitations with ADLs and IADLs.

Table 4A.9. Illness-free life expectancy by age, gender and occupational social class

	Social class		
	Routine	Intermediate	Professional
Men			
At the age of 50			
Estimate in years	17.8	21.1	23.2
95% CI	(17.0; 19.0)	(20.1; 22.4)	(22.4; 24.0)
At the age of 65			
Estimate in years	8.0	10.5	11.7
95% CI	(7.4; 8.6)	(9.7; 11.3)	(11.1; 12.5)
At the age of 85			
Estimate in years	2.1	3.2	2.8
95% CI	(1.6; 2.6)	(2.2; 4.0)	(2.1; 3.5)
Women			
At the age of 50			
Estimate in years	19.1	22.9	24.3
95% CI	(18.3; 20.0)	(21.6; 24.1)	(23.2; 25.5)
At the age of 65			
Estimate in years	9.4	11.8	12.6
95% CI	(8.8; 10.0)	(10.9; 12.7)	(11.8; 13.3)
At the age of 85			
Estimate in years	2.8	3.3	4.1
95% CI	(2.3; 3.3)	(2.7; 3.9)	(3.1; 4.8)

Note: Illness-free means free from a limiting long-standing illness.

Table 4A.10. Illness-free life expectancy by age, gender and wealth

	Wealth tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	14.9	21.2	24.7
95% CI	(13.9; 16.0)	(20.2; 21.8)	(24.0; 25.4)
At the age of 65			
Estimate in years	6.2	10.2	13.0
95% CI	(5.6; 6.8)	(9.6; 10.8)	(12.4; 13.7)
At the age of 85			
Estimate in years	1.9	2.9	3.5
95% CI	(1.4; 2.5)	(2.2; 3.5)	(2.5; 4.2)
Women			
At the age of 50			
Estimate in years	16.1	22.3	25.9
95% CI	(15.2; 17.2)	(21.4; 23.1)	(25.0; 26.9)
At the age of 65			
Estimate in years	7.7	11.2	14.0
95% CI	(7.1; 8.3)	(10.5; 11.9)	(13.5; 14.9)
At the age of 85			
Estimate in years	2.5	3.5	4.2
95% CI	(2.1; 3.0)	(3.0; 4.1)	(3.4; 5.0)

Note: Illness-free means free from a limiting long-standing illness.

Table 4A.11. Illness-free life expectancy by age, gender and income

	Income tertiles		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	16.5	19.2	24.1
95% CI	(15.5; 17.8)	(18.2; 20.3)	(23.3; 25.0)
At the age of 65			
Estimate in years	7.8	9.13	13.2
95% CI	(7.2; 8.6)	(8.4; 9.8)	(12.3; 13.6)
At the age of 85			
Estimate in years	2.6	1.8	3.4
95% CI	(2.2; 3.1)	(1.3; 2.4)	(2.4; 4.8)
Women			
At the age of 50			
Estimate in years	17.5	20.8	25.4
95% CI	(16.4; 18.9)	(19.7; 21.7)	(24.4; 26.5)
At the age of 65			
Estimate in years	9.6	10.3	13.8
95% CI	(8.9; 10.3)	(9.6; 10.9)	(13.1; 14.7)
At the age of 85			
Estimate in years	3.0	3.3	4.2
95% CI	(2.6; 3.5)	(2.6; 3.9)	(3.1; 5.1)

Note: Illness-free means free from a limiting long-standing illness.

Table 4A.12. Illness-free life expectancy by age, gender and education

	Education		
	Low	Medium	High
Men			
At the age of 50			
Estimate in years	18.4	22.1	24.4
95% CI	(17.5; 19.3)	(21.1; 23.0)	(23.1; 25.4)
At the age of 65			
Estimate in years	8.4	11.2	12.7
95% CI	(7.9; 9.0)	(10.4; 11.9)	(11.7; 13.8)
At the age of 85			
Estimate in years	2.2	3.2	3.2
95% CI	(1.7; 2.6)	(2.5; 3.8)	(1.8; 4.5)
Women			
At the age of 50			
Estimate in years	19.4	22.9	25.2
95% CI	(18.3; 20.3)	(22.0; 24.0)	(24.1; 26.5)
At the age of 65			
Estimate in years	9.4	12.1	13.6
95% CI	(8.8; 10.0)	(11.4; 12.9)	(12.3; 14.7)
At the age of 85			
Estimate in years	2.8	3.7	3.8
95% CI	(2.4; 3.3)	(3.1; 4.2)	(2.8; 5.0)

Note: Illness-free means free from a limiting long-standing illness.

Table 4A.13. All-cause mortality and wealth in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	1.09 (0.75; 1.58)		1.69 (1.31; 2.17)		1.08 (0.94; 1.23)	
Low	2.85 (2.08; 3.92)		2.96 (2.33; 3.76)		1.54 (1.36; 1.74)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	1.09 (0.75; 1.58)	0.0	1.56 (1.22; 2.02)	15.3	1.08 (0.94; 1.23)	0.0
Low	2.40 (1.73; 3.32)	16.4	2.49 (1.96; 3.18)	15.9	1.56 (1.38; 1.76)	–3.0
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	1.00 (0.69; 1.45)	100	1.44 (1.12; 1.86)	30.5	0.98 (0.85; 1.12)	N/A
Low	2.09 (1.49; 2.92)	29.6	2.20 (1.72; 2.83)	27.3	1.31 (1.16; 1.48)	37.5
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	1.00 (0.69; 1.45)	100	1.41 (1.09; 1.83)	34.5	1.03 (0.89; 1.17)	61.6
Low	1.85 (1.30; 2.62)	41.3	1.84 (1.42; 2.38)	43.8	1.31 (1.15; 1.49)	37.5
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	1.06 (0.73; 1.53)	32.4	1.64 (1.27; 2.11)	5.7	1.06 (0.93; 1.21)	24.3
Low	2.54 (1.84; 3.53)	11.0	2.72 (2.13; 3.47)	7.8	1.50 (1.32; 1.69)	6.1
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	0.99 (0.75; 1.58)	N/A	1.24 (0.96; 1.61)	59.0	0.98 (0.85; 1.12)	N/A
Low	1.57 (1.09; 2.27)	56.9	1.49 (1.14; 1.96)	63.3	1.23 (1.08; 1.40)	52.1
Number of participants	3,813		3,103		3,350	
Number of deaths	226		466		1,696	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.

[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).

[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.

[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.14. Cardiovascular disease mortality and wealth in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	2.71 (1.04; 7.05)		2.16 (1.20; 3.87)		1.20 (0.96; 1.50)	
Low	7.98 (3.33; 19.10)		5.37 (3.20; 9.17)		1.81 (1.47; 2.22)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	2.54 (0.97; 6.63)	6.5	1.87 (1.04; 3.37)	18.7	1.18 (0.94; 1.48)	9.2
Low	5.98 (2.46; 14.50)	13.9	4.02 (2.33; 6.95)	17.2	1.79 (1.45; 2.20)	1.9
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	2.43 (0.93; 6.39)	10.9	1.64 (0.91; 2.97)	35.8	1.08 (0.86; 1.36)	57.8
Low	5.11 (2.06; 12.67)	21.5	3.26 (1.86; 5.69)	29.7	1.52 (1.23; 1.87)	29.4
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	2.25 (0.85; 5.92)	18.5	1.87 (1.03; 3.39)	18.7	1.16 (0.92; 1.46)	18.6
Low	4.03 (1.59; 10.21)	32.9	3.35 (1.88; 5.98)	28.1	1.55 (1.25; 1.93)	26.1
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	2.65 (1.02; 6.91)	2.2	2.05 (1.13; 3.68)	6.8	1.19 (0.95; 1.50)	4.6
Low	7.41 (3.06; 17.92)	3.6	4.55 (2.63; 7.87)	9.9	1.79 (1.46; 2.20)	1.9
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	2.14 (0.80; 5.69)	23.7	1.43 (0.78; 2.62)	53.6	1.09 (0.86; 1.37)	52.7
Low	3.45 (1.33; 8.97)	40.4	2.25 (1.24; 4.09)	51.8	1.44 (1.15; 1.79)	38.5
Number of participants	3,813		3,103		3,350	
Number of deaths	52		115		642	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.15. Cancer mortality and wealth in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	0.87 (0.55; 1.39)	N/A	1.34 (0.95; 1.88)		0.93 (0.73; 1.20)	
Low	1.62 (1.07; 2.47)		1.74 (1.24; 2.44)		1.13 (0.89; 1.43)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	0.92 (0.58; 1.48)	N/A	1.32 (0.93; 1.85)	5.1	0.97 (0.75; 1.25)	N/A
Low	1.58 (1.02; 2.43)	5.2	1.65 (1.17; 2.34)	9.6	1.26 (0.99; 1.60)	N/A
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	0.80 (0.55; 1.39)	N/A	1.30 (0.92; 1.83)	10.4	0.91 (0.71; 1.18)	N/A
Low	1.29 (0.83; 2.02)	47.2	1.64 (1.15; 2.34)	10.7	1.09 (0.85; 1.40)	N/A
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	0.78 (0.48; 1.26)	N/A	1.15 (0.81; 1.62)	52.2	0.89 (0.69; 1.16)	N/A
Low	1.07 (0.67; 1.71)	86.0	1.28 (0.88; 1.85)	55.4	0.99 (0.77; 1.28)	N/A
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	0.84 (0.53; 1.35)	N/A	1.34 (0.95; 1.88)	0.0	0.92 (0.72; 1.19)	N/A
Low	1.45 (0.94; 2.25)	23.0	1.73 (1.22; 2.45)	1.0	1.10 (0.87; 1.40)	N/A
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	0.80 (0.49; 1.29)	N/A	1.14 (0.80; 1.62)	55.2	0.92 (0.71; 1.20)	N/A
Low	0.96 (0.59; 1.58)	N/A	1.23 (0.83; 1.81)	62.6	1.10 (0.85; 1.43)	N/A
Number of participants	3,813		3,103		3,350	
Number of deaths	118		209		407	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.16. All-cause mortality and occupational social class in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
Professional	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Intermediate	1.53 (1.05; 2.23)		1.15 (0.87; 1.53)		1.13 (0.97; 1.30)	
Routine	1.84 (1.33; 2.53)		1.62 (1.29; 2.03)		1.32 (1.17; 1.48)	
Model 2: model 1+ chronic conditions[a]						
Professional	1.00		1.00		1.00	
Intermediate	1.39 (0.96; 2.03)	22.6	1.16 (0.88; 1.54)	–6.2	1.11 (0.96; 1.28)	14.6
Routine	1.63 (1.18; 2.25)	19.9	1.50 (1.19; 1.88)	16.0	1.30 (1.15; 1.47)	5.5
Model 3: model 1+functional capability[b]						
Professional	1.00		1.00		1.00	
Intermediate	1.39 (0.95; 2.03)	22.6	1.07 (0.80; 1.42)	51.6	1.06 (0.92; 1.23)	52.3
Routine	1.46 (1.04; 2.02)	37.9	1.28 (1.01; 1.61)	48.8	1.14 (1.01; 1.29)	52.8
Model 4: model 1+lifestyle factors[c]						
Professional	1.00		1.00		1.00	
Intermediate	1.37 (0.94; 2.01)	26.0	1.06 (0.80; 1.40)	58.3	1.07 (0.93; 1.24)	44.6
Routine	1.40 (1.00; 1.95)	44.8	1.17 (0.92; 1.48)	67.5	1.17 (1.03; 1.32)	43.4
Model 5: model 1+depression[d]						
Professional	1.00		1.00		1.00	
Intermediate	1.49 (1.03; 2.19)	6.2	1.13 (0.85; 1.50)	12.6	1.11 (0.96; 1.29)	14.6
Routine	1.69 (1.23; 2.33)	13.9	1.51 (1.20; 1.90)	14.6	1.27 (1.13; 1.44)	13.9
Model 6: fully adjusted						
Professional	1.00		1.00		1.00	
Intermediate	1.24 (0.84; 1.82)	49.4	1.06 (0.80; 1.40)	58.3	1.04 (0.89; 1.20)	67.9
Routine	1.24 (0.88; 1.75)	64.7	1.04 (0.82; 1.32)	91.9	1.09 (0.96; 1.23)	69.0
Number of participants	3,813		3,103		3,350	
Number of deaths	226		466		1,696	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.17. Cardiovascular mortality and occupational social class in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
Professional	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Intermediate	2.92 (1.27; 6.68)		1.42 (0.78; 2.57)		1.22 (0.96; 1.55)	
Routine	2.93 (1.38; 6.23)		2.12 (1.32; 3.43)		1.46 (1.19; 1.78)	
Model 2: model 1+ chronic conditions[a]						
Professional	1.00		1.00		1.00	
Intermediate	2.56 (1.11; 5.90)	12.3	1.41 (0.78; 2.56)	2.0	1.21 (0.95; 1.54)	4.1
Routine	2.38 (1.11; 5.10)	19.3	1.90 (1.17; 3.07)	14.6	1.43 (1.17; 1.75)	5.5
Model 3: model 1+functional capability[b]						
Professional	1.00		1.00		1.00	
Intermediate	2.56 (1.11; 5.92)	12.3	1.21 (0.67; 2.20)	45.6	1.13 (0.89; 1.44)	38.5
Routine	2.06 (0.95; 4.50)	32.8	1.40 (0.86; 2.29)	55.2	1.24 (1.01; 1.52)	43.2
Model 4: model 1+lifestyle factors[c]						
Professional	1.00		1.00		1.00	
Intermediate	2.31 (1.00; 5.34)	21.9	1.29 (0.71; 2.35)	27.4	1.15 (0.90; 1.47)	29.7
Routine	1.85 (0.85; 4.01)	42.8	1.48 (0.90; 2.44)	47.8	1.28 (1.04; 1.57)	34.8
Model 5: model 1+depression[d]						
Professional	1.00		1.00		1.00	
Intermediate	2.86 (1.25; 6.54)	1.9	1.36 (0.75; 2.46)	12.3	1.22 (0.96; 1.55)	0.0
Routine	2.72 (1.27; 5.80)	6.9	1.85 (1.14; 3.01)	18.1	1.44 (1.18; 1.77)	3.6
Model 6: fully adjusted						
Professional	1.00		1.00		1.00	
Intermediate	2.11 (0.90; 4.97)	30.3	1.18 (0.65; 2.15)	52.8	1.11 (0.87; 1.41)	47.5
Routine	1.65 (0.75; 3.66)	53.4	1.20 (0.73; 1.99)	75.7	1.17 (0.95; 1.44)	58.5
Number of participants	3,813		3,103		3,350	
Number of deaths	52		115		642	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.18. All-cause mortality and education in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	1.93 (1.19; 3.13)		1.23 (0.87; 1.73)		1.03 (0.85; 1.25)	
Low	2.60 (1.64; 4.13)		1.57 (1.15; 2.15)		1.27 (1.06; 1.52)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	1.98 (1.22; 3.22)	–3.9	1.20 (0.85; 1.69)	11.9	1.04 (0.86; 1.27)	–32.7
Low	2.38 (1.49; 3.78)	9.3	1.42 (1.04; 1.95)	22.3	1.26 (1.05; 1.51)	3.3
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	1.74 (1.07; 2.84)	15.8	1.12 (0.80; 1.58)	45.3	1.02 (0.84; 1.24)	33.0
Low	2.04 (1.27; 3.28)	25.4	1.15 (0.83; 1.58)	69.0	1.14 (0.95; 1.37)	45.2
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	1.72 (1.06; 2.79)	17.5	1.11 (0.79; 1.57)	49.6	1.04 (0.85; 1.26)	–32.7
Low	1.81 (1.12; 2.91)	37.9	1.11 (0.81; 1.53)	76.9	1.15 (0.96; 1.39)	41.5
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	1.90 (1.17; 3.09)	2.4	1.20 (0.86; 1.69)	11.9	1.02 (0.84; 1.24)	33.0
Low	2.45 (1.54; 3.89)	6.2	1.47 (1.08; 2.01)	14.6	1.22 (1.02; 1.47)	16.8
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	1.69 (1.04; 2.76)	20.2	1.07 (0.76; 1.50)	67.3	1.04 (0.86; 1.27)	–32.7
Low	1.63 (1.00; 2.64)	48.9	0.94 (0.68; 1.30)	N/A	1.10 (0.91; 1.33)	60.1
Number of participants	3,813		3,103		3,350	
Number of deaths	226		466		1,696	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.19. Cardiovascular mortality and education in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	2.86 (0.37; 9.90)		2.11 (0.93; 4.81)		1.08 (0.79; 1.47)	
Low	5.06 (1.55; 16.51)		2.76 (1.27; 5.98)		1.23 (0.91; 1.65)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	3.15 (0.91; 10.97)	–9.2	1.96 (0.86; 4.46)	9.9	1.08 (0.79; 1.48)	N/A
Low	4.63 (1.42; 15.14)	5.5	2.19 (1.01; 4.79)	22.8	1.18 (0.88; 1.59)	N/A
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	2.51 (0.72; 8.74)	12.4	1.81 (0.79; 4.13)	20.5	1.06 (0.77; 1.45)	N/A
Low	3.59 (1.07; 11.98)	21.2	1.60 (0.73; 3.52)	53.7	1.08 (0.80; 1.46)	N/A
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	2.42 (0.70; 8.43)	15.9	2.00 (0.87; 4.57)	7.2	1.10 (0.80; 1.51)	N/A
Low	2.70 (0.80; 9.05)	38.7	1.97 (0.90; 4.34)	33.2	1.13 (0.83; 1.52)	N/A
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	2.83 (0.82; 9.78)	1.0	2.03 (0.89; 4.64)	5.2	1.07 (0.78; 1.47)	N/A
Low	4.79 (1.47; 15.66)	3.4	2.44 (1.12; 5.31)	12.1	1.21 (0.90; 1.63)	N/A
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	2.59 (0.74; 9.11)	9.4	1.73 (0.76; 3.97)	26.6	1.09 (0.79; 1.49)	N/A
Low	2.65 (0.78; 9.03)	39.9	1.32 (0.60; 2.94)	72.7	1.03 (0.76; 1.40)	N/A
Number of participants	3,813		3,103		3,350	
Number of deaths	52		115		642	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.20. All-cause mortality and income in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	1.91 (1.38; 2.63)		1.62 (1.27; 2.07)		1.19 (1.02; 1.58)	
Low	2.60 (1.88; 3.59)		2.03 (1.58; 2.59)		1.26 (1.09; 1.45)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	1.77 (1.28; 2.45)	11.8	1.47 (1.15; 1.88)	20.1	1.18 (1.02; 1.37)	4.9
Low	2.16 (1.55; 3.01)	19.4	1.77 (1.38; 2.28)	19.4	1.29 (1.12; 1.49)	–10.2
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	1.61 (1.16; 2.23)	26.4	1.34 (1.04; 1.72)	39.3	1.05 (0.90; 1.22)	72.0
Low	1.83 (1.30; 2.58)	36.8	1.58 (1.23; 2.04)	35.4	1.13 (0.97; 1.30)	47.1
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	1.63 (1.18; 2.27)	24.5	1.32 (1.03; 1.70)	42.5	1.04 (0.90; 1.22)	77.5
Low	1.79 (1.27; 2.52)	39.1	1.37 (1.06; 1.78)	55.5	1.13 (0.98; 1.31)	47.1
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	1.82 (1.32; 2.52)	7.5	1.56 (1.22; 2.00)	7.8	1.28 (1.02; 1.37)	–41.9
Low	2.28 (1.64; 3.18)	13.7	1.88 (1.47; 2.42)	10.8	1.24 (1.08; 1.43)	6.9
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	1.53 (1.10; 2.14)	34.3	1.16 (0.90; 1.49)	69.2	1.00 (0.86; 1.17)	100
Low	1.44 (1.02; 2.09)	61.8	1.16 (0.89; 1.52)	79.0	1.09 (0.94; 1.27)	62.7
Number of participants	3,813		3,103		3,350	
Number of deaths	226		466		1,696	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

Table 4A.21. Cardiovascular mortality and income in 10,266 men and women

	Age 50–59		Age 60–69		Age 70+	
	HR (95% CI)	Δ%	HR (95% CI)	Δ%	HR (95% CI)	Δ%
Model 1: age and gender						
High	1.00 (Reference)		1.00 (Reference)		1.00 (Reference)	
Medium	1.96 (0.95; 4.07)		2.36 (1.37; 4.06)		1.19 (0.93; 1.52)	
Low	4.20 (2.15; 8.18)		3.03 (1.76; 5.22)		1.27 (1.01; 1.61)	
Model 2: model 1+ chronic conditions[a]						
High	1.00		1.00		1.00	
Medium	1.68 (0.81; 3.52)	22.9	1.98 (1.15; 3.42)	20.4	1.16 (0.91; 1.48)	14.7
Low	3.04 (1.51; 6.09)	22.5	2.39 (1.37; 4.15)	21.4	1.28 (1.02; 1.62)	–3.3
Model 3: model 1+functional capability[b]						
High	1.00		1.00		1.00	
Medium	1.48 (0.70; 3.13)	41.7	1.69 (0.98; 2.94)	38.9	1.04 (0.81; 1.33)	77.5
Low	2.37 (1.16; 4.87)	39.9	1.97 (1.13; 3.44)	38.8	1.11 (0.88; 1.40)	56.3
Model 4: model 1+lifestyle factors[c]						
High	1.00		1.00		1.00	
Medium	1.44 (0.68; 3.03)	45.8	1.88 (1.08; 3.25)	26.5	1.05 (0.82; 1.34)	72.0
Low	2.14 (1.05; 4.38)	47.0	1.97 (1.11; 3.48)	38.8	1.16 (0.91; 1.47)	37.9
Model 5: model 1+depression[d]						
High	1.00		1.00		1.00	
Medium	1.90 (0.91; 3.95)	4.6	2.21 (1.28; 3.81)	7.6	1.19 (0.93; 1.52)	0.0
Low	3.79 (1.91; 7.52)	7.2	2.63 (1.52; 4.55)	12.8	1.27 (1.00; 1.60)	0.0
Model 6: fully adjusted						
High	1.00		1.00		1.00	
Medium	1.20 (0.55; 2.61)	72.9	1.45 (0.83; 2.54)	56.7	0.97 (0.76; 1.25)	N/A
Low	1.54 (0.71; 3.32)	69.9	1.44 (0.81; 2.57)	67.1	1.08 (0.85; 1.38)	67.8
Number of participants	3,813		3,103		3,350	
Number of deaths	52		115		642	

[a] Self-reported doctor-diagnosed chronic conditions at baseline: heart disease, stroke, cancer, chronic lung disease and hypertension.
[b] Functional capabilities at baseline: having any ADL and IADL limitation vs. not and quartiles of baseline recall score (i.e. summary of immediate and delayed recall of ten words).
[c] Smoking, physical activity on weekly basis and frequency of alcohol consumption.
[d] Elevated depressive symptoms defined as a score of ≥ four symptoms on the eight-item CES-D with dichotomous response scale.

5. Methodology

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This chapter presents a summary of the survey methodology for the seventh wave (2014–15) of the English Longitudinal Study of Ageing (ELSA). It includes a brief account of the sample design, the content of the interview and the approach to fieldwork. It also provides basic information about survey response rates, and the weighting strategies used in this report. Further detail is provided in the ELSA technical report, which can be accessed via the ELSA website (http://www.elsa-project.ac.uk).

A summary of the key points relating to wave 7 is given below:

- The wave 7 (2014–15) core questionnaire was similar to that used in the previous waves. Some content was rotated back on and some off the questionnaire, but the structure and the majority of content was the same.
- As in previous waves, participants who completed the main ELSA interview were asked to complete a self-completion questionnaire. The content was broadly the same as in previous waves.
- There was no nurse visit at wave 7.
- Five cohorts of people made up the ELSA sample issued at wave 7:

  Cohort 1[10] born on or before 29 February 1952. Selected from Health Survey for England (HSE) 1998, 1999 and 2001. First interviewed at ELSA wave 1 (2002–03) aged 50 and over. Cohort 1 core members and their partners represented 56% of all issued cases at wave 7.

  Cohort 3 born between 1 March 1952 and 1 March 1956. Selected from four years of HSE (2001–04). First interviewed at ELSA wave 3 (2006–07). Cohort 3 core members and their partners represented 10% of all issued cases at wave 7.

  Cohort 4 born between 1 March 1933 and 28 February 1958. Selected from HSE 2006. First interviewed at ELSA wave 4 (2008–09) aged 50–74. Cohort 4 core members and their partners represented 19% of all issued cases at wave 7.

  Cohort 6 born between 1 March 1956 and 28 February 1962. Selected from HSE 2009, 2010 and the first half of 2011. First interviewed at ELSA wave 6

[10] All longitudinal analysis in this report is based on Cohort 1 core members interviewed at every wave of ELSA.

(2012–13) aged 50–55. Cohort 6 core members and their partners represented 9% of all issued cases at wave 7.

Cohort 7 born between 1 March 1962 and 28 February 1964. Selected from HSE 2011 and 2012. The wave 7 'refresher' cohort, i.e. first interviewed at ELSA wave 7 (2014–15) aged 50–51. Cohort 7 core members and their partners represented 6% of all issued cases at wave 7.

- A total of 9,666 main interviews were completed at wave 7 across these five cohorts. Much of the analysis in this chapter focuses on core members. Core members are defined as age-eligible (50+) sample members who participated the first time they were approached to join the ELSA study. They represent the core element of the continuing ELSA sample, and at wave 7, a total of 8,249 interviews (85%) were conducted with core members. Specifically, 4,894 interviews were with Cohort 1 core members from the original wave 1 sample, 787 were with core members from Cohort 3, 1,606 were with core members from Cohort 4, 661 were with core members from Cohort 6, and 301 were with core members from Cohort 7 (the wave 7 refresher cohort). The remaining 1,417 interviews (15%) were with partners of core members (defined as either core, young, old or new partners; see Box 5.1).

5.1 Sample design

The ELSA sample is selected to be representative of people aged 50 and over, living in private households in England. It was drawn from households that had previously responded to the HSE so that the study could benefit from data that had already been collected. Some background information about the HSE is provided below.

Health Survey for England

The HSE is an annual cross-sectional household survey that gathers a wide range of health data and biometric measures. Each of the main HSE samples for ELSA was originally drawn in two stages. First, postcode sectors were selected from the Postcode Address File, stratified by health authority and the proportion of households in the non-manual socio-economic groups. Addresses were then selected systematically from each sector and up to 10 adults and 2 children in each household were deemed eligible for interview.

Eligible individuals at HSE were asked to participate in a personal interview, followed by a nurse visit. Further details about the HSE years used to select the ELSA sample are available from the HSE Methodology Reports (Erens and Primatesta, 1999; Erens, Primatesta and Prior, 2001; Prior et al., 2003; Sproston and Primatesta, 2003, 2004; Sproston and Mindell, 2006; Craig and Mindell, 2008, 2011, 2012, 2013; Craig and Hirani, 2010).

ELSA Cohort 1

The original cohort at wave 1 (persons born on or before 29 February 1952) were selected from households who had previously responded to the HSE in 1998, 1999 and 2001. The ELSA wave 1 interview took place in 2002–03, providing the baseline for the study. Overall, there were 12,099 achieved interviews at wave 1, and of these

11,391 became Cohort 1 core members. Interviews with Cohort 1 core members and their partners were attempted every two years following wave 1 (wave 2 in 2004–05, wave 3 in 2006–07, wave 4 in 2008–09, wave 5 in 2010–11, wave 6 in 2012–13 and wave 7 in 2014–15).

ELSA Cohort 3

At wave 3, a 'refresher' cohort of people just entering their 50s (born between 1 March 1952 and 1 March 1956) was introduced (Cohort 3). The sample used to form Cohort 3 was selected from four survey years of the HSE (2001 to 2004). There were 1,733 Cohort 3 interviews at wave 3 and, of these, 1,276 became core members. The majority of Cohort 3 core members (87%) came from HSE households issued for the first time at ELSA wave 3; the remaining were mainly younger partners in Cohort 1 households who were reclassified as Cohort 3 core members because they now met the age criteria. There are now five waves of interviews with Cohort 3 core members and their partners (wave 3 in 2006–07, wave 4 in 2008–09, wave 5 in 2010–11, wave 6 in 2012–13 and wave 7 in 2014–15).

ELSA Cohort 4

A cohort of people born between 1 March 1933 and 28 February 1958 (aged 50–74) was added to the wave 1 and wave 3 cohorts in 2008–09 (henceforth referred to as Cohort 4). The main wave 4 cohort was selected from HSE 2006. There were 2,590 interviews at wave 4 and, of these, 2,290 became Cohort 4 core members. The group of Cohort 4 core members includes 248 people who were mistakenly not issued at wave 3 (as part of Cohort 3) and were followed up for interview at wave 4 instead. Wave 7 represents the fourth wave of interviews with Cohort 4 members and their partners (wave 4 in 2008–09, wave 5 in 2010–11, wave 6 in 2012–13 and wave 7 in 2014–15).

ELSA Cohort 6

At wave 6, a further 'refresher' cohort of people born between 1 March 1956 and 28 February 1962 (aged 50–55) was added in 2012–13 (Cohort 6). Cohort 6 was selected from participating individuals in HSE 2009, 2010 and 2011. There were 1,154 Cohort 6 interviews at wave 6 and, of these, 826 became core members. Wave 7 (2014–15) is the second wave of interviews with Cohort 6 members.

ELSA Cohort 7

At wave 7 in 2014–15, a 'refresher' cohort of people born between 1 March 1962 and 28 February 1964 (aged 50–51) was added (Cohort 7). Cohort 7 was selected from participating individuals in HSE 2011 and 2012. There were 454 Cohort 7 interviews at wave 7 and, of these, 301 became core members. Wave 7 is the first wave of interviews with Cohort 7 members.

Types of eligible sample members

Box 5.1 summarises the different types of sample members eligible for the ELSA study – namely, core members, core partners, younger partners, older partners and new partners.

Box 5.1. ELSA sample members

Core members are individuals who had been living within the household that participated in HSE (although not all were personally interviewed for HSE). They met the age criteria for the ELSA study at the time of their first ELSA interview and had their first ELSA interview at a private residential address in England.

Core partners are individuals who, like core members, had been living within the household at the time of the HSE interview and were age-eligible for inclusion in ELSA. However they were *not* interviewed the first time they were approached to join ELSA, so missed the baseline survey. As a consequence, they are now only approached by virtue of being the partner of a core member.

Younger partners are the cohabiting younger spouses or partners of core members, who were living within the household at the time of HSE and the first ELSA interview, but who did not meet the age criteria to be classified as a core member.

Older partners (for Cohorts 3, 4, 6 and 7 only) are the older cohabiting spouses or partners of age-eligible sample members selected for ELSA, who had been living within the household at the time of the HSE or ELSA interview.

New partners are the cohabiting spouses or partners (of any age) of core members at the time of the ELSA interview who have joined the household *since* the original HSE interview.

Sample members are neither core members nor partners. These people were originally sampled for ELSA in their own right as they took part in HSE and were age-eligible for ELSA; however, they did not take part in the first ELSA wave they were invited to take part in and so could not become core members. They are retained in the sample file and have an opportunity to take part in future waves because they live with a core member of the sample but they are not cohabiting partners, e.g. they may be siblings, children or parents of a core member.

Eligibility criteria for wave 7 main interview

The eligibility criteria for a wave 7 interview are given below:

- Individuals were not eligible for follow-up if they had since died, asked not be revisited, or moved out of Great Britain.[11] For the refresher sample (Cohort 7), individuals are not eligible if they have moved out of England since taking part in HSE.
- Core members who later move into a care home or institution, or into Scotland or Wales, after their first ELSA interview (baseline wave) remain eligible for all future ELSA interviews. A total of 63 productive institutional interviews were conducted at wave 7. These are excluded from some response rates presented in Section 5.6 because, for some analyses, they no longer represent the population of interest.

[11] Note that sample members are followed if they move to Scotland or Wales but not if they move to Northern Ireland.

- An interview was attempted with all partners who had been living with a core member at the time of an ELSA interview in either wave 5 or wave 6 and had been separated, divorced or widowed from them, so that we could understand their circumstances after this event had occurred.
- Partners who have stopped living with someone who is an ELSA core member are only eligible to be interviewed once following the split with their core member partner. Therefore, if ex-partners were interviewed at wave 6 (or before) they were not re-contacted at wave 7. In the refresher sample, partners who had split from an ELSA-participating partner at the time of HSE were not eligible for an interview.

5.2 Development of the wave 7 interview (2014–15)

Extensive discussion took place with ELSA collaborators about what changes were needed for the wave 7 interview and what new topics were to be included.

After the initial consultation and discussion, a pilot survey for wave 7 was conducted in June 2013 to test the proposed content that was new to ELSA. The purpose of the pilot was to test how respondents understood and responded to new elements and questions, and how acceptable these were to respondents. The elements included in the pilot included two hearing tests (using the HearCheck device and the Digit Triplet Test), self-reported hearing questions, and the assessments included in the cognitive function section. Respondents' views were also sought on the accompanying survey documents as well as the methods of communication with NatCen Social Research.

The questionnaire was finalised with reference to the findings from the pilot, and a dress rehearsal was conducted in November 2013 to test the final questionnaire (including the HearCheck test) as well as the overall survey process.

The research team collected feedback from interviewers working on the dress rehearsal for the overall survey content and all associated procedures. The insights collected were used to identify final improvements to implement for the main stage of wave 7, and to develop a plan for interviewer training.

5.3 Structure and content of the wave 7 interview (2014–15)

As at previous waves, the wave 7 main survey comprised a personal face-to-face interview and a self-completion questionnaire.

The structure of the main interview was the same as it had been at previous waves. In brief:

- In households with one respondent, or where two respondents were interviewed separately, each interview followed the course set out in Box 5.2, though some flexibility was given in the order of the walking-speed, income and assets and housing modules.
- In households where more than one eligible respondent agreed to take part, two individuals could be interviewed in a single session (unless they kept their

finances separately and were not prepared to share this information). In these 'concurrent' sessions, the two respondents were interviewed alongside each other, but were separated during the course of the interview so that the later modules, assessing cognitive function and collecting information about expectations for the future, psychosocial health, demographic information and consents for linkages to administrative data, could be administered in private.

- In single-person households, the self-completion questionnaire was provided in advance of the interview (in person by the interviewer or by post) to give respondents an opportunity to complete it before the interview. In households containing more than one potential respondent, the self-completion questionnaire was never given in advance. In concurrent interviews, the self-completion questionnaire was completed while the other respondent in the concurrent session was completing the 'private' modules, or at the end of the interview, or after the interview. In multi-person households where interviews were conducted separately, the respondents could complete the self-completion questionnaire while the other person was being interviewed, or at the end of the interview, or after the interview. Completed questionnaires were returned by the interviewer (if they had been completed before or during the interview) or posted back by the respondent in a Freepost envelope provided by the interviewer.
- Where two or more eligible individuals lived in a household, one was nominated as the respondent for the housing module. Similarly, one individual was asked to be the respondent to report on income and assets on behalf of each benefit unit. However, if two individuals in the same benefit unit kept their finances separately, the data for each financial unit were collected separately.

Overall, the intention at wave 7 was to collect data about the same topics as at the previous waves, but some changes to the questionnaire were made. The new topics introduced at wave 7 are included in Box 5.2, as well as key questions chosen to be omitted for this wave (e.g. due to wave rotation).

The interview ended with a request to confirm or amend consent to obtain health data (Hospital Episode Statistics) and economic data (benefits and National Insurance information) from administrative sources. All respondents were asked if they would be willing to consent to their data being linked to Primary Care data records. Consent for NHS Central Register linkage was requested from the refresher sample only if consent had not been provided at HSE. None of these consents was collected from individuals for whom a proxy respondent was needed. Contact details were requested for a stable address and for a nominated individual who might respond if a proxy, institutional or end-of-life interview were needed in the future.

Box 5.2. Content of the ELSA interview at wave 7 (2014–15)

Household demographics: collected or updated demographic information about everyone living in the household, including gender, age and relationships to each other, and collected or updated information about children living outside the household.

Individual demographics: collected or updated details about respondents' legal marital status, parents' age and cause of death, and number of living children.

Health: collected or updated self-reported general health, long-standing illness or disability, eyesight, hearing, specific diagnoses and symptoms, pain, difficulties with daily activities, smoking, mental health, urinary and bowel incontinence, falls and fractures, quality of care and cancer screening. New questions were included at wave 7 on dental health, hearing and e-cigarette use.

Social care: new questions about expectations around the funding of social care were added at wave 7. Topics included the nature of care received, who it was received from, the amount received and payments made for care.

Social participation: covered the use of public transport.

Work and pensions: collected or updated current work activities, current and past pensions, reasons for job change, health-related job limitations, working beyond the state pension age and state pension deferral.

Income and assets: assessed the income that respondents received from a variety of sources over the last 12 months: wages, state pensions, private pensions, other annuity income and state benefits; also collected financial and non-financial assets. Routing to questions about lifetime receipt of gifts and inheritances that were included in wave 6 was changed at wave 7 to ensure that the questions were asked of respondents not asked at wave 6.

Housing: collected or updated current housing situation (including size and quality), housing-related expenses, adaptations to accommodation for those with physical impairments, ownership of durable goods and cars, consumption including food in and out of home, fuel, durables and clothing.

Cognitive function: measured different aspects of the respondent's cognitive function, including memory, speed and mental flexibility. Elements included were memory and concentration, word list recall, animal naming, backwards counting from 20, serial 7s, naming objects and people, and word list recall repeat.

Expectations: measured expectations for the future in a number of dimensions, financial decision-making and relative deprivation.

Effort and reward: assessed the relationship between effort and reward in relation to voluntary and caring activities. New questions on care provided to others were integrated into existing questions in this section.

Psychosocial health: measured how the respondent viewed his or her life across a variety of dimensions.

Hearing test: a HearCheck screening test, which tests for audibility of pure tone beeps as a measure of impairment.

Walking speed: for respondents aged 60 and over, a 'timed walk' with the respondent walking a distance of 8 feet (244 cm) at their usual walking pace.

Final questions: collected any missing demographic information and updated contact details and consents.

Self-completion questionnaires: covered quality of life, social participation, altruism, control at work, life satisfaction, consumption of fruit and vegetables, social networks and alcohol consumption.

5.4 Fieldwork

Each eligible individual was sent an advance letter inviting them to take part in wave 7. Interviewers then contacted the household by phone or in person to arrange an appointment for the face-to-face interview. A number of approaches were used to encourage participation among the sample, many of which were similar to those described in the first ELSA report (Marmot et al., 2003). Fieldwork for the seventh wave of ELSA began in June 2014 and spanned 12 months, finishing in May 2015.

5.5 Survey response

In this section, we present summary information about survey response in wave 7 (2014–15) for the face-to-face interview.

Response to main interview

Survey response and quality of fieldwork were carefully monitored throughout the study period. Ultimately, the ELSA wave 7 fieldwork produced 9,666 productive interviews (including both proxy and partial interviews). Of these, 63 interviews were conducted with individuals who had originally been interviewed in a private household and had since moved into an institution, and were therefore still eligible for follow-up (see Section 5.1).

Table 5.1 shows the number of interviews conducted for Cohort 1, broken down by sample type. A total of 5,353 interviews were achieved with members of Cohort 1 at wave 7, and 4,894 of these were with core members.

Table 5.2 presents the pattern of response over time for the 4,894 Cohort 1 core members who were interviewed at wave 7, and gives a breakdown of the type of wave 7 interview conducted with them. Eighty-four per cent of those interviewed at wave 7 had completed an interview at every wave since wave 1. Ninety-five per cent of Cohort 1 core members interviewed at wave 7 were interviewed in person.

Table 5.3 gives a breakdown of the number of achieved interviews by each sample type for Cohort 3. A total of 1,096 interviews were conducted overall and 787 of these were with core members.

Table 5.1. Respondents, by sample type: Cohort 1
Respondents in 2014–15, including proxies

	Number of respondents
Core member[a]	4,894
Core partner[b]	106
Younger partner	246
New partner	107
Unweighted N	*5,353*

[a] Born on or before 29 February 1952.
[b] Core partners are individuals sampled as core members in wave 1 but who did not respond in wave 1 and so were only interviewed in wave 7 by virtue of being the partner of a core member.

Table 5.2. Core member respondents, by situation in wave 7 (2014–15): Cohort 1
Core member respondents in 2014–15

	Number of respondents	%
Pattern of response		
All seven waves	4,107	84
Missed one or more waves	787	16
Type of interview		
Full interview in person	4,629	95
Full interview by proxy	196	4
Partial interview in person	9	<1
Partial interview by proxy	2	<1
Institutional interview in person	9	<1
Institutional interview by proxy	49	1
Unweighted N	*4,894*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.3. Respondents, by sample type: Cohort 3
Respondents in 2014–15, including proxies

	Number of respondents
Core member[a]	787
Core partner[b]	11
Younger partner	174
Older partner	85
New partner	39
Unweighted N	*1,096*

[a] Born between 1 March 1952 and 1 March 1956.
[b] Core partners are individuals sampled as core members in wave 3 but who did not respond in wave 3 and so were only interviewed in wave 7 by virtue of being the partner of a core member.

Table 5.4 shows the pattern of response over time for the 787 Cohort 3 core members interviewed at wave 7, and the type of interview conducted at wave 7. Eighty-eight per cent of Cohort 3 core members interviewed at wave 7 also took part in the four preceding waves for which they were eligible (wave 3, wave 4, wave 5 and wave 6). Ninety-five per cent of Cohort 3 core members interviewed at wave 7 were interviewed in person.

Table 5.5 presents the breakdown of achieved interviews by sample type for Cohort 4. A total of 1,827 interviews were conducted, and 1,606 of these were with core members.

Table 5.4. Core member respondents, by situation in wave 7 (2014–15): Cohort 3
Core member respondents in 2014–15

	Number of respondents	%
Pattern of response		
All five waves (waves 3, 4, 5, 6, 7)	692	88
Missed one or more waves	95	12
Type of interview		
Full interview in person	749	95
Full interview by proxy	32	4
Partial interview in person	5	<1
Partial interview by proxy	0	0
Institutional interview in person	1	<1
Institutional interview by proxy	0	0
Unweighted N	*787*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.5. Respondents, by sample type: Cohort 4
Respondents in 2014–15, including proxies

	Number of respondents
Core member[a]	1,606
Core partner[b]	21
Younger partner	79
Older partner	93
New partner	28
Unweighted N	*1,827*

[a] Born between 1 March 1933 and 28 February 1958.
[b] Core partners are individuals sampled as core members in wave 4 but who did not respond in wave 4 and so were only interviewed in wave 7 by virtue of being the partner of a core member.

Table 5.6 shows the type of wave 7 interview conducted with the 1,606 core members from Cohort 4. Ninety-three per cent of Cohort 4 core members interviewed at wave 7 also took part in the three preceding waves for which they were eligible (wave 4, wave 5 and wave 6). Ninety-six per cent of Cohort 4 core members interviewed at wave 7 were interviewed in person.

Table 5.7 presents the breakdown of achieved interviews by sample type for Cohort 6. A total of 934 interviews were conducted, and 661 of these were with core members.

Table 5.6. Core member respondents, by situation in wave 7 (2014–15): Cohort 4
Core member respondents in 2014–15

	Number of respondents	%
Pattern of response		
All four waves (wave 4, 5, 6, 7)	1,501	93
Missed one or more waves	105	7
Type of interview		
Full interview in person	1,546	96
Full interview by proxy	51	3
Partial interview in person	5	<1
Partial interview by proxy	1	<1
Institutional interview in person	0	0
Institutional interview by proxy	3	<1
Unweighted N	*1,606*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.7. Respondents, by sample type: Cohort 6
Respondents in 2014–15, including proxies

	Number of respondents
Core member[a]	661
Core partner[b]	27
Younger partner	119
Older partner	113
New partner	14
Unweighted N	*934*

[a] Born between 1 March 1956 and 28 February 1962.
[b] Core partners are individuals sampled as core members in wave 6 but who did not respond in wave 6 and so were only interviewed in wave 7 by virtue of being the partner of a core member.

Table 5.8 shows the type of wave 7 interview conducted with the 661 core members from Cohort 6. Only those who were productive at Wave 6 were selected for Wave 7. Ninety-seven per cent of Cohort 6 core members interviewed at wave 7 were interviewed in person.

Table 5.9 presents the breakdown of achieved interviews by sample type for Cohort 7. A total of 456 interviews were conducted, and 301 of these were with core members.

Table 5.10 shows the type of wave 7 interview conducted with the 301 core members from Cohort 7. As wave 7 was the first wave of fieldwork for this cohort, no pattern of response is shown. Ninety-six per cent of Cohort 7 core members interviewed at wave 7 were interviewed in person.

Table 5.8. Core member respondents, by situation in wave 7 (2014–15): Cohort 6
Core member respondents in 2014–15

	Number of respondents	%
Type of interview		
Full interview in person	645	97
Full interview by proxy	14	2
Partial interview in person	3	<1
Partial interview by proxy	0	0
Unweighted N	*661*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.9. Respondents, by sample type: Cohort 7
Respondents in 2014–15, including proxies

	Number of respondents
Core member[a]	301
Core partner[b]	3
Younger partner	73
Older partner	77
New partner	2
Unweighted N	*456*

[a] Born between 1 March 1962 and 28 February 1964.
[b] In wave 7, only people who took part in HSE were classed as core members. Core partners in wave 7 are those who were age-eligible for ELSA but who were not classed as core members because they had not taken part in HSE.

Table 5.10. Core member respondents, by situation in wave 7 (2014–15): Cohort 7
Core member respondents in 2014–15

	Number of respondents	%
Type of interview		
Full interview in person	290	96
Full interview by proxy	9	3
Partial interview in person	2	1
Partial interview by proxy	0	0
Unweighted N	*301*	*100*

Note: Columns may not add up to 100% because of rounding.

5.6 Response rates

There is no universally accepted definition of response rate. An important distinction exists between *field* and *study* response rates. Fieldwork response rates are based on the subset of individuals actually issued for interview at any particular wave. Study response rates for longitudinal surveys are broader in that they relate back to the originally selected sample, irrespective of whether eligible cases were issued to field at any particular wave.

Both field and study rates exclude cases not belonging to the target population through 'terminating events' such as deaths, institutional moves (refresher sample only) and moves out of Great Britain (or England for refresher sample). In what follows, we first cover fieldwork response rates and then present key study response rates. Respondents are defined as those who gave a full or partial interview either in person or in proxy.

Fieldwork response rates

Three different types of fieldwork response rate are presented here. Household contact rates,[12] individual cooperation[13] and individual response rates[14] are measures often used to evaluate the quality of fieldwork. External information from the NHS Central Register was matched to non-respondents to identify any deaths that had not been revealed in the course of fieldwork. Individuals whose outcome showed that their eligibility; had *not* been confirmed during fieldwork were all assumed to be eligible for the response rate calculation (e.g. for non-contacts, movers, etc.).

For all Cohort 1 households issued at wave 7, the household contact rate was 97.6%. Amongst Cohort 1 core members, an individual cooperation rate of 83.3% was achieved and the overall response rate for Cohort 1 core members was 82.3%. Table 5.11 shows the reasons for non-response for issued Cohort 1 core members in wave 7.[15]

The equivalent household contact rate for Cohort 3 was 96.4%. The individual cooperation rate for Cohort 3 core members was 81.0% and their overall response rate was 79.3%. Table 5.12 shows the reasons for non-response for issued Cohort 3 core members in wave 7.

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[12] The contact rate is defined as 'total households where contact was made with at least one member of the sample divided by total eligible households'.

[13] The cooperation rate is defined as 'total individual wave 7 respondents divided by total eligible individuals contacted by the interviewer'. Non-contacts and those untraced are therefore also treated as ineligible in this response rate.

[14] The response rate is defined as 'total individual respondents to wave 7 divided by total individuals eligible for wave 7'. By eligible, we mean that core members were *not* known to have died, moved into an institution (refresher sample only) or moved outside Great Britain (outside England for refresher sample). Note that inclusion in either the numerator or denominator was *not* conditional upon response at wave 6. Hence, the total respondents in wave 7 included those core members who returned to the study after missing wave 6.

[15] All core members had an interview at the first wave, but their pattern of response at subsequent waves differs amongst this group.

The equivalent household contact rate for Cohort 4 was 97.9%. The individual cooperation rate for Cohort 4 core members was 79.3% and their overall response rate was 78.3%. Table 5.13 shows the reasons for issued non-response for Cohort 4 core members in wave 7.

The equivalent household contact rate for Cohort 6 was 96.4%. The individual cooperation rate for Cohort 6 core members was 82.8% and their overall response rate was 81.4%. Table 5.14 shows the reasons for non-response for issued Cohort 6 core members in wave 7.

Table 5.11. Reasons for non-response: core members in Cohort 1
Eligible core members but non-respondents in 2014–15

	Frequency	**%**
Non-contact	48	4
Refusal	790	68
Moved – unable to trace	81	7
Other	240	21
Unweighted N	*1,159*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.12. Reasons for non-response: core members in Cohort 3
Eligible core members but non-respondents in 2014–15

	Frequency	**%**
Non-contact	25	8
Refusal	232	76
Moved – unable to trace	23	8
Other	25	8
Unweighted N	*305*	100

Note: Columns may not add up to 100% because of rounding.

Table 5.13. Reasons for non-response: core members in Cohort 4
Eligible core members but non-respondents in 2014–15

	Frequency	**%**
Non-contact	37	7
Refusal	403	78
Moved – unable to trace	27	5
Other	48	9
Unweighted N	*515*	*100*

Note: Columns may not add up to 100% because of rounding.

The equivalent household contact rate for Cohort 7 was 85.4%. The individual cooperation rate for Cohort 7 core members was 70.0% and their overall response rate was 61.3%. Table 5.15 shows the reasons for non-response for the issued Cohort 7 core members in wave 7.

Table 5.14. Reasons for non-response: core members in Cohort 6
Eligible core members but non-respondents in 2014–15

	Frequency	%
Non-contact	26	12
Refusal	146	70
Moved – unable to trace	20	10
Other	18	9
Unweighted N	*210*	*100*

Note: Columns may not add up to 100% because of rounding.

Table 5.15. Reasons for non-response: core members in Cohort 7
Eligible core members but non-respondents in 2014–15

	Frequency	%
Non-contact	23	12
Refusal	110	58
Moved – unable to trace	40	21
Other	17	9
Unweighted N	*190*	*100*

Note: Columns may not add up to 100% because of rounding.

As in previous waves, the largest component (ranging from 58% in Cohort 7 to 78% in Cohort 4) of field non-response within each of the cohorts was a result of refusals. A judgement of the impact of any differential non-response is reserved for Section 5.7 where bias is examined.

Study response rates

As with the field response rates, study response rates exclude cases not belonging to the target population through 'terminating events' such as deaths, institutional moves (refresher sample only) and moves out of Great Britain (or England for refresher sample). Two key types of study response rates are presented here for each cohort: the (cross-sectional) wave 7 response rates conditional upon baseline wave, and the (longitudinal) conditional wave 7 response rates.

The (cross-sectional) wave 7 response rate conditional upon baseline wave

Cohort 1

A total of 11,391 original core members were interviewed at wave 1. Table 5.16 shows the status of these core members at wave 7.

In order to work out the proportion of eligible Cohort 1 core members interviewed at wave 7, the following response rate was calculated as conditional upon response in wave 1 (of those that were still eligible). However, inclusion in either the numerator or denominator was *not* conditional upon response in any subsequent wave. Hence, the total number of respondents in wave 7 includes those who returned to the ELSA study at wave 7 after missing up to five prior waves. The (cross-sectional) wave 7 response rate conditional on response at wave 1 was 61.0.

Table 5.16. Status of original Cohort 1 core members at wave 7

	Frequency	**%**
Died	3,196	28
Moved out of Great Britain	169	1
Respond at wave 7	4,894	43
Non-respond at wave 7	3,132	27
Unweighted N	*11,391*	*100*
Total C1CMs eligible at wave 7	*8,026*	
Total C1CMs ineligible at wave 7	*3,365*	
Study response rate	***4,894/8,026***	***61.0***

Cohort 3

Wave 3 represents the baseline wave of ELSA for core members belonging to Cohort 3. A total of 1,276 Cohort 3 core members took part in wave 3. Table 5.17 shows the status of these core members at wave 7.

The wave 7 response rate conditional upon response at wave 3 reflects the proportion of core members from Cohort 3 with a wave 7 interview (of those that were still eligible). A response rate of 64.7% was achieved for Cohort 3 core members at wave 7.

Table 5.17. Status of original Cohort 3 core members at wave 7

	Frequency	**%**
Died	43	3
Moved out of Great Britain	17	1
Respond at wave 7	787	62
Non-respond at wave 7	429	34
Unweighted N	*1,276*	*100*
Total C3CMs eligible at wave 7	*1,216*	
Total C3CMs ineligible at wave 7	*60*	
Study response rate	***787/1,216***	***64.7***

Cohort 4

Wave 4 represents the baseline wave for Cohort 4 core members. A total of 2,290 Cohort 4 core members took part in wave 4. Table 5.18 shows the status of these core members at wave 7.

The wave 7 response rate conditional upon response at wave 4 reflects the proportion of core members from Cohort 4 with a wave 7 interview (of those that were still eligible). A response rate of 74.9% was achieved for Cohort 4 core members at wave 7.

Table 5.18 Status of original Cohort 4 core members at wave 7

	Frequency	**%**
Died	130	4
Moved out of Great Britain	16	1
Respond at wave 7	1,606	70
Non-respond at wave 7	538	23
Unweighted N	*2,290*	*100*
Total C4CMs eligible at wave 7	*2,144*	
Total C4CMs ineligible at wave 7	*146*	
Study response rate	***1,606/2,144***	***74.9***

Cohort 6

Wave 6 represents the baseline wave for Cohort 6 core members. A total of 832 Cohort 6 core members took part in wave 6. Table 5.19 shows the status of these core members at wave 7.

The wave 7 response rate conditional upon response at wave 6 reflects the proportion of core members from Cohort 6 with a wave 7 interview (of those that were still eligible). A response rate of 81.7% was achieved for Cohort 6 core members at wave 7.

Table 5.19. Status of original Cohort 6 core members at wave 7

	Frequency	**%**
Died	13	2
Moved out of Great Britain	4	<1
Respond at wave 7	661	79
Non-respond at wave 7	148	19
Unweighted N	*826*	*100*
Total C4CMs eligible at wave 7	*809*	
Total C4CMs ineligible at wave 7	*17*	
Study response rate	***661/809***	***81.7***

The (longitudinal) conditional wave 7 response rate

The longitudinal response rate shows the proportion of core members that have been interviewed at every wave of the study from those that were eligible at each wave. This group is selected for longitudinal analysis. The longitudinal conditional rate for core members at wave 7 was 51.2% for Cohort 1, 56.9% for Cohort 3, 70.0% for Cohort 4 and 81.7% for Cohort 6.

5.7 Profile of main interview respondents at wave 7

Cohort 1

The profile of core member respondents belonging to Cohort 1 (born on or before 29 February 1952) is presented in Table 5.20; this includes respondents who took part in all seven waves plus some who returned to wave 7 after missing waves 2, 3, 4, 5 or 6.[16] The distribution shows that the sample contains more women than men, as expected.

Table 5.21 is based on Cohort 1 core members who took part in all waves (waves 1–6) and shows their main interview response at wave 7. Amongst those who were still eligible at wave 7 (i.e. had not died or moved out of Great Britain), the propensity to participate at wave 7 decreased with age for both men and women.

Table 5.20. Achieved sample of core members: Cohort 1, by age in 2014–15 and by gender
Respondents in 2014–15, including proxies but excluding those in institutions

	Men	Women	Total	Men %	Women %	Total %
Age in wave 7						
60–64	260	308	568	5	6	12
65–69	575	714	1,289	12	15	27
70–74	444	557	1,001	9	12	21
75–79	387	491	878	8	10	18
80–84	247	345	592	5	7	12
85 and over	199	309	508	4	6	11
Unweighted N	2,112	2,724	4,836	*44*	56	100

Note: Columns may not add up to 100% because of rounding.

[16] Interviewers do not follow-up sample members who have repeatedly refused, or if comments recorded at their last visit suggest it would be unwise to return.

Table 5.21. Wave 7 (2014–15) main interview response for core members: Cohort 1, who took part in waves 1–6, by age in 2002–03 and by gender
Eligible core members in 2014–15 who took part in waves 1–6

	50–59	60–74	75+	All
	%	%	%	%
Men				
Respondents	93	93	82	92
Non-respondents	7	7	18	8
Women				
Respondents	93	93	88	92
Non-respondents	7	7	12	8
All				
Respondents	93	93	85	92
Non-respondents	7	7	15	8
Unweighted N	*2,110*	*1,989*	*351*	*4,450*
Men	*948*	*848*	*138*	*1,934*
Women	*1,162*	*1,141*	*213*	*2,516*

Note: Columns may not add up to 100% because of rounding.

Cohort 3

The profile of the core member respondents belonging to Cohort 3 is presented in Table 5.22. As with Cohort 1, the achieved sample of Cohort 3 core members at wave 7 contains more women than men. The age distribution of the Cohort 3 core member sample is not evenly distributed across the ages represented, with fewer sample members being in the youngest and oldest age year.

Table 5.22. Achieved sample of core members: Cohort 3, by age in 2014–15 and by gender
Respondents in 2014–16, including proxies but excluding those in institutions

	Men	Women	Total	Men	Women	Total
				%	%	%
Age in wave 7						
58	34	50	84	4	6	11
59	111	138	249	14	18	32
60	114	122	236	15	16	30
61	79	95	174	10	12	22
62	17	26	43	2	3	5
Unweighted N	*355*	*431*	*786*	*45*	*55*	*100*

Cohort 4

The profile of the core member respondents belonging to Cohort 4 is presented in Table 5.23. As with other cohorts, the achieved sample at wave 7 includes more women than men.

Table 5.23. Achieved sample of core members: Cohort 4, by age in 2014–15 and by gender
Respondents in 2014–15, including proxies but excluding those in institutions

	Men	Women	Total	Men %	Women %	Total %
Age in wave 7						
55–59	82	104	186	5	6	12
60–64	207	268	475	13	17	30
65–69	166	196	362	10	12	23
70–74	137	141	278	9	9	17
75–79	118	130	248	7	8	15
80–84	26	28	54	2	2	3
Unweighted N	*736*	*867*	*1,603*	*46*	*54*	*100*

Note: Columns may not add up to 100% because of rounding.

Cohort 6

The profile of the core member respondents belonging to Cohort 6 is presented in Table 5.24. As with other cohorts, the achieved sample at wave 7 includes more women than men.

Table 5.24. Achieved sample of core members: Cohort 6, by age in 2014–15 and by gender
Respondents in 2014–15, including proxies

	Men	Women	Total	Men %	Women %	Total %
Age in wave 7						
52	16	22	38	2	3	6
53	42	61	103	6	9	16
54	51	71	122	8	11	18
55	57	55	112	9	8	17
56	49	62	111	7	9	17
57	35	68	103	5	10	16
58	31	41	72	5	6	11
Unweighted N	*281*	*380*	*661*	*43*	*57*	*100*

Note: Columns may not add up to 100% because of rounding.

Cohort 7

The profile of the core member respondents belonging to Cohort 7 is presented in Table 5.25. Again, the achieved sample at wave 7 includes a greater number of women than men.

Table 5.25. Achieved sample of core members: Cohort 7, by age in 2014–15 and by gender
Respondents in 2014–15, including proxies

	Men	Women	Total	Men %	Women %	Total %
Age in wave 7						
50	25	23	48	8	8	16
51	61	87	148	20	29	50
52	42	59	101	14	20	34
53	1	3	4	<1	1	1
Unweighted N	*129*	*172*	*301*	*43*	*57*	*100*

Note: Columns may not add up to 100% because of rounding.

Profile of proxy respondents

Proxy interviews were carried out if an ELSA panel member could not be interviewed in person because of a physical or cognitive impairment, if they were away in hospital or temporary care, or if they had refused a personal interview but were happy for a proxy to answer for them. Not including institutional interviews, a total of 305 proxy interviews were carried out at wave 7 with core members across all cohorts. Of these, 198 were with Cohort 1 members. Table 5.26 shows the proxy sample in 2014–15 for Cohort 1 core members, by age and gender. There were more proxy interviews for women in the sample than for men (51% as compared with 49%).

Table 5.26. Proxy interview sample: Cohort 1, by age in 2014–15 and by gender
Sample members requiring a proxy in 2014–15, excluding those in institutions

	Men	Women	Total	Men %	Women %	Total %
Age in wave 7						
60–64	6	7	13	3	4	7
65–69	22	25	47	11	13	24
70–74	21	9	30	11	5	15
75–79	18	17	35	9	9	18
80–84	9	16	25	5	8	13
85 and over	21	27	48	11	14	24
Unweighted N	*97*	*101*	*198*	*49*	*51*	*100*

5.8 Implications for analyses: weighting

This section describes the weighting strategies used to adjust for non-response and the process of combining Cohorts 1, 3, 4, 6 and 7. We describe the cross-sectional and longitudinal weights constructed at wave 7, beginning with the longitudinal weight.

Longitudinal weights

For those core members from Cohort 1 who were eligible for the main interview in wave 7, *and* who responded at all previous waves, response to wave 7 was modelled using logistic regression analysis on a range of household- and individual-level information collected at wave 6 (supplemented by information taken from waves 1–5). The analysis was conducted using the longitudinal weight derived in wave 6 to ensure that the wave 7 weight did not replicate the adjustments made by the wave 6 weight.

The results showed significant differences between respondents and non-respondents on a number of characteristics:

- age (at wave 1) by gender;
- government office region;
- highest educational qualification;
- marital status;
- self-reported general health.

A longitudinal weight was calculated for the set of 4,062 core members who responded to all seven waves of ELSA and remained living in private households. The weighting strategy in wave 7 aimed to minimise any bias arising from sample loss after wave 6. The longitudinal weight aims to be representative of those living in England at a single point in time (i.e. at wave 1 in 2002) so those who subsequently move to Scotland or Wales are still assigned a longitudinal weight.

Taking the inverse of the estimated probability of response (from the logistic regression model) created a non-response weight for wave 7. This was then multiplied by the wave 6 longitudinal weight (and scaled to an average of 1) to produce the wave 7 longitudinal weight. The sequential nature of the weighting[17] means that we have adjusted for non-response to HSE and each of the seven waves of ELSA.

Cross-sectional weights

A cross-sectional weight was derived that can be used to analyse all core members responding at wave 7. This allows for the inclusion of Cohort 3, Cohort 4, Cohort 6 and Cohort 7 core members including 'wave non-responders' (those core members from Cohorts 1, 3 and 4 who returned to the study at wave 7 after missing one or more previous waves). The cross-sectional sample at wave 7 aims to be representative of those living in England in 2014. As described below, we weight to population

[17] Longitudinal weights are based on a sequence of attrition models, one for each wave. Each time, the resulting non-response weight is multiplied by the weight created at the previous wave. In this case, the weight derived in wave 7 builds on the wave 6 weight, which, in turn, built on the weight created in wave 5, etc.

estimates for England, so by definition we cannot (and do not) include anyone now living in Scotland or Wales in the cross-sectional weighting.

Core members responding at wave 7 can be described as the *combined sample*. For weighting purposes, this combined sample was split into two main groups by age (at interview): those aged 63+ and those aged 50–62. The cross-sectional weight was calculated using the following steps:

1. A non-response weight was derived for Cohort 3 core members who had responded to (all of) waves 3–6 to adjust for non-response at wave 7.
2. A non-response weight was derived for Cohort 4 core members who had responded to (all of) waves 4–6 to adjust for non-response at wave 7.
3. A non-response weight was derived for Cohort 6 core members to adjust for non-response at wave 7.
4. A non-response weight was derived for Cohort 7 core members to adjust for non-response at wave 7.
5. Population estimates (of highest educational qualification, tenure, ethnicity and marital status) for core members aged 63+ (at wave 7) were derived from the longitudinal group (those Cohort 1 core members responding to all five previous waves of ELSA) combined with Cohort 4 core members aged 63+.
6. The non-response weights for *all* core members aged 63+ at wave 7 (i.e. the two groups mentioned above in point 5 plus wave non-responders) were then calibrated to these population estimates plus estimates of age/gender and region from 2014 household population estimates.[18]
7. The non-response weights for all core members aged 50–62 (at wave 7) were calibrated to 2014 population estimates of age/gender and region.
8. Finally, the calibration weights from steps 6 and 7 above were combined and scaled so that the average weight was equal to 1.

These steps are discussed in turn. A more detailed description will be provided in the wave 7 technical report.

Non-response weights for Cohort 3

For the 710 Cohort 3 core members eligible for the main interview in wave 7 who responded to (all of) waves 3–6 (and remaining in private households in England), response to wave 7 was modelled on a range of household- and individual-level information collected at wave 6. The analysis was conducted using the non-response weight derived in wave 6 to ensure that the wave 7 weight did not replicate any adjustment made by the wave 6 weight.

The results showed significant differences between respondents and non-respondents on two characteristics:

- gender;
- government office region.

[18] Age is defined here as age at 1 March 2014, immediately prior to the beginning of wave 7 fieldwork.

Taking the inverse of the estimated probability of response created a non-response weight to adjust for potential non-response bias between wave 7 and wave 6 for a total of 642 respondents.

Non-response weights for Cohort 4

For the 1,736 Cohort 4 core members eligible for the main interview in wave 7 who responded to all waves 4–6 (and remaining in private households in England), response to wave 7 was modelled on a range of household- and individual-level information collected at wave 6. The analysis was conducted using the non-response weight derived in wave 6 to ensure that the wave 7 weight did not replicate any adjustment made by the wave 6 weight.

The results showed significant differences between respondents and non-respondents on a number of characteristics:

- government office region;
- highest educational qualification;
- white/non-white ethnicity;
- Index of Multiple Deprivation (IMD) quintile.

Age/gender was also included in the model.

Taking the inverse of the estimated probability of response created a non-response weight to adjust for potential non-response bias between wave 7 and wave 6 for a total of 1,544 respondents.

Non-response weights for Cohort 6

For the 817 Cohort 6 core members eligible for the main interview in wave 7 (and remaining in private households in England), response to wave 7 was modelled on a range of household- and individual-level information collected at wave 6. The analysis was conducted using the non-response weight derived in wave 6 to ensure that the wave 7 weight did not replicate any adjustment made by the wave 6 weight.

The results showed significant differences between respondents and non-respondents on a number of characteristics:

- government office region;
- number in household;
- white/non-white ethnicity.

Gender was also included in the model.

Taking the inverse of the estimated probability of response created a non-response weight to adjust for potential non-response bias between wave 7 and wave 6 for a total of 661 respondents.

Non-response weights for Cohort 7

A cohort of people born between 1 March 1962 and 29 February 1964 was added to the ELSA sample at wave 7. They were selected from HSE 2011 and 2012 and are collectively referred to as Cohort 7.

Their response to wave 7 was modelled on a range of household- and individual-level information collected from HSE. The results showed significant differences between respondents and non-respondents on a number of characteristics:

- whether they had a long-term limiting illness;
- IMD quintile.

Gender was also included in the model.

Taking the inverse of the estimated probability of response created a non-response weight for the 300 respondents to adjust for potential non-response bias between HSE and ELSA.

Cross-sectional weights for those aged 63+

Core members aged 63+ responding at wave 7 belonged to one of three groups:

1) Cohort 1 core members who had taken part in all seven waves of ELSA;[19]

2) Cohort 4 core members who took part in waves 4, 5, 6 and 7;[20]

3) wave non-responders, i.e. core members from Cohorts 1, 3 and 4 who had returned to the study at wave 7 after missing one or more previous waves.[21]

It is often speculated that wave non-responders are likely to have characteristics that differ from those who have taken part in all waves (Lynn et al., 1994). At wave 3, it was found that the following socio-demographic features were predictive of wave non-response when compared with response to all waves:

- housing tenure;
- white/non-white ethnicity;
- highest educational qualifications;
- marital status.

In order to combine the three groups to create a representative sample of persons aged 63+, it was necessary to make sure, as far as possible, that the characteristics of the combined sample match those of the population. In order to do this, estimates of population characteristics were required.

The first two groups already had weights derived to adjust for non-response at wave 7, previous waves of ELSA and HSE. Combining these groups provided a basis from which to estimate the population characteristics of those aged 63+. Before these estimates could be derived, two adjustments were necessary:

i) the non-response weights of those aged 63–80 (who come from Cohorts 1 and 4) were scaled down so that this group were in the correct proportion as compared with those aged 81 and over (who come from Cohort 1 only);

[19] Ten of these respondents had moved to either Wales or Scotland and were therefore given zero cross-sectional weights.

[20] None of these respondents had moved to Scotland or Wales.

[21] Fifteen of these respondents had moved to either Wales or Scotland and were therefore given zero cross-sectional weights.

ii) these weights were then calibrated to mid-2014 household population estimates of age/gender and region.

Estimates of housing tenure, white/non-white ethnicity, highest educational qualification and marital status were then derived from the combined groups weighted by the resulting weights (the same characteristics were used as in waves 3–6 for consistency).

The non-response weights for *all* core members aged 63+ at wave 7 (i.e. the two groups already combined plus the third group of wave non-responders) were then adjusted using calibration weighting so that the resulting weights, when applied to the three groups combined, provide a sample profile that matches the population estimates on the four socio-demographic characteristics plus estimates of age/gender and region of those aged 63+ (from mid-2014 household population estimates; see Table 5.27).

Table 5.27. Household population estimates
Mid-2014 England household population (aged 50 and over)

Age	Men	Women	Total	Men %	Women %	Total %
50–54	1,825,985	1,870,007	3,695,992	20.3	18.8	19.5
55–59	1,564,818	1,603,333	3,168,151	17.4	16.1	16.7
60–64	1,416,224	1,481,433	2,897,658	15.7	14.9	15.3
65–69	1,435,465	1,519,949	2,955,414	15.9	15.3	15.6
70–74	1,029,629	1,134,839	2,164,468	11.4	11.4	11.4
75–79	805,832	941,702	1,747,533	8.9	9.5	9.2
80–84	541,101	709,749	1,250,849	6.0	7.1	6.6
85+	397,441	682,587	1,080,028	4.4	6.9	5.7
Total	9,016,494	9,943,599	18,960,094	100	100	100

Source: Calculated from ONS, Annual Mid-Year Population Estimates for England and Wales, 2014, http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/datasets/populationestimatesforukenglandandwalesscotlandandnorthernireland.[22]

Cross-sectional weights for those aged 50–62

Responding core members aged 50–62 at wave 7 came from Cohorts 3, 4, 6 and 7.[23] These groups were combined and their non-response weights were adjusted using calibration weighting so that the resulting weights provide a sample profile that matches population estimates of age/gender and region (from mid-2014 household population estimates) for those aged 50–62.

[22] ELSA is weighted to the household population in England, excluding those in institutions. As the Office for National Statistics (ONS) no longer produces household population estimates, these are calculated by adjusting the latest ONS mid-year residential population estimates. The adjustment is based on the ratio between the (2011) census residential and household population figures for each age and gender grouping within each region.

[23] Four of these respondents had moved to Wales and were therefore given a zero cross-sectional weight.

Putting the cross-sectional weights together

The final step in the calculation of the cross-sectional weights was to take the calibrated weights from the two groups (50–62 and 63+) combined and to scale them so that they are in the correct proportion in the final weighted sample. The final weights were then scaled so that the average weight was equal to 1.

The profile of the combined core member respondents, weighted by the cross-sectional weight, is presented in Table 5.28.

Table 5.28. Achieved (combined) sample of core members, by age in 2014–15 and by gender
Respondents to wave 7, including proxies but excluding those in institutions

	Men	Women	Total	Men %	Women %	Total %
Age at wave 7 interview						
50–54	785	804	1,589	20.3	18.8	19.5
55–59	673	689	1,362	17.4	16.1	16.7
60–64	609	637	1,246	15.7	14.9	15.3
65–69	617	654	1,271	15.9	15.3	15.6
70–74	443	488	931	11.4	11.4	11.4
75–79	346	405	751	8.9	9.5	9.2
80–84	233	305	538	6.0	7.1	6.6
85+	171	293	464	4.4	6.9	5.7
Weighted N	3,877	4,275	8,152	100	100	100
Unweighted N	4,042	5,026	9,068	100	100	100

Note: Columns may not add up to 100% because of rounding.

Self-completion weights

For the 8,152 core members living in private households in England who completed a full or partial wave 7 main interview, response to the main self-completion questionnaire was modelled on a range of household- and individual-level information collected from the ELSA wave 7 main interview. The weighting strategy aimed to minimise any bias arising from differential non-response to the self-completion questionnaire. The analysis was conducted on data weighted by the wave 7 cross-sectional weight.

The results showed significant differences between (core member) respondents to the self-completion questionnaire and non-respondents on a number of characteristics:

- age by gender;
- government office region;
- highest educational qualification;
- white/non-white ethnicity;
- housing tenure;
- marital status;
- self-reported general health;
- whether they had a long-term limiting illness;

- number in household;
- financial unit type;
- current work/activity status;
- whether they had help with showcards.

A non-response weight for the 7,095 respondents to the self-completion questionnaire was created by taking the inverse of the estimated probability of response. The final self-completion weight was a product of this non-response weight and the wave 7 cross-sectional weight (scaled so that the average weight was equal to 1).

5.9 Conclusions

This chapter aimed to provide an overview of the survey methodology for ELSA wave 7. The main topics included sample design, interview content, field and study response rates, and weighting of the data.

The format of the ELSA interview itself has remained relatively unchanged over time, with interviews every two years and nurse visits every four years. Over the waves, ELSA interviewers have consistently worked hard to maintain the panel of ELSA sample members. At wave 7, field household contact rates of over 96% were achieved for all four existing ELSA cohorts and 85% for the wave 7 refresher cohort.

The prior experiences of sample members within each cohort need to be considered when interpreting response rates at wave 7. For Cohort 1 members, this was the seventh ELSA interview they had been asked to do. Cohort 3 members joined ELSA at wave 3 (so wave 7 represented their fifth wave of ELSA interviewing), for Cohort 4 members, wave 7 was their fourth interview, and for Cohort 6 members, wave 7 was their second interview. Levels of non-response do tend to accumulate over time as further waves of interviewing are conducted and, as expected, higher study response rates were found at wave 7 amongst those existing members who joined ELSA most recently (Cohort 6). Response among those who had taken part in the first wave they were invited to and who were still believed to be eligible at wave 7 were 61.0% for Cohort 1, 64.7% for Cohort 3, 74.9% for Cohort 4 and 81.7% for Cohort 6. It was therefore important to present the response rates separately for each cohort rather than just producing combined rates.

Of all wave 7 interviews, 55% were with those belonging to Cohort 1 and 51% were with Cohort 1 core members. Original core members from wave 1 are still found to be highly committed to the study. Their fieldwork response rate showed that 82.3% of those issued to field (and still found to be eligible) had a wave 7 interview. There is a wealth of data accumulating for this group, with 51.2% of eligible Cohort 1 core members having been interviewed at every wave (the longitudinal study response rate).

Cohort 3 sample members made up 11.3% of the total achieved sample at wave 7 and Cohort 3 core members made up 8% of the achieved sample at wave 7. Their introduction to ELSA at wave 3 was to ‘refresh’ the younger age group and to help ensure the study remained representative of all those aged 50 and over. The fieldwork response rates for Cohort 3 core members were slightly lower than Cohort 1 (78.3%

and 82.3%, respectively). Of eligible Cohort 3 members who took part in an initial interview at wave 3, 56.9% have taken part in every wave since they joined the study.

Cohort 4 accounts for 18.9% of achieved interviews at wave 7 (and core members from Cohort 4 account for 16.7%) covering core members aged 58–83 at wave 7. This cohort had a higher study response rate than the two other existing cohorts but a similar fieldwork response rate (78.3%). Their cross-sectional study response rate (conditional upon baseline wave) was 74.9%, compared with 64.7% and 61.0% for Cohorts 3 and 1, respectively. Of the Cohort 4 members who took part in an initial interview at wave 4, 70% have taken part in every wave where eligible since they joined the study.

Cohort 6 accounts for 9.7% of the achieved interviews at wave 7 (core members from Cohort 6 account for 6.8% of the achieved interviews). This cohort was introduced to refresh the younger end of the sample. Of Cohort 6 members who took part in an initial interview at wave 6, 81.7% also took part in an interview at wave 7.

Cohort 7 was introduced at wave 7 and accounts for 4.7% of the achieved interviews at wave 7 (with core members from Cohort 7 accounting for 3.1% of the achieved interviews). As with Cohort 6, this cohort was introduced to refresh the younger end of the sample. The team will continue to work hard to ensure that this group and others within the wider sample remain engaged with the study to ensure that the sample remains representative. Study and longitudinal response rates are not applicable to the refresher cohort. The fieldwork response among Cohort 7 core members was 61.3%.

For all the cohorts, refusals made up the biggest component of non-response at wave 7.

The response rates in this chapter provide useful indicators of the success of panel maintenance. However, it was also important to investigate the impact of any differential non-response (i.e. whether those with certain characteristics were more likely to respond than others). The section on weighting highlights how we attempt to minimise any bias arising from sample loss after each wave. Key characteristics of non-respondents and respondents are presented, and a summary is given of how the longitudinal and cross-sectional weights at wave 7 were constructed. It also covers the process of combining Cohorts 1, 3, 4, 6 and 7 to facilitate cross-sectional analysis of all core members at wave 7.

Over time, the ELSA study team intends to use information about differential non-response to help inform fieldwork practices and develop the strategies needed to maximise participation by those groups most at risk of attrition.

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E. Economics domain tables

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Introduction

E.1 This chapter presents selected data tables from the Economics domain of the English Longitudinal Study of Ageing (ELSA). The tables are split into two main sections. The first section presents cross-sectional data from wave 7 of ELSA, which took place from June 2014 to May 2015. The second section presents results that make use of the longitudinal aspect of the ELSA data.

E.2 Both main sections are further divided into three subsections, each containing information on income, pensions, wealth and other measures of resources, and labour market participation.

E.3 The variables included in each table have been selected to provide a broad picture of the data available from the Economics domain of ELSA. A glossary of the measures is provided in the annex to this chapter.

E.4 The unit of observation in all tables is the individual. All cross-sectional tables are based on the cross-section of ELSA sample members in each wave of data. This includes refreshment sample members. In this report, all longitudinal tables are based on individuals who have responded in all of waves 1 to 7 (the 'balanced panel') unless otherwise specified. All numbers are based on weighted data. Both unweighted and weighted frequencies (*N*) are reported. For cross-sectional analyses, cross-sectional weights are used. For longitudinal analyses, appropriate longitudinal weights are used. All values are expressed in January 2015 prices using the retail price index (RPI).

Cross-sectional tables

Income

E.5 Table E1a shows mean *unequivalised* net weekly family income by age and family type. As with all tables in this report, the unit of observation is the individual but each individual is assigned the income level of their family (where a family is defined as a couple or a single person and any children aged under 18 they may have). Table E1b shows mean *equivalised* net weekly family income by age and gender.

E.6 Equivalising income is one way to compare income across different family types. A couple will need more income than a single person to be equally well off, but because of economies of scale involved with sharing, they will not need twice as much income to be as well off. Although equivalising is useful in making comparisons across different family types, the process of equivalising means that assumptions have to be made about the extent of economies of scale and there are many different equivalence scales that could be used. For this reason, Table E1a shows numbers that are unequivalised so that it is possible to see the actual level of income unadjusted for household size.

E.7 The unequivalised numbers in Table E1a are grouped into family types so that comparisons can be made across age groups *within* household types. Tables E1a and E1b look at mean total income and also aggregate income into some broad components: employment income, self-employment income, private pension income, state pension income, state benefit income, asset income and other income. Table E1b groups individuals into groups defined by age and gender.

E.8 Looking at all family types, Table E1a reveals that mean net unequivalised income is £553.20 per week. Converting all values to an equivalent adult basis, Table E1b reveals that mean net equivalised income is £390.80 per week. At younger ages, employment income is the biggest component of total income, whereas at older ages private pension income and state pension income become much more important.

E.9 Tables E2a and E2b look at the distribution of total net weekly family income. In a similar way to Tables E1a and E1b, Table E2a looks at the distribution of total *unequivalised* income by age and family type and Table E2b looks at the distribution of total *equivalised* income by age and gender. The first column of numbers reports the mean income level and the remaining columns report various percentile points including the median level.

Pensions, wealth and other measures of resources

E.10 Income is just one way to measure financial resources and, particularly in the older population, other resources may be important. This subsection looks at financial wealth, household spending, private pension membership and a measure of adequacy of financial resources in the future.

E.11 Table E3 looks at average (mean and median) wealth by age and family type. Total net (non-pension) wealth is reported along with some broad components of wealth: net financial wealth, net physical wealth (including secondary housing) and net primary housing wealth. Table E4 looks at the mean of total (non-pension) wealth along with various percentile points by age and family type. Primary housing wealth makes up the largest component of total (non-pension) wealth for all groups. There is a large amount of dispersion in the total wealth distribution. Looking at single women aged 60–64, for example, Table E4 reveals that 25% of this group have total wealth of £800 or less while 25% have £273,200 or more. The wealth distribution is much more unequal than the total income distribution. The ratio of the 75th percentile to the 25th percentile of income for all individuals (Table E2b) is 2.2, meaning that the 75th percentile is 2.2 times larger than the 25th percentile. In contrast, the ratio of the 75th percentile to the 25th percentile of total wealth for all individuals (Table E4) is 4.3.

E.12 Tables E5a and E5b look at private pension membership (pensions from all non-state sources). Private pension wealth can be an important potential source of resources for the older population and private pension membership is a useful proxy for private pension wealth. Table E5a looks at private pension membership by age and gender for all workers and non-workers under the state pension age (SPA) and Table E5b reports similar numbers for workers only. The first column of numbers in Tables E5a and E5b reports the percentage of individuals who are a member of a private pension scheme. The next three columns of numbers break this figure down into those who are currently contributing to a private pension scheme, those who are receiving income from a private pension scheme and those who have retained rights in a private pension scheme. Because individuals can have multiple pensions at different stages of contribution, receiving income and retaining rights, these three columns of numbers

do not sum to the total percentage of individuals who are members of a private pension scheme. The numbers show, for example, that 82% of men (workers and non-workers) aged 50–64 are currently a member of at least one private pension scheme. Breaking that down further, the numbers show that 53% of men aged 50–64 are currently contributing to at least one private pension scheme, 26% are receiving an income from at least one private pension scheme and 36% have retained rights in at least one private pension scheme.

E.13 The next measure of resources that we report is household spending. Household spending may be a more useful indication of the level of resources available for a household because consumption tends to be smoothed across time. A retired household may have low income but may be drawing down assets in order to fund its consumption. Table E6 looks at the level of spending on some very broad types of goods and services by age and family type. Note that there are some large outliers in the level of spending on transfers outside the home which, combined with relatively small sample sizes, push up the level of the mean in some groups (notably single women aged 65–69) so any patterns in transfer expenditure should be interpreted with caution.

E.14 Current resources give us a useful picture of economic well-being, but respondents may be aware of other issues that might determine how well off they feel or how well off they expect to be in the future. For example, a respondent may have health issues that might affect their future expected resources; or they may be expecting to help in the care of elderly parents, which again might reduce their future expected resources. Using the expectations question methodology (see definitions in the annex to this chapter), respondents are asked to report the chances that they will have insufficient resources at some point in the future to meet their needs, where a higher number indicates a higher chance of having insufficient resources. The results are reported by age, gender and income group in Table E7. Because expectations are asked on an individual basis, we split couples into 'partnered men' and 'partnered women' so that we can look at differences between men and women in couples. On average, across all age and income groups, there are differences in expectation of partnered women and partnered men despite having access to the same resources. Partnered women taken as a whole, on average, are more pessimistic than their male counterparts. Single women are, on average, more pessimistic than their male counterparts, although they may have good reason to expect to have insufficient resources given that they have lower incomes on average, as Table E1a shows.

Labour market participation

E.15 The tables in this section look at different aspects of labour market participation. Table E8 looks at the percentage of respondents working full-time, part-time and either full- or part-time by age, gender and wealth group. We restrict our sample to those aged under 75.

E.16 Using the expectations question methodology (see definitions), Table E9 reports the mean chances of working at future ages. The age that respondents are asked to consider in thinking about their chances of working depends on their current age. The first column of numbers shows the 'target age' for each age group. For example, men aged 50–59 are asked about the chances of working at age 60, while women aged 50–54 are asked about the chances of working at age 55. The second column of numbers reports the mean chances within each age and gender group. The

five columns on the right-hand side report the mean chances within each age, gender and wealth group.

E.17 Health is an important factor in an individual's ability to work. Respondents are asked whether they have a health problem that limits the kind or amount of work they can do. If respondents are currently working and they report that they do have a health problem that limits the kind or amount of work they can do, they are asked a follow-up question about whether this health problem limits the kind or amount of work they can do in their current job. The results in Table E10 combine the information from these two questions. The first column of numbers shows the percentages of individuals (by age, gender and wealth group) who do not report that they have a limiting health problem and the second column of numbers shows the percentage who do. The next three columns of numbers further break down the group with a health limitation into those who have a limiting health problem but are not currently working, those who have a limiting health problem that does not limit them in their current job and those who have a limiting health problem that does limit them in their current job.

E.18 For example, 17% of men aged 55–59 have a health problem that limits the kind or amount of work they can do. This 17% can be further broken down into 10% who are not working, 4% who are working but whose health problem does not limit them in their current job and 3% who are working and whose health problem does limit them in their current job. The numbers in Table E10 also reveal a stark difference between the lowest and highest wealth groups. Looking at all men aged 50–64, the table shows that of the 33% of men in the lowest wealth group who have a limiting health problem, only 15% ((4%+1%)/33%) are in work. This contrasts with the highest wealth group, where a much lower proportion have a limiting health problem (8%) and, of those who do, 38% ((1%+2%)/8%) are in work. A similar pattern is found for women.

E.19 As well as current health problems, respondents' expectations about the effect of their health on their ability to work in the future may be an important factor in their decision making. Table E11 reports the mean chances that health will limit respondents' ability to work at age 65 by age, gender and wealth group, where a higher number indicates a higher chance that health will limit the respondent's ability to work. This information was collected using the expectations questions methodology (see definitions) for workers aged under 65 only.

Longitudinal tables

Income

E.20 Cross-sectional tables using a series of data from different time periods combine the effect of age, time and differential mortality. For example, looking at cross-sectional data on income over time, it would not be possible to isolate the effect of age on income because we cannot strip out the effect of time or differential mortality (i.e. the observation that higher-income individuals tend to live longer than lower-income individuals). Because longitudinal data follow the same individuals over time, by selecting a sample of individuals who are interviewed in every wave we can eliminate the effect of differential mortality.

E.21 Table EL1a takes the set of individuals who have responded in every wave from 1 to 6 (the 'balanced panel') and tracks average total family income by age, gender and family type in 2002–03 (the 'baseline' year) across time (waves). Tables EL1b–EL1e are identical in structure to Table EL1a but look at the broad components of income instead of total income. Earnings are the sum of employment income and self-employment income. Note that family type may change over time as couples form or dissolve, but an individual is defined in terms of their couple status at baseline. Although income is measured at the family level, because family structure may change we look separately at partnered men and partnered women. Partnered women are more likely to see a change in their family structure due to widowhood.

E.22 Tables EL2a–EL2e are similar to Tables EL1a–EL1e but track income by age and education. Education can be a useful proxy for social status or permanent income.

E.23 Table EL3 looks at a measure of inequality. The measure chosen is the interquartile ratio, which is defined as the size of the 75th percentile of income relative to the 25th percentile of income (p75/p25). An interquartile ratio of 2.00 would mean that the 75th percentile point was twice as large as the 25th percentile point of income. A larger number implies a more dispersed distribution of income and higher inequality. In general, Table EL3 shows declining inequality over time for this balanced panel.

Pensions, wealth and other measures of resources

E.24 Tables E5a and E5b in the cross-sectional tables look at private pension membership. However, private pension membership at a particular point in time is only part of the story. It is the amount that individuals accumulate in that pension fund that determines its value. As individuals move into or out of employment or their circumstances change, their pension contributions may vary. Table EL4a shows how persistently individuals contribute to their private pensions. The table takes the groups of men and women who are below SPA at baseline and reports the percentage of men and women who never contribute to a private pension in any of the waves in which they are under SPA (taking into account the changes to SPA that came into effect), the percentage who contribute in some waves in which they are under SPA and the percentage who contribute in all waves in which they are under SPA. For example, a man aged 60 at baseline would be observed to be under SPA at waves 2 and 3 (he would be 62 and 64, respectively) but over SPA in wave 4 (he would be 66). If this individual were observed to be contributing to a private pension in waves 1 and 2 but not in wave 4 (when he is over SPA), he would be counted as 'always' contributing to a private pension. The reason for doing this is to reduce the extent to which not contributing to a private pension is due to leaving the labour market. The table is based on individuals who are aged under SPA at baseline and who are employed or self-employed at baseline and the proportions are reported by age, gender and (baseline) wealth group.

E.25 Table EL4a shows that a rather low proportion of men contribute to a private pension in all waves in which they are aged under SPA. Amongst all men aged 50–64 at baseline, only 30.0% always contribute. Amongst women aged 50–59, 45.5% always contribute. To reduce the effect that leaving the labour market has on pension contributions, we have not included years in which the individual is over SPA when calculating the number of waves in which an individual has contributed to a private pension. However, it is still the case that some of the dynamics of pension contributions may be due to exits out of the labour market before SPA. So, for

example, although a man aged 60 at baseline may have a full contribution history, if he retires at age 62 and therefore stops contributing to his pension he will be counted in Table EL4a as only 'sometimes' contributing to a private pension.

E.26 Table EL4b shows an alternative way of looking at the persistency of making private pension contributions, which attempts to eliminate employment dynamics as an explanation for private pension contribution dynamics. This table is calculated on a similar basis to Table EL4a except that only those individuals who are in work (employed or self-employed) in all waves that they are below SPA are included. This means that if an individual is observed not contributing, it is not simply due to the fact that they have left employment or self-employment. Table EL4b shows that even conditioning on being in work in all waves, the proportion who contribute to a private pension in every wave is rather low (46.2% for men aged 50–64 and 54.7% for women aged 50–59).

E.27 An alternative way to assess how well off individuals are is to ask them directly how well they are managing financially. Respondents in ELSA are asked which phrase best describes how they (and their partner) are getting along financially. The question is asked once per family and the response categories are 'manage very well', 'manage quite well', 'get by alright', 'don't manage very well', 'have some financial difficulties' and 'have severe financial difficulties'. Looking at the first three columns of data in Table EL5, anyone who puts themselves into any of the bottom three categories ('don't manage very well', 'have some financial difficulties', 'have severe financial difficulties') is defined as 'Reports having financial difficulty'. These columns report the percentage of single men, single women and couples who never report having financial difficulty, the percentage who sometimes report having financial difficulty and the percentage who report having financial difficulty in every wave (1–7). For example, 82.6% of single men did not report having financial difficulty in any of the seven waves, 17.4% sometimes reported having financial difficulties and none of them reported having financial difficulty in every wave.

E.28 The numbers in columns five to seven of Table EL5 use the same financial difficulties question but, instead of looking at families who report financial difficulties, they look at how many people report that they are managing very well (those putting themselves into the highest category). Again, the columns report the percentage of single men, single women and couples who never report that they manage very well, the percentage who sometimes report that they manage very well and the percentage who report that they manage very well in every wave (1–7). For example, 7.9% of single men reported in every wave that they manage very well, 58.2% sometimes reported managing very well and 33.9% never reported that they manage very well.

E.29 Tables EL6a, EL6b and EL6c look at another measure of well-being and resources. In wave 2 onwards, respondents were asked whether having too little money stops them from doing any of the following things: buying your first choice of food items, having your family and friends round for a drink or meal, having an outfit to wear for social or family occasions, keeping your home in a reasonable state of decoration, replacing or repairing broken electrical goods, paying for fares or other transport costs to get to or from places you want to go, buying presents for friends or family once a year, taking the sorts of holidays you want, and treating yourself from time to time. An index of material deprivation can be created by counting the number of items that a respondent reports that they cannot afford.

E.30 The question is asked once per individual, which means that even if members of a couple have access to the same financial resources, they may feel differently about whether they have too little money. For this reason, we split couples into 'partnered men' and 'partnered women', so any potential differences between men and women can be seen.

E.31 Tables EL6a–EL6c look at the persistence of reporting having too little money to do three or more items on the list described above. The numbers show the percentage of men or women who never report three or more items on the list (in waves 2–7), the percentage who report three or more items on the list in some waves (at least one wave but not all of waves 2–7) and the percentage who report three or more items on the list in every wave (2–7). Table EL6a looks at the percentages by education for single men, single women, partnered men and partnered women aged 50 to SPA at baseline. Table EL6b is similar but shows the percentages for those aged SPA to 74 and Table EL6c shows the percentages for those aged 75 or over.

Labour market participation

E.32 Tables EL7a and EL7b show labour market participation by wealth group and age for men and women, respectively. The first column of numbers reports the percentage of the baseline (wave 1) longitudinal sample aged 50–74 who are employed (or self-employed) full- or part-time. The next seven columns take the sample of individuals employed at baseline and report the percentage of those individuals who are employed in wave 1, wave 2, through to wave 7. By definition, 100% of the samples are employed in wave 1, but as we move further through time the percentage employed in each of the subsequent waves falls. For example, of the group of men who were aged 50–54 and in work in 2002–03 (wave 1), 47% are still in work approximately 12 years later (wave 6).

E.33 Table EL8 also looks at labour market participation but it considers transitions back into the labour market. The first column of numbers reports the percentage of individuals who are not in employment at baseline (2002–03). The next seven columns take the sample of people out of employment at baseline and report the percentage in employment at subsequent waves (again by definition, 0% are employed in wave 1).

E.34 Tables EL9a and EL9b look at the persistency of health limiting an individual's ability to work by wealth group and age. Respondents are asked whether they have a health problem that limits the kind or amount of work that they can do. As well as looking at the percentage of men (Table EL9a) and women (Table EL9b) who never report a limiting health problem and the percentage who always report a limiting health problem in waves 1–6, the tables also split those who sometimes report a limiting health problem into two distinct groups. The first is a 'transitory' group, for which we define a transitory limiting health problem as one that comes and goes throughout the seven-wave period (a period spanning 14 years). For example, if an individual reported that they had a limiting health problem in waves 1, 3 and 7, we would define that as transitory. We define a limiting health problem as 'onset' if an individual starts the seven-wave period without a limiting health problem but then reports a limiting health problem at some point during the period and reports it in all subsequent waves. For instance, an individual who reported a limiting health problem in waves 5, 6 and 7 would be classed as having an 'onset' limiting health problem.

E.35 For example, Table EL9a shows that 61.4% of men aged 50–74 never had a limiting health problem in waves 1–7 and only 0.7% had a limiting health problem in every wave (1–7). The third column of the table shows that 29.6% of men aged 50–74 sometimes had a limiting health problem that came and went over the six-wave period. The next column shows that 8.3% of men aged 50–74 sometimes had a limiting health problem but, unlike the group whose problem came and went, this group experienced the onset of the limiting health problem sometime in the seven-wave period and it was not subsequently observed to go away during that time.

Annex AE. Definitions

AE.1 *Asset income:* Net income from any financial savings or investments (current and deposit accounts, TESSAs, ISAs, premium bonds, National Savings, PEPs, shares, trusts, bonds, other savings income not covered elsewhere) and any rental income from property (second homes, farm or business property) expressed in January 2015 prices.

AE.2 *Balanced panel:* The set of individuals who are interviewed in all waves of interest.

AE.3 *Baseline:* The wave of data that is chosen to be the starting point for characteristics in longitudinal analysis that may change over time.

AE.4 *Earnings*: The sum of employment income and self-employment income

AE.5 *Education:* Low education is defined as leaving full-time education at or before compulsory school-leaving age. Medium education is defined as leaving full-time education after compulsory school-leaving age and before age 19. High education is defined as leaving full-time education at age 19 or above.

AE.6 *Employment income:* Net income from main and subsidiary jobs expressed in January 2015 prices.

AE.7 *Equivalisation:* Equivalising is a way of adjusting household resources to take account of different household sizes and the economies of scale involved in living with additional people in a household. An equivalence scale estimates how much expenditure or income different household types need to be equivalently well off and enables comparisons to be made across different family or household types. The equivalence scale used is the OECD scale, in which a single person with no children is taken as the benchmark. Secondary adults contribute 0.5 to the scale, meaning that a couple needs 50% more income than a single person in order to be assessed as equally well off. Children aged 13 and under contribute 0.3 to the scale and older children contribute 0.5. To convert the numbers to the equivalent amount that a childless couple spends, numbers should be multiplied by 1.5. Income is equivalised using a family-level equivalence scale and expenditure is equivalised using a household-level equivalence scale. Wealth is not equivalised. This is because there is no single accepted way to equivalise wealth. It is also not clear that it is sensible to equivalise wealth because the point at which wealth is used to fund consumption is likely to be in the future, when family composition may have changed compared with the current situation.

AE.8 *Expectations questions methodology:* ELSA includes a number of questions that ask respondents about their expectations of future events. Respondents are asked to report the chances from 0 to 100 that an event will happen in the future, where a higher number indicates a higher chance.

AE.9 *Family:* A couple or a single person and any children aged under 18 they may have who are living at home.

AE.10 *Income group:* To form income groups, we order all ELSA sample members according to the value of their total equivalised family income and divide the sample into five equal-sized groups. Where analysis is carried out using all ELSA sample members, the groups are equal in size and can be referred to as quintiles. Much of the

analysis in this chapter is carried out using subsamples of the ELSA population. Where analysis does not use the whole ELSA sample, the groups are unequal in size and are more accurately referred to as 'income groups'. For consistency reasons, we use the term 'income group' rather than 'income quintile' throughout the chapter. The cut-off points for the income groups are shown in the following table, reported in January 2015 prices and rounded to the nearest £10:

	Income group definition, wave 1 (2002–03)	**Income group definition, wave 7 (2014–15)**
	£ per week equivalised	
Lowest	Less than £170	Less than £220
2nd	Between £170 and £250	Between £220 and £310
3rd	Between £250 and £340	Between £310 and £430
4th	Between £330 and £480	Between £430 and £610
Highest	More than £480	More than £610

AE.11 *Net financial wealth:* Net financial wealth is reported at the family level and is defined as savings (interest-bearing current and deposit accounts, cash ISAs, TESSAs) plus investments (premium bonds, National Savings, PEPs, shares, trusts, bonds, the saving element of life insurance, shares ISAs and life insurance ISAs) but not including pensions or housing) minus debt (outstanding balances on credit cards, loans, mail-order and other private debt but not including mortgages). Expressed in January 2015 prices.

AE.12 *Net housing wealth:* Net housing wealth is reported at the family level and is defined as the self-reported current value of primary housing (i.e. residential housing) less any debt outstanding on that house. Expressed in January 2015 prices.

AE.13 *Net physical wealth:* Net physical wealth is reported at the family level and is defined as wealth held in second homes, farm or business property, other business wealth, other land and other assets such as jewellery or works of art or antiques. Expressed in January 2015 prices.

AE.14 *Other income:* Net income coming from individuals outside the household such as maintenance payments. Expressed in January 2015 prices.

AE.15 *Private pension income:* Net income from private pensions and annuities (from all non-state sources) expressed in January 2015 prices.

AE.16 *Self-employment income:* Net income from self-employment. This is defined as profit (converted to a weekly equivalent) for self-employed individuals who keep accounts or income from self-employment for those who do not keep accounts. Self-employment income can be negative if those keeping accounts make a loss. Expressed in January 2015 prices.

AE.17 *State benefit income:* Income from the following state benefits: incapacity benefit, employment and support allowance (wave 5 onwards), severe disablement allowance, statutory sick pay, attendance allowance, disability living allowance, industrial injuries allowance, war pensions, invalid care allowance (wave 1), carer's allowance (wave 2 onwards), disabled person's tax credit (wave 1), income support, pension credit (wave 2 onwards), working families' tax credit (wave 1), working tax credit (wave 2 onwards), jobseeker's allowance, guardian's allowance, widow's pension, child benefit and child tax credit (wave 2 onwards). State benefit income

does not include housing benefit or council tax benefit. Expressed in January 2015 prices.

AE.18 *State pension age:* Various changes to the SPA have been phased in and further changes have been announced or planned. Women born on or after 6 April 1950 in our sample are affected by a gradual increase in the SPA between April 2010 and November 2018. Calculation of SPA in this report incorporates these changes. This means that for women, SPA varies according to date of birth. For the tables in this report, women aged up to 62 can be below SPA. Men currently in our sample are not currently affected by the changes and their SPA remains at 65. Further details can be found in https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/310231/spa-timetable.pdf.

AE.19 *State pension income:* Net income from state pensions (basic state pension, State Earnings-Related Pension Scheme/state second pension) expressed in January 2015 prices.

AE.20 *Total (family) income:* Total income is defined net of taxes and is the sum of employment income (including income from self-employment), private pension income, state pension income, other state benefit income (excluding housing benefit and council tax benefit), asset income and any other income. Total income is summed across family members (where a family is defined as a couple or a single person and any children aged under 18 they may have who are living at home) to obtain family income. Expressed in January 2015 prices.

AE.21 *Total non-pension wealth:* Total non-pension wealth is reported at the family level and is defined as the sum of net financial wealth, net physical wealth and net housing wealth. Expressed in January 2015 prices.

AE.22 *Wealth group:* To form wealth groups, we order all ELSA sample members according to the value of their total (non-pension) family wealth and divide the sample into five equal-sized groups. Where analysis is carried out using all ELSA sample members, the groups are equal in size and can be referred to as quintiles. Much of the analysis in this chapter is carried out using subsamples of the ELSA population. Where analysis does not use the whole ELSA sample, the groups are unequal in size and are more accurately referred to as 'wealth groups'. For consistency reasons, we use the term 'wealth group' rather than 'wealth quintile' throughout the chapter. The cut-off points for the wealth groups are shown in the following table, reported in January 2015 prices and rounded to the nearest £1,000.

	Wealth group definition, wave 1 (2002–03)	**Wealth group definition, wave 7 (2014–15)**
Lowest	Less than £24k	Less than £59k
2nd	Between £24k and £137k	Between £59k and £199k
3rd	Between £137k and £240k	Between £199k and £331k
4th	Between £240k and £423k	Between £331k and £554k
Highest	More than £423k	More than £554k

AE.23 *Notes to all tables*

The unit of observation in all tables is the individual.

All cross-sectional tables are based on the cross-section of ELSA sample members in each wave of data. This includes refreshment sample members.

All longitudinal tables are based on individuals who have responded in all of waves 1 to 7 (the 'balanced panel') unless otherwise specified.

All numbers are based on weighted data. Both unweighted and weighted frequencies (*N*) are reported.

For cross-sectional analyses, cross-sectional weights are used. For longitudinal analyses, longitudinal weights are used.

Values are converted to January 2015 prices using the retail price index (RPI).

The fieldwork dates are shown in the following table:

	Fieldwork dates (inclusive)
Wave 1	March 2002 – March 2003
Wave 2	June 2004 – June 2005
Wave 3	May 2006 – August 2007
Wave 4	June 2008 – July 2009
Wave 5	July 2010 – June 2011
Wave 6	May 2012 – May 2013
Wave 7	June 2014 – May 2015

Table E1a. Mean unequivalised net weekly family income (£), by age and family type: wave 7

	Empl. income	Self-empl. income	Private pension income	State pension income	State benefit income	Asset income	Other income	Total income	*Wted N*	*Unwted N*
Single men	**120.28**	**22.58**	**75.50**	**71.18**	**35.50**	**26.19**	**0.30**	**351.54**	***915***	***856***
50–54	289.76	24.72	16.28	0.00	42.03	39.47	0.20	412.46	*186*	*62*
55–59	223.29	24.68	36.44	0.00	52.23	28.01	0.02	364.67	*172*	*99*
60–64	112.31	30.03	72.16	0.63	56.41	18.57	0.05	290.16	*116*	*131*
65–69	31.80	30.02	114.85	142.60	20.06	24.68	1.10	365.11	*120*	*142*
70–74	2.58	33.68	95.27	144.15	20.45	22.59	0.00	318.72	*93*	*121*
75–79	4.43	17.97	110.65	155.52	19.28	14.56	0.00	322.41	*85*	*129*
80+	1.31	0.30	135.84	149.76	22.19	23.47	0.70	333.56	*142*	*172*
Single women	**61.87**	**5.96**	**56.71**	**97.79**	**36.50**	**20.67**	**1.98**	**281.48**	***1,523***	***1,795***
50–54	192.94	13.93	10.09	0.00	62.07	41.70	9.23	329.95	*192*	*85*
55–59	151.21	20.48	26.18	0.00	52.66	18.08	1.43	270.05	*196*	*147*
60–64	93.95	5.28	62.27	66.86	37.70	16.29	2.03	284.39	*173*	*233*
65–69	39.02	5.52	72.61	127.95	21.64	28.10	0.74	295.59	*182*	*267*
70–74	15.55	2.36	87.05	143.00	20.01	19.02	0.88	287.86	*158*	*251*
75–79	1.05	0.11	74.29	150.72	24.87	17.92	0.31	269.26	*196*	*321*
80+	3.40	0.15	63.40	145.59	34.88	12.87	0.64	260.92	*425*	*491*
Couples	**256.46**	**61.68**	**152.84**	**118.83**	**24.12**	**46.71**	**1.38**	**662.03**	***5,496***	***5,327***
50–54	533.99	103.12	32.91	3.04	28.43	48.31	1.03	750.83	*1,123*	*385*
55–59	470.24	89.52	86.25	15.29	28.21	36.67	1.35	727.52	*952*	*636*
60–64	272.82	84.68	179.24	72.09	18.58	61.56	1.27	690.25	*922*	*1,088*
65–69	91.46	41.91	233.20	216.03	17.68	54.76	1.39	656.43	*936*	*1,190*
70–74	30.33	19.89	231.14	235.28	22.40	43.46	1.92	584.42	*667*	*887*
75–79	8.77	15.61	207.26	234.24	23.99	38.10	2.81	530.77	*464*	*662*
80+	2.32	0.51	201.37	233.08	32.55	29.78	0.19	499.81	*432*	*479*
All family types	**203.42**	**46.48**	**125.47**	**109.30**	**27.81**	**39.35**	**1.37**	**553.20**	***7,934***	***7,978***
50–54	460.15	82.01	27.93	2.28	34.41	46.37	1.98	655.13	*1,501*	*532*
55–59	390.58	70.79	70.82	11.02	34.98	32.77	1.19	612.15	*1,320*	*882*
60–64	231.79	68.06	152.21	64.48	24.95	50.95	1.27	593.70	*1,212*	*1,452*
65–69	77.97	35.41	198.12	195.96	18.50	47.92	1.27	575.15	*1,239*	*1,599*
70–74	24.98	18.26	192.59	210.18	21.79	37.14	1.54	506.49	*918*	*1,259*
75–79	6.24	11.80	161.22	203.26	23.68	30.09	1.83	438.13	*746*	*1,112*
80+	2.63	0.33	133.38	184.04	32.07	21.69	0.45	374.60	*999*	*1,142*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.1, AE.6, AE.9, AE.14, AE.15, AE.16, AE.17, AE.19, AE.20 and AE.23.
For related text, see E.5–E.8.

Table E1b. Mean equivalised net weekly family income (£), by age and gender: wave 7

	Empl. income	Self-empl. income	Private pension income	State pension income	State benefit income	Asset income	Other income	Total income	*Wted N*	*Unwted N*
Men	**160.89**	**35.66**	**93.79**	**74.26**	**19.31**	**29.90**	**0.73**	**414.55**	***3,782***	***3,523***
50–54	331.56	50.34	18.65	0.73	20.90	35.16	0.76	458.10	*759*	*231*
55–59	306.57	49.29	41.47	5.01	23.99	23.86	0.32	450.50	*648*	*383*
60–64	186.52	56.77	102.34	17.06	20.14	33.95	0.67	417.45	*595*	*662*
65–69	60.08	28.30	145.63	140.39	13.65	36.44	1.23	425.72	*599*	*715*
70–74	18.84	23.48	149.48	154.45	15.94	29.93	0.55	392.67	*436*	*570*
75–79	6.60	10.58	134.63	155.98	18.67	21.60	1.33	349.40	*343*	*496*
80+	1.80	0.31	134.81	154.18	20.12	21.00	0.39	332.61	*401*	*466*
Women	**117.96**	**26.16**	**85.99**	**88.64**	**22.79**	**26.45**	**1.17**	**369.17**	***4,152***	***4,455***
50–54	275.47	50.19	17.96	2.24	25.68	29.36	1.91	402.81	*742*	*301*
55–59	236.62	45.04	57.23	9.57	29.05	23.38	1.30	402.19	*672*	*499*
60–64	136.21	36.19	110.08	74.26	19.62	36.52	1.13	414.00	*617*	*790*
65–69	49.66	21.55	133.13	142.01	14.24	31.85	0.62	393.05	*639*	*884*
70–74	16.55	4.37	124.91	151.96	16.74	23.59	1.56	339.69	*482*	*689*
75–79	2.56	6.93	104.21	153.50	18.69	22.69	1.18	309.75	*403*	*616*
80+	2.64	0.22	83.83	147.87	32.24	14.98	0.45	282.23	*597*	*676*
All	**138.42**	**30.69**	**89.71**	**81.79**	**21.13**	**28.10**	**0.96**	**390.80**	***7,934***	***7,978***
50–54	303.82	50.27	18.31	1.48	23.26	32.30	1.33	430.77	*1,501*	*532*
55–59	270.96	47.12	49.49	7.33	26.57	23.61	0.82	425.91	*1,320*	*882*
60–64	160.91	46.29	106.28	46.18	19.88	35.26	0.90	415.69	*1,212*	*1,452*
65–69	54.70	24.82	139.18	141.23	13.95	34.07	0.92	408.86	*1,239*	*1,599*
70–74	17.64	13.45	136.58	153.15	16.36	26.60	1.08	364.85	*918*	*1,259*
75–79	4.42	8.61	118.22	154.64	18.68	22.19	1.25	328.00	*746*	*1,112*
80+	2.30	0.26	104.31	150.41	27.37	17.40	0.43	302.47	*999*	*1,142*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.1, AE.6, AE.7, AE.9, AE.14, AE.15, AE.16, AE.17, AE.19, AE.20 and AE.23. For related text, see E.5–E.8.

Table E2a. Distribution of total net weekly unequivalised family income (£), by age and family type: wave 7

	Mean	10th percentile	25th percentile	Median	75th percentile	90th percentile	*Wted N*	*Unwted N*
Single men	**351.54**	**114.70**	**185.16**	**279.25**	**429.66**	**626.72**	***915***	***856***
50–54	412.46	71.83	167.30	298.55	575.38	786.58	*186*	*62*
55–59	364.67	93.33	181.93	309.94	427.26	755.73	*172*	*99*
60–64	290.16	74.50	129.84	214.25	392.50	579.78	*116*	*131*
65–69	365.11	147.02	192.08	279.82	458.89	686.14	*120*	*142*
70–74	318.72	149.71	198.38	261.64	342.98	512.40	*93*	*121*
75–79	322.41	155.30	197.68	258.72	369.37	490.18	*85*	*129*
80+	333.56	159.26	220.86	288.03	399.79	495.74	*142*	*172*
Single women	**281.48**	**114.04**	**163.78**	**237.52**	**343.16**	**490.45**	***1,523***	***1,795***
50–54	329.95	96.17	159.63	263.07	419.21	633.40	*192*	*85*
55–59	270.05	63.00	136.92	228.97	340.22	536.06	*196*	*147*
60–64	284.39	91.68	147.08	230.40	357.57	519.69	*173*	*233*
65–69	295.59	139.29	172.49	247.92	344.90	510.08	*182*	*267*
70–74	287.86	147.27	174.50	244.19	345.20	483.15	*158*	*251*
75–79	269.26	145.99	177.99	239.44	327.63	443.70	*196*	*321*
80+	260.92	129.14	163.78	223.00	311.84	417.97	*425*	*491*
Couples	**662.03**	**266.08**	**379.34**	**561.66**	**824.58**	**1136.28**	***5,496***	***5,327***
50–54	750.83	230.16	426.21	647.68	936.55	1303.13	*1,123*	*385*
55–59	727.52	265.61	433.32	660.25	875.02	1238.56	*952*	*636*
60–64	690.25	266.53	389.99	586.44	839.82	1173.77	*922*	*1,088*
65–69	656.43	318.15	403.82	559.64	764.38	1106.41	*936*	*1,190*
70–74	584.42	274.03	356.53	491.42	689.23	968.92	*667*	*887*
75–79	530.77	259.16	338.81	461.95	656.68	870.90	*464*	*662*
80+	499.81	236.04	332.86	433.79	610.95	834.61	*432*	*479*
All family types	**553.20**	**167.38**	**274.58**	**450.97**	**708.12**	**1012.81**	***7,934***	***7,978***
50–54	655.13	157.70	306.96	562.65	859.79	1218.47	*1,501*	*532*
55–59	612.15	143.95	300.49	520.58	818.10	1140.22	*1,320*	*882*
60–64	593.70	154.29	291.36	507.26	768.92	1061.23	*1,212*	*1,452*
65–69	575.15	204.39	326.14	488.25	698.65	1018.68	*1,239*	*1,599*
70–74	506.49	191.24	281.13	410.48	623.01	888.00	*918*	*1,259*
75–79	438.13	180.80	253.01	365.54	549.99	779.60	*746*	*1,112*
80+	374.60	150.92	208.73	314.74	458.41	678.18	*999*	*1,142*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.9, AE.20 and AE.23. For related text, see E.9.

Table E2b. Distribution of total net weekly equivalised family income (£), by age and gender: wave 7

	Mean	10th percentile	25th percentile	Median	75th percentile	90th percentile	*Wted N*	*Unwted N*
Men	**414.55**	**152.68**	**233.91**	**346.60**	**513.08**	**739.82**	***3,782***	***3,523***
50–54	458.10	109.44	228.45	391.69	589.31	845.79	*759*	*231*
55–59	450.50	131.26	253.19	395.83	564.28	790.77	*648*	*383*
60–64	417.45	126.13	219.26	354.19	526.60	739.37	*595*	*662*
65–69	425.72	191.65	257.22	358.37	500.45	726.21	*599*	*715*
70–74	392.67	182.68	232.85	312.73	461.50	664.79	*436*	*570*
75–79	349.40	170.76	216.00	298.81	434.28	563.63	*343*	*496*
80+	332.61	157.36	220.86	290.61	399.91	551.02	*401*	*466*
Women	**369.17**	**141.78**	**205.95**	**305.38**	**462.93**	**657.75**	***4,152***	***4,455***
50–54	402.81	109.42	205.95	345.62	549.90	708.29	*742*	*301*
55–59	402.19	111.76	211.76	336.15	543.88	750.33	*672*	*499*
60–64	414.00	142.31	230.00	349.33	524.30	719.88	*617*	*790*
65–69	393.05	163.24	228.51	332.21	468.43	687.74	*639*	*884*
70–74	339.69	156.30	213.79	285.59	410.68	576.31	*482*	*689*
75–79	309.75	153.49	196.15	267.33	375.67	532.02	*403*	*616*
80+	282.23	134.50	175.69	243.10	341.01	467.22	*597*	*676*
All	**390.80**	**146.68**	**217.95**	**326.76**	**489.85**	**688.25**	***7,934***	***7,978***
50–54	430.77	109.42	212.91	364.63	563.60	778.22	*1,501*	*532*
55–59	425.91	119.72	233.16	372.19	554.14	760.14	*1,320*	*882*
60–64	415.69	136.82	225.13	353.52	524.87	727.67	*1,212*	*1,452*
65–69	408.86	175.06	245.20	345.31	486.00	704.46	*1,239*	*1,599*
70–74	364.85	165.01	222.37	299.14	435.49	621.37	*918*	*1,259*
75–79	328.00	159.59	202.93	278.96	398.30	540.46	*746*	*1,112*
80+	302.47	144.95	186.63	258.32	355.71	508.03	*999*	*1,142*

Note: All values are expressed in January 2015.

For variable definitions, see AE.7, AE.9, AE.20 and AE.23. For related text, see E.9.

Table E3. Mean and median wealth, by age and family type: wave 7

	Net financial wealth £'000		Net physical wealth £'000		Net primary housing wealth £'000		Net total (non-pension) wealth £'000		*Wted N*	*Unwted N*
	Mean	**Median**	**Mean**	**Median**	**Mean**	**Median**	**Mean**	**Median**		
Single men	**51.4**	**9.9**	**63.4**	**0.0**	**120.1**	**86.8**	**234.9**	**122.7**	***915***	***856***
50–54	30.1	3.0	64.8	0.0	76.3	42.1	171.2	92.2	*186*	*62*
55–59	51.0	3.5	37.7	0.0	110.8	52.1	199.5	111.6	*172*	*99*
60–64	45.3	6.0	24.1	0.0	98.4	23.8	167.8	46.8	*116*	*131*
65–69	47.2	11.9	45.3	0.0	124.4	99.2	216.8	133.9	*120*	*142*
70–74	64.7	14.9	14.6	0.0	155.3	117.1	234.6	163.1	*93*	*121*
75–79	57.9	11.4	65.7	0.0	142.2	148.7	265.9	173.1	*85*	*129*
80+	75.9	19.8	171.1	0.0	167.0	139.3	413.9	188.7	*142*	*172*
Single women	**37.2**	**6.9**	**18.0**	**0.0**	**147.5**	**116.0**	**202.7**	**134.5**	***1,523***	***1,795***
50–54	20.2	0.7	44.3	0.0	115.0	87.8	179.4	90.6	*192*	*85*
55–59	12.9	0.6	9.2	0.0	110.7	94.3	132.8	92.2	*196*	*147*
60–64	44.8	3.3	15.1	0.0	147.3	100.0	207.1	134.3	*173*	*233*
65–69	58.5	8.7	21.3	0.0	161.0	129.7	240.8	160.4	*182*	*267*
70–74	56.6	14.9	17.7	0.0	208.0	158.6	282.3	198.5	*158*	*251*
75–79	43.5	11.3	12.3	0.0	164.3	140.0	220.1	169.0	*196*	*321*
80+	33.9	10.3	12.8	0.0	143.1	109.7	189.8	136.4	*425*	*491*
Couples	**95.1**	**30.8**	**94.5**	**0.0**	**258.5**	**199.5**	**448.1**	**279.3**	***5,496***	***5,327***
50–54	59.2	6.0	135.5	0.0	215.9	154.0	410.6	188.5	*1,123*	*385*
55–59	81.0	22.0	85.2	0.0	255.7	201.0	421.9	275.8	*952*	*636*
60–64	120.2	45.0	90.4	0.0	279.8	238.8	490.4	343.2	*922*	*1,088*
65–69	123.8	50.1	123.4	0.0	276.6	223.1	523.9	321.6	*936*	*1,190*
70–74	112.2	41.7	81.6	0.0	283.6	209.5	477.3	292.8	*667*	*887*
75–79	94.3	35.6	53.9	0.0	263.2	219.5	411.5	287.2	*464*	*662*
80+	78.6	31.8	18.5	0.0	246.5	198.7	343.6	252.7	*432*	*479*
All	**79.0**	**20.3**	**76.3**	**0.0**	**221.2**	**178.4**	**376.5**	**232.6**	***7,934***	***7,978***
50–54	50.6	4.0	115.1	0.0	185.7	132.5	351.4	164.3	*1,501*	*532*
55–59	67.0	14.4	67.7	0.0	215.2	170.0	349.9	223.0	*1,320*	*882*
60–64	102.2	30.6	73.3	0.0	243.4	198.7	418.8	289.0	*1,212*	*1,452*
65–69	106.7	38.7	100.9	0.0	244.9	198.7	452.5	272.4	*1,239*	*1,599*
70–74	97.8	32.3	63.8	0.0	257.6	198.4	419.2	261.3	*918*	*1,259*
75–79	76.8	25.8	44.3	0.0	223.3	198.2	344.5	237.4	*746*	*1,112*
80+	59.2	18.8	37.7	0.0	191.2	159.2	288.1	201.7	*999*	*1,142*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.9, AE.11, AE.12, AE.13, AE.21 and AE.23. For related text, see E.11.

Table E4. Distribution of total net non-pension wealth, by age and family type: wave 7

	Mean	10th percentile	25th percentile	Median	75th percentile	90th percentile	*Wted N*	*Unwted N*
	£'000	*£'000*	*£'000*	*£'000*	*£'000*	*£'000*		
Single men	**234.9**	**0.0**	**3.5**	**122.7**	**273.3**	**492.1**	***915***	***856***
50–54	171.2	-0.5	0.0	92.2	143.4	335.2	*186*	*62*
55–59	199.5	-0.3	0.3	111.6	265.3	579.6	*172*	*99*
60–64	167.8	0.0	1.6	46.8	239.7	486.9	*116*	*131*
65–69	216.8	0.0	2.0	133.9	301.3	548.6	*120*	*142*
70–74	234.6	0.5	9.4	163.1	334.7	525.8	*93*	*121*
75–79	265.9	0.2	5.5	173.1	320.0	541.3	*85*	*129*
80+	413.9	5.5	49.9	188.7	336.0	521.5	*142*	*172*
Single women	**202.7**	**0.0**	**5.0**	**134.5**	**268.0**	**452.5**	***1,523***	***1,795***
50–54	179.4	-1.8	0.0	90.6	238.3	378.1	*192*	*85*
55–59	132.8	-0.7	0.0	92.2	206.3	357.8	*196*	*147*
60–64	207.1	0.0	0.8	134.3	273.2	531.2	*173*	*233*
65–69	240.8	0.0	5.0	160.4	300.0	513.1	*182*	*267*
70–74	282.3	0.3	60.0	198.5	332.0	529.3	*158*	*251*
75–79	220.1	1.0	15.4	169.0	299.3	492.0	*196*	*321*
80+	189.8	0.8	10.0	136.4	265.6	421.6	*425*	*491*
Couples	**448.1**	**19.1**	**146.9**	**279.3**	**493.3**	**889.0**	***5,496***	***5,327***
50–54	410.6	0.3	82.3	188.5	413.2	824.0	*1,123*	*385*
55–59	421.9	42.6	141.2	275.8	512.6	879.5	*952*	*636*
60–64	490.4	52.0	169.5	343.2	560.3	959.0	*922*	*1,088*
65–69	523.9	59.5	185.4	321.6	559.3	960.8	*936*	*1,190*
70–74	477.3	67.1	177.1	292.8	530.5	977.0	*667*	*887*
75–79	411.5	35.6	179.1	287.2	473.6	873.1	*464*	*662*
80+	343.6	66.5	147.5	252.7	419.5	622.1	*432*	*479*
All	**376.5**	**1.0**	**98.7**	**232.6**	**427.5**	**775.7**	***7,934***	***7,978***
50–54	351.4	0.0	41.0	164.3	367.7	713.2	*1,501*	*532*
55–59	349.9	0.0	94.6	223.0	422.6	751.2	*1,320*	*882*
60–64	418.8	2.0	121.4	289.0	506.8	864.4	*1,212*	*1,452*
65–69	452.5	3.0	140.0	272.4	491.2	840.0	*1,239*	*1,599*
70–74	419.2	6.0	143.0	261.3	469.5	846.7	*918*	*1,259*
75–79	344.5	3.1	120.7	237.4	406.5	713.3	*746*	*1,112*
80+	288.1	5.0	80.7	201.7	345.2	529.1	*999*	*1,142*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.9, AE.21 and AE.23. For related text, see E.11.

Table E5a. Private pension membership, by age and gender (workers and non-workers under the SPA): wave 7

	Member of a private pension scheme	Contributing to a private pension scheme	Receiving income from a private pension scheme	Retained rights in a private pension scheme	*Wted N*	*Unwted N*
Men (50–SPA)	**82%**	**53%**	**26%**	**36%**	***2,067***	***1,311***
50–54	79%	66%	8%	35%	*785*	*236*
55–59	84%	53%	24%	43%	*673*	*398*
60–64	85%	35%	53%	28%	*609*	*677*
Women (50–SPA)	**72%**	**46%**	**17%**	**27%**	***1,779***	***1,203***
50–54	72%	55%	4%	30%	*804*	*326*
55–59	72%	42%	21%	28%	*689*	*518*
60–SPA	69%	29%	42%	20%	*285*	*359*
All under SPA	**78%**	**49%**	**22%**	**32%**	***3,845***	***2,514***
50–54	75%	60%	6%	32%	*1589*	*562*
55–59	78%	48%	23%	36%	*1362*	*916*
60–64	80%	33%	49%	25%	*894*	*1,036*

Note: The middle three columns of the table do not sum to the first column of numbers (or to 100%) because individuals can have multiple pension schemes at different stages of contribution, receiving income and retaining rights. SPA for women varies according to date of birth (see AE.18).

For variable definitions, see AE.18 and AE.23. For related text, see E.12.

Table E5b. Private pension membership, by age and gender (workers under the SPA): wave 7

	Member of a private pension scheme	Contributing to a private pension scheme	Receiving income from a private pension scheme	Retained rights in a private pension scheme	*Wted N*	*Unwted N*
Men (50–SPA)	**87%**	**67%**	**19%**	**39%**	***1,577***	***912***
50–54	86%	76%	7%	38%	*672*	*199*
55–59	88%	65%	20%	45%	*540*	*314*
60–64	87%	55%	42%	32%	*364*	*399*
Women (50–SPA)	**80%**	**62%**	**12%**	**30%**	***1,271***	***811***
50–54	80%	67%	2%	30%	*649*	*266*
55–59	81%	61%	16%	30%	*463*	*346*
60–SPA	77%	48%	36%	24%	*158*	*199*
All under SPA	**84%**	**65%**	**16%**	**35%**	***2,847***	***1,723***
50–54	83%	72%	5%	34%	*1,322*	*465*
55–59	85%	63%	18%	38%	*1,003*	*660*
60–64	84%	52%	40%	29%	*522*	*598*

Note: The middle three columns of the table do not sum to the first column of numbers (or to 100%) because individuals can have multiple pension schemes at different stages of contribution, receiving income and retaining rights. SPA for women varies according to date of birth (see AE.18).

For variable definitions, see AE.18 and AE.23. For related text, see E.12.

Table E6. Mean equivalised weekly household spending (£), by age and family type: wave 7

	Food inside the home	Food outside the home	Clothing and footwear	Domestic fuel	Leisure	Transfers outside the home	*Wted N*	*Unwted N*
Single men	**48.01**	**9.27**	**10.03**	**19.33**	**12.16**	**19.51**	***825***	***773***
50–54	51.27	13.33	10.70	17.23	10.71	6.48	*164*	*54*
55–59	51.96	9.85	14.77	21.31	12.92	8.79	*161*	*93*
60–64	41.57	7.18	7.35	17.70	9.70	12.50	*109*	*123*
65–69	45.71	8.26	7.00	18.78	10.02	60.43	*114*	*135*
70–74	45.95	8.08	6.15	17.47	12.01	15.75	*85*	*110*
75–79	48.84	9.13	18.39	20.19	19.90	21.16	*70*	*110*
80+	47.29	6.77	5.98	22.35	12.94	20.68	*122*	*148*
Single women	**45.72**	**6.08**	**11.02**	**20.32**	**7.88**	**39.69**	***1,373***	***1,622***
50–54	43.38	7.42	11.58	21.54	8.70	14.44	*192*	*85*
55–59	39.42	5.20	13.18	18.15	8.38	8.35	*189*	*141*
60–64	46.38	5.84	11.58	19.95	9.65	13.85	*164*	*221*
65–69	49.34	7.09	14.20	20.77	10.14	189.41	*171*	*253*
70–74	52.15	7.06	12.52	19.83	9.87	38.23	*146*	*229*
75–79	48.56	6.37	10.26	21.14	6.50	31.35	*181*	*298*
80+	44.08	4.78	7.29	20.58	4.96	12.59	*330*	*395*
Couples	**53.62**	**10.90**	**14.85**	**17.59**	**12.01**	**28.48**	***5,407***	***5,200***
50–54	50.57	12.10	18.56	16.50	13.25	11.83	*1,153*	*398*
55–59	52.88	10.95	15.73	17.18	13.75	22.21	*937*	*630*
60–64	55.73	13.35	16.69	18.88	13.09	28.46	*904*	*1,068*
65–69	54.65	10.64	14.77	18.07	13.27	49.52	*918*	*1,165*
70–74	54.88	10.45	11.45	18.68	10.47	32.31	*650*	*865*
75–79	55.07	8.08	11.01	17.14	8.20	38.07	*444*	*628*
80+	53.44	6.23	7.96	16.44	5.77	26.14	*402*	*446*
All family types	**51.59**	**9.85**	**13.64**	**18.27**	**11.28**	**29.53**	***7,605***	***7,595***
50–54	49.73	11.64	16.82	17.22	12.40	11.58	*1,509*	*537*
55–59	50.79	9.97	15.23	17.84	12.86	18.50	*1,286*	*864*
60–64	53.12	11.73	15.11	18.92	12.30	24.95	*1,176*	*1,412*
65–69	53.04	9.91	13.95	18.52	12.52	70.48	*1,204*	*1,553*
70–74	53.56	9.66	11.11	18.75	10.52	31.69	*881*	*1,204*
75–79	52.74	7.74	11.56	18.49	8.95	34.61	*695*	*1,036*
80+	48.94	5.75	7.42	18.88	6.48	20.12	*854*	*989*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.7, AE.9 and AE.23. For related text, see E.13.

Table E7. Mean self-reported chances (%) of having insufficient resources to meet needs at some point in the future, by age, gender and income group: wave 7

	All	Total equivalised income group					*Wted*	*Unwted*
		Lowest	2nd	3rd	4th	Highest	*N*	*N*
Single men	**34.9**	**42.7**	**34.8**	**36.3**	**23.1**	**31.0**	***883***	***821***
50–54	48.4	54.2	55.8	59.5	29.9	39.4	*186*	*62*
55–59	42.8	50.1	42.3	53.9	28.1	35.2	*165*	*95*
60–64	37.0	43.3	36.3	39.7	30.1	22.9	*113*	*127*
65–69	28.0	31.4	30.7	26.6	18.1	31.3	*116*	*137*
70–74	24.2	32.9	24.2	21.9	18.2	14.6	*90*	*118*
75–79	30.9	34.6	38.6	29.7	10.3	28.1	*81*	*122*
80+	19.7	22.7	23.0	18.3	19.4	8.5	*132*	*160*
Single women	**36.3**	**41.7**	**34.4**	**35.6**	**31.2**	**26.2**	***1,434***	***1,701***
50–54	50.1	52.9	55.7	56.8	46.0	20.6	*185*	*83*
55–59	52.8	63.5	55.4	44.9	37.5	28.2	*192*	*144*
60–64	40.4	44.1	38.0	32.9	44.6	37.7	*167*	*224*
65–69	38.4	38.7	40.6	41.9	30.5	35.1	*177*	*261*
70–74	33.9	44.5	28.4	30.9	32.4	22.2	*155*	*246*
75–79	29.6	32.7	25.4	36.0	21.6	22.8	*189*	*310*
80+	22.4	28.5	17.4	20.4	17.0	18.8	*370*	*433*
Partnered men	**31.0**	**36.4**	**36.0**	**32.2**	**28.6**	**26.3**	***2,671***	***2,492***
50–54	39.9	49.7	43.2	42.2	37.6	35.1	*528*	*157*
55–59	33.6	28.8	46.3	40.9	33.2	27.0	*455*	*271*
60–64	28.0	32.8	35.4	31.5	25.0	21.2	*446*	*497*
65–69	29.0	48.5	32.6	29.2	25.8	25.2	*453*	*545*
70–74	26.9	30.8	33.7	27.5	21.4	22.0	*316*	*417*
75–79	26.3	29.4	29.6	27.2	24.5	18.0	*239*	*341*
80+	25.5	29.0	33.0	23.7	23.2	12.0	*233*	*264*
Partnered women	**33.7**	**40.7**	**34.8**	**36.4**	**32.0**	**28.2**	***2,451***	***2,487***
50–54	37.7	48.4	26.4	50.2	33.3	33.0	*515*	*204*
55–59	37.0	42.7	40.7	38.2	38.6	31.1	*448*	*334*
60–64	33.0	40.4	36.0	35.6	35.5	24.7	*418*	*527*
65–69	32.0	35.6	37.2	35.2	30.5	24.1	*429*	*579*
70–74	33.2	42.2	37.8	33.2	26.6	26.7	*301*	*409*
75–79	29.6	35.1	35.3	32.0	18.4	21.1	*190*	*271*
80+	23.0	24.6	25.2	18.3	28.2	15.7	*151*	*163*

For variable definitions, see AE.7, AE8, AE.9, AE.10 and AE.23. For related text, see E.14.

Table E8. Labour market participation, by age, gender and wealth group (individuals aged under 75 only): wave 7

	% working part-time	% working full-time	% working full- or part-time	% working full- or part-time by wealth group				
				Lowest	2nd	3rd	4th	Highest
Men (50–74)	**11.9**	**44.1**	**56.0**	**44.9**	**63.8**	**59.2**	**56.3**	**56.0**
50–54	9.7	74.9	84.6	63.0	88.2	[89.4]	[98.0]	–
55–59	9.7	69.7	79.4	62.0	82.9	91.5	79.7	82.4
60–64	16.4	41.9	58.3	44.4	66.3	71.0	65.1	50.3
65–69	14.9	10.8	25.7	12.0	23.4	28.5	25.7	33.1
70–74	8.6	2.5	11.0	2.6	8.4	11.5	7.4	21.0
Women (50–74)	**26.9**	**18.3**	**45.3**	**37.7**	**58.5**	**44.7**	**41.1**	**43.9**
50–54	40.8	39.0	79.9	60.3	91.9	[92.5]	[83.0]	[79.5]
55–59	37.9	28.9	66.7	48.2	70.5	72.0	71.0	72.2
60–64	29.4	12.1	41.5	31.9	54.9	42.0	36.2	43.6
65–69	13.9	3.3	17.1	11.7	23.6	17.7	13.1	19.8
70–74	5.2	0.4	5.6	0.6	5.5	5.0	3.5	11.6
All (50–74)	**19.6**	**30.9**	**50.5**	**41.2**	**61.0**	**51.6**	**48.7**	**50.0**
50–54	25.2	57.1	82.3	61.6	90.0	90.9	90.6	88.2
55–59	24.1	48.9	73.0	55.1	75.9	81.3	75.4	77.6
60–64	23.1	26.6	49.7	38.1	60.2	55.4	50.4	46.9
65–69	14.4	6.9	21.3	11.9	23.5	23.1	19.4	26.2
70–74	6.8	1.4	8.2	1.6	6.8	7.8	5.4	16.3

For variable definitions, see AE.22 and AE.23. For related text, see E.15.

Table E8N. Sample sizes for Table E8: wave 7

	Sample sizes by age and gender		Sample sizes by age, gender and wealth group									
			Weighted N					*Unweighted N*				
	Wted N	*Unwted N*	Lowest	2nd	3rd	4th	Highest	Lowest	2nd	3rd	4th	Highest
Men (50–74)	***2,956***	***2,499***	*587*	*580*	*542*	*601*	*646*	*410*	*416*	*474*	*565*	*634*
50–54	*734*	*224*	*191*	*204*	*114*	*123*	*101*	*60*	*65*	*36*	*34*	*29*
55–59	*630*	*371*	*133*	*124*	*119*	*113*	*142*	*77*	*68*	*70*	*68*	*88*
60–64	*573*	*639*	*109*	*93*	*87*	*131*	*152*	*112*	*97*	*98*	*150*	*182*
65–69	*590*	*703*	*89*	*88*	*129*	*138*	*146*	*89*	*95*	*154*	*178*	*187*
70–74	*430*	*562*	*64*	*73*	*92*	*96*	*105*	*72*	*91*	*116*	*135*	*148*
Women (50–74)	***3,102***	***3,126***	*624*	*647*	*593*	*602*	*636*	*521*	*592*	*632*	*659*	*722*
50–54	*726*	*296*	*205*	*194*	*108*	*119*	*100*	*83*	*82*	*47*	*47*	*37*
55–59	*657*	*490*	*131*	*160*	*130*	*109*	*127*	*92*	*118*	*96*	*84*	*100*
60–64	*604*	*776*	*111*	*105*	*102*	*137*	*150*	*126*	*133*	*136*	*180*	*201*
65–69	*634*	*877*	*107*	*103*	*129*	*140*	*154*	*130*	*139*	*175*	*205*	*228*
70–74	*480*	*687*	*69*	*84*	*124*	*98*	*105*	*90*	*120*	*178*	*143*	*156*
All (50–74)	***6,058***	***5,625***	*1,211*	*1,227*	*1,135*	*1,203*	*1,282*	*931*	*1,008*	*1,106*	*1,224*	*1,356*
50–54	*1,459*	*520*	*397*	*398*	*222*	*242*	*201*	*143*	*147*	*83*	*81*	*66*
55–59	*1,288*	*861*	*264*	*284*	*249*	*222*	*269*	*169*	*186*	*166*	*152*	*188*
60–64	*1,177*	*1,415*	*220*	*198*	*190*	*268*	*302*	*238*	*230*	*234*	*330*	*383*
65–69	*1,224*	*1,580*	*197*	*191*	*258*	*278*	*300*	*219*	*234*	*329*	*383*	*415*
70–74	*910*	*1,249*	*133*	*157*	*217*	*194*	*210*	*162*	*211*	*294*	*278*	*304*

Table E9. Mean self-reported chances (%) of working at future target ages, by age, gender and wealth: wave 7

	Target age	All	Wealth group				
			Lowest	2nd	3rd	4th	Highest
Men (50–64)							
50–54	*60*	69.6	64.4	78.4	[63.9]	[64.9]	–
55–59	*60*	67.3	56.8	70.9	72.3	71.5	66.2
60–64	*65*	38.7	36.2	42.8	42.4	41.3	33.4
Women (50–59)							
50–54	*55*	76.0	59.2	85.7	[87.2]	[79.8]	[73.5]
55–59	*60*	56.7	51.5	60.9	65.8	54.6	49.5

For variable definitions, see AE.8, AE.22 and AE23. For related text, see E.16.

Table E9N. Sample sizes for Table E9: wave 7

	Sample sizes by age and gender		Sample sizes by age, gender and wealth group									
			Weighted N					*Unweighted N*				
	Wted N	*Unwted N*	Lowest	2nd	3rd	4th	Highest	Lowest	2nd	3rd	4th	Highest
Men (50–64)												
50–54	*730*	*223*	*190*	*204*	*116*	*123*	*98*	*59*	*65*	*37*	*34*	*28*
55–59	*623*	*367*	*129*	*122*	*118*	*113*	*142*	*74*	*68*	*69*	*68*	*88*
60–64	*568*	*633*	*106*	*92*	*87*	*131*	*152*	*109*	*96*	*97*	*150*	*181*
Women (50–59)												
50–54	*702*	*288*	*194*	*192*	*106*	*115*	*94*	*80*	*81*	*46*	*46*	*35*
55–59	*647*	*481*	*130*	*157*	*127*	*107*	*126*	*91*	*115*	*94*	*82*	*99*

Table E10. Whether health limits kind or amount of work, by age, gender and wealth: wave 7

Age, gender and wealth group	No limiting health problem	Has limiting health problem	Has limiting health problem and ...			*Wted N*	*Unwted N*
			Not working	Working but health problem doesn't limit current job	Working and health problem does limit current job		
Men 50–54	**87%**	**13%**	**8%**	**3%**	**2%**	***734***	***224***
Lowest	76%	24%	20%	4%	0%	*190*	*59*
2nd	87%	13%	7%	5%	2%	*204*	*65*
3rd	(83%)	(17%)	(8%)	(4%)	(5%)	*116*	*37*
4th	(100%)	(0%)	(0%)	(0%)	(0%)	*123*	*34*
Highest	–	–	–	–	–	*101*	*29*
Men 55–59	**83%**	**17%**	**10%**	**4%**	**3%**	***629***	***370***
Lowest	64%	36%	30%	5%	2%	*130*	*75*
2nd	70%	30%	14%	10%	6%	*125*	*69*
3rd	94%	6%	1%	1%	4%	*119*	*70*
4th	93%	7%	0%	5%	1%	*113*	*68*
Highest	94%	6%	3%	0%	3%	*142*	*88*
Men 60–64	**78%**	**22%**	**16%**	**3%**	**4%**	***567***	***632***
Lowest	54%	46%	40%	3%	3%	*105*	*109*
2nd	64%	36%	24%	2%	11%	*92*	*96*
3rd	82%	18%	9%	5%	4%	*87*	*97*
4th	92%	8%	5%	1%	2%	*131*	*150*
Highest	87%	13%	10%	3%	1%	*151*	*180*
All men 50–64	**83%**	**17%**	**11%**	**3%**	**3%**	***1,929***	***1,226***
Lowest	67%	33%	28%	4%	1%	*425*	*243*
2nd	77%	23%	13%	6%	5%	*421*	*230*
3rd	87%	13%	6%	3%	4%	*322*	*204*
4th	95%	5%	2%	2%	1%	*368*	*252*
Highest	92%	8%	5%	1%	2%	*394*	*297*
Women 50–54	**79%**	**21%**	**11%**	**4%**	**6%**	***718***	***294***
Lowest	56%	44%	28%	8%	9%	*201*	*82*
2nd	89%	11%	6%	2%	3%	*194*	*82*
3rd	(94%)	(6%)	(0%)	(4%)	(3%)	*108*	*47*
4th	(78%)	(22%)	(8%)	(1%)	(12%)	*115*	*46*
Highest	(95%)	(5%)	(0%)	(2%)	(3%)	*100*	*37*
Women 55–59	**75%**	**25%**	**18%**	**4%**	**3%**	***648***	***486***
Lowest	48%	52%	42%	2%	7%	*128*	*91*
2nd	66%	34%	22%	6%	6%	*154*	*116*
3rd	85%	15%	12%	2%	1%	*129*	*95*
4th	85%	15%	8%	7%	0%	*109*	*84*
Highest	95%	5%	4%	1%	0%	*127*	*100*
All women 50–59	**76%**	**24%**	**19%**	**2%**	**3%**	***269***	***340***
Lowest	51%	49%	46%	3%	0%	*55*	*59*
2nd	73%	27%	17%	0%	10%	*48*	*61*
3rd	79%	21%	15%	3%	3%	*45*	*59*
4th	84%	16%	13%	0%	3%	*54*	*69*
Highest	90%	10%	7%	2%	1%	*66*	*92*

For variable definitions, see AE.22 and AE.23. For related text, see E.17 and E.18.

Table E11. Mean self-reported chances (%) of health limiting ability to work at age 65 (workers aged under 65 only), by age, gender and wealth group: wave 7

	All	Wealth group				
		Lowest	2nd	3rd	4th	Highest
Men (50–64)	**35.5**	**45.4**	**38.2**	**35.9**	**32.7**	**26.3**
50–54	38.6	[43.9]	43.2	[38.6]	[33.8]	–
55–59	36.0	[38.3]	43.2	36.2	33.9	29.2
60–64	25.1	[30.4]	23.2	29.3	27.5	17.9
Women (50–64)	**36.8**	**41.4**	**40.0**	**38.5**	**37.4**	**25.7**
50–54	43.3	[44.8]	44.8	[45.2]	[45.8]	–
55–59	34.9	[41.0]	36.7	37.2	34.6	26.3
60–64	25.6	[30.3]	31.1	26.2	24.9	18.9

For variable definitions, see AE.8, AE.22 and AE.23. For related text, see E.19.

Table E11N. Sample sizes for Table E11: wave 7

	Sample sizes by age and gender		Sample sizes by age, gender and wealth group									
			Weighted N					*Unweighted N*				
	Wted N	*Unwted N*	Lowest	2nd	3rd	4th	Highest	Lowest	2nd	3rd	4th	Highest
Men (50–64)	***1,446***	***838***	*250*	*338*	*273*	*296*	*289*	*126*	*178*	*161*	*182*	*191*
50–54	*619*	*187*	*120*	*180*	*104*	*121*	*94*	*35*	*59*	*33*	*33*	*27*
55–59	*496*	*288*	*82*	*98*	*109*	*90*	*117*	*43*	*56*	*62*	*54*	*73*
60–64	*330*	*363*	*47*	*60*	*60*	*85*	*78*	*48*	*63*	*66*	*95*	*91*
Women (50–59)	***1,250***	***876***	*215*	*343*	*234*	*225*	*233*	*134*	*222*	*168*	*164*	*188*
50–54	*566*	*233*	*118*	*177*	*98*	*98*	*74*	*49*	*73*	*42*	*40*	*29*
55–59	*433*	*324*	*63*	*108*	*93*	*78*	*91*	*45*	*80*	*69*	*61*	*69*
60–64	*251*	*319*	*34*	*57*	*43*	*49*	*69*	*40*	*69*	*57*	*63*	*90*

Table EL1a. Mean equivalised weekly family TOTAL income (£), by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**348.11**	**351.57**	**355.72**	**335.08**	**310.52**	**316.50**	**318.73**	***313***	***301***
50–54	387.42	357.50	373.88	345.76	306.05	278.44	327.15	*72*	*63*
55–59	329.38	370.73	328.31	323.95	281.44	302.99	313.67	*76*	*74*
60–64	307.21	348.88	398.67	324.88	310.98	346.92	345.14	*57*	*53*
65–69	326.27	349.32	332.95	339.22	320.20	326.68	299.01	*48*	*50*
70–74	[396.32]	[315.54]	[339.15]	[325.12]	[306.71]	[320.56]	[296.49]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**283.84**	**300.54**	**270.32**	**292.47**	**280.26**	**272.11**	**271.86**	***689***	***754***
50–54	324.64	328.42	331.31	347.66	329.06	304.71	308.25	*116*	*127*
55–59	319.93	320.98	297.06	338.43	306.95	303.29	296.23	*93*	*122*
60–64	301.06	306.78	290.14	294.50	268.78	270.40	266.67	*99*	*122*
65–69	303.66	287.68	277.07	273.58	277.75	272.27	260.58	*122*	*157*
70–74	250.90	348.67	238.48	282.12	284.62	258.23	260.68	*107*	*116*
75–79	218.11	227.14	211.40	236.27	220.30	225.89	243.14	*91*	*68*
80+	[238.72]	[257.56]	[213.57]	[254.43]	[254.59]	[260.31]	[261.87]	*60*	*42*
Partnered men	**460.30**	**442.38**	**429.74**	**415.23**	**401.66**	**395.58**	**395.35**	***1,490***	***1,446***
50–54	495.16	510.63	496.77	490.39	444.46	433.25	422.09	*410*	*363*
55–59	523.20	487.76	452.03	431.51	439.83	432.13	432.52	*354*	*370*
60–64	472.33	444.45	430.66	395.31	387.41	389.79	400.75	*271*	*267*
65–69	399.05	352.47	361.71	347.86	332.38	346.41	329.98	*225*	*233*
70–74	344.96	335.87	360.31	341.86	362.41	327.07	351.71	*143*	*143*
75–79	352.00	341.93	311.77	349.81	341.13	334.59	346.75	*75*	*59*
80+	–	–	–	–	–	–	–	*13*	*11*
Partnered women	**439.50**	**422.00**	**397.22**	**391.63**	**375.65**	**375.86**	**366.70**	***1,495***	***1,490***
50–54	539.00	509.24	467.06	463.61	439.87	466.65	420.69	*406*	*381*
55–59	436.72	443.78	430.86	423.33	395.35	378.94	381.85	*372*	*406*
60–64	441.86	433.27	388.61	380.42	356.33	348.70	351.26	*278*	*291*
65–69	382.39	331.63	330.43	321.49	317.13	324.84	312.95	*220*	*236*
70–74	306.15	307.43	304.02	299.36	310.99	288.82	304.74	*148*	*125*
75–79	[330.49]	[290.18]	[273.08]	[275.11]	[305.16]	[302.51]	[346.89]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.4, AE.7, AE.9, AE.20 and AE.23. For related text, see E.21.

Table EL1b. Mean equivalised weekly family EARNINGS (£), by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**160.91**	**138.56**	**126.38**	**91.89**	**64.80**	**43.77**	**37.42**	***313***	***301***
50–54	315.65	275.85	282.34	214.80	152.48	121.78	89.83	*72*	*63*
55–59	216.79	221.80	197.53	158.06	102.34	40.58	43.07	*76*	*74*
60–64	110.72	94.07	52.99	7.70	15.31	18.99	28.56	*57*	*53*
65–69	41.15	19.96	14.90	15.80	5.06	6.73	8.23	*48*	*50*
70–74	[92.50]	[7.78]	[15.75]	[9.56]	[14.05]	[16.41]	[0.26]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**71.06**	**65.03**	**57.29**	**50.92**	**33.17**	**20.84**	**17.40**	***689***	***754***
50–54	216.40	223.35	227.01	207.26	146.97	92.09	80.57	*116*	*127*
55–59	155.02	123.90	104.26	73.65	47.33	26.13	20.14	*93*	*122*
60–64	58.74	56.47	23.94	36.00	12.26	9.20	9.80	*99*	*122*
65–69	16.92	14.56	6.81	4.18	2.12	3.87	0.00	*122*	*157*
70–74	12.69	3.51	2.81	0.14	0.77	0.08	0.00	*107*	*116*
75–79	0.42	1.18	1.18	0.00	0.22	0.00	0.00	*91*	*68*
80+	[0.75]	-[4.16]	[0.00]	[0.00]	[0.00]	[0.00]	[0.00]	*60*	*42*
Partnered men	**267.52**	**220.77**	**197.89**	**153.85**	**123.84**	**83.54**	**62.15**	***1,490***	***1,446***
50–54	429.73	415.71	387.80	345.22	276.70	199.47	157.83	*410*	*363*
55–59	359.12	302.99	270.12	187.18	158.79	88.10	59.04	*354*	*370*
60–64	265.81	141.14	106.87	52.84	41.38	31.36	24.04	*271*	*267*
65–69	80.37	42.23	38.30	25.91	15.93	10.45	2.84	*225*	*233*
70–74	28.48	22.30	16.36	8.51	2.43	5.09	2.94	*143*	*143*
75–79	16.86	8.31	4.46	4.15	1.67	1.22	0.00	*75*	*59*
80+	–	–	–	–	–	–	–	*13*	*11*
Partnered women	**232.61**	**187.39**	**157.14**	**123.11**	**87.65**	**58.60**	**40.10**	***1,495***	***1,490***
50–54	435.93	382.66	345.82	290.32	218.70	145.64	99.54	*406*	*381*
55–59	289.83	240.79	201.12	134.26	89.39	59.39	38.09	*372*	*406*
60–64	158.10	107.91	57.82	49.65	25.89	16.93	13.73	*278*	*291*
65–69	71.27	22.54	16.79	12.41	7.89	8.04	2.63	*220*	*236*
70–74	14.36	7.56	9.28	1.02	2.78	1.61	8.35	*148*	*125*
75–79	[11.61]	[1.02]	[0.42]	[0.55]	[0.00]	[0.80]	[0.00]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.6, AE.7, AE.9, AE.16 and AE.23. For related text, see E.21.

Table EL1c. Mean equivalised weekly family PRIVATE PENSION income (£), by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**77.21**	**92.79**	**93.77**	**100.91**	**101.23**	**105.45**	**109.40**	***313***	***301***
50–54	27.98	37.81	41.00	67.29	72.90	88.38	125.80	*72*	*63*
55–59	41.09	71.39	53.31	67.22	70.81	79.81	91.22	*76*	*74*
60–64	97.13	104.87	136.92	119.89	109.51	119.48	111.84	*57*	*53*
65–69	107.39	142.35	128.56	135.71	129.02	132.79	102.98	*48*	*50*
70–74	[126.91]	[119.54]	[115.48]	[121.86]	[116.61]	[100.58]	[106.74]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**57.86**	**77.86**	**46.93**	**62.10**	**71.04**	**64.23**	**68.32**	***689***	***754***
50–54	12.50	18.90	16.70	35.48	49.58	48.57	49.02	*116*	*127*
55–59	51.06	63.52	44.82	77.25	82.56	83.05	94.53	*93*	*122*
60–64	71.73	77.46	75.29	70.88	71.93	73.43	73.29	*99*	*122*
65–69	95.53	90.60	62.44	72.94	84.11	76.81	75.25	*122*	*157*
70–74	66.62	159.72	45.52	70.11	87.00	62.16	70.59	*107*	*116*
75–79	49.20	58.48	39.32	51.40	53.38	47.47	54.48	*91*	*68*
80+	[54.49]	[70.92]	[44.78]	[56.54]	[65.18]	[53.63]	[59.25]	*60*	*42*
Partnered men	**82.90**	**100.42**	**103.21**	**119.75**	**129.00**	**138.65**	**150.21**	***1,490***	***1,446***
50–54	24.15	43.99	52.48	78.16	99.04	129.39	134.76	*410*	*363*
55–59	64.43	87.46	96.61	124.10	136.65	147.02	166.98	*354*	*370*
60–64	111.76	156.96	144.35	153.12	153.97	153.17	170.85	*271*	*267*
65–69	138.00	129.30	134.33	135.12	129.78	137.09	131.49	*225*	*233*
70–74	121.50	119.93	122.85	120.94	143.64	118.53	150.76	*143*	*143*
75–79	136.74	131.45	121.27	143.30	134.66	138.13	135.47	*75*	*59*
80+	-	-	-	-	-	-	-	*13*	*11*
Partnered women	**83.98**	**102.71**	**99.76**	**110.97**	**122.44**	**124.85**	**131.44**	***1,495***	***1,490***
50–54	33.01	57.13	67.01	88.79	114.03	133.24	136.30	*406*	*381*
55–59	73.18	93.98	97.81	117.00	132.37	129.32	147.75	*372*	*406*
60–64	120.92	162.11	139.42	141.22	138.41	136.16	137.00	*278*	*291*
65–69	132.12	125.84	114.22	123.39	122.93	122.28	116.71	*220*	*236*
70–74	99.22	102.76	97.94	93.87	96.74	84.47	107.00	*148*	*125*
75–79	[111.29]	[110.49]	[102.05]	[92.67]	[113.43]	[109.03]	[106.46]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.5, AE.9, AE.15 and AE.23. For related text, see E.21.

Table EL1d. Mean equivalised weekly family STATE PENSION AND BENEFIT income (£), by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**78.61**	**91.59**	**102.26**	**106.14**	**124.84**	**143.04**	**150.83**	***313***	***301***
50–54	27.98	31.68	35.29	40.69	59.38	54.01	90.82	*72*	*63*
55–59	44.85	49.06	43.26	62.09	97.17	148.82	156.50	*76*	*74*
60–64	59.02	106.53	146.25	148.70	160.77	176.66	180.05	*57*	*53*
65–69	143.02	144.57	165.70	157.02	163.39	172.09	164.71	*48*	*50*
70–74	[143.48]	[159.95]	[170.98]	[160.61]	[161.10]	[178.62]	[174.11]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**122.79**	**135.56**	**136.51**	**150.64**	**156.93**	**164.49**	**166.28**	***689***	***754***
50–54	53.79	54.44	53.47	68.29	99.29	127.16	139.72	*116*	*127*
55–59	72.16	106.13	122.90	149.18	158.29	162.74	161.94	*93*	*122*
60–64	149.76	151.83	155.92	158.08	164.03	160.33	168.36	*99*	*122*
65–69	159.82	160.69	165.28	160.92	166.20	171.30	169.62	*122*	*157*
70–74	150.59	173.67	170.27	193.65	185.45	187.02	179.23	*107*	*116*
75–79	134.26	143.84	144.90	162.18	157.90	169.06	166.57	*91*	*68*
80+	[148.30]	[177.64]	[153.69]	[185.54]	[182.21]	[183.84]	[188.64]	*60*	*42*
Partnered men	**70.25**	**80.31**	**87.94**	**100.01**	**117.26**	**135.55**	**150.85**	***1,490***	***1,446***
50–54	17.11	19.94	20.11	27.28	39.49	51.13	92.92	*410*	*363*
55–59	49.28	43.26	48.13	70.47	110.99	153.79	166.21	*354*	*370*
60–64	51.52	97.84	131.62	147.48	154.87	172.10	172.23	*271*	*267*
65–69	141.08	151.93	150.34	155.53	168.76	171.81	177.32	*225*	*233*
70–74	147.31	152.35	161.64	164.59	168.80	183.34	177.48	*143*	*143*
75–79	151.10	159.57	153.06	166.85	175.74	170.71	178.95	*75*	*59*
80+	-	-	-	-	-	-	-	*13*	*11*
Partnered women	**81.68**	**93.88**	**101.72**	**115.13**	**135.18**	**153.83**	**166.52**	***1,495***	***1,490***
50–54	40.68	28.02	25.61	43.43	81.32	115.22	146.58	*406*	*381*
55–59	38.43	72.36	90.33	117.75	135.67	156.71	163.00	*372*	*406*
60–64	105.27	126.67	141.35	147.67	156.84	168.71	174.51	*278*	*291*
65–69	134.10	147.95	151.06	150.35	164.81	172.15	173.28	*220*	*236*
70–74	144.19	154.42	158.63	166.35	170.20	182.84	173.25	*148*	*125*
75–79	[158.20]	[153.25]	[158.31]	[160.99]	[179.07]	[180.46]	[230.99]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.7, AE.9, AE.17, AE.19 and AE.23. For related text, see E.21.

Table EL1e. Mean equivalised weekly family ASSET AND OTHER income (£), by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**31.38**	**28.63**	**32.60**	**36.14**	**19.65**	**24.23**	**20.95**	***313***	***301***
50–54	15.81	12.15	15.25	22.98	21.29	14.26	20.69	*72*	*63*
55–59	26.65	28.48	29.49	36.58	11.13	33.79	22.88	*76*	*74*
60–64	40.34	43.40	62.51	48.60	25.38	31.79	24.69	*57*	*53*
65–69	34.70	42.43	23.79	30.69	22.73	15.07	23.09	*48*	*50*
70–74	[33.42]	[28.27]	[36.95]	[33.10]	[14.95]	[24.94]	[15.37]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**32.14**	**22.01**	**29.53**	**28.98**	**19.12**	**22.56**	**19.84**	***689***	***754***
50–54	41.95	31.73	34.14	36.63	33.22	36.89	38.42	*116*	*127*
55–59	41.68	27.42	25.09	38.34	18.76	31.37	19.61	*93*	*122*
60–64	20.83	21.03	34.99	30.88	20.56	27.43	15.22	*99*	*122*
65–69	31.40	21.73	42.50	35.54	25.33	20.29	15.72	*122*	*157*
70–74	21.00	11.77	19.89	18.22	11.39	8.96	10.85	*107*	*116*
75–79	34.23	23.64	26.00	22.69	8.79	9.36	22.08	*91*	*68*
80+	[35.19]	[13.16]	[15.10]	[12.34]	[7.20]	[22.84]	[13.98]	*60*	*42*
Partnered men	**39.63**	**40.55**	**41.08**	**41.33**	**31.94**	**38.31**	**32.45**	***1,490***	***1,446***
50–54	24.18	31.09	36.70	39.73	28.91	53.57	36.26	*410*	*363*
55–59	50.37	53.23	37.17	48.69	34.16	43.23	41.84	*354*	*370*
60–64	43.24	47.83	47.82	41.88	37.19	33.15	33.62	*271*	*267*
65–69	39.60	29.02	38.74	31.55	17.91	27.05	18.32	*225*	*233*
70–74	47.67	41.16	59.65	47.78	47.55	20.11	20.53	*143*	*143*
75–79	47.30	42.60	32.98	35.51	29.06	24.53	32.33	*75*	*59*
80+	–	–	–	–	–	–	–	*13*	*11*
Partnered women	**41.23**	**37.94**	**39.67**	**42.21**	**31.41**	**39.36**	**28.53**	***1,495***	***1,490***
50–54	29.38	41.62	28.94	40.53	27.40	74.66	37.84	*406*	*381*
55–59	35.28	36.65	43.00	54.05	38.24	33.40	32.90	*372*	*406*
60–64	57.58	36.17	50.02	41.85	35.19	26.90	25.99	*278*	*291*
65–69	44.90	35.20	48.37	35.35	21.51	22.37	20.34	*220*	*236*
70–74	48.38	42.68	38.17	38.12	41.26	19.90	16.09	*148*	*125*
75–79	[49.39]	[25.42]	[12.31]	[20.90]	[12.67]	[12.23]	[9.44]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.1, AE.3, AE.7, AE.9, AE.14 and AE.23. For related text, see E.21.

Table EL2a. Mean equivalised weekly family TOTAL income (£), by baseline (wave 1) age and education

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Aged 50–54	**489.84**	**480.00**	**457.94**	**454.11**	**420.68**	**422.18**	**402.57**	***988***	***923***
Low education	419.09	388.17	381.95	363.62	343.97	336.10	330.46	*408*	*338*
Med. education	460.51	481.25	445.65	467.61	419.57	427.83	405.81	*376*	*364*
High education	685.52	664.77	635.74	614.32	576.20	588.03	545.34	*204*	*221*
Aged 55–59	**449.48**	**441.99**	**417.37**	**409.69**	**394.70**	**386.56**	**386.58**	***885***	***962***
Low education	357.29	356.20	342.15	334.75	312.45	305.62	303.59	*423*	*402*
Med. education	485.94	449.22	439.45	433.13	436.87	420.11	415.01	*340*	*400*
High education	668.81	720.46	618.93	611.96	564.81	574.63	599.55	*121*	*160*
Aged 60–64	**423.40**	**411.52**	**392.61**	**369.93**	**352.31**	**353.40**	**358.08**	***701***	***730***
Low education	344.97	309.76	314.12	292.66	284.94	286.04	285.21	*370*	*342*
Med. education	438.28	444.43	420.01	398.51	386.45	387.67	400.07	*222*	*251*
High education	656.88	682.80	604.86	576.62	507.59	511.54	518.20	*110*	*137*
Aged 65–69	**370.81**	**332.28**	**332.92**	**323.43**	**313.21**	**323.95**	**307.76**	***601***	***663***
Low education	312.82	286.95	284.94	274.62	268.77	282.44	260.58	*341*	*343*
Med. education	422.17	370.89	360.07	360.92	348.10	346.63	339.91	*195*	*233*
High education	522.86	457.36	502.36	468.18	443.68	475.12	462.61	*64*	*87*
Aged 70–74	**311.82**	**328.38**	**309.06**	**311.22**	**321.49**	**296.36**	**309.16**	***424***	***414***
Low education	264.02	314.97	274.41	280.53	300.85	276.88	278.04	*263*	*232*
Med. education	348.44	313.43	331.06	317.38	315.18	305.47	328.21	*132*	*144*
High education	[575.81]	[514.22]	[526.30]	[558.38]	[532.60]	[429.95]	[502.95]	*29*	*38*
Aged 75+	**297.37**	**284.17**	**264.41**	**287.17**	**288.51**	**288.19**	**300.15**	***332***	***253***
Low education	250.54	246.80	224.87	251.24	256.13	249.93	271.66	*185*	*128*
Med. education	338.40	314.38	297.20	317.60	318.80	321.01	323.13	*128*	*104*
High education	–	–	–	–	–	–	–	*19*	*21*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.5, AE.7, AE.9, AE.20 and AE.23. For related text, see E.22.

Table EL2b. Mean equivalised weekly family EARNINGS (£), by baseline (wave 1) age and education

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Aged 50–54	**403.45**	**372.44**	**345.71**	**298.25**	**229.72**	**160.47**	**120.32**	***988***	***923***
Low education	338.73	300.48	289.00	237.05	180.39	139.17	99.08	*408*	*338*
Med. education	369.88	366.27	338.69	310.04	233.27	158.87	120.05	*376*	*364*
High education	594.87	529.25	472.56	401.42	322.61	206.32	164.47	*204*	*221*
Aged 55–59	**296.24**	**251.24**	**218.08**	**150.51**	**113.16**	**65.31**	**42.90**	***885***	***962***
Low education	235.88	211.81	195.33	133.14	96.23	54.87	31.66	*423*	*402*
Med. education	305.83	227.77	203.04	142.75	119.96	72.58	52.55	*340*	*400*
High education	479.85	454.82	340.17	234.75	153.59	81.40	55.26	*121*	*160*
Aged 60–64	**182.34**	**110.53**	**71.88**	**45.74**	**28.70**	**21.58**	**18.24**	***701***	***730***
Low education	170.12	89.78	64.59	35.53	24.70	19.71	13.84	*370*	*342*
Med. education	145.98	100.61	56.90	40.25	27.03	21.65	19.14	*222*	*251*
High education	296.66	199.41	127.03	92.00	45.36	27.79	31.22	*110*	*137*
Aged 65–69	**61.74**	**27.79**	**22.76**	**15.85**	**9.38**	**8.03**	**2.57**	***601***	***663***
Low education	59.76	23.74	24.17	14.29	9.76	9.03	1.99	*341*	*343*
Med. education	73.95	33.85	19.80	16.99	9.02	7.24	4.01	*195*	*233*
High education	35.15	30.96	24.32	20.67	8.42	5.18	1.26	*64*	*87*
Aged 70–74	**24.07**	**11.56**	**10.51**	**3.91**	**2.94**	**3.41**	**3.91**	***424***	***414***
Low education	21.81	9.16	10.15	1.95	3.21	4.34	5.16	*263*	*232*
Med. education	21.75	13.18	11.24	7.38	2.66	1.37	1.08	*132*	*144*
High education	[54.69]	[25.89]	[10.46]	[5.87]	[1.67]	[4.14]	[5.39]	*29*	*38*
Aged 75+	**8.91**	**2.91**	**1.58**	**1.40**	**0.63**	**0.48**	**0.00**	***332***	***253***
Low education	8.22	3.60	1.01	1.50	0.67	0.63	0.00	*185*	*128*
Med. education	8.24	1.69	1.03	1.09	0.49	0.32	0.00	*128*	*104*
High education	–	–	–	–	–	–	–	*19*	*21*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.5, AE.6, AE.7, AE.9, AE.16 and AE.23. For related text, see E.22.

Table EL2c. Mean equivalised weekly family PRIVATE PENSION income (£), by baseline (wave 1) age and education

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Aged 50–54	**26.90**	**45.80**	**53.23**	**77.16**	**98.12**	**119.41**	**125.81**	***988***	***923***
Low education	17.99	33.77	38.91	54.53	69.54	86.27	85.04	*408*	*338*
Med. education	34.37	54.06	56.75	81.12	95.49	115.48	117.90	*376*	*364*
High education	30.98	54.75	75.78	116.16	160.13	194.54	224.56	*204*	*221*
Aged 55–59	**65.00**	**86.84**	**88.49**	**112.13**	**124.31**	**127.90**	**145.85**	***885***	***962***
Low education	35.83	50.64	48.33	64.55	74.08	74.73	84.95	*423*	*402*
Med. education	90.82	114.86	114.48	138.15	148.84	152.63	165.67	*340*	*400*
High education	94.42	134.23	156.63	209.36	231.67	244.07	305.04	*121*	*160*
Aged 60–64	**108.66**	**143.79**	**132.41**	**134.39**	**132.94**	**132.65**	**139.40**	***701***	***730***
Low education	61.37	75.45	81.42	83.71	81.16	77.71	79.76	*370*	*342*
Med. education	134.56	177.48	153.49	162.91	159.54	154.27	171.14	*222*	*251*
High education	215.29	302.91	263.69	249.70	251.57	274.39	275.72	*110*	*137*
Aged 65–69	**126.64**	**121.40**	**112.45**	**118.95**	**118.04**	**120.60**	**113.21**	***601***	***663***
Low education	85.55	87.11	77.82	83.38	74.91	83.17	75.67	*341*	*343*
Med. education	155.51	146.16	131.84	142.21	154.26	142.45	136.63	*195*	*233*
High education	257.32	229.79	235.30	236.89	237.57	252.64	243.07	*64*	*87*
Aged 70–74	**100.50**	**124.26**	**94.35**	**99.01**	**111.53**	**91.54**	**112.79**	***424***	***414***
Low education	72.83	114.79	69.26	72.48	93.58	68.17	77.06	*263*	*232*
Med. education	118.24	114.46	103.41	109.69	113.56	103.10	142.72	*132*	*144*
High education	[268.87]	[252.10]	[282.90]	[288.86]	[262.07]	[248.92]	[299.58]	*29*	*38*
Aged 75+	**96.01**	**99.17**	**86.57**	**96.18**	**100.07**	**92.84**	**91.97**	***332***	***253***
Low education	62.79	60.41	50.43	61.68	63.24	58.92	64.15	*185*	*128*
Med. education	122.99	129.73	116.92	124.09	131.44	117.41	110.06	*128*	*104*
High education	–	–	–	–	–	–	–	*19*	*21*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.5, AE.7, AE.9, AE.15 and AE.23. For related text, see E.22.

Table EL2d. Mean equivalised weekly family STATE PENSION AND BENEFIT income (£), by baseline (wave 1) age and education

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Aged 50–54	**31.59**	**27.54**	**27.51**	**39.65**	**64.84**	**85.33**	**119.59**	***988***	***923***
Low education	51.08	39.16	38.26	50.24	79.45	97.26	131.06	*408*	*338*
Med. education	22.39	23.11	24.18	36.74	59.89	84.29	119.22	*376*	*364*
High education	9.50	12.20	11.88	23.37	44.66	62.82	96.62	*204*	*221*
Aged 55–59	**46.70**	**62.36**	**72.93**	**97.57**	**125.13**	**155.80**	**164.05**	***885***	***962***
Low education	63.48	69.74	78.36	103.56	125.11	156.64	167.74	*423*	*402*
Med. education	36.24	60.71	75.54	96.87	130.46	155.38	161.54	*340*	*400*
High education	17.47	41.30	46.66	78.14	110.23	154.03	158.05	*121*	*160*
Aged 60–64	**86.86**	**117.58**	**140.08**	**149.12**	**157.48**	**169.52**	**173.13**	***701***	***730***
Low education	94.03	122.69	144.28	153.12	162.43	173.98	178.78	*370*	*342*
Med. education	85.07	115.46	143.71	147.13	153.66	168.82	173.68	*222*	*251*
High education	66.39	104.87	118.45	139.46	148.69	155.91	153.09	*110*	*137*
Aged 65–69	**142.34**	**151.58**	**155.12**	**154.85**	**164.64**	**171.72**	**172.75**	***601***	***663***
Low education	142.34	154.57	156.36	156.91	166.91	174.20	173.40	*341*	*343*
Med. education	146.12	150.44	156.68	153.09	163.95	170.17	176.20	*195*	*233*
High education	130.82	138.96	143.89	149.31	154.66	163.28	158.65	*64*	*87*
Aged 70–74	**146.80**	**158.99**	**163.45**	**172.13**	**172.86**	**183.76**	**176.16**	***424***	***414***
Low education	147.34	168.49	171.70	181.13	181.71	192.78	185.47	*263*	*232*
Med. education	149.06	145.12	152.44	160.95	160.20	174.16	162.89	*132*	*144*
High education	[131.91]	[135.02]	[138.00]	[141.23]	[149.97]	[146.05]	[151.76]	*29*	*38*
Aged 75+	**149.08**	**155.51**	**150.84**	**162.90**	**170.29**	**176.87**	**188.12**	***332***	***253***
Low education	153.31	160.83	157.59	171.15	179.59	179.41	193.55	*185*	*128*
Med. education	146.08	151.62	144.21	154.16	162.65	177.38	184.28	*128*	*104*
High education	–	–	–	–	–	–	–	*19*	*21*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.3, AE.5, AE.7, AE.9, AE.17, AE.19 and AE.23. For related text, see E.22.

Table EL2e. Mean equivalised weekly family ASSET AND OTHER income (£), by baseline (wave 1) age and education

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Aged 50–54	**27.91**	**34.39**	**31.88**	**38.82**	**28.55**	**58.10**	**36.44**	***988***	***923***
Low education	11.29	14.77	15.59	21.39	15.37	13.71	15.29	*408*	*338*
Med. education	33.87	37.81	27.07	39.71	31.65	69.76	47.77	*376*	*364*
High education	50.18	67.92	74.08	72.85	49.27	127.44	59.11	*204*	*221*
Aged 55–59	**41.54**	**41.28**	**37.96**	**49.00**	**32.56**	**37.50**	**34.41**	***885***	***962***
Low education	22.11	23.54	21.38	32.87	17.84	19.38	19.24	*423*	*402*
Med. education	53.05	45.89	45.33	55.04	37.87	39.35	36.77	*340*	*400*
High education	77.07	90.11	75.46	89.70	69.32	95.14	81.20	*121*	*160*
Aged 60–64	**45.54**	**39.27**	**48.23**	**40.92**	**33.19**	**29.64**	**27.29**	***701***	***730***
Low education	19.44	21.31	23.83	20.65	16.65	14.64	12.80	*370*	*342*
Med. education	72.67	50.88	65.91	48.21	46.23	42.93	36.11	*222*	*251*
High education	78.55	75.60	95.68	95.57	61.97	53.45	58.18	*110*	*137*
Aged 65–69	**40.08**	**31.43**	**42.57**	**33.88**	**21.15**	**23.60**	**19.23**	***601***	***663***
Low education	25.17	21.40	26.58	20.23	17.20	16.04	9.53	*341*	*343*
Med. education	46.60	40.44	51.67	48.62	20.87	26.78	23.05	*195*	*233*
High education	99.58	57.64	98.85	61.31	43.03	54.03	59.63	*64*	*87*
Aged 70–74	**40.44**	**33.55**	**40.82**	**36.17**	**34.16**	**17.65**	**16.29**	***424***	***414***
Low education	22.04	22.53	23.30	24.97	22.34	11.59	10.35	*263*	*232*
Med. education	59.39	40.58	63.99	39.33	38.76	26.83	21.51	*132*	*144*
High education	[120.33]	[101.22]	[96.01]	[122.42]	[118.88]	[30.84]	[46.23]	*29*	*38*
Aged 75+	**43.36**	**26.57**	**25.41**	**26.68**	**17.52**	**18.00**	**20.05**	***332***	***253***
Low education	26.22	21.96	15.84	16.91	12.63	10.97	13.95	*185*	*128*
Med. education	61.10	31.33	35.05	38.25	24.23	25.89	28.79	*128*	*104*
High education	–	–	–	–	–	–	–	*19*	*21*

Note: All values are expressed in January 2015 prices.

For variable definitions, see AE.1, AE.3, AE.5, AE.7, AE.9, AE.14 and AE.23. For related text, see E.22.

Table EL3. Interquartile ratio (p75/p25) of total equivalised net family income, by baseline (wave 1) age and family type

Age and family type in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Wted N*	*Unwted N*
Single men	**2.51**	**2.36**	**2.29**	**2.43**	**2.04**	**2.10**	**2.17**	***313***	***301***
50–54	2.35	3.21	2.78	3.13	3.10	2.82	3.01	*72*	*63*
55–59	2.93	2.65	2.44	2.85	1.75	1.96	2.11	*76*	*74*
60–64	2.38	2.14	1.97	2.27	1.87	1.93	2.07	*57*	*53*
65–69	2.50	2.19	1.98	1.87	1.80	1.81	1.78	*48*	*50*
70–74	[2.08]	[2.25]	[1.85]	[2.14]	[1.95]	[1.86]	[2.11]	*29*	*32*
75–79	–	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	–	*10*	*11*
Single women	**2.26**	**2.13**	**2.10**	**2.04**	**1.97**	**1.94**	**1.97**	***689***	***754***
50–54	3.20	2.60	2.56	2.33	2.08	1.96	2.08	*116*	*127*
55–59	2.63	2.28	2.23	2.35	1.97	2.18	2.16	*93*	*122*
60–64	2.41	2.21	2.40	2.24	2.00	2.01	2.04	*99*	*122*
65–69	2.33	2.02	2.04	1.95	1.95	1.84	1.96	*122*	*157*
70–74	1.95	1.89	1.77	1.90	1.87	1.80	1.87	*107*	*116*
75–79	1.54	1.68	1.75	1.85	1.82	1.93	1.63	*91*	*68*
80+	[1.86]	[1.68]	[2.07]	[1.67]	[1.71]	[1.84]	[1.81]	*60*	*42*
Partnered men	**2.10**	**2.05**	**2.12**	**2.06**	**2.07**	**1.99**	**1.91**	***1,490***	***1,446***
50–54	1.98	1.96	2.08	1.97	2.35	2.07	1.91	*410*	*363*
55–59	1.96	2.00	2.11	2.26	2.20	2.02	2.00	*354*	*370*
60–64	1.99	1.98	2.02	1.91	1.97	1.93	1.90	*271*	*267*
65–69	2.02	1.84	1.84	1.97	1.79	1.83	1.87	*225*	*233*
70–74	1.98	1.66	1.93	1.85	1.78	1.68	1.85	*143*	*143*
75–79	1.87	1.88	1.79	1.98	1.70	1.83	1.82	*75*	*59*
80+	–	–	–	–	–	–	–	*13*	*11*
Partnered women	**2.06**	**2.08**	**2.11**	**2.13**	**2.00**	**1.96**	**1.97**	***1,495***	***1,490***
50–54	1.94	1.95	1.93	2.25	2.27	2.16	2.00	*406*	*381*
55–59	2.10	2.12	2.08	2.01	2.10	2.00	1.98	*372*	*406*
60–64	2.16	2.14	2.19	1.98	1.94	2.01	1.92	*278*	*291*
65–69	1.83	1.71	1.90	1.94	1.66	1.70	1.82	*220*	*236*
70–74	2.01	1.78	1.88	1.81	1.96	1.72	1.90	*148*	*125*
75–79	[1.84]	[1.71]	[2.14]	[2.00]	[1.90]	[2.03]	[1.97]	*61*	*44*
80+	–	–	–	–	–	–	–	*11*	*7*
All family types	**2.25**	**2.12**	**2.20**	**2.20**	**2.07**	**2.02**	**2.01**	***3,987***	***3,991***
50–54	2.06	2.02	2.12	2.27	2.36	2.29	2.00	*1,004*	*934*
55–59	2.29	2.20	2.20	2.24	2.17	2.05	1.99	*895*	*972*
60–64	2.14	2.06	2.09	2.04	1.96	1.99	1.91	*705*	*733*
65–69	2.11	1.80	1.97	1.96	1.81	1.82	1.85	*615*	*676*
70–74	2.07	1.93	1.99	1.94	1.93	1.82	1.90	*426*	*416*
75–79	1.99	1.87	1.97	1.97	1.88	1.99	1.98	*248*	*189*
80+	2.24	2.03	2.17	1.89	2.03	2.15	1.82	*95*	*71*

For variable definitions, see AE.3, AE.7, AE.9, AE.20 and AE.23. For related text, see E.23.

Table EL4a. Persistency of making pension contributions in waves when observed to be under SPA, by age, gender and wealth group: aged under SPA and employed or self-employed at baseline only

Age and wealth group in 2002–03	Contributes to a pension …			*Wted*	*Unwted*
	Never	Sometimes	Always	*N*	*N*
	%	%	%		
All men 50–64	**21.1**	**48.8**	**30.0**	***891***	***874***
Lowest	41.8	39.5	18.7	*69*	*55*
2nd	19.8	53.2	27.0	*138*	*119*
3rd	22.6	44.5	32.8	*221*	*214*
4th	14.7	51.5	33.8	*254*	*257*
Highest	21.5	50.4	28.1	*209*	*229*
Men 50–54	**14.8**	**63.2**	**22.1**	***418***	***377***
Lowest	–	–	–	*36*	*27*
2nd	16.5	64.8	18.7	*76*	*62*
3rd	14.1	61.2	24.8	*97*	*88*
4th	11.4	63.3	25.4	*126*	*117*
Highest	12.6	67.9	19.6	*83*	*83*
Men 55–59	**21.5**	**45.8**	**32.7**	***314***	***338***
Lowest	–	–	–	*28*	*24*
2nd	(21.6)	(50.9)	(27.5)	*39*	*37*
3rd	20.5	42.0	37.5	*79*	*80*
4th	14.4	49.7	35.9	*90*	*104*
Highest	19.0	48.7	32.3	*79*	*93*
Men 60–64	**37.2**	**17.1**	**45.7**	***159***	***159***
Lowest	–	–	–	*5*	*4*
2nd	–	–	–	*23*	*20*
3rd	[44.7]	[13.3]	[42.0]	*45*	*46*
4th	[26.6]	[16.3]	[57.1]	*38*	*36*
Highest	41.3	22.4	36.4	*47*	*53*
All women 50–59	**30.4**	**24.1**	**45.5**	***705***	***752***
Lowest	48.3	23.1	28.6	*70*	*62*
2nd	28.3	26.8	44.9	*129*	*124*
3rd	31.4	20.0	48.6	*157*	*168*
4th	26.4	22.4	51.2	*185*	*206*
Highest	28.1	28.0	43.9	*164*	*192*
Women 50–54	**26.7**	**31.3**	**42.0**	***408***	***407***
Lowest	[46.8]	[26.5]	[26.8]	*46*	*39*
2nd	23.7	35.4	40.9	*83*	*73*
3rd	30.4	27.9	41.7	*87*	*89*
4th	18.3	28.9	52.8	*109*	*116*
Highest	25.8	36.7	37.5	*83*	*90*
Women 55–59	**35.5**	**14.1**	**50.4**	***297***	***345***
Lowest	–	–	–	*24*	*23*
2nd	36.5	11.2	52.3	*46*	*51*
3rd	32.7	10.2	57.1	*70*	*79*
4th	37.9	13.2	48.9	*76*	*90*
Highest	30.5	19.1	50.3	*81*	*102*

For variable definitions, see AE.3, AE.18, AE.22 and AE.23. For related text, see E.24 and E.25.

Table EL4b. Persistency of making pension contributions in waves when observed to be under SPA, by age, gender and wealth group: employed or self-employed in all waves observed below SPA

Age and wealth group in 2002–03	Contributes to a pension ... Never %	Sometimes %	Always %	*Wted N*	*Unwted N*
All aged 50–64	**26.1**	**23.3**	**50.6**	***1,113***	***1,145***
Lowest	41.1	24.1	34.7	*95*	*80*
2nd	24.5	26.0	49.5	*188*	*173*
3rd	27.1	20.2	52.6	*270*	*274*
4th	20.8	22.0	57.2	*298*	*320*
Highest	26.8	25.7	47.4	*263*	*298*
Men 50–64	**21.7**	**32.1**	**46.2**	***546***	***535***
Lowest	–	–	–	*36*	*29*
2nd	17.1	41.0	42.0	*86*	*74*
3rd	23.4	27.6	49.0	*142*	*137*
4th	16.1	32.2	51.7	*148*	*150*
Highest	24.4	33.0	42.6	*133*	*145*
Women 50–59	**30.4**	**14.9**	**54.7**	***567***	***610***
Lowest	42.3	23.8	33.8	*59*	*51*
2nd	30.9	13.3	55.8	*102*	*99*
3rd	31.4	12.0	56.6	*127*	*137*
4th	25.4	11.9	62.7	*149*	*170*
Highest	29.4	18.2	52.4	*130*	*153*

For variable definitions, see AE.18, AE.22 and AE.23. For related text, see E.26.

Table EL5. Persistence of self-reported financial difficulties and persistence of managing very well financially, by age and family type

Age and family type in 2002–03	Reports having financial difficulty ...			Reports managing very well ...			*Wted N*	*Unwted N*
	Never %	Sometimes %	Always %	Always %	Sometimes %	Never %		
Single men	**82.6**	**17.4**	**0.0**	**7.9**	**58.2**	**33.9**	***313***	***301***
50–54	77.6	22.4	0.0	1.5	55.0	43.6	*72*	*63*
55–59	78.1	21.9	0.0	7.0	54.6	38.4	*76*	*74*
60–64	80.8	19.2	0.0	6.4	63.9	29.7	*57*	*53*
65–69	83.4	16.6	0.0	14.2	50.9	34.9	*48*	*50*
70–74	(94.1)	(5.9)	(0.0)	(16.9)	(67.2)	(15.9)	*29*	*32*
75–79	–	–	–	–	–	–	*21*	*18*
80+	–	–	–	–	–	–	*10*	*11*
Single women	**81.4**	**18.3**	**0.3**	**6.9**	**59.1**	**33.9**	***694***	***757***
50–54	60.1	39.9	0.0	4.5	43.7	51.7	*118*	*128*
55–59	71.5	26.0	2.5	7.2	54.2	38.6	*93*	*122*
60–64	83.6	16.4	0.0	7.8	57.4	34.8	*99*	*122*
65–69	83.9	16.1	0.0	10.8	56.6	32.6	*124*	*158*
70–74	89.6	10.4	0.0	6.3	61.8	31.9	*109*	*117*
75–79	93.6	6.4	0.0	5.0	74.8	20.2	*91*	*68*
80+	(96.2)	(3.8)	(0.0)	(5.7)	(76.6)	(17.8)	*60*	*42*
Couples	**90.0**	**9.9**	**0.1**	**10.8**	**62.9**	**26.3**	***3,055***	***3,004***
50–54	87.5	12.2	0.3	11.3	62.3	26.4	*839*	*766*
55–59	88.1	11.6	0.2	12.2	60.2	27.6	*749*	*802*
60–64	92.5	7.5	0.0	11.7	62.1	26.2	*560*	*568*
65–69	89.2	10.8	0.0	9.8	60.4	29.9	*449*	*473*
70–74	92.4	7.6	0.0	6.0	71.2	22.8	*297*	*273*
75–79	100.0	0.0	0.0	11.2	71.7	17.1	*137*	*104*
80+	–	–	–	–	–	–	*24*	*18*

Note: The response categories are ‘manage very well’, ‘manage quite well’, ‘get by alright’, ‘don’t manage very well’, ‘have some financial difficulties’ and ‘have severe financial difficulties’. For the purposes of this table, ‘having financial difficulties’ includes those reporting that they ‘don't manage very well’, ‘have some financial difficulties’ or ‘have severe financial difficulties’. Those ‘managing very well’ for the purposes of this table include only those reporting in the highest category (‘manage very well’).

For variable definitions, see AE.9 and AE.23. For related text, see E.27 and E.28.

Table EL6a. Persistence of having too little money to do three or more items of the material deprivation index (waves 2–7), by education and family type: aged 50–SPA

Education and family type in 2002–03	Reports three or more items ... Never %	Sometimes %	Always %	*Wted N*	*Unwted N*
Aged 50–SPA	**78.3**	**20.1**	**1.6**	***2,243***	***2,251***
Single men	**70.4**	**27.7**	**1.9**	***200***	***186***
Low education	68.8	30.2	1.0	*118*	*99*
Medium education	72.5	22.0	5.5	*49*	*50*
High education	[72.8]	[27.2]	[0.0]	*34*	*37*
Single women	**49.7**	**40.8**	**9.5**	***207***	***245***
Low education	44.5	50.0	5.6	*97*	*100*
Medium education	52.4	31.2	16.3	*88*	*111*
High education	[61.4]	[38.6]	[0.0]	*22*	*34*
Partnered men	**84.7**	**14.8**	**0.5**	***1,038***	***1,009***
Low education	80.1	19.3	0.6	*453*	*386*
Medium education	86.1	13.2	0.7	*357*	*367*
High education	91.5	8.5	0.0	*228*	*256*
Partnered women	**79.3**	**19.7**	**0.9**	***798***	***811***
Low education	74.2	23.8	2.1	*357*	*322*
Medium education	81.1	18.9	0.0	*329*	*353*
High education	90.5	9.5	0.0	*112*	*136*

Note: See paragraph E.29 for the definition and description of the items on the deprivation index.

For variable definitions, see AE.4 and AE.23. For related text, see E.29–E.31.

Table EL6b. Persistence of having too little money to do three or more items of the material deprivation index (waves 2–7), by education and family type: aged SPA–74

Education and family type in 2002–03	Reports three or more items ...			*Wted*	*Unwted*
	Never	Sometimes	Always	*N*	*N*
	%	%	%		
Aged SPA–74	**76.8**	**22.3**	**0.9**	***1,420***	***1,504***
Single men	**75.9**	**24.1**	**0.0**	***75***	***80***
Low education	70.0	30.0	0.0	*56*	*56*
Medium education	–	–	–	*16*	*18*
High education	–	–	–	*4*	*6*
Single women	**65.8**	**32.7**	**1.6**	***331***	***396***
Low education	59.1	38.7	2.2	*191*	*209*
Medium education	72.3	27.0	0.7	*114*	*147*
High education	[86.9]	[13.1]	[0.0]	*26*	*40*
Partnered men	**80.1**	**19.7**	**0.2**	***365***	***373***
Low education	74.9	25.1	0.0	*208*	*189*
Medium education	86.3	13.7	0.0	*113*	*130*
High education	88.6	9.4	2.0	*44*	*54*
Partnered women	**80.6**	**18.3**	**1.1**	***649***	***655***
Low education	78.8	20.0	1.2	*351*	*317*
Medium education	80.4	18.3	1.3	*222*	*242*
High education	89.5	10.5	0.0	*75*	*96*

Note: See paragraph E.29 for the definition and description of the items on the deprivation index.

For variable definitions, see AE.5 and AE.23. For related text, see E.29–E.31.

Table EL6c. Persistence of having too little money to do three or more items of the material deprivation index (waves 2–7), by education and family type: aged 75+

Education and family type in 2002–03	Reports three or more items ... Never %	Sometimes %	Always %	*Wted N*	*Unwted N*
Aged 75+	**87.6**	**12.4**	**0.0**	***334***	***254***
Single men	**–**	**–**	**–**	***31***	***29***
Low education	–	–	–	*18*	*15*
Medium education	–	–	–	*9*	*9*
High education	–	–	–	*4*	*5*
Single women	**85.8**	**14.2**	**0.0**	***145***	***106***
Low education	82.9	17.1	0.0	*88*	*58*
Medium education	[91.1]	[8.9]	[0.0]	*52*	*42*
High education	–	–	–	*5*	*6*
Partnered men	**87.3**	**12.7**	**0.0**	***88***	***70***
Low education	[85.6]	[14.4]	[0.0]	*47*	*34*
Medium education	–	–	–	*35*	*29*
High education	–	–	–	*7*	*7*
Partnered women	**[92.6]**	**[7.4]**	**[0.0]**	***69***	***49***
Low education	–	–	–	*33*	*22*
Medium education	–	–	–	*33*	*24*
High education	–	–	–	*3*	*3*

Note: See paragraph E.29 for the definition and description of the items on the deprivation index.

For variable definitions, see AE.5 and AE.23. For related text, see E.29–E.31.

Table EL7a. Percentage of men employed or self-employed at baseline (wave 1) and, of those, percentage still in employment or self-employment at waves 2–7, by wealth group and age

Wealth group and age in 2002–03	Whole sample: % in empl. or self- empl. in 2002–03	Of those employed or self-employed at baseline: % still in employment or self-employment at ...							*Wted N*	*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7		
All men 50–74	**58.0**	**100**	**82.8**	**75.2**	**66.3**	**54.7**	**41.3**	**31.3**	***976***	***960***
Lowest	37.7	100	81.9	74.0	69.0	54.8	33.2	21.0	*80*	*63*
2nd	53.5	100	86.3	76.5	71.3	60.6	48.8	34.4	*146*	*128*
3rd	64.5	100	80.3	74.1	66.0	53.5	37.9	28.0	*241*	*234*
4th	66.2	100	83.2	78.6	64.0	54.6	42.0	33.4	*272*	*276*
Highest	57.3	100	82.9	71.8	65.2	52.2	42.3	33.9	*237*	*259*
Men 50–54	**86.9**	**100**	**92.9**	**89.6**	**85.6**	**74.8**	**60.9**	**47.0**	***418***	***377***
Lowest	62.7	–	–	–	–	–	–	–	*36*	*27*
2nd	83.4	100	97.4	93.6	90.1	78.1	64.9	45.7	*76*	*62*
3rd	95.4	100	90.6	92.3	87.4	71.6	61.2	47.2	*97*	*88*
4th	93.7	100	92.3	89.7	82.8	79.6	64.4	51.6	*126*	*117*
Highest	86.3	100	94.4	87.1	88.2	69.9	56.3	44.7	*83*	*83*
Men 55–59	**72.9**	**100**	**86.4**	**80.8**	**69.3**	**53.5**	**34.0**	**24.7**	***314***	***338***
Lowest	42.7	–	–	–	–	–	–	–	*28*	*24*
2nd	66.7	[100]	[88.9]	[74.9]	[67.6]	[60.5]	[42.7]	[30.0]	*39*	*37*
3rd	80.1	100	89.6	82.6	73.8	58.3	27.7	17.9	*79*	*80*
4th	91.5	100	78.8	81.6	64.8	44.4	32.6	25.0	*90*	*104*
Highest	71.3	100	92.0	82.7	69.4	58.1	43.8	34.7	*79*	*93*
Men 60–64	**48.4**	**100**	**66.5**	**43.6**	**29.2**	**22.4**	**16.3**	**14.2**	***159***	***159***
Lowest	15.4	–	–	–	–	–	–	–	*5*	*4*
2nd	50.5	–	–	–	–	–	–	–	*23*	*20*
3rd	58.6	[100]	[59.0]	[42.6]	[29.4]	[23.5]	[15.2]	[13.4]	*45*	*46*
4th	53.1	[100]	[76.3]	[45.9]	[19.5]	[13.4]	[4.0]	[6.7]	*38*	*36*
Highest	47.7	100	64.1	42.5	37.4	27.5	24.8	23.4	*47*	*53*
Men 65–74	**19.2**	**100**	**50.2**	**42.2**	**29.6**	**20.5**	**19.4**	**10.7**	***85***	***86***
Lowest	19.8	–	–	–	–	–	–	–	*11*	*8*
2nd	10.8	–	–	–	–	–	–	–	*8*	*9*
3rd	21.1	–	–	–	–	–	–	–	*20*	*20*
4th	17.0	–	–	–	–	–	–	–	*18*	*19*
Highest	25.6	[100]	[54.4]	[44.3]	[31.0]	[24.2]	[25.5]	[16.3]	*27*	*30*

For variable definitions, see AE.3, AE.9, AE.22 and AE.23. For related text, see E.32.

Table EL7b. Percentage of women employed or self-employed at baseline (wave 1) and, of those, percentage still in employment or self-employment at waves 2–7, by wealth group and age

Wealth group and age in 2002–03	Whole sample: % in empl. or self-empl. in 2002–03	Of those employed or self-employed at baseline, % still in employment or self-employment at ...							*Wted N*	*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7		
All women 50–74	**45.3**	**100**	**81.4**	**70.5**	**54.9**	**41.8**	**30.7**	**22.1**	***889***	***962***
Lowest	28.9	100	85.0	75.8	55.4	44.6	33.8	24.0	*84*	*76*
2nd	45.5	100	82.2	71.6	55.7	43.3	27.0	21.4	*163*	*161*
3rd	48.5	100	79.4	69.2	56.9	41.8	35.8	23.7	*198*	*216*
4th	52.0	100	82.5	71.7	56.4	43.7	29.1	20.1	*228*	*256*
Highest	46.4	100	80.0	67.3	50.7	37.5	29.1	22.3	*215*	*253*
Women 50–54	**78.2**	**100**	**93.0**	**87.9**	**75.2**	**56.6**	**43.5**	**32.6**	***408***	***407***
Lowest	52.9	[100]	[94.8]	[95.0]	[73.5]	[58.3]	[38.3]	[36.6]	*46*	*39*
2nd	83.6	100	93.6	88.7	74.0	55.2	41.9	32.9	*83*	*73*
3rd	86.9	100	91.8	82.9	76.4	55.6	48.9	33.7	*87*	*89*
4th	85.8	100	93.7	89.4	77.6	60.1	44.4	29.8	*109*	*116*
Highest	76.4	100	91.8	86.4	73.0	53.3	41.2	32.7	*83*	*90*
Women 55–59	**63.9**	**100**	**77.6**	**63.0**	**41.8**	**32.4**	**21.1**	**13.9**	***297***	***345***
Lowest	41.3	–	–	–	–	–	–	–	*24*	*23*
2nd	64.6	100	80.8	60.5	46.3	36.0	10.0	10.0	*46*	*51*
3rd	69.2	100	74.2	65.5	44.9	32.4	25.8	12.5	*70*	*79*
4th	67.9	100	75.9	59.4	37.4	29.6	16.4	14.9	*76*	*90*
Highest	66.3	100	82.5	65.7	41.8	31.9	23.1	16.4	*81*	*102*
Women 60–64	**32.3**	**100**	**62.5**	**47.2**	**32.1**	**26.7**	**19.4**	**12.8**	***122***	***140***
Lowest	16.1	–	–	–	–	–	–	–	*6*	*7*
2nd	32.9	–	–	–	–	–	–	–	*22*	*23*
3rd	33.6	[100]	[53.0]	[44.2]	[34.2]	[27.7]	[19.3]	[20.4]	*29*	*34*
4th	39.1	[100]	[76.5]	[53.7]	[44.4]	[30.2]	[19.1]	[6.9]	*29*	*34*
Highest	32.3	[100]	[66.0]	[47.5]	[33.4]	[30.5]	[27.7]	[21.7]	*35*	*42*
Women 65–74	**10.3**	**100**	**60.1**	**37.1**	**28.5**	**19.2**	**13.9**	**9.5**	***62***	***70***
Lowest	7.2	–	–	–	–	–	–	–	*8*	*7*
2nd	9.9	–	–	–	–	–	–	–	*12*	*14*
3rd	9.9	–	–	–	–	–	–	–	*12*	*14*
4th	11.2	–	–	–	–	–	–	–	*14*	*16*
Highest	13.0	–	–	–	–	–	–	–	*16*	*19*

For variable definitions, see AE.3, AE.9, AE.22 and AE.23. For related text, see E.32.

Table EL8. Percentage not employed or self-employed at baseline (wave 1) and, of those, percentage in employment or self-employment at waves 2–7, by age and gender

Age in 2002–03 and gender	Whole sample: % not in empl. or self-empl. in 2002–03	Of those not employed or self-employed at baseline, % in employment or self-employment at …							*Wted N*	*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7		
Men 50–74	**42.0**	**0**	**4.8**	**5.0**	**3.0**	**2.5**	**1.3**	**1.6**	***708***	***688***
50–54	13.1	0	5.0	15.6	9.7	9.4	3.5	6.1	*63*	*49*
55–59	27.1	0	11.4	12.0	7.7	5.4	2.0	2.5	*116*	*106*
60–64	51.6	0	6.4	4.0	2.5	2.3	2.1	2.1	*169*	*161*
65–74	80.8	0	1.8	1.4	0.6	0.4	0.2	0.3	*360*	*372*
Women 50–74	**54.7**	**0**	**3.2**	**3.1**	**3.0**	**1.7**	**1.0**	**1.1**	***1,071***	***1,121***
50–54	21.8	0	12.1	12.2	11.6	7.7	4.7	4.5	*114*	*101*
55–59	36.1	0	6.4	7.4	6.3	3.7	1.2	1.7	*168*	*183*
60–64	67.7	0	2.7	1.9	2.6	0.7	0.7	1.3	*255*	*273*
65–74	89.7	0	0.6	0.4	0.3	0.3	0.2	0.2	*535*	*564*

For variable definitions, see AE.3 and AE.23. For related text, see E.33.

Table EL9a. Persistency of health problem limiting ability to work in waves 1–7, by wealth group and age: men aged under 75 at baseline only

Wealth group and age in 2002–03	Health limits ability to work ...				*Wted N*	*Unwted N*
	Never	Sometimes (transitory)	Sometimes (onset)	Always		
	%	%	%	%		
All men 50–74	**61.4**	**29.6**	**8.3**	**0.7**	***1,681***	***1,645***
Lowest	40.1	46.9	12.0	1.0	*214*	*157*
2nd	50.5	36.8	11.4	1.3	*270*	*240*
3rd	56.6	34.8	7.7	0.9	*373*	*355*
4th	69.5	20.8	9.6	0.2	*411*	*424*
Highest	75.9	19.9	3.8	0.4	*413*	*469*
Men 50–54	**73.4**	**20.3**	**6.1**	**0.2**	***480***	***425***
Lowest	[43.7]	[46.5]	[9.8]	[0.0]	*58*	*40*
2nd	66.3	25.6	8.1	0.0	*90*	*71*
3rd	70.8	21.1	8.1	0.0	*101*	*92*
4th	83.7	11.0	5.3	0.0	*135*	*125*
Highest	86.3	11.8	0.9	0.9	*97*	*97*
Men 55–59	**63.2**	**28.2**	**7.5**	**1.1**	***431***	***444***
Lowest	[44.9]	[45.8]	[7.5]	[1.7]	*65*	*49*
2nd	45.0	40.4	12.9	1.6	*59*	*55*
3rd	63.6	26.4	8.2	1.9	*98*	*96*
4th	69.0	23.8	6.4	0.8	*98*	*113*
Highest	78.0	17.0	5.0	0.0	*110*	*131*
Men 60–64	**57.8**	**31.6**	**9.9**	**0.6**	***326***	***319***
Lowest	[30.7]	[43.2]	[26.1]	[0.0]	*34*	*26*
2nd	[47.0]	[27.6]	[22.4]	[3.0]	*44*	*39*
3rd	48.8	44.4	6.8	0.0	*77*	*72*
4th	63.7	28.7	7.6	0.0	*71*	*70*
Highest	74.9	21.5	2.9	0.7	*99*	*112*
Men 65–74	**49.3**	**39.4**	**10.4**	**0.8**	***444***	***457***
Lowest	[36.5]	[50.8]	[10.8]	[1.9]	*56*	*42*
2nd	38.4	52.3	7.8	1.5	*78*	*75*
3rd	40.9	50.2	7.3	1.6	*96*	*95*
4th	55.7	25.0	19.2	0.0	*107*	*116*
Highest	65.2	28.7	6.1	0.0	*107*	*129*

For variable definitions, see AE.3, AE.9, AE.22 and AE.23. For related text, see E.34 and E.35.

Table EL9b. Persistency of health problem limiting ability to work in waves 1–7, by wealth group and age: women aged under 75 at baseline only

Wealth group and age in 2002–03	Health limits ability to work ...				*Wted N*	*Unwted N*
	Never	Sometimes (transitory)	Sometimes (onset)	Always		
	%	%	%	%		
All Women 50–74	**58.9**	**31.3**	**9.2**	**0.6**	***1,960***	***2,083***
Lowest	39.4	47.8	11.4	1.5	*291*	*252*
2nd	51.9	35.8	11.8	0.5	*358*	*362*
3rd	63.7	28.2	7.3	0.8	*409*	*435*
4th	65.1	25.8	8.5	0.5	*439*	*488*
Highest	66.5	25.4	8.0	0.2	*463*	*546*
Women 50–54	**68.5**	**23.1**	**7.9**	**0.5**	***522***	***508***
Lowest	44.0	44.0	12.0	0.0	*87*	*71*
2nd	65.7	26.6	6.7	1.0	*100*	*87*
3rd	76.8	16.9	4.7	1.6	*100*	*102*
4th	79.2	15.0	5.7	0.0	*127*	*133*
Highest	70.6	18.3	11.1	0.0	*108*	*115*
Women 55–59	**61.6**	**31.0**	**7.1**	**0.3**	***465***	***528***
Lowest	42.0	48.4	8.4	1.2	*58*	*55*
2nd	49.5	36.5	14.0	0.0	*71*	*80*
3rd	67.6	26.7	5.7	0.0	*101*	*109*
4th	64.3	28.1	7.0	0.6	*112*	*130*
Highest	70.4	25.7	3.9	0.0	*122*	*154*
Women 60–64	**58.5**	**33.0**	**7.7**	**0.9**	***377***	***413***
Lowest	[32.0]	[56.8]	[11.2]	[0.0]	*40*	*37*
2nd	53.2	35.2	11.5	0.0	*66*	*69*
3rd	61.1	32.6	5.3	1.0	*87*	*93*
4th	62.7	29.9	5.2	2.2	*75*	*83*
Highest	66.4	25.2	7.6	0.7	*109*	*131*
Women 65–74	**48.7**	**37.6**	**12.8**	**0.9**	***596***	***634***
Lowest	36.9	47.1	12.6	3.4	*105*	*89*
2nd	41.3	43.2	14.9	0.6	*121*	*126*
3rd	51.4	35.6	12.3	0.7	*120*	*131*
4th	52.8	32.4	14.8	0.0	*126*	*142*
Highest	59.1	31.3	9.6	0.0	*124*	*146*

For variable definitions, see AE.3, AE.9, AE.22 and AE.23. For related text, see E.34 and E.35.

S. Social domain tables

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Introduction

S.1 This chapter presents selected data tables from the Social domain of the English Longitudinal Study of Ageing (ELSA). The tables are split into two sections:

- Cross-sectional tables (Tables S1–S13) involve classification by gender and age (divided into five-year categories) and classification by gender and wealth group. Tables S1–S13 contain data for all core members at wave 7 (2014–15), including people from the original ELSA cohort in 2002–03 and the refreshment sample members added to ELSA in 2006–07 (wave 3), 2008–09 (wave 4), 2012–13 (wave 6) and 2014-15 (wave 7). These cross-sectional tables show a representative sample of people aged 50 and over in 2014–15.
- Longitudinal tables (Tables SL1–SL7) include a balanced ELSA sample who participated in all of waves 1 to 7. Again, classifications by gender and age and by gender and wealth group are presented. The longitudinal tables show the change over time in a representative sample of people aged 50 and over in 2002–03. For example, Table SL4a shows the percentage of people using public transport in wave 1 and the percentage still using public transport in every wave up to and including wave 7 (2014–15). Differences across the waves can be interpreted as a consequence of a combination of ageing and period effects.

S.2 The unit of observation in all tables is the individual. The data are weighted using either a cross-sectional (main questionnaire or self-completion questionnaire) or longitudinal weight as appropriate. The variables included in each table have been selected to provide a broad picture of the data available from the Social domain of ELSA. A glossary of the measures is provided in the annex to this chapter.

Cross-sectional tables

Socio-demographic

S.3 Table S1a shows the percentage of men and women by marital status and age in 2014–15. The majority of men and women are reportedly married or have remarried. The percentage of women who reported being married or remarried declines with age from 65% in those aged 50–54 to 29% in those aged 80 and above. The percentage of men and women reporting as widowed rises considerably with age, and this is particularly noticeable for women. This occurs at a greater rate between the oldest age groups. Almost two-thirds of women aged 80 and above are widowed (60%), compared with over a quarter of men aged 80 and above (28%). There is a steady decline in the percentage of men who remained single as they aged, with 3% of men aged 80 or above reporting being single. This is compared with a U-shaped relationship with age for women. The decline with age in the percentage who reported being divorced or separated is similar for men and women.

S.4 Table S1b shows the percentage of men and women by marital status and wealth in 2014–15. The percentage of men and women married or remarried in the

three highest wealth groups is as much as double that of the lowest wealth group. Men and women in the lowest wealth group are much more likely to be single, divorced or separated, or widowed than those in higher wealth groups. This is partially explained by the family-level wealth measure used in the analysis (see Table E3 in the Economics domain tables, Chapter E).

S.5 Table S2a shows the percentage of men and women by ethnicity and age in 2014–15. Across each age group, the vast majority of men (94%) and women (95%) identify as white. However, the percentage of white respondents increases with age for men and women. Table S2b shows the percentage of men and women by ethnicity and wealth group in 2014–15. Of those men and women who self-identified as non-white, a higher proportion were in the lowest wealth group than in the highest wealth group.

Internet and recreation

S.6 Table S3a shows the percentage of men and women by usage of the internet and age in 2014–15. Four-fifths of men (80%) and almost three-quarters of women (73%) report that they use the internet. However, usage of the internet declines with age, particularly for women. Among those aged 80 and above, twice as many men than women report using the internet (46%, compared with 23%, respectively).

S.7 Table S3b shows the percentage of men and women by usage of the internet and wealth in 2014–15. There is a strong wealth gradient in internet usage among men and women. Two-thirds of men in the lowest wealth group report using the internet (60%), compared with over nine-tenths of those in the highest wealth group (93%). These figures are 54% and 89%, respectively, for women.

S.8 Table S4a shows the mean hours of TV watched on the day prior to interview, by gender and age in 2014–15. The number of hours of TV viewed is slightly higher among older age groups than younger for men and women. Table S4b shows the mean hours of TV watched by gender and wealth. It suggests that men and women in higher wealth groups watch less TV, on average, than those in lower wealth groups.

S.9 Table S5a shows the percentage of men and women who have taken a holiday, in the UK or abroad, in the last year by age in 2014–15. Around three-quarters of men and women aged between 50 and 74 have taken a holiday in the last year. Just over two-thirds of men and women aged 75–79 have taken a holiday in the last year (66% and 64%, respectively), but by age 80 this is just over half of men (52%) and less than half of women (45%).

S.10 Table S5b shows the percentage of men and women who have taken a holiday, in the UK or abroad, in the last year by wealth in 2014–15. The proportion of men and women in the highest wealth group taking a holiday is around double that for those in the lowest wealth group. Nonetheless, almost half of men and women in the lowest wealth group reported having been on holiday in the last year (44% and 48%, respectively).

Transport and services

S.11 Table S6a shows the percentage of men and women by the frequency of public transport use and age in 2014–15. Women report using public transport more often than men, but this difference is marginal. Public transport usage declines rapidly for men and women over the age of 80, with almost half of men and women never using public transport by age 80.

S.12 Table S6b shows the percentage of men and women by the frequency of public transport use and wealth in 2014–15. Men and women in lower wealth groups are more likely than those in higher wealth groups to report using public transport regularly (i.e. at least once a week), but those in lower wealth groups are also more likely than those in higher wealth groups to report never using public transport.

S.13 Table S7a shows the percentage of men and women who have access to a car or van when needed, by age in 2014–15. Of those who do, the table shows the percentage who drive this vehicle themselves; and of those who do not, the table shows the percentage who drove a vehicle in the past. The percentage of those reporting access to a car or van remains reasonably stable across age groups, but a decline in access begins to occur at age 75, and a sharp decline is reported by age 80. Less than three-quarters of men and under half of women aged 80 and over have access to a vehicle when needed. The majority of men of all ages drive this vehicle themselves, but among women the percentage driving themselves declines with age at a greater rate. Over four-fifths of men aged 80 and over (85%) drive their own vehicle, compared with less than half of women aged 80 and over (46%). The percentage of non-drivers in 2014–15 who drove in the past increases with age at a greater rate for men than for women. Almost three-quarters of non-driving men aged 80 and over (74%) drove in the past, compared with just over a third of women aged 80 and over (36%).

S.14 Table S7b shows the percentage of men and women who have access to a car or van when needed, by wealth in 2014–15. Of those who do, the table shows the percentage who drive this vehicle themselves; of those who do not, the table shows the percentage who drove a vehicle in the past. Almost all men and women in the highest wealth quintile have access to a vehicle when needed, compared with just over three-fifths of men (64%) and just over half of women (55%) in the lowest wealth group. There is a 9 percentage point reduction in the proportion of men driving vehicles themselves in the lowest wealth group compared with the highest, but among women this difference is 39 percentage points. Among non-drivers, rates of having driven in the past are higher among higher wealth groups. Non-driving men in the lowest wealth group are over twice as likely to have driven in the past than non-driving women in the lowest wealth group.

Providing social support

S.15 Table S8a shows the percentage of men and women by frequency of voluntary work and age in 2014–15. The prevalence of frequent voluntary work (i.e. twice a month or more) among men and women is generally greater as they age up to 75. Over a fifth of men and a quarter of women aged 70–74 (21% and 26%, respectively) do voluntary work at least twice a month. In later ages, the prevalence of volunteering declines for men and women, particularly in those aged 80 and over.

S.16 Table S8b shows the percentage of men and women by the frequency of voluntary work and wealth in 2014–15. Men and women in higher wealth groups are more likely to volunteer, and to volunteer more often, than those in lower wealth groups. At least two-fifths of men and women in the highest wealth group (41% and 44%, respectively) did some voluntary work in the last year compared with just over one-in-seven of those in the lowest wealth group.

S.17 Table S9a shows the percentage of men and women who cared for someone in the last month by age in 2014–15. The prevalence of caring for someone in the last

month is 9% among men and 16% among women. The percentage of men who cared for someone in the last month is fairly stable across age groups. However, the percentage of women who cared for someone declines considerably with age, from 22% for those aged 55–59 to 4% for those aged 80 and over.

S.18 Table S9b shows the percentage of men and women who cared for someone in the last month by wealth in 2014–15. The percentage who cared for someone in the last month is similar across wealth groups for men but increases with wealth group for women.

Receipt of social support

S.19 Table S10a shows the percentage of men and women with an ADL or IADL difficulty (see AS.9 for details of definitions) who receive help (including from their partner or other people in the household) by age in 2014–15. Almost three-tenths of men (29%) and over two-fifths of women (42%) with a difficulty receive help. The proportion increases with age in men and women. Almost half of men aged 80 and over (49%) and over two-thirds of women aged 80 and over (69%) with a difficulty receive help.

S.20 Table S10b shows the percentage of men and women with an ADL or IADL difficulty who receive help (including from their partner or other people in the household) by wealth in 2014–15. The proportion of men and women with a difficulty receiving help is lower for those in higher wealth groups. Across all wealth groups, a higher percentage of women receive help than men.

S.21 Table S11a shows the mean number of close relationships with children, family and friends for men and women by age in 2014–15. On average, men and women have six or seven close relationships. Women have a higher number of close relationships than men, although the difference is marginal. The mean number of close contacts reported by men increased steadily with age, but this pattern is not observed among women.

S.22 Table S11b shows the mean number of close relationships with children, family and friends for men and women by wealth in 2014–15. On average, men and women in the higher wealth groups have marginally more close contacts than those in the lower wealth groups.

Perceived social status

S.23 Table S12a shows the percentage of men and women by self-perceived social status and age in 2014–15. More than three-quarters of men and women perceive their social position to be on the third, fourth or fifth rung of a five-point social ladder, where the fifth rung is the best-off and the first rung is the worst-off. Between two-fifths and a half of men across all ages rank their social position as being in the highest two rungs of society (best-off and fourth rungs). Around two-fifths of women aged 60–74 rank their social position as being in the highest two rungs of society; this percentage then decreases thereafter.

S.24 Table S12b shows the percentage of men and women by self-perceived social status and wealth in 2014–15. Men and women in the lower wealth groups are more likely to rank their status lower on the social ladder than those in the higher wealth groups.

Expectation of life expectancy

S.25 Table S13a shows the mean self-perceived chance of living to 85 for men and women aged under 70 by age in 2014–15. Women are more optimistic about their chances of living to 85 than men. The average man believes that there is a 51% chance he will live to 85, compared with the average woman believing she has a 55% chance of doing so. The percentage of women who expect to live to age 85 increases steadily with age. For men, the percentage expecting to live to 85 is lower at age 65–69 than at age 50–54.

S.26 Table S13b shows the mean self-perceived chance of living to 85 for men and women aged under 70 by wealth in 2014–15. Men and women in the highest wealth group are, on average, 10 percentage points more likely to expect to live to 85 than those in the lowest wealth group. Nonetheless, women in the lowest wealth group, on average, believe they have a 50% chance of living to 85 and men in the lowest wealth group, on average, believe they have a 44% chance of living to 85.

Longitudinal tables

Marital status

S.27 Table SL1a shows the percentage of men and women married or remarried at baseline (wave 1) and the percentage still married across each wave, by age. The majority of married men and women in 2002–03 remained in a marriage by 2014–15. However, this varies by age, particularly for women. For example, only two-fifths (41%) of married women aged 75 and over at baseline, and under half (49%) of married women aged 70–74 at baseline were still married by wave 7. Almost three-quarters (72%) of men aged 75 and over were still married by wave 7.

S.28 Table SL1b shows the percentage of men and women married or remarried at baseline (wave 1) and the percentage still married across each wave, by wealth. Men and women married in 2002–03 in the lowest wealth group are less likely to remain in a marriage by 2014–15 than those in higher wealth groups.

Internet

S.29 Table SL2a shows the percentage of men and women using the internet at baseline (wave 1) and the percentage still using it in subsequent waves, by age. The majority of men and women using the internet in 2002–03 continued to use the internet by 2014–15, although the rate of decline in internet use across waves occurs at a faster rate among women.

S.30 Table SL2b shows the percentage of men and women using the internet at baseline (wave 1) and the percentage still using it in subsequent waves, by wealth. Men and women in the highest wealth group are more likely to continue using the internet across each wave of ELSA than those in the lowest wealth group. Although those in lower wealth groups who used the internet in 2002–03 are less likely than those in higher wealth groups to be using the internet in 2014–15, the majority of people using the internet in 2002–03 are still doing so in 2014–15.

S.31 Table SL2c shows the percentage of men and women not using the internet at baseline and, of those, the percentage using it in subsequent waves, by age. Around two-thirds of men and just under three-quarters of women aged 50–54 (67% and 72%,

respectively) and around 60% of men and women aged 55–59 (59% and 63%, respectively) who were not using the internet in 2002–03 stated that they were using it by 2014–15. The proportion of men and women starting to use the internet is lower for each older age group, and women aged 70 and over are considerably less likely to start using the internet than men of the same age.

S.32 Table SL2d shows the percentage of men and women not using the internet at baseline and, of those, the percentage using it in subsequent waves, by wealth. Men in the highest wealth group are generally more than twice as likely to start using the internet at any wave as those in the lowest wealth group, and the gap in uptake widens steadily between 2004–05 and 2014–15. Women in the highest wealth group are consistently more likely to start using the internet at any time between 2004–05 and 2014–15 than women in the lowest wealth group, but the difference in uptake is smaller than that for men.

Holidays

S.33 Table SL3a shows the percentage of men and women having been on holiday in the last year at baseline (wave 1) and the percentage still having been on holiday in the last year in subsequent waves, by age. In each wave up to wave 7, at least four-fifths of men and women who had been on holiday in 2002–03 had also been on holiday in the last year (79% of men and 80% of women had been on holiday in 2014–15). The proportion of men and women continuing to go on holiday in subsequent waves is lower for older individuals. By 2014–15, just over half of men and women aged 70–74 had been on holiday, after reporting they had been on holiday in 2002–03 (56% and 54%, respectively). For men and women aged 50–64, at least four-fifths who reported having been on holiday in 2002–03 also reported having been on holiday in 2014–15.

S.34 Table SL3b shows the percentage of men and women having been on holiday in the last year at baseline (wave 1) and the percentage still having been on holiday in the last year in subsequent waves, by wealth. Men and women in the lowest wealth group are more likely to report not going on holiday in subsequent waves. By 2014–15, just under three-fifths of women and men (56% and 59%, respectively) in the lowest wealth group reported not going on holiday in the last year, having reported that they did at baseline. This compares with around 15% of those in the highest wealth group.

Transport

S.35 Table SL4a shows the percentage of men and women who used public transport at baseline (wave 1) and the percentage still using public transport in subsequent waves, by age. The majority of men and women still used public transport in 2014–15 having already been using public transport in 2002–03. The proportion is lower for those aged 75 and over for men and women, of whom only around two-fifths still used public transport in 2014–15 (42% and 43%, respectively).

S.36 Table SL4b shows the percentage of men and women who used public transport at baseline (wave 1) and the percentage still using public transport in subsequent waves, by wealth. The majority of men and women in each wealth group still used public transport in subsequent waves of ELSA.

S.37 Table SL4c shows the percentage of men and women who did not use public transport at baseline (wave 1) and, of those, the percentage using public transport in

subsequent waves, by age. Men aged 55–69 and women aged 50–69 in 2002–03 are more likely to start using public transport than those in other age groups. The proportion of men and women in all age groups starting to use public transport increased after wave 3 (2006–07). This coincides with the introduction of free off-peak bus travel for over-60s in April 2008.

S.38 Table SL4d shows the percentage of men and women who did not use public transport at baseline (wave 1) and, of those, the percentage using public transport in subsequent waves, by wealth. Men and women in the lowest wealth group are less likely to start using public transport than those in higher wealth groups. This difference increases after wave 3 (2006–07), when free off-peak bus travel for over-60s was introduced in April 2008. Around two-fifths of men and women (38% and 44%, respectively) in the highest wealth group not using public transport in 2002–03 started using public transport by 2014–15.

S.39 Table SL5a shows the percentage of men and women with access to a car or van when needed at baseline (wave 1) and, of those, the percentage with a car or van when needed in subsequent waves, by age. The decline in car access for men is slight but greater among those aged 70 and over at baseline. For women, the decline is faster and occurs among cohorts aged 65 and over. By 2014–15, only half (51%) of women aged 75 and over, who had access to a car in 2002–03, had access to a car when needed. This compares to 69% of men in the same age group.

S.40 Table SL5b shows the percentage of men and women with access to a car or van when needed at baseline (wave 1) and, of those, the percentage with a car or van when needed in subsequent waves, by age. There is a general decline in car access over time across all wealth groups, but the decline is greater in the lower wealth quintiles and again occurs more rapidly among women. By 2014–15, 83% of men in the lowest wealth group who had access to a car at baseline still had access when needed, compared with 68% of women in that wealth group.

Volunteering

S.41 Table SL6a shows the percentage of men and women volunteering at baseline (wave 1) and the percentage still volunteering in subsequent waves, by age. Women aged 60–64 at baseline are continuously more likely to volunteer across all waves than any other age group. Men in this cohort are also the most likely to volunteer, although by 2014–15, those aged 50–59 at baseline are the most likely to volunteer. Almost two-thirds of men and women aged 70–74 who reported volunteering at baseline had stopped volunteering by 2014–15 (65% for both).

S.42 Table SL6b shows the percentage of men and women volunteering at baseline (wave 1) and the percentage still volunteering in subsequent waves, by wealth. Men and women in the higher wealth groups are more likely to continue volunteering across each wave of ELSA.

S.43 Table SL6c shows the percentage of men and women not volunteering at baseline (wave 1) and, of those, the percentage volunteering in subsequent waves, by age. The vast majority of men and women not volunteering in 2002–03 did not start volunteering by 2014–15. Men and women aged under 70 are more likely to have started volunteering than those aged 70 and above.

S.44 Table SL6d shows the percentage of men and women not volunteering at baseline (wave 1) and, of those, the percentage volunteering in subsequent waves, by

wealth. Men and women in the highest wealth group are more likely to have started volunteering than those in lower wealth groups. About a quarter of men and women (24% for both) in the highest wealth group not volunteering in 2002–03 had started to volunteer by 2014–15. This compares to less than a tenth of men and women in the lowest wealth group (7% and 8%, respectively).

Caring

S.45 Table SL7a shows the percentage of men and women who did not care for someone in the last month at baseline (wave 1) and, of those, the percentage caring for someone in the last month in subsequent waves, by age. The vast majority of men and women in each age group did not start caring for someone by 2014–15. However, men aged 60–64 and women aged under 65 are more likely to have started caring for someone than those at other ages.

S.46 Table SL7b shows the percentage of men and women who did not care for someone in the last month at baseline (wave 1) and, of those, the percentage caring for someone in the last month in subsequent waves, by wealth. The vast majority of men and women did not start caring for someone by 2014–15. However, women in the lowest wealth group are less likely to have started caring for someone than those in higher wealth groups.

Annex AS. Definitions

AS.1 *Age* is defined as age at last birthday.

AS.2 *Baseline* is defined as wave 1 of ELSA. Fieldwork for wave 1 was conducted in 2002 and 2003. Subsequent waves have been conducted every two years, with the most recent (wave 7) conducted in 2014 and 2015.

AS.3 *Caring* is defined as whether a respondent cared for someone in the last month.

AS.4 *Close relationships* are defined as the number of close relationships a respondent has with their children, family and friends.

AS.5 *Ethnicity* is measured by a dichotomous categorisation of white and non-white. The ELSA sample is known not to be representative of the ethnic minority population aged 50 and over in England.

AS.6 *Holidays taken in the last year* are measured by whether a respondent has taken a holiday, in the UK or abroad, in the last 12 months.

AS.7 *Internet usage* is defined by whether a respondent uses the internet and/or email. Those classed as not using the internet report using it less than once every three months or never.

AS.8 *Marital status* is defined as per a respondent's legal status.

AS.9 *Mobility assistance* is defined as whether a respondent with an ADL or IADL difficulty receives assistance with these activities, including from a partner or other people in the household. Activities of daily living (ADLs) include dressing, getting around inside the home, bathing or showering, eating, getting in or out of bed and using the toilet. Instrumental activities of daily living (IADLs) include preparing a hot meal, shopping, making telephone calls, taking medication, doing household chores and managing personal finances.

AS.10 *Private transport usage* is measured by whether a respondent has access to a car or van when needed.

AS.11 *Public transport usage* is measured by frequency categories: every day or nearly every day; two or three times a week; once a week; two or three times a month; once a month or less; and never. At waves 1–2, the following usage categories were used: a lot; quite often; sometimes; rarely; and never.

AS.12 *Self-perceived chance of living to 85* is measured by the mean of respondents' assessments of the probability (0 to 100) of them living to 85 for those aged 69 and under.

AS.13 *Self-perceived social status* is measured by respondents indicating on the rung of a ladder where they stand in society based on money, education and employment.

AS.14 *TV viewing* is defined as the mean number of hours of television watched on the day prior to interview.

AS.15 *Volunteering* is defined by frequency of any voluntary work carried out: twice a month or more; about once a month; every few months; about once or twice a year; less than once a year; and never.

AS.16 *Wealth* is defined as non-pension wealth minus any debt. Net non-pension

wealth is measured at the family level and includes financial wealth from savings and investments minus debts and housing wealth minus mortgages.

AS.17 *Wealth groups* are formed by ordering all ELSA sample members according to the value of their total (non-pension) family wealth and dividing the sample into five equal-sized groups. The cut-off points for the wealth groups are shown in the following table, reported in January 2015 prices and rounded to the nearest £1,000.

	Wealth group definition, wave 1 (2002–03)	**Wealth group definition, wave 7 (2014–15)**
Lowest	Less than £24k	Less than £59k
2nd	Between £24k and £137k	Between £59k and £199k
3rd	Between £137k and £240k	Between £199k and £331k
4th	Between £240k and £423k	Between £331k and £554k
Highest	More than £423k	More than £554k

AS.18 *Notes to all tables*

The unit of observation in all tables is the individual.

All cross-sectional tables are based on the cross-section of ELSA sample members in wave 7 of data. This includes refreshment sample members.

All longitudinal tables are based on individuals who have responded in all of waves 1 to 7 (the 'balanced panel') unless otherwise specified.

All numbers are based on weighted data. Unweighted frequencies (*N*) are reported.

For cross-sectional analyses, cross-sectional weights are used. For longitudinal analyses, longitudinal weights are used.

The fieldwork dates are shown in the following table.

	Fieldwork dates (inclusive)
Wave 1	March 2002 – March 2003
Wave 2	June 2004 – June 2005
Wave 3	May 2006 – August 2007
Wave 4	June 2008 – July 2009
Wave 5	July 2010 – June 2011
Wave 6	May 2012 – June 2013
Wave 7	June 2014 – May 2015

Table S1a. Marital status (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Single	16.0	15.1	9.3	6.2	5.7	5.1	3.0	9.7
Married or civil partner	58.2	57.1	63.6	66.2	64.8	62.5	56.9	61.1
Remarried	9.8	11.6	11.1	9.9	13.4	12.4	7.5	10.7
Divorced or separated	15.5	15.1	14.4	12.9	8.1	9.0	4.3	12.2
Widowed	0.5	1.2	1.6	4.8	8.1	11.1	28.3	6.2
Women								
Single	11.9	7.4	6.3	3.7	1.8	3.1	4.7	6.1
Married or civil partner	53.4	53.2	55.6	57.4	56.9	45.6	25.8	50.1
Remarried	11.8	12.1	11.4	12.1	8.7	5.8	3.5	9.8
Divorced or separated	21.1	22.0	19.3	14.7	13.3	11.2	5.6	16.0
Widowed	1.9	5.3	7.5	12.1	19.3	34.3	60.4	18.1
N (unweighted)								
Men	*240*	*399*	*677*	*741*	*581*	*505*	*472*	*3,615*
Women	*326*	*517*	*819*	*909*	*698*	*621*	*680*	*4,570*

For variable definitions, see AS.1, AS.8 and AS.18. For related text, see S.3.

Table S1b. Marital status (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
Single	20.7	10.5	6.5	8.0	4.9	10.0
Married or civil partner	33.8	56.0	66.4	70.0	75.7	60.9
Remarried	11.9	10.8	10.3	9.8	9.8	10.5
Divorced or separated	25.6	13.8	11.0	7.2	5.6	12.4
Widowed	8.1	8.9	5.9	5.1	4.1	6.3
Women						
Single	10.0	7.9	4.0	4.0	4.0	6.1
Married or civil partner	24.8	45.3	51.5	61.9	68.9	49.9
Remarried	7.6	11.5	11.1	8.5	10.7	9.9
Divorced or separated	32.8	15.1	13.5	9.2	6.9	15.8
Widowed	24.9	20.2	20.0	16.4	9.5	18.4
N (unweighted)						
Men	*563*	*593*	*729*	*818*	*826*	*3,529*
Women	*810*	*865*	*945*	*927*	*906*	*4,453*

For variable definitions, see AS.8, AS.16, AS.17 and AS.18. For related text, see S.4.

Table S2a. Ethnicity (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
White	87.7	92.6	93.6	95.9	97.4	95.6	97.7	93.7
Non-white	12.3	7.4	6.4	4.1	2.6	4.4	2.3	6.4
Women								
White	91.0	90.1	93.8	97.5	97.1	97.6	98.0	94.6
Non-white	9.0	9.9	6.2	2.5	2.9	2.4	2.0	5.4
N (unweighted)								
Men	*239*	*400*	*677*	*741*	*581*	*505*	*472*	*3,615*
Women	*323*	*518*	*819*	*910*	*698*	*621*	*682*	*4,571*

For variable definitions, see AS.1, AS.5 and AS.18. For related text, see S.5.

Table S2b. Ethnicity (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
White	92.5	93.9	94.2	94.0	94.7	93.9
Non-white	7.5	6.1	5.8	6.0	5.3	6.1
Women						
White	92.3	94.9	96.4	95.2	95.0	94.7
Non-white	7.7	5.1	3.6	4.8	5.0	5.3
N (unweighted)						
Men	*563*	*594*	*729*	*818*	*824*	*3,528*
Women	*810*	*866*	*946*	*928*	*904*	*4,454*

For variable definitions, see AS.5, AS.16, AS.17 and AS.18. For related text, see S.5.

Table S3a. Use internet and/or email (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	94.3	92.0	89.5	81.2	71.0	52.5	45.5	80.0
Women	92.5	89.9	86.9	78.2	64.4	46.6	23.4	72.5
N (unweighted)								
Men	*206*	*333*	*578*	*655*	*500*	*419*	*357*	*3,048*
Women	*258*	*457*	*728*	*805*	*622*	*533*	*486*	*3,889*

For variable definitions, see AS.1, AS.7 and AS.18. For related text, see S.6.

Table S3b. Use internet and/or email (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	66.2	71.6	80.1	85.5	93.3	79.7
Women	54.6	67.6	73.9	77.2	88.6	72.0
N (unweighted)						
Men	*424*	*484*	*615*	*731*	*727*	*2,981*
Women	*623*	*742*	*812*	*818*	*804*	*3,799*

For variable definitions, see AS.7, AS.16, AS.17 and AS.18. For related text, see S.7.

Table S4a. Mean total hours of TV watched, by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	3.3	3.6	3.6	3.7	4.0	4.0	3.9	3.7
Women	3.4	3.4	3.7	3.7	3.9	4.2	4.2	3.7
N (unweighted)								
Men	*171*	*286*	*503*	*593*	*446*	*390*	*334*	*2,723*
Women	*204*	*388*	*650*	*719*	*562*	*496*	*462*	*3,481*

For variable definitions, see AS.1, AS.14 and AS.18. For related text, see S.8.

Table S4b. Mean total hours of TV watched, by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	5.0	3.9	3.7	3.2	2.9	3.7
Women	4.6	4.2	3.6	3.4	2.8	3.7
N (unweighted)						
Men	*363*	*445*	*553*	*675*	*630*	*2,666*
Women	*542*	*669*	*759*	*736*	*698*	*3,404*

For variable definitions, see AS.14, AS.16, AS.17 and AS.18. For related text, see S.8.

Table S5a. Taken holiday (in UK or abroad) in the last 12 months (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	72.9	76.4	78.4	77.8	78.0	65.7	52.1	73.0
Women	80.4	74.5	81.3	79.5	75.7	64.1	44.5	72.5
N (unweighted)								
Men	*206*	*335*	*578*	*662*	*505*	*433*	*371*	*3,090*
Women	*258*	*458*	*732*	*812*	*635*	*550*	*512*	*3,957*

For variable definitions, see AS.1, AS.6 and AS.18. For related text, see S.9.

Table S5b. Taken holiday (in UK or abroad) in the last 12 months (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	43.6	69.4	78.3	78.4	90.8	72.6
Women	48.4	67.9	77.9	79.9	89.1	72.2
N (unweighted)						
Men	*438*	*496*	*623*	*735*	*730*	*3,022*
Women	*645*	*756*	*831*	*824*	*810*	*3,866*

For variable definitions, see AS.6, AS.16, AS.17 and AS.18. For related text, see S.10.

Table S6a. Use of public transport (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Every day or nearly every day	10.0	12.0	7.2	6.6	6.9	7.4	4.7	8.2
Two or three times a week	9.1	6.6	7.7	12.3	14.7	14.6	14.0	10.6
Once a week	2.4	4.8	6.1	9.8	6.6	5.5	7.2	5.9
Two or three times a month	9.3	8.3	8.1	11.1	11.0	8.4	6.8	9.1
Once a month or less	30.8	33.5	33.2	31.3	31.2	31.5	22.5	31.0
Never	38.4	34.9	37.7	29.1	29.7	32.6	44.8	35.3
Women								
Every day or nearly every day	10.0	9.7	8.6	6.9	7.1	8.2	8.5	8.6
Two or three times a week	6.1	8.0	11.9	19.1	17.7	18.9	15.3	13.1
Once a week	5.0	4.7	7.5	9.4	10.0	11.9	6.9	7.5
Two or three times a month	9.4	8.9	10.0	12.5	10.4	8.0	4.1	9.1
Once a month or less	41.6	37.3	37.7	30.6	28.0	25.8	17.2	32.2
Never	28.0	31.4	24.4	21.6	26.8	27.3	48.0	29.6
N (unweighted)								
Men	*240*	*400*	*677*	*741*	*581*	*505*	*472*	*3,616*
Women	*326*	*518*	*819*	*910*	*698*	*621*	*682*	*4,574*

For variable definitions, see AS.1, AS.11 and AS.18. For related text, see S.11.

Table S6b. Use of public transport (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
Every day or nearly every day	14.4	8.2	6.2	5.5	7.3	8.2
Two or three times a week	14.4	8.2	8.7	10.1	10.5	10.4
Once a week	5.2	4.5	6.7	5.9	7.3	5.9
Two or three times a month	5.0	7.1	9.7	11.4	11.0	8.9
Once a month or less	20.2	29.9	28.9	36.7	38.1	31.0
Never	40.9	42.2	40.0	30.5	25.8	35.6
Women						
Every day or nearly every day	13.0	10.3	6.3	8.2	4.6	8.6
Two or three times a week	18.6	12.8	13.6	9.4	10.0	13.0
Once a week	9.1	6.0	7.2	8.2	7.6	7.6
Two or three times a month	6.4	6.7	10.1	11.0	11.3	9.0
Once a month or less	19.4	30.0	33.3	35.6	43.3	32.0
Never	33.6	34.3	29.4	27.7	23.3	29.8
N (unweighted)						
Men	*562*	*594*	*729*	*818*	*826*	*3,529*
Women	*810*	*867*	*946*	*928*	*906*	*4,457*

For variable definitions, see AS.11, AS.16, AS.17 and AS.18. For related text, see S.12.

Table S7a. Use of private transport (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Has use of car or van when needed	89.4	87.7	92.8	90.2	90.2	84.6	74.2	87.8
Of whom:								
Drives a car or van themselves	97.5	96.8	95.6	94.9	93.8	91.6	85.1	94.6
Drove in the past (if no longer drives)	31.8	43.7	53.0	48.9	64.1	57.3	73.8	53.7
Women								
Has use of car or van when needed	85.6	87.9	88.7	88.4	86.6	78.3	53.1	81.7
Of whom:								
Drives a car or van themselves	86.5	81.1	80.8	76.6	68.5	64.9	46.4	75.3
Drove in the past (if no longer drives)	20.6	24.0	28.4	31.5	33.8	35.6	36.2	30.9
N (unweighted)								
Men								
Has use of car or van when needed	*240*	*400*	*677*	*741*	*581*	*505*	*472*	*3,616*
Drives a car or van themselves	*202*	*340*	*604*	*659*	*509*	*418*	*338*	*3,070*
Drove in the past (if no longer drives)	*36*	*56*	*70*	*79*	*71*	*98*	*148*	*558*
Women								
Has use of car or van when needed	*326*	*518*	*819*	*910*	*698*	*621*	*682*	*4,574*
Drives a car or van themselves	*276*	*445*	*707*	*784*	*592*	*474*	*352*	*3,630*
Drove in the past (if no longer drives)	*76*	*139*	*212*	*258*	*254*	*276*	*451*	*1,666*

For variable definitions, see AS.1, AS.10 and AS.18. For related text, see S.13.

Table S7b. Use of private transport (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
Has use of car or van when needed	64.4	88.4	92.7	94.8	96.4	87.7
Of whom:						
Drives a car or van themselves	88.0	93.0	95.0	96.5	97.2	94.5
Drove in the past (if no longer drives)	42.3	61.1	61.8	66.8	72.2	53.5
Women						
Has use of car or van when needed	55.7	81.8	85.0	91.5	95.1	81.3
Of whom:						
Drives a car or van themselves	51.1	66.6	78.9	80.4	89.8	75.0
Drove in the past (if no longer drives)	20.9	26.0	37.7	48.1	55.7	31.0
N (unweighted)						
Men						
Has use of car or van when needed	*562*	*594*	*729*	*818*	*826*	*3,529*
Drives a car or van themselves	*348*	*485*	*634*	*753*	*769*	*2,989*
Drove in the past (if no longer drives)	*233*	*114*	*90*	*67*	*48*	*552*
Women						
Has use of car or van when needed	*810*	*867*	*946*	*928*	*906*	*4,457*
Drives a car or van themselves	*436*	*667*	*779*	*812*	*830*	*3,524*
Drove in the past (if no longer drives)	*560*	*411*	*309*	*243*	*117*	*1,640*

For variable definitions, see AS.10, AS.16, AS.17 and AS.18. For related text, see S.14.

Table S8a. Voluntary work frequency (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Twice a month or more	11.3	13.7	15.9	21.0	20.8	15.7	10.9	15.4
About once a month	3.4	3.9	2.3	5.0	4.3	4.3	2.6	3.7
Every few months	4.5	2.9	3.4	2.9	1.7	3.1	2.7	3.2
About once or twice a year	5.3	4.1	2.9	2.7	1.7	1.9	1.1	3.2
Less than once a year	5.4	2.6	2.0	1.7	1.0	0.4	0.5	2.3
Never	70.2	72.8	73.5	66.8	70.5	74.7	82.1	72.3
Women								
Twice a month or more	11.6	14.1	19.2	22.0	26.2	20.3	8.8	16.9
About once a month	4.6	2.8	3.4	3.4	4.2	4.5	2.5	3.6
Every few months	2.6	2.5	2.8	2.4	2.7	2.4	0.9	2.3
About once or twice a year	4.2	2.8	2.4	2.0	1.2	2.1	0.6	2.4
Less than once a year	3.0	1.7	2.2	0.9	0.4	0.6	0.4	1.5
Never	73.9	76.1	70.0	69.3	65.3	70.1	86.8	73.4
N (unweighted)								
Men	*232*	*386*	*650*	*713*	*554*	*484*	*440*	*3,459*
Women	*242*	*383*	*543*	*589*	*432*	*412*	*540*	*3,141*

For variable definitions, see AS.1, AS.15 and AS.18. For related text, see S.15.

Table S8b. Voluntary work frequency (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
Twice a month or more	8.5	11.3	15.1	18.6	22.8	15.5
About once a month	1.6	1.7	4.1	4.2	6.1	3.6
Every few months	3.0	1.6	1.8	3.9	5.3	3.2
About once or twice a year	2.0	3.1	3.3	3.4	3.8	3.1
Less than once a year	0.8	2.0	2.9	2.5	3.1	2.3
Never	84.2	80.4	72.9	67.3	59.0	72.4
Women						
Twice a month or more	9.6	13.0	16.0	20.7	27.4	17.0
About once a month	1.3	3.1	2.6	4.9	6.4	3.6
Every few months	1.9	2.0	1.4	3.1	3.5	2.3
About once or twice a year	1.3	1.1	2.1	2.9	4.9	2.4
Less than once a year	0.4	1.5	2.0	2.1	1.4	1.5
Never	85.5	79.3	76.0	66.4	56.5	73.2
N (unweighted)						
Men	*537*	*558*	*692*	*792*	*794*	*3,373*
Women	*785*	*844*	*915*	*893*	*871*	*4,308*

For variable definitions, see AS.15, AS.16, AS.17 and AS.18. For related text, see S.16.

Table S9a. Cared for someone in the last month (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	3.8	11.51	10.02	9.16	10.12	10.15	7.29	8.62
Women	17.48	22.32	20.31	18.27	12.79	11.48	4.03	15.82
N (unweighted)								
Men	*240*	*400*	*678*	*741*	*581*	*504*	*472*	*3,616*
Women	*326*	*518*	*819*	*910*	*698*	*621*	*682*	*4,574*

For variable definitions, see AS.1, AS.3 and AS.18. For related text, see S.17.

Table S9b. Cared for someone in the last month (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	7.3	8.1	9.9	9.7	8.3	8.7
Women	11.9	15.1	17.3	15.7	18.0	15.5
N (unweighted)						
Men	*563*	*594*	*729*	*818*	*825*	*3,529*
Women	*810*	*867*	*946*	*928*	*906*	*4,457*

For variable definitions, see AS.3, AS.16, AS.17 and AS.18. For related text, see S.18.

Table S10a. Receives help with mobility (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	12.6	21.3	23.2	25.2	27.1	38.9	49.4	28.9
Women	25.2	34.4	31.9	29.4	39.5	46.5	69.3	41.7
N (unweighted)								
Men	*80*	*129*	*247*	*332*	*297*	*310*	*360*	*1,755*
Women	*127*	*235*	*404*	*522*	*444*	*448*	*592*	*2,772*

For variable definitions, see AS.1, AS.9 and AS.18. For related text, see S.19.

Table S10b. Receives help with mobility (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	37.3	31.0	28.1	25.7	17.8	29.2
Women	53.9	43.8	38.3	35.7	28.9	42.1
N (unweighted)						
Men	*388*	*334*	*371*	*343*	*284*	*1,720*
Women	*633*	*566*	*592*	*514*	*410*	*2,715*

For variable definitions, see AS.9, AS.16, AS.17 and AS.18. For related text, see S.20.

Table S11a. Mean number of close relationships with children, family and friends, by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	6.4	6.5	6.7	7.0	7.3	7.2	7.6	6.8
Women	8.2	6.9	7.6	7.4	7.7	7.9	7.3	7.6
N (unweighted)								
Men	*198*	*332*	*562*	*642*	*497*	*421*	*355*	*3,007*
Women	*256*	*448*	*719*	*793*	*619*	*541*	*493*	*3,869*

For variable definitions, see AS.1, AS.4 and AS.18. For related text, see S.21.

Table S11b. Mean number of close relationships with children, family and friends, by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	6.2	6.8	7.2	7.0	7.1	6.9
Women	7.3	7.5	7.4	7.9	7.6	7.6
N (unweighted)						
Men	*416*	*483*	*602*	*717*	*723*	*2,941*
Women	*620*	*735*	*814*	*815*	*797*	*3,781*

For variable definitions, see AS.4, AS.16, AS.17 and AS.18. For related text, see S.22.

Table S12a. Self-perceived social standing in society (%), by age and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Worst-off	8.0	6.0	3.6	5.0	2.6	2.7	0.8	4.7
2nd	17.1	19.9	18.9	11.0	13.0	18.8	12.1	16.1
3rd	34.2	30.6	30.3	34.5	38.4	39.4	46.6	35.2
4th	36.2	34.6	38.5	42.0	37.8	34.2	34.4	37.0
Best-off	4.6	8.9	8.7	7.6	8.1	4.9	6.1	7.1
Women								
Worst-off	4.6	4.3	3.0	1.8	1.3	2.2	2.5	3.0
2nd	14.6	18.2	16.9	15.2	15.3	17.6	16.7	16.3
3rd	39.7	39.0	37.5	43.6	45.7	48.4	45.3	42.1
4th	37.3	33.3	35.4	34.6	31.6	27.8	30.3	33.5
Best-off	3.8	5.1	7.2	4.9	6.1	4.1	5.1	5.2
N (unweighted)								
Men	*203*	*327*	*570*	*654*	*504*	*426*	*366*	*3,050*
Women	*253*	*447*	*727*	*796*	*626*	*521*	*470*	*3,840*

For variable definitions, see AS.1, AS.13 and AS.18. For related text, see S.23.

Table S12b Self-perceived social standing in society (%), by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men						
Worst-off	18.1	4.1	2.0	0.6	0.0	4.7
2nd	27.7	25.2	15.2	9.5	4.4	16.0
3rd	35.5	42.2	40.7	37.2	21.9	35.4
4th	14.8	26.3	36.9	46.9	56.0	36.8
Best-off	3.9	2.2	5.2	5.8	17.7	7.1
Women						
Worst-off	9.6	3.7	0.9	1.0	0.0	3.0
2nd	30.1	22.1	15.5	9.2	4.1	16.4
3rd	43.3	44.1	46.2	44.5	30.7	41.9
4th	15.4	27.4	34.3	39.4	53.2	33.7
Best -off	1.6	2.8	3.2	6.0	12.0	5.0
N (unweighted)						
Men	*427*	*490*	*611*	*728*	*729*	*2,985*
Women	*602*	*720*	*805*	*817*	*807*	*3,751*

For variable definitions, see AS.13, AS.16, AS.17 and AS.18. For related text, see S.24.

Table S13a. Mean self-perceived chance (%) of living to 85, by age and gender: wave 7

	Age in 2014–15				
	50–54	**55–59**	**60–64**	**65–69**	**All**
Men	51.5	51.7	49.1	49.5	50.5
Women	53.6	53.7	56.1	56.2	54.8
N (unweighted)					
Men	*222*	*369*	*626*	*696*	*1,913*
Women	*305*	*496*	*780*	*843*	*2,424*

For variable definitions, see AS.1, AS.12 and AS.18. For related text, see S.25.

Table S13b. Mean self-perceived chance (%) of living to 85, by wealth group and gender: wave 7

	Wealth group in 2014–15					
	Lowest	**2nd**	**3rd**	**4th**	**Highest**	**All**
Men	44.1	47.3	53.7	53.4	54.1	50.6
Women	49.7	52.1	54.4	58.5	59.7	54.8
N (unweighted)						
Men	*306*	*310*	*334*	*439*	*463*	*1,852*
Women	*404*	*458*	*437*	*488*	*542*	*2,329*

Note: Only includes people aged 69 and under.

For variable definitions, see AS.12, AS.16, AS.17 and AS.18. For related text, see S.26.

Table SL1a. Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–7, by age and gender

		Of those married or remarried at baseline, % still married at …							
Age in 2002–03	**% married in 2002–03**	**Wave 1**	**Wave 2**	**Wave 3**	**Wave 4**	**Wave 5**	**Wave 6**	**Wave 7**	***Unwted N***
Men	**79.7**	**100**	**97.4**	**95.9**	**95.2**	**93.6**	**92.3**	**90.9**	***1,412***
50–54	78.5	100	97.9	97.4	96.9	97.3	96.9	95.8	*341*
55–59	78.2	100	98.1	96.5	96.8	93.9	93.1	91.4	*354*
60–64	81.8	100	97.2	96.0	95.0	94.2	92.3	91.4	*270*
65–69	81.1	100	98.7	97.2	96.1	95.4	95.3	94.0	*230*
70–74	83.8	100	97.4	94.7	93.7	88.7	85.2	82.7	*145*
75+	75.7	100	90.3	86.3	82.5	78.1	73.6	71.9	*72*
Women	**66.2**	**100**	**95.7**	**93.4**	**90.0**	**86.3**	**83.2**	**79.0**	***1,466***
50–54	73.4	100	96.8	96.3	95.9	93.9	90.9	87.6	*369*
55–59	76.3	100	97.1	95.7	93.4	91.2	88.3	85.2	*400*
60–64	71.8	100	97.2	95.0	90.5	87.7	86.4	83.9	*284*
65–69	62.9	100	93.2	90.6	87.3	82.6	79.2	74.4	*233*
70–74	57.7	100	93.4	84.0	78.2	71.1	66.9	57.3	*128*
75+	32.7	100	88.4	87.4	71.7	57.9	49.0	41.2	*52*

For variable definitions, see AS.1, AS.2, AS.8 and AS.18. For related text, see S.27.

Table SL1b. Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–7, by wealth group and gender

		Of those married or remarried at baseline, % still married at …							
Wealth group in 2002–03	**% married in 2002–03**	**Wave 1**	**Wave 2**	**Wave 3**	**Wave 4**	**Wave 5**	**Wave 6**	**Wave 7**	***Unwted N***
Men	**79.6**	**100**	**97.4**	**95.9**	**95.2**	**93.5**	**92.2**	**90.9**	***1,391***
Lowest	55.8	100	92.3	89.1	88.4	83.6	82.1	82.1	*92*
2nd	75.6	100	95.8	94.4	94.4	93.7	91.5	87.9	*186*
3rd	80.3	100	97.9	96.5	96.0	95.1	94.1	93.6	*293*
4th	85.3	100	98.4	97.1	96.5	94.9	93.6	92.6	*378*
Highest	88.3	100	98.7	97.1	95.9	93.8	93.2	91.5	*442*
Women	**66.1**	**100**	**95.6**	**93.3**	**89.9**	**86.3**	**83.1**	**78.9**	***1,430***
Lowest	37.7	100	92.3	88.5	82.8	76.5	71.8	63.8	*101*
2nd	58.5	100	92.0	87.7	84.0	78.9	77.5	73.4	*212*
3rd	68.8	100	96.5	94.4	90.2	88.6	85.5	81.9	*300*
4th	76.7	100	96.1	94.7	92.4	88.5	84.7	81.1	*370*
Highest	79.9	100	97.8	96.3	93.5	90.2	87.1	82.8	*447*

For variable definitions, see AS.2, AS.8, AS.16, AS.17 and AS.18. For related text, see S.28.

Table SL2a. Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–7, by age and gender

Age in 2002–03	% using internet and/or email in 2002–03	Of those using internet and/or email at baseline, % still using internet and/or email at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**47.4**	**100**	**93.1**	**93.9**	**92.9**	**92.5**	**95.9**	**96.4**	***598***
50–54	64.1	100	96.6	97.6	95.1	96.2	99.0	99.4	*204*
55–59	53.2	100	93.2	92.8	93.1	92.2	96.1	97.3	*171*
60–64	40.1	100	91.8	91.4	93.3	93.1	96.1	97.2	*101*
65–69	34.3	100	93.3	94.4	95.1	89.7	94.2	91.3	*76*
70–74	31.3	100	[77.7]	[86.5]	[77.2]	[82.8]	[79.3]	[85.6]	*33*
75+	21.6	100	[78.7]	[78.7]	[78.7]	[67.3]	[87.4]	[81.5]	*13*
Women	**35.1**	**100**	**86.6**	**87.0**	**87.0**	**87.9**	**91.4**	**93.2**	***571***
50–54	51.2	100	91.5	92.2	90.4	91.1	94.3	97.2	*195*
55–59	44.5	100	88.8	89.4	89.9	89.3	94.9	96.0	*191*
60–64	31.9	100	84.8	83.2	88.4	89.5	91.4	93.3	*101*
65–69	21.4	100	75.2	78.2	81.2	81.7	85.7	86.4	*62*
70–74	9.9	100	[56.2]	[62.1]	[56.0]	[62.1]	[56.0]	[55.6]	*14*
75+	12.1	100	[72.0]	[55.3]	[34.3]	[55.3]	[55.3]	[55.3]	*8*

For variable definitions, see AS.1, AS.2, AS.7 and AS.18. For related text, see S.29.

Table SL2b. Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% using internet and/or email in 2002–03	Of those using internet and/or email at baseline, % still using internet and/or email at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**47.4**	**100**	**93.2**	**94.0**	**93.0**	**92.4**	**95.8**	**96.4**	***590***
Lowest	27.1	[100]	[80.5]	[95.0]	[79.2]	[84.8]	[83.2]	[88.9]	*26*
2nd	30.5	[100]	[92.1]	[89.3]	[88.6]	[87.7]	[94.8]	[96.4]	*53*
3rd	39.0	100	93.3	96.5	94.2	93.3	97.0	97.0	*100*
4th	54.3	100	93.1	92.2	92.8	90.3	94.3	95.6	*168*
Highest	64.5	100	95.6	95.3	95.9	96.0	98.7	97.8	*243*
Women	**35.0**	**100**	**86.6**	**86.8**	**87.5**	**88.6**	**91.8**	**93.2**	***560***
Lowest	13.9	[100]	[67.2]	[65.8]	[62.4]	[65.8]	[73.2]	[83.4]	*24*
2nd	21.8	[100]	[81.9]	[83.3]	[80.9]	[84.0]	[85.8]	[84.7]	*56*
3rd	29.6	100	91.5	85.1	83.8	85.6	87.8	91.3	*102*
4th	44.4	100	88.9	87.7	92.7	91.0	95.7	96.9	*162*
Highest	50.4	100	86.3	90.9	90.5	92.6	94.9	95.1	*216*

For variable definitions, see AS.2, AS.7, AS.16, AS.17 and AS.18. For related text, see S.30.

Table SL2c. Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–7, by age and gender

Age in 2002–03	% not using internet and/or email in 2002–03	Of those not using internet and/or email at baseline, % using internet and/or email at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**52.6**	**0**	**22.5**	**27.1**	**36.0**	**41.4**	**50.4**	**50.9**	***598***
50–54	35.9	0	30.4	37.0	52.8	58.5	66.1	66.9	*93*
55–59	46.8	0	21.2	26.0	36.9	43.7	54.8	58.8	*128*
60–64	59.9	0	22.2	31.9	37.3	42.4	56.0	56.0	*126*
65–69	65.7	0	20.5	21.6	31.1	34.2	39.7	39.7	*120*
70–74	68.7	0	17.6	17.7	28.3	33.1	38.9	35.5	*69*
75+	78.4	0	[18.2]	[18.1]	[10.5]	[18.8]	[26.0]	[23.3]	*36*
Women	**64.9**	**0**	**16.0**	**22.3**	**27.8**	**34.2**	**42.9**	**47.7**	***926***
50–54	48.8	0	24.0	36.4	51.0	56.2	63.7	71.6	*160*
55–59	55.5	0	18.3	26.6	30.4	40.9	56.9	63.4	*206*
60–64	68.1	0	15.5	20.9	27.9	37.7	48.3	50.5	*188*
65–69	78.6	0	11.5	15.7	17.8	24.1	29.4	33.0	*202*
70–74	90.1	0	12.2	14.6	13.5	15.5	18.9	23.0	*123*
75+	87.9	0	[8.4]	[7.5]	[11.7]	[9.4]	[14.3]	[16.0]	*47*

For variable definitions, see AS.1, AS.2, AS.7 and AS.18. For related text, see S.31.

Table SL2d. Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% not using internet and/or email in 2002–03	Of those not using internet and/or email at baseline, % using internet and/or email at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**52.7**	**0**	**22.5**	**26.9**	**36.0**	**41.4**	**50.5**	**51.0**	***567***
Lowest	72.9	0	14.9	19.5	17.7	22.0	28.6	30.5	*62*
2nd	69.5	0	15.9	24.3	27.0	32.3	39.9	38.3	*107*
3rd	61.0	0	19.5	24.0	34.6	39.5	47.2	50.0	*146*
4th	45.7	0	31.7	30.3	46.9	50.7	61.6	60.9	*128*
Highest	35.5	0	29.1	35.5	48.7	57.8	70.3	70.2	*124*
Women	**65.0**	**0**	**15.6**	**22.3**	**27.8**	**34.1**	**42.7**	**47.6**	***909***
Lowest	86.1	0	8.8	15.5	21.0	25.2	30.2	35.9	*128*
2nd	78.2	0	10.1	17.8	22.7	29.5	34.8	38.4	*183*
3rd	70.4	0	11.6	19.8	24.4	29.5	40.5	45.2	*216*
4th	55.6	0	23.6	26.8	32.3	41.8	50.3	57.7	*189*
Highest	49.6	0	23.7	31.1	38.6	44.1	56.7	59.8	*193*

For variable definitions, see AS.2, AS.7, AS.16, AS.17 and AS.18. For related text, see S.32.

Table SL3a. Percentage been on holiday in the last year at baseline (wave 1) and, of those, percentage still been on holiday in the last year at waves 2–7, by age and gender

Age in 2002–03	% been on holiday in 2002–03	Of those been on holiday in the last year at baseline, % still been on holiday in the last year at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**82.7**	**100**	**92.4**	**91.0**	**86.9**	**84.5**	**84.3**	**79.2**	***1,016***
50–54	84.0	100	94.9	93.3	91.7	91.1	91.0	89.7	*255*
55–59	83.7	100	92.2	93.3	86.7	83.4	87.3	84.0	*258*
60–64	81.1	100	93.1	90.9	88.3	85.0	87.3	85.1	*195*
65–69	81.7	100	91.1	87.9	84.0	84.4	79.8	72.2	*169*
70–74	84.4	100	92.3	90.1	80.6	73.3	69.2	56.2	*95*
75+	78.6	[100]	[82.0]	[79.5]	[75.4]	[70.3]	[63.2]	[39.2]	*44*
Women	**82.1**	**100**	**92.1**	**89.6**	**87.5**	**85.6**	**84.0**	**79.9**	***1,292***
50–54	86.2	100	93.0	91.9	90.8	89.6	88.9	89.3	*312*
55–59	81.5	100	94.2	90.9	90.5	89.0	90.3	87.7	*337*
60–64	88.4	100	90.8	90.9	87.4	86.8	85.1	81.3	*267*
65–69	81.3	100	91.2	85.2	87.4	84.6	80.3	70.9	*223*
70–74	74.8	100	92.0	90.4	81.8	73.0	63.8	54.3	*115*
75+	60.5	[100]	[84.2]	[76.7]	[61.3]	[65.5]	[71.8]	[60.7]	*38*

For variable definitions, see AS.1, AS.2, AS.6 and AS.18. For related text, see S.33.

Table SL3b. Percentage been on holiday in the last year at baseline (wave 1) and, of those, percentage still been on holiday in the last year at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% been on holiday in 2002–03	Of those been on holiday in the last year at baseline, % still been on holiday in the last year at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**82.7**	**100**	**92.3**	**91.1**	**87.0**	**84.5**	**84.3**	**79.1**	***1,004***
Lowest	55.6	100	86.6	75.6	61.3	66.8	67.9	59.0	*54*
2nd	71.8	100	87.4	88.1	88.4	76.6	79.0	72.5	*121*
3rd	84.9	100	92.8	91.4	87.0	86.5	85.2	77.9	*216*
4th	88.0	100	93.5	92.4	89.5	87.2	85.3	81.0	*267*
Highest	93.0	100	94.5	94.6	90.2	88.2	89.0	85.8	*346*
Women	**82.1**	**100**	**92.4**	**89.8**	**87.7**	**84.5**	**84.3**	**79.1**	***1,268***
Lowest	57.8	100	79.0	71.8	57.1	65.9	59.6	55.9	*97*
2nd	75.5	100	91.3	86.5	86.0	80.9	79.5	76.7	*187*
3rd	85.5	100	93.8	90.7	90.1	86.7	87.1	81.7	*287*
4th	89.5	100	94.0	91.9	92.4	90.4	87.5	83.0	*321*
Highest	89.4	100	94.8	94.8	92.4	89.5	89.3	85.2	*376*

For variable definitions, see AS.2, AS.6, AS.16, AS.17 and AS.18. For related text, see S.34.

Table SL4a. Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–7, by age and gender

Age in 2002–03	% using public transport in 2002–03	Of those using public transport at baseline, % still using public transport at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**68.6**	**100**	**85.0**	**74.4**	**79.5**	**80.3**	**80.0**	**78.2**	***1,230***
50–54	69.4	100	85.1	69.8	72.6	76.3	80.8	85.8	*308*
55–59	67.0	100	83.3	73.7	83.5	82.1	83.9	83.2	*309*
60–64	63.8	100	85.3	73.7	82.6	86.7	84.6	79.3	*211*
65–69	73.8	100	90.4	79.5	83.1	85.8	80.6	77.5	*204*
70–74	69.2	100	84.5	82.4	80.7	75.8	75.2	70.3	*124*
75+	71.9	100	77.8	73.0	74.9	67.9	57.7	42.4	*74*
Women	**80.2**	**100**	**89.5**	**80.9**	**83.7**	**83.4**	**80.5**	**77.5**	***1,842***
50–54	81.2	100	86.6	75.6	80.1	85.4	85.2	85.4	*423*
55–59	78.0	100	87.0	79.6	85.7	85.4	84.2	85.7	*429*
60–64	82.1	100	94.3	84.3	87.6	86.6	88.2	84.8	*344*
65–69	81.1	100	92.2	82.8	84.8	82.7	79.3	76.5	*318*
70–74	82.4	100	89.7	84.5	88.0	84.4	73.9	64.8	*205*
75+	75.0	100	89.3	82.9	73.8	67.3	56.4	43.1	*123*

For variable definitions, see AS.1, AS.2, AS.11 and AS.18. For related text, see S.35.

Table SL4b. Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% using public transport in 2002–03	Of those using public transport at baseline, % still using public transport at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**68.8**	**100**	**85.0**	**74.4**	**79.5**	**80.2**	**79.9**	**78.2**	***1,215***
Lowest	66.6	100	87.3	79.8	81.5	80.9	80.7	73.8	*111*
2nd	61.9	100	85.1	68.9	75.6	73.9	73.9	75.9	*157*
3rd	61.8	100	82.3	71.3	78.8	77.5	78.0	78.6	*234*
4th	70.9	100	82.6	73.7	76.6	80.2	79.8	77.7	*317*
Highest	78.2	100	87.9	77.5	83.6	84.9	84.0	81.3	*396*
Women	**80.1**	**100**	**89.7**	**80.9**	**83.9**	**83.5**	**80.5**	**77.4**	***1,804***
Lowest	77.2	100	93.6	88.4	88.9	84.7	77.2	73.8	*225*
2nd	83.0	100	88.9	81.8	84.1	84.1	80.2	77.5	*329*
3rd	79.4	100	88.9	79.0	81.2	81.4	80.1	77.2	*376*
4th	77.8	100	88.4	79.4	85.8	84.1	83.6	80.1	*397*
Highest	82.5	100	89.4	78.0	81.3	83.5	80.7	77.4	*477*

For variable definitions, see AS.2, AS.11, AS.16, AS.17 and AS.18. For related text, see S.36.

Table SL4c. Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–7, by age and gender

Age in 2002–03	% not using public transport in 2002–03	Of those not using public transport at baseline, % using public transport at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**31.4**	**0**	**34.0**	**25.1**	**38.5**	**43.8**	**45.3**	**45.0**	***525***
50–54	30.6	0	32.8	17.2	29.4	38.0	39.7	39.2	123
55–59	33.0	0	33.5	29.6	44.4	51.5	47.4	53.3	137
60–64	36.2	0	39.4	29.6	46.4	52.9	55.7	55.3	111
65–69	26.2	0	37.0	22.4	38.8	42.3	50.0	41.5	76
70–74	30.8	0	33.5	25.9	30.8	38.5	40.8	37.2	52
75+	28.1	0	[16.9]	[29.0]	[38.2]	[17.0]	[22.0]	[19.8]	26
Women	**19.8**	**0**	**36.8**	**27.1**	**37.5**	**41.5**	**44.7**	**40.7**	***433***
50–54	18.8	0	43.1	29.3	40.2	44.1	56.9	55.0	96
55–59	22.0	0	43.0	28.3	45.8	52.4	52.5	47.2	116
60–64	17.9	0	34.7	35.4	37.6	45.0	42.6	43.2	70
65–69	18.9	0	40.1	29.1	39.4	37.8	43.0	42.3	74
70–74	17.6	0	[21.2]	[15.0]	[28.7]	[23.8]	[30.3]	[19.3]	40
75+	25.0	0	[25.5]	[18.2]	[22.0]	[30.6]	[24.4]	[15.1]	37

For variable definitions, see AS.1, AS.2, AS.11 and AS.18. For related text, see S.37.

Table SL4d. Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% not using public transport in 2002–03	Of those not using public transport at baseline, % using public transport at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**31.3**	**0**	**34.3**	**25.5**	**38.5**	**43.6**	**45.1**	**45.0**	***516***
Lowest	33.5	0	21.4	22.9	29.0	34.2	30.2	32.7	*57*
2nd	38.1	0	40.4	25.9	35.8	37.5	44.9	49.8	*94*
3rd	38.2	0	37.7	29.9	40.8	48.8	55.1	51.9	*134*
4th	29.1	0	31.8	24.4	42.5	48.4	44.0	45.4	*128*
Highest	21.8	0	36.0	22.0	40.4	43.9	43.4	38.3	*103*
Women	**19.9**	**0**	**36.6**	**27.6**	**37.8**	**42.3**	**45.6**	**41.1**	***426***
Lowest	22.8	0	25.6	21.7	27.2	29.2	32.6	27.6	*64*
2nd	17.0	0	30.6	24.1	32.6	33.1	39.5	38.8	*64*
3rd	20.6	0	43.1	27.0	39.1	49.9	52.4	45.8	*92*
4th	22.2	0	45.4	34.9	43.6	45.7	50.9	46.2	*108*
Highest	17.5	0	34.2	27.8	43.6	49.4	48.8	44.1	*98*

For variable definitions, see AS.2, AS.11, AS.16, AS.17 and AS.18. For related text, see S.38.

Table SL5a. Percentage with access to a car or van at baseline (wave 1) and, of those, percentage still with access to a car or van at waves 2–7, by age and gender

Age in 2002–03	% with access to a car or van in 2002–03	Of those with access to a car or van at baseline, % still with access to a car or van at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**92.0**	**100**	**97.3**	**97.5**	**97.3**	**95.4**	**95.1**	**92.2**	***1,646***
50–54	94.8	100	97.7	97.7	97.7	96.8	97.1	96.8	*415*
55–59	91.6	100	98.1	97.3	97.8	96.2	98.1	95.2	*419*
60–64	92.8	100	97.0	99.0	98.2	96.8	95.9	93.8	*303*
65–69	88.9	100	97.8	96.8	97.6	95.3	97.1	94.4	*257*
70–74	94.1	100	94.7	95.5	94.9	89.5	87.2	79.7	*167*
75+	83.6	100	95.9	97.5	94.1	92.1	80.0	68.8	*85*
Women	**85.5**	**100**	**92.9**	**91.1**	**90.6**	**90.0**	**87.7**	**84.9**	***1,986***
50–54	88.5	100	96.5	95.5	96.1	97.0	96.6	95.0	*467*
55–59	91.1	100	94.8	94.0	93.7	93.2	94.5	92.1	*499*
60–64	90.9	100	92.1	92.9	91.6	90.5	90.3	89.8	*379*
65–69	87.3	100	92.6	90.0	91.8	88.6	85.5	81.7	*345*
70–74	74.6	100	88.3	83.8	85.7	82.3	73.0	66.1	*189*
75+	67.4	100	84.0	76.1	66.6	70.4	58.1	51.4	*107*

For variable definitions, see AS.1, AS.2, AS.10 and AS.18. For related text, see S.39.

Table SL5b. Percentage with access to a car or van at baseline (wave 1) and, of those, percentage still with access to a car or van at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% with access to a car or van in 2002–03	Of those with access to a car or van at baseline, % still with access to a car or van at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**91.9**	**100**	**97.3**	**97.4**	**97.3**	**95.5**	**95.1**	**92.1**	***1,622***
Lowest	66.2	100	89.2	90.9	91.3	89.1	90.2	83.0	*118*
2nd	86.6	100	95.1	95.0	94.6	90.5	92.1	90.0	*219*
3rd	96.3	100	97.9	97.2	97.9	94.3	94.4	90.1	*355*
4th	98.4	100	99.7	99.5	99.2	98.9	98.0	95.4	*438*
Highest	98.4	100	98.5	99.3	98.5	98.1	96.5	94.7	*492*
Women	**85.6**	**100**	**92.9**	**91.2**	**90.6**	**89.9**	**87.6**	**84.8**	***1,947***
Lowest	62.7	100	77.7	70.9	73.2	70.9	68.6	68.3	*185*
2nd	78.8	100	87.8	86.9	87.5	83.8	79.4	78.4	*314*
3rd	88.2	100	95.9	92.6	90.6	90.6	89.4	84.7	*413*
4th	95.1	100	96.4	96.7	96.1	95.2	93.4	89.0	*481*
Highest	96.0	100	97.7	97.2	95.7	97.3	95.1	92.7	*554*

For variable definitions, see AS.2, AS.10, AS.16, AS.17 and AS.18. For related text, see S.40.

Table SL6a. Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–7, by age and gender

Age in 2002–03	% volunteering in 2002–03	Of those volunteering at baseline, % still volunteering at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**28.7**	**100**	**67.9**	**67.6**	**64.6**	**61.7**	**57.6**	**53.4**	***530***
50–54	30.2	100	61.5	59.6	62.1	62.2	59.9	58.7	*139*
55–59	22.3	100	64.0	69.8	66.3	65.1	58.1	64.4	*106*
60–64	27.5	100	74.7	71.2	70.8	68.5	69.1	56.2	*95*
65–69	27.5	100	78.6	77.6	73.5	67.5	66.8	57.8	*85*
70–74	36.1	100	67.3	72.3	57.8	51.3	48.5	35.5	*67*
75+	42.2	[100]	[66.0]	[59.5]	[52.2]	[45.1]	[25.0]	[25.3]	*38*
Women	**31.5**	**100**	**73.1**	**69.9**	**68.2**	**65.4**	**58.7**	**53.0**	***753***
50–54	27.8	100	72.9	65.5	68.6	67.5	62.9	62.2	*150*
55–59	27.5	100	69.3	68.0	67.9	66.2	60.3	63.1	*157*
60–64	39.6	100	73.6	74.4	75.7	73.7	70.7	66.7	*172*
65–69	35.1	100	73.9	73.0	68.8	62.7	56.8	42.3	*147*
70–74	29.0	100	79.9	70.4	65.5	57.2	51.4	34.6	*75*
75+	32.7	100	71.2	66.5	52.3	54.7	29.8	20.0	*52*

For variable definitions, see AS.1, AS.2, AS.15 and AS.18. For related text, see S.41.

Table SL6b. Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% volunteering in 2002–03	Of those volunteering at baseline, % still volunteering at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**28.8**	**100**	**68.0**	**67.9**	**64.5**	**61.6**	**57.5**	**53.2**	***524***
Lowest	17.8	[100]	[50.3]	[53.1]	[50.1]	[37.5]	[31.3]	[36.7]	*28*
2nd	18.3	100	65.7	65.6	67.2	64.4	63.3	59.0	*50*
3rd	23.7	100	66.8	60.3	60.5	54.9	56.5	48.0	*91*
4th	33.5	100	66.5	70.5	65.4	66.6	63.6	58.7	*150*
Highest	40.9	100	74.4	73.5	68.2	65.6	57.3	53.4	*205*
Women	**31.5**	**100**	**73.3**	**69.7**	**68.5**	**65.7**	**58.9**	**53.0**	***736***
Lowest	15.9	100	69.5	65.8	49.5	51.9	43.0	32.9	*50*
2nd	22.2	100	63.6	57.6	58.9	53.2	56.6	43.5	*88*
3rd	31.6	100	67.3	65.4	60.3	58.3	51.8	52.5	*149*
4th	32.3	100	73.2	71.5	75.3	72.0	66.0	57.6	*166*
Highest	48.0	100	81.3	76.5	76.9	73.9	63.3	58.3	*283*

For variable definitions, see AS.2, AS.15, AS.16, AS.17 and AS.18. For related text, see S.42.

Table SL6c. Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–7, by age and gender

Age in 2002–03	% not volunteering in 2002–03	Of those not volunteering at baseline, % volunteering at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**71.3**	**0**	**12.7**	**14.7**	**15.7**	**16.6**	**16.8**	**15.9**	***1,177***
50–54	69.8	0	11.7	12.4	16.5	15.3	15.4	13.1	*284*
55–59	77.7	0	13.6	18.3	17.4	22.1	21.8	26.3	*327*
60–64	72.5	0	13.7	15.5	17.1	18.8	19.1	16.5	*221*
65–69	72.5	0	15.0	15.1	16.6	17.4	16.4	13.3	*189*
70–74	63.9	0	8.0	8.6	5.4	5.7	8.3	6.0	*103*
75+	57.9	0	11.2	13.5	12.3	2.9	5.3	0.0	*53*
Women	**68.5**	**0**	**11.5**	**14.3**	**14.5**	**15.6**	**14.8**	**15.5**	***1,455***
50–54	72.2	0	9.7	16.6	15.4	17.6	17.4	15.6	*356*
55–59	72.5	0	12.3	14.6	17.3	17.3	19.8	23.3	*381*
60–64	60.4	0	13.4	17.4	18.9	21.8	17.4	18.7	*234*
65–69	64.9	0	13.0	14.8	12.7	16.9	13.9	16.4	*234*
70–74	71.0	0	11.0	8.0	10.8	7.9	6.3	4.8	*162*
75+	67.3	0	9.2	10.0	5.4	3.3	2.6	2.6	*88*

For variable definitions, see AS.1, AS.2, AS.15 and AS.18. For related text, see S.43.

Table SL6d. Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% not volunteering in 2002–03	Of those not volunteering at baseline, % volunteering at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**71.2**	**0**	**12.6**	**14.7**	**15.6**	**16.7**	**16.6**	**16.0**	***1,159***
Lowest	82.2	0	10.8	10.2	11.5	10.4	6.5	7.3	*132*
2nd	81.7	0	8.7	9.1	10.7	11.1	10.3	10.6	*195*
3rd	76.3	0	13.7	15.2	13.4	14.9	16.5	14.8	*269*
4th	66.5	0	13.6	15.9	16.7	18.9	19.7	19.8	*279*
Highest	59.1	0	15.2	20.9	24.0	25.7	26.0	24.2	*284*
Women	**68.7**	**0**	**11.3**	**14.0**	**14.4**	**15.8**	**14.6**	**15.4**	***1,427***
Lowest	84.1	0	5.5	7.0	9.6	11.5	6.8	8.3	*229*
2nd	77.8	0	7.6	9.8	15.3	13.1	12.9	10.6	*285*
3rd	68.5	0	13.2	17.9	13.5	16.3	16.1	16.3	*306*
4th	67.7	0	14.9	17.9	15.1	17.0	17.9	18.8	*328*
Highest	52.0	0	15.6	17.7	18.8	21.7	19.8	23.9	*279*

For variable definitions, see AS.2, AS.15, AS.16, AS.17 and AS.18. For related text, see S.44.

Table SL7a. Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–7, by age and gender

Age in 2002–03	% not caring in 2002–03	Of those not caring for someone at baseline, % caring for someone at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**91.7**	**0**	**9.4**	**9.1**	**8.0**	**10.8**	**8.8**	**8.4**	***1,621***
50–54	91.6	0	9.6	9.0	9.0	11.3	9.5	8.9	397
55–59	90.7	0	8.6	9.9	6.5	9.3	6.4	8.7	407
60–64	94.6	0	10.7	6.9	10.8	16.0	12.7	9.1	305
65–69	91.2	0	9.9	10.2	7.1	10.2	8.4	7.6	262
70–74	91.3	0	11.7	12.1	6.9	8.9	6.5	6.3	161
75+	90.0	0	3.8	6.0	5.0	3.7	7.8	7.8	89
Women	**86.5**	**0**	**16.0**	**13.5**	**13.0**	**12.9**	**12.6**	**10.4**	***1,991***
50–54	86.1	0	19.6	18.2	19.8	18.2	19.8	15.4	455
55–59	82.3	0	19.9	16.2	16.6	19.0	16.6	14.6	456
60–64	86.5	0	16.4	13.9	11.8	10.8	11.1	11.8	362
65–69	86.6	0	15.5	12.3	10.3	8.6	8.1	6.4	348
70–74	92.8	0	12.5	6.6	6.3	6.7	5.4	4.6	228
75+	89.1	0	4.6	6.5	4.1	5.5	5.8	1.3	142

For variable definitions, see AS.1, AS.2, AS.3 and AS.18. For related text, see S.45.

Table SL7b. Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–7, by wealth group and gender

Wealth group in 2002–03	% not caring in 2002–03	Of those not caring for someone at baseline, % caring for someone at …							*Unwted N*
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	
Men	**91.6**	**0**	**9.4**	**9.0**	**8.1**	**10.8**	**8.8**	**8.4**	***1,597***
Lowest	89.6	0	6.9	8.8	10.4	9.7	8.8	6.9	*151*
2nd	90.9	0	8.8	7.7	5.5	12.0	8.6	5.2	*232*
3rd	90.9	0	7.5	7.5	9.0	11.2	10.1	10.6	*337*
4th	93.3	0	10.6	11.1	6.8	10.6	8.4	10.1	*414*
Highest	92.2	0	11.5	9.4	9.0	10.6	8.2	7.6	*463*
Women	**86.9**	**0**	**16.2**	**13.6**	**13.0**	**12.9**	**12.6**	**10.4**	***1,957***
Lowest	84.8	0	12.7	10.4	9.5	6.8	7.5	5.0	*248*
2nd	85.9	0	15.0	11.5	10.8	11.9	12.6	10.7	*344*
3rd	86.4	0	17.1	16.8	15.6	15.4	12.1	12.1	*406*
4th	87.0	0	16.2	15.4	16.1	16.3	13.7	11.8	*442*
Highest	89.4	0	18.5	12.8	11.9	12.5	15.3	10.9	*517*

For variable definitions, see AS.2, AS.3, AS.16, AS.17 and AS.18. For related text, see S.46.

H. Health domain tables

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Introduction

H.1 This chapter presents results for the Health domain of the latest wave of the English Longitudinal Study of Ageing (ELSA). Results are presented according to six domains of health: general health, diagnosed health conditions, sensorial function, disability, cognitive function and health behaviours. Where possible results are presented as follows:

- Cross-sectional tables (H1a to H8b) based on core members respondents of wave 7 (including the refreshment sample members added in 2006–07, 2008–09, 2012–13 and 2014–15). Results are classified by gender and age (divided into five-year categories), and by gender and wealth groups (quintiles). Results are weighted using cross-sectional weight.

- Longitudinal tables (HL1a to HL12b), based on a balanced ELSA sample of core members who participated in all waves (1 to 7). Results are classified by gender and age at wave 1 (divided into five-year categories), and by gender and wealth groups (quintiles at wave 1). Results are weighted using longitudinal weight.

Cross-sectional tables

General health

H.2 Table H1a shows the percentage of self-rated health by gender and age at wave 7. The prevalence of men and women reporting excellent self-rated health decreases with age and reaches the lowest value at the age of 80 and over. Overall, 76% of men and 72% of women report excellent, very good or good health.

H.3 Table H1b shows the percentage of self-rated health by gender and wealth at wave 7. There is a steep economic gradient in self-rated health: men and women in the lowest wealth groups report more frequently fair or poor health than those in the highest wealth groups. Among the highest wealth group, 90% of men and 85% women rate their health good to excellent; the corresponding figure for men and women in the lowest wealth group is 51%.

H.4 Table H2a shows the percentage of people reporting a limiting long-standing illness by gender and age at wave 7. The prevalence of men and women reporting a limiting long-standing illness increases with age, from 17% in men and 23% in women aged 50–54 to 51% in men and 58% in women aged 80 and over.

H.5 Table H2b shows the percentage of limiting long-standing illness by gender and wealth at wave 7. The prevalence of men and women in the lowest wealth group

reporting a limiting long-standing illness is over 50%, which is more than twice the proportion of those in the highest wealth group.

Health conditions

H.6 Table H3a shows the percentage of diagnosed health conditions by gender and age at wave 7. The prevalence of health conditions increases with age, in both men and women; the only exception is for diagnosed depression, which peaks between ages 60 and 64 for both men and women and is less prevalent at older ages. In each age group, more men than women report CHD, while more women than men report arthritis, depression and cancer up to the age of 75. Overall, the prevalence of chronic disease is high in wave 7 of ELSA, particularly for arthritis, diabetes and respiratory illnesses.

H.7 Table H3b shows the percentage of health conditions by gender and wealth at wave 7. Among men and women, the prevalence of all health conditions is lowest in the highest wealth group. The only exception is for cancer in women, which increases from 12% in the lowest wealth group to 14% in the highest; however, the difference is not statistically significant.

Hearing acuity

H.8 Table H4a shows the percentage of hearing acuity, both objectively measured and self-rated, by gender and age at wave 7. The percentage of men and women wearing a hearing aid increases with age and nearly doubles between those aged 75–79 and those aged 80 and over. The prevalence of those reporting objectively good hearing acuity decreases sharply with age for both men and women; nevertheless, at any given age, women show better hearing acuity than men. Hearing impairment is highly prevalent overall (36% of men and 31% of women) and extremely frequent in those aged 80 and over (83% of men and 76% of women). A similar trend is observed with self-reported hearing.

H.9 Table H4b shows the percentage of hearing acuity by gender and wealth at wave 7. Women in the lowest wealth group wear a hearing aid more frequently, have more hearing difficulties and report poorer hearing acuity than women in the highest wealth group. No clear trend can be seen in men.

H.10 Table H4c shows the discrepancies between objective and self-reported hearing impairment by gender and age group. Only a very small number of people who self-report a fair or poor hearing are objectively classified as not having hearing impairment. A fifth of men and women who, according to the objective measure, have a hearing impairment do not self-report a fair or poor hearing, and this percentage increases dramatically with age.

H.11 Table H4d shows the discrepancies between objective and self-reported hearing impairment by gender and wealth group. No clear trend is observed in men, but there are more women not reporting a fair or poor hearing while suffering from hearing impairment in the lowest wealth group.

Disability

H.12 Table H5a shows the mean walking speed (m/s) by gender and age at wave 7. In both men and women, the mean walking speed decreases with age and in each age group is lower for women than men.

H.13 Table H5b shows the mean walking speed (m/s) by gender and wealth at wave 7. The mean walking speed of men and women in the lowest wealth group is, on average, 0.25 m/s lower than that of people in the highest wealth group.

H.14 Table H6a reports the prevalence of limitations with one or more activities of daily living (ADLs) and instrumental activities of daily living (IADLs) by gender and age at wave 7. The prevalence of men and women reporting limitations with one or more ADLs and IADLs increases with age. At all ages, women are more likely to report difficulties with ADLs and IADLs than men.

H.15 Table H6b reports the prevalence of limitations with one or more ADLs and IADLs by gender and wealth at wave 7. There is a strong economic gradient, with more than three times the proportion of men and women having limitations with one or more ADLs and IADLs in the lowest wealth group compared with the highest wealth group. In the lowest wealth groups, there is a gender difference in the prevalence of those reporting limitations with one or more IADLs (with women being more at risk than men), which is attenuated in the highest quintile of wealth.

Cognitive function

H.16 Table H7a reports the mean cognitive function by gender and age at wave 7. Memory functioning declines with age in both genders and scores are very similar between men and women. Attention functioning is stable across age groups in men but declines slightly in women. Comprehension decreases a little at older ages for both men and women.

H.17 Table H7b reports the mean cognitive function by gender and wealth at wave 7. In both genders, cognitive functioning – memory, attention and comprehension – is lowest in the lowest wealth group.

Health behaviours

H.18 Table H8a shows the prevalence of several health behaviours by gender and age at wave 7. In both genders, the prevalence of current smokers decreases with age, while the prevalence of those being physically inactive increases with age. The prevalence of men reporting daily alcohol consumption is higher at older ages; no clear trend is observed in women. The prevalence of men and women consuming five and more portions of fruit and vegetables a day increases up to the age of 74 in women and 79 in men and declines thereafter.

H.19 Table H8b shows the prevalence of several health behaviours by gender and wealth at wave 7. In both genders, the prevalence of current smokers and physical inactivity is highest in the lowest wealth groups. The prevalence of daily alcohol intake and consumption of five and more portions of fruit and vegetables is lowest in the lowest wealth group. In the lowest wealth group, over a third of men and women are physically inactive, and over half eat less than five portions of fruit and vegetables a day.

Longitudinal tables

H.20 Cross-sectional tables using a series of data from different time periods combine the effect of age, time and differential mortality. For example, looking at cross-sectional data on income over time, it would not be possible to isolate the effect

of age on income because we cannot strip out the effect of time or differential mortality (i.e. the observation that higher-income individuals tend to live longer than lower-income individuals). Because longitudinal data follow the same individuals over time, by selecting a sample of individuals who are interviewed at every wave, we can eliminate the effect of differential mortality. The tables that follow take the set of individuals who have responded at every wave from waves 1 to 7 (the 'balanced panel') and track some health conditions by age, gender and wealth in 2002–03 (the 'baseline' year) across waves over 12 years.

General health

H.21 Table HL1a shows the percentage of participants reporting fair or poor self-rated health by gender and age for waves 1 to 7.[24] The prevalence of men and women reporting fair or poor health increases from wave 1 to wave 7, particularly in the older age group.

H.22 Table HL1b shows the percentage of participants reporting fair or poor self-rated health by gender and wealth for waves 1 to 7.[25] The prevalence of men and women reporting fair or poor health increases in each quintile of wealth from wave 1 to wave 7 and is consistently higher in the lowest wealth groups.

Health conditions

H.23 Tables HL2a and HL3a show the percentage of CHD and diabetes by gender and age for waves 1 to 7. The percentage of men and women reporting CHD and diabetes increases from wave 1 to wave 7, particularly for older individuals.

H.24 Tables HL2b and HL3b show the percentage of CHD and diabetes by gender and wealth for waves 1 to 7. The percentage of men and women reporting CHD and diabetes increases in each wealth group from wave 1 to wave 7 and is highest at wave 7 among individuals in the lowest wealth group. The prevalence of diabetes is nearly five times higher in wave 7 compared to wave 1 in the lowest wealth group, for both genders, while the increase follows a flatter trend in the higher wealth groups. By wave 7, women in the highest wealth group have not yet reached the CHD prevalence seen in the lowest wealth group in wave 1.

H.25 Table HL4a shows the percentage of cancer by gender and age for waves 1 to 7. Overall, the prevalence of cancer increases from wave 1 to 7 and in all age groups, and is higher in women than men. However, trends are different according to age: women aged between 50 and 64 at baseline show a higher prevalence of cancer than men (of the same age) at every wave. It is likely that a survival effect is occurring for men aged 75–79 for whom we see a particularly low prevalence of cancer at the first waves.

H.26 Table HL4b shows the percentage of cancer by gender and wealth for waves 1 to 7. The percentage of people with cancer increases from wave 1 to wave 7 in all wealth groups, and no clear pattern is observed across wealth groups.

H.27 Table HL5a reports the prevalence of diagnosed depression by gender and age in waves 1 to 7. The percentage of men and women reporting depression increases from wave 1 to wave 7, nearly doubling, and at each wave is higher in women than in

[24] Wave 3 is excluded because it used a different question.
[25] See previous footnote.

men. Older men and women show consistently lower percentages of diagnosed depression than younger men and women.

H.28 Table HL5b reports the prevalence of diagnosed depression by gender and wealth in waves 1 to 7. The prevalence of diagnosed depression increases with time in each wealth group. In men, the increase is particularly sharp (it triples from wave 1 to wave 7) in the lowest wealth group, whereas in men in the higher wealth groups and in women across all wealth groups, the prevalence approximately doubles.

Hearing

H.29 Table HL6a reports the prevalence of self-reported hearing impairment by gender and age groups in waves 1 to 7. The prevalence of hearing impairment increases with time overall and in most age groups. The increase is more marked in men and women aged 65 and above, and at any given wave the prevalence is higher in those aged 65 and above compared to younger individuals.

H.30 Table HL6b reports the prevalence of self-reported hearing impairment by gender and wealth in waves 1 to 7. The prevalence of hearing impairment increases over time in all wealth categories. It is consistently higher in the second lowest wealth group in men and in the bottom wealth group in women, for whom it is two times the prevalence of the highest wealth group.

Disability

H.31 Table HL7a reports the prevalence of participants reporting limitations with one and more ADLs by gender and age for waves 1 to 7. In both genders, the prevalence of those reporting limitations with one or more ADLs increases over time, particularly for people aged over 60. There is also a clear gradient by age at every wave.

H.32 Table HL7a reports the prevalence of participants reporting limitations with one and more ADLs by gender and wealth for waves 1 to 7. In both genders, the prevalence of those reporting limitations with one or more ADLs increases with time in each wealth group and is consistently twice as high in the lowest wealth group compared to the highest wealth group at every wave.

H.33 Table HL8a reports the mean walking speed by gender and age for waves 1 to 7. For both men and women, mean walking speed decreases from wave 1 to wave 7 in each age group, and the decline is steeper from the age of 70 onwards. At every wave, walking speed decreases with increasing age.

H.34 Table HL8b reports the mean walking speed by gender and wealth for waves 1 to 7. For both men and women, walking speed decreases over time in each wealth group and walking speed is consistently higher in the highest wealth group.

Cognitive function

H.35 Table HL9a reports the mean cognitive function (memory) by gender and age at waves 1 to 7. In both genders, overall memory function score is almost constant over time, with a slight decrease from wave 4 to wave 7. No decline is observed in men and women aged 50–54 at baseline.

H.36 Table HL9b reports the mean cognitive function (memory) by gender and wealth at waves 1 to 7. For both men and women, the decrease in memory over time starts from wave 4 onwards and is more pronounced in the lowest wealth group.

Health behaviours

H.37 Table HL10a shows the prevalence of cigarette smoking by gender and age for waves 1 to 7. There is an overall slight decrease in the prevalence of smoking over time with some fluctuations. In men, the prevalence is stable from waves 1 to 5 and decreases from waves 5 to 7, except for men aged 55–59, for whom the decrease starts at wave 3. In women aged 50–69, no clear pattern can be observed. The trend is almost flat for women aged 75 and over. At every wave and for both genders, the prevalence decreases with age.

H.38 Table HL10b shows the prevalence of smoking by gender and wealth for waves 1 to 7. In both genders, the prevalence of current smokers decreases over time in all wealth groups from wave 5 onwards and the trend is steeper in the lowest and second lowest wealth groups.

H.39 Table HL11a shows the percentage of daily alcohol consumers by gender and age for waves 1 to 7. Overall, the percentage of alcohol consumers decreases over time, particularly from wave 1 to wave 2, and is then approximately stable from wave 2 onwards. This trend is observed at all ages up to 74, for both men and women. There is a steeper decrease in men and women aged 75 and over.

H.40 Table HL11b shows the percentage of daily alcohol consumers by gender and wealth for waves 1 to 7. As above, there is a sharp decrease from wave 1 to wave 2 in all wealth groups and the percentage then declines only a little. The highest percentages of daily alcohol consumers are observed in the highest wealth groups for both men and women.

H.41 Table HL12a shows the prevalence of physical inactivity by gender and age for waves 1 to 7. In both genders, the percentage of those physically inactive increases with time in older ages only, and is relatively constant at younger ages.

H.42 Table HL12b shows the prevalence of physical inactivity by gender and wealth for waves 1 to 7. Physical inactivity increases over time in all wealth groups. At each wave, the proportion of participants reporting physical inactivity is three to five times higher in the lowest wealth group compared to the highest wealth group, reaching high absolute levels (more than half of the women from the lowest wealth group).

Annex AH. Definitions

AH.1 *Activities of daily living (ADLs) and instrumental activities of daily living (IADLs):* Respondents were asked to report whether because of a physical, mental, emotional or memory problem they have any difficulty with ADLs (dressing, walking across a room, bathing or showering, eating, getting out of bed, using the toilet) and with IADLs (using a map, preparing a hot meal, shopping for groceries, making phone calls, taking medications, doing work around the house, managing money). From the responses to these questions, two variables were derived to indicate whether the respondent had difficulties with one or more ADLs and IADLs.

AH.2 *Age:* Defined as age at last birthday

AH.3 *Alcohol consumption:* Based on the questions concerning frequency of alcohol consumption, a variable was derived to indicate whether or not the respondent was drinking alcohol three days a week or more (which was then labelled as daily alcohol consumption).

AH.4 *Balanced panel:* The set of individuals are who interviewed in all waves of interest.

AH.5 *Baseline:* The wave of data that is chosen to be starting point for characteristics in longitudinal analysis that may change over time.

AH.6 *Cognitive function – attention:* This is an index that combines the scores on the cognitive test on attention and calculation (counting backward, subtraction). Higher scores indicate better attention functioning.

AH.7 *Cognitive function – comprehension*: A score that combines the results of five questions (naming objects and people) on comprehension, semantics and recent memory. Higher scores indicate better comprehension.

AH.8 *Cognitive function – memory:* This is an index that combines the scores on the objective memory tests (word-list learning, immediate and delayed memory), ranging from 0 to 20. Higher scores indicate better memory.

AH.9 *Consumption of fruit and vegetables:* Based on the questions regarding fruit and vegetable consumption, a variable was derived to indicate whether the respondent ate five or more portions of fruits and vegetables a day.

AH.10 *Health conditions:* Respondents were asked whether a doctor had ever told them that they suffered from any of the following conditions: coronary heart disease (angina or myocardial infarction), diabetes, cancer, respiratory illness (asthma or pulmonary disease), arthritis and depression.

AH.11 *Limiting long-standing illness:* Respondents were asked whether they suffered from any illness or disability that affected them over a long period of time and, if so, whether the illness limited their activities in some way.

AH.12 *Objectively measured hearing acuity*: A hearing test was performed for all participants, unless they had an ear infection or a cochlear implant. Participants were asked to remove their hearing aid, if wearing any. The HearCheck screener device was used. This simple hand-held device produces a fixed series of three pure high-frequency sounds (3 kHz) and three mid-frequency sounds (1 kHz), at decreasing intensities. Hearing performance at the best ear was used to classify hearing acuity as

follows: good (heard all six tones); mild hearing difficulty (three to five tones); moderate to severe hearing difficulty (zero to two tones).

AH.13 *Physical activity:* Based on the questions regarding frequency of leisure-time physical activity, a variable was derived to indicate whether or not the respondent was physically inactive (sedentary physical activity).

AH.14 *Self-rated hearing acuity*: Respondents were asked to rate their hearing, as excellent, very good, good, fair or poor. Self-reported hearing impairment was defined as having declared a fair or poor hearing.

AH.15 *Self-rated general health:* Respondents were asked to rate their health as excellent, very good, good, fair or poor. Because at wave 3 self-rated general health was collected using a different version, for comparability results from that wave are omitted from the tables.

AH.16 *Smoking status:* Defined as whether the respondent was a current smoker or not.

AH.17 *Total non-pension wealth:* Total non-pension wealth is reported at the family level and is defined as the sum of net financial wealth, net physical wealth and net housing wealth.

AH.18 *Walking speed:* A walking speed test was performed among participants aged 60 and over. The test involved timing how long it took to walk a distance of 8 feet. The total score indicates the walking speed of respondents in metres per second (m/s) with higher scores indicating faster speed.

AH.19 *Wealth groups:* To form wealth groups, we order all ELSA sample members according to the value of their total (non-pension) family wealth and we divide the sample into five equal-sized groups. Where analysis is carried out using all ELSA sample members, the groups are equal in size and can be referred to as quintiles. Much of the analysis in this chapter is carried out using subsamples of the ELSA population. Where analysis does not use the whole ELSA sample, the groups are unequal in size and are more accurately referred to as 'wealth groups'. For consistency reasons, we use the term 'wealth group' rather than 'wealth quintile' throughout the chapter. The cut-off points for the wealth groups are shown in the following table. Cut-off points are reported in January 2015 prices and are rounded to the nearest £1,000.

	Wealth group definition, wave 1 (2002–03)	**Wealth group definition, wave 7 (2014–15)**
Lowest	Less than £24k	Less than £59k
2nd	Between £24k and £137k	Between £59k and £199k
3rd	Between £137k and £240k	Between £199k and £331k
4th	Between £240k and £423k	Between £331k and £554k
Highest	More than £423k	More than £554k

AH.20 ***Notes to all tables***

The unit of observation in all tables is the individual.

All cross-sectional tables are based on the cross-section of ELSA sample members in this wave of data. This includes refreshment sample members.

All longitudinal tables are based on individuals who have responded in all of waves 1 to 7 (the 'balanced panel') unless otherwise specified.

All numbers are based on weighted data. Unweighted frequencies (*N*) are reported.

For cross-sectional analyses, the figures are weighted for non-response. For longitudinal analyses, the figures are weighted for non-response and attrition using longitudinal weights.

Values are converted to January 2015 prices using the retail price index (RPI).

The fieldwork dates are shown in the following table:

	Fieldwork dates (inclusive)
Wave 1	March 2002 – March 2003
Wave 2	June 2004 – June 2005
Wave 3	May 2006 – August 2007
Wave 4	June 2008 – July 2009
Wave 5	July 2010 – June 2011
Wave 6	May 2012 – June 2013
Wave 7	June 2014 – May 2015

Table H1a. Self-rated health (%), by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Excellent	18.0	16.8	16.5	10.7	9.1	4.8	5.2	12.9
Very good	37.4	32.7	27.0	32.2	29.4	25.1	24.1	30.8
Good	29.9	30.3	32.7	34.0	34.2	34.7	28.8	31.9
Fair	9.5	12.9	17.2	16.8	20.7	22.3	30.9	17.0
Poor	5.2	7.3	6.6	6.4	6.6	13.0	11.0	7.4
Women								
Excellent	23.2	15.6	13.8	10.9	8.4	6.7	3.2	12.7
Very good	26.9	27.7	32.1	29.7	28.3	24.4	18.3	27.0
Good	28.7	30.8	32.1	34.5	32.7	32.2	35.3	32.1
Fair	12.7	17.8	15.0	18.5	21.6	28.4	29.7	19.6
Poor	8.5	8.2	7.0	6.5	9.0	8.3	13.5	8.6
Unweighted N								
Men	*232*	*386*	*650*	*712*	*555*	*483*	*441*	*3,459*
Women	*319*	*507*	*795*	*880*	*684*	*600*	*647*	*4,432*

For variable definitions, see AH.2 and AH.15. For related text, see H.2.

Table H1b. Self-rated health (%), by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
Excellent	6.5	8.6	13.1	12.5	19.8
Very good	17.1	25.2	32.1	36.0	37.0
Good	27.4	35.3	33.2	32.0	32.8
Fair	31.8	23.4	15.3	14.7	7.7
Poor	17.3	7.6	6.3	4.8	2.6
Women					
Excellent	3.7	10.6	9.7	13.6	18.8
Very good	16.1	22.3	28.5	32.2	37.4
Good	31.6	34.9	32.1	34.4	28.7
Fair	29.4	22.8	22.2	15.5	11.9
Poor	19.3	9.3	7.4	4.4	3.2
Unweighted N					
Men	*467*	*529*	*663*	*754*	*788*
Women	*704*	*768*	*868*	*860*	*855*

For variable definitions, see AH.15, AH.17 and AH.19. For related text, see H.3.

Table H2a. Limiting long-standing illness (%), by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	17.2	23.1	24.9	31.5	36.4	46.7	50.6	30.0
Women	23.3	31.6	29.2	34.6	37.4	47.2	57.8	36.0
Unweighted N								
Men	*240*	*400*	*680*	*742*	*582*	*505*	*486*	*3,635*
Women	*326*	*518*	*820*	*910*	*699*	*628*	*716*	*4,617*

For variable definitions, see AH.2 and AH.11. For related text, see H.4.

Table H2b. Limiting long-standing illness (%), by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men	49.8	37.1	28.9	26.0	18.8
Women	55.7	41.1	37.6	28.2	25.0
Unweighted N					
Men	*489*	*566*	*696*	*777*	*816*
Women	*729*	*799*	*893*	*890*	*883*

For variable definitions, see AH.11, AH.17 and AH.19. For related text, see H.5.

Table H3a. Diagnosed health conditions (%), by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
CHD	2.3	6.6	11.1	17.7	22.8	24.1	37.0	14.8
Diabetes	8.4	9.0	13.3	18.4	18.3	20.3	17.8	14.1
Cancer	1.7	6.0	5.2	8.6	13.2	21.5	20.7	9.1
Respiratory illness	14.6	13.7	15.4	20.2	22.4	21.5	18.1	17.3
Arthritis	9.4	21.1	29.2	36.8	41.2	46.9	52.6	30.3
Depression	7.9	11.0	12.7	12.3	10.2	5.7	3.9	9.6
Women								
CHD	1.0	3.1	4.8	8.7	13.6	18.8	14.8	9.8
Diabetes	2.1	12.1	9.7	11.0	13.0	14.4	19.2	11.0
Cancer	5.1	9.3	11.4	13.2	18.9	15.4	17.1	12.2
Respiratory illness	12.6	17.2	20.7	21.7	24.4	25.1	23.5	20.0
Arthritis	15.0	34.6	44.4	53.7	59.0	60.9	69.4	45.4
Depression	15.5	16.5	16.8	16.5	13.7	10.3	8.2	14.3
Unweighted N								
Men								
CHD	*240*	*400*	*680*	*742*	*582*	*506*	*486*	*3,636*
Diabetes	*240*	*400*	*679*	*741*	*582*	*504*	*486*	*3,632*
Cancer	*240*	*400*	*680*	*742*	*582*	*506*	*486*	*3,636*
Respiratory illness	*240*	*400*	*679*	*742*	*582*	*506*	*486*	*3,635*
Arthritis	*236*	*395*	*660*	*725*	*559*	*481*	*466*	*3,522*
Depression	*240*	*400*	*678*	*740*	*577*	*506*	*486*	*3,627*
Women								
CHD	*326*	*518*	*820*	*910*	*699*	*628*	*716*	*4,617*
Diabetes	*326*	*517*	*820*	*910*	*699*	*628*	*716*	*4,616*
Cancer	*326*	*518*	*820*	*910*	*699*	*628*	*716*	*4,617*
Respiratory illness	*326*	*518*	*820*	*909*	*698*	*628*	*715*	*4,614*
Arthritis	*322*	*498*	*793*	*880*	*678*	*600*	*673*	*4,444*
Depression	*325*	*516*	*816*	*907*	*696*	*626*	*716*	*4,602*

For variable definitions, see AH.2 and AH.10. For related text, see H.6.

Table H3b. Diagnosed health conditions (%), by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
CHD	23.5	15.7	18.8	14.9	10.0
Diabetes	18.4	16.7	14.0	13.4	11.0
Cancer	11.0	11.3	10.5	9.9	8.7
Respiratory illness	23.0	21.4	15.9	16.3	13.3
Arthritis	41.1	34.4	32.7	34.1	24.5
Depression	16.9	10.7	8.8	8.6	7.1
Women					
CHD	17.7	14.1	11.0	7.2	4.3
Diabetes	20.1	12.6	11.6	9.7	5.5
Cancer	12.0	11.6	13.6	14.2	14.1
Respiratory illness	28.9	21.6	21.0	17.4	15.0
Arthritis	62.8	48.4	51.8	43.3	40.4
Depression	20.0	17.8	11.9	11.8	9.9
Unweighted N					
Men					
CHD	*489*	*567*	*696*	*777*	*816*
Diabetes	*487*	*566*	*696*	*777*	*816*
Cancer	*489*	*567*	*696*	*777*	*816*
Respiratory illness	*488*	*567*	*696*	*777*	*816*
Arthritis	*461*	*549*	*673*	*758*	*794*
Depression	*487*	*566*	*694*	*775*	*814*
Women					
CHD	*729*	*799*	*893*	*890*	*883*
Diabetes	*729*	*798*	*893*	*890*	*883*
Cancer	*729*	*799*	*893*	*890*	*883*
Respiratory illness	*728*	*799*	*892*	*890*	*883*
Arthritis	*695*	*766*	*858*	*862*	*850*
Depression	*728*	*799*	*890*	*885*	*881*

For variable definitions, see AH.10, AH.17 and AH.19. For related text, see H.7.

Table H4a. Objective and self-reported hearing acuity (%), by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Objective hearing								
Wears hearing aid	2.4	1.7	6.2	10.4	18.5	26.9	43.1	12.3
Hearing acuity								
Good	82.3	81.6	73.8	63.6	52.6	41.8	16.6	64.5
Mild difficulty	17.2	16.2	25.2	34.5	42.6	48.9	61.4	31.1
Moderate/severe difficulty	0.5	2.2	1.1	2.0	4.8	9.2	21.9	4.4
Self-reported hearing								
Excellent	25.3	16.1	13.7	12.8	8.8	8.0	3.4	14.2
Very good	30.4	32.2	29.0	25.6	22.5	19.4	17.3	26.5
Good	26.5	33.7	33.9	35.2	38.0	36.0	34.3	33.3
Fair	15.0	14.0	17.8	21.0	22.8	27.1	30.6	19.9
Poor	2.7	4.0	5.5	5.4	8.0	9.5	14.3	6.2
Women								
Objective hearing acuity								
Wears hearing aid	3.3	2.0	4.3	7.5	11.6	17.0	30.4	9.8
Hearing acuity								
Good	86.8	83.7	82.3	73.5	63.0	47.9	24.2	68.9
Mild difficulty	12.6	15.7	16.8	25.1	33.5	45.1	56.6	26.9
Moderate/severe difficulty	0.6	0.7	0.8	1.5	3.5	7.0	19.2	4.2
Self-reported hearing								
Excellent	35.9	26.8	22.1	20.8	16.6	14.6	6.9	21.8
Very good	31.6	33.9	34.4	29.6	30.7	24.7	21.2	29.9
Good	20.1	30.6	32.5	33.1	37.0	37.3	38.2	31.7
Fair	9.7	7.3	8.7	14.4	12.3	18.2	21.8	12.7
Poor	2.8	1.4	2.3	2.1	3.5	5.3	12.0	4.0
Unweighted N								
Men								
Wears hearing aid	*232*	*386*	*650*	*713*	*554*	*484*	*441*	*3,460*
Hearing test	*220*	*364*	*618*	*678*	*525*	*455*	*393*	*3,253*
Self-reported hearing	*240*	*400*	*679*	*742*	*582*	*505*	*486*	*3,634*
Women								
Wears hearing aid	*319*	*507*	*795*	*880*	*684*	*600*	*647*	*4,432*
Hearing test	*296*	*490*	*753*	*827*	*645*	*568*	*592*	*4,171*
Self-reported hearing	*326*	*518*	*820*	*909*	*699*	*628*	*716*	*4,616*

For variable definitions, see AH.2, AH.12 and AH.14. For related text, see H.8.

Table H4b. Objective and self-reported hearing acuity, by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
Objective hearing acuity					
Wears hearing aid	12.9	14.6	14.3	15.5	12.3
Hearing acuity					
Good	58.5	58.2	59.9	62.6	68.2
Mild difficulty	33.1	35.4	34.5	34.0	29.6
Moderate/severe difficulty	8.4	6.4	5.6	3.4	2.2
Self-reported hearing					
Excellent	10.4	11.6	10.5	12.6	14.1
Very good	26.7	23.2	24.8	26.6	27.4
Good	34.3	36.3	33.2	31.9	36.6
Fair	19.9	20.9	23.2	23.5	18.0
Poor	8.8	8.0	8.3	5.4	3.9
Women					
Objective hearing					
Wears hearing aid	13.8	11.1	11.7	9.1	8.0
Hearing acuity					
Good	52.5	67.9	66.0	70.5	76.5
Mild difficulty	38.9	27.0	29.1	26.9	21.3
Moderate/severe difficulty	8.6	5.1	5.0	2.6	2.2
Self-reported hearing					
Excellent	16.1	20.9	18.8	20.8	23.7
Very good	25.8	26.5	32.6	31.1	32.9
Good	33.3	33.6	31.4	34.7	31.3
Fair	17.3	13.7	12.0	11.3	11.0
Poor	7.5	5.3	5.1	2.1	1.1
Unweighted N					
Men					
Wears hearing aid	*467*	*529*	*663*	*755*	*788*
Hearing test	*423*	*496*	*621*	*721*	*752*
Self-reported hearing	*488*	*566*	*696*	*777*	*816*
Women					
Wears hearing aid	*704*	*768*	*868*	*860*	*855*
Hearing test	*655*	*720*	*815*	*826*	*811*
Self-reported hearing	*729*	*799*	*893*	*890*	*882*

For variable definitions, see AH.12, AH.14, AH.17 and AH.19. For related text, see H.9.

Table H4c. Discrepancies between self-reported and objective hearing impairment, by age group and gender: wave 7

	Age in 2014–15			
	50–59	**60–69**	**70+**	**All**
Men				
No objective but self-reported hearing impairment	10.4	10.0	5.1	8.7
Objective but not self-reported hearing impairment	11.7	17.4	33.2	19.9
Women				
No objective but self-reported hearing impairment	6.5	6.1	3.5	5.3
Objective but not self-reported hearing impairment	10.8	15.0	36.7	20.9
Unweighted N				
Men				
No objective but self-reported hearing impairment	*60*	*129*	*72*	*261*
Objective but not self-reported hearing impairment	*62*	*217*	*442*	*721*
Women				
No objective but self-reported hearing impairment	*50*	*92*	*67*	*209*
Objective but not self-reported hearing impairment	*86*	*234*	*636*	*956*

For variable definitions, see AH.2, AH.12 and AH.14. For related text, see H.10.

Table H4d. Discrepancies between self-reported and objective hearing impairment by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
No objective but self-reported hearing impairment	9.0	7.5	9.7	9.9	8.2
Objective but not self-reported hearing impairment	24.6	21.3	21.9	19.3	19.5
Women					
No objective but self-reported hearing impairment	6.6	4.9	5.1	4.8	5.0
Objective but not self-reported hearing impairment	30.5	20.8	23.2	20.9	17.1
Unweighted N					
Men					
No objective but self-reported hearing impairment	*39*	*35*	*51*	*63*	*58*
Objective but not self-reported hearing impairment	*110*	*115*	*140*	*158*	*157*
Women					
No objective but self-reported hearing impairment	*34*	*36*	*41*	*40*	*41*
Objective but not self-reported hearing impairment	*206*	*172*	*200*	*180*	*145*

For variable definitions, see AH.12, AH.14, AH.17 and AH.19. For related text, see H.11.

Table H5a. Mean walking speed (m/s), by age group and gender: wave 7

	Age in 2014–15					
	60–64	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men	0.99	0.96	0.91	0.82	0.70	0.90
Women	0.94	0.91	0.82	0.77	0.63	0.83
Unweighted N						
Men	*588*	*661*	*510*	*418*	*321*	*2,498*
Women	*717*	*797*	*621*	*519*	*436*	*3,090*

For variable definitions, see AH.2 and AH.18. For related text, see H.12.

Table H5b. Mean walking speed (m/s), by wealth group and gender: wave 7

	Wealth group in 2014–015				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men	0.76	0.83	0.91	0.92	1.01
Women	0.69	0.78	0.82	0.88	0.95
Unweighted N					
Men	*281*	*369*	*509*	*607*	*640*
Women	*430*	*509*	*666*	*664*	*678*

For variable definitions, see AH.17, AH.18 and AH.19. For related text, see H.13.

Table H6a. Difficulties with one or more ADLs and IADLs (%), by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
ADLs	5.8	9.4	12.5	16.2	17.5	25.3	32.9	15.0
IADLs	8.9	8.6	11.2	13.5	16.0	27.7	36.5	15.3
Women								
ADLs	8.0	15.4	12.9	13.5	20.0	21.0	40.7	18.0
IADLs	11.6	19.2	14.4	17.4	22.7	26.0	54.0	22.7
Unweighted N								
Men	*240*	*400*	*679*	*742*	*582*	*505*	*486*	*3,634*
Women	*326*	*518*	*820*	*910*	*699*	*628*	*716*	*4,617*

For variable definitions, see AH.1 and AH.2. For related text, see H.14.

Table H6b. Difficulties with one or more ADLs and IADLs (%), by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
ADLs	27.3	19.3	13.3	13.6	8.3
IADLs	27.5	21.6	15.2	11.3	8.5
Women					
ADLs	33.5	22.6	18.2	12.7	7.9
IADLs	39.9	27.2	24.4	15.2	11.6
Unweighted N					
Men	*488*	*567*	*696*	*777*	*816*
Women	*729*	*799*	*893*	*890*	*883*

For variable definitions, see AH.1, AH.17 and AH.19. For related text, see H.15.

Table H7a. Mean cognitive function, by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Memory	11.2	11.3	11.5	10.6	9.5	8.3	7.1	10.3
Attention	5.8	6.0	6.0	6.0	5.9	5.6	5.6	5.9
Comprehension	4.7	4.8	4.8	4.8	4.7	4.6	4.3	4.7
Women								
Memory	11.8	11.9	12.1	11.2	10.4	9.5	6.9	10.7
Attention	5.7	5.5	5.6	5.7	5.4	5.3	5.1	5.5
Comprehension	4.7	4.7	4.8	4.8	4.7	4.7	4.2	4.7
Unweighted N								
Men								
Memory	*229*	*385*	*649*	*711*	*554*	*483*	*439*	*3,450*
Attention	*226*	*373*	*628*	*686*	*527*	*436*	*399*	*3,275*
Comprehension	*225*	*380*	*637*	*700*	*540*	*464*	*418*	*3,364*
Women								
Memory	*313*	*506*	*794*	*877*	*683*	*598*	*644*	*4,415*
Attention	*293*	*470*	*747*	*820*	*626*	*523*	*519*	*3,998*
Comprehension	*300*	*481*	*779*	*854*	*662*	*565*	*586*	*4,227*

For variable definitions, see AH.2, AH.6, AH.7 and AH.8. For related text, see H.16.

Table H7b. Mean cognitive function, by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
Memory	8.8	9.9	10.0	10.5	11.4
Attention	5.4	5.7	5.9	6.1	6.3
Comprehension	4.4	4.7	4.8	4.8	4.8
Women					
Memory	9.1	10.4	10.3	11.2	12.2
Attention	5.1	5.2	5.6	5.6	5.8
Comprehension	4.4	4.6	4.7	4.8	4.8
Unweighted N					
Men					
Memory	*467*	*530*	*660*	*755*	*787*
Attention	*405*	*496*	*625*	*736*	*771*
Comprehension	*452*	*515*	*643*	*734*	*776*
Women					
Memory	*701*	*764*	*866*	*859*	*853*
Attention	*580*	*686*	*776*	*802*	*819*
Comprehension	*664*	*724*	*824*	*837*	*825*

For variable definitions, see AH.6, AH.7, AH.8, AH.17 and AH.19. For related text, see H.17.

Table H8a. Health behaviours (%) by age group and gender: wave 7

	Age in 2014–15							
	50–54	**55–59**	**60–64**	**65–69**	**70–74**	**75–79**	**80+**	**All**
Men								
Current smokers	16.7	19.2	16.3	12.8	10.5	8.7	3.9	13.8
Physically inactive	6.7	9.8	11.9	13.0	14.9	23.1	40.4	15.0
Daily alcohol consumption	18.5	19.2	22.3	27.6	30.3	22.6	25.3	23.1
At least five portions of fruit and veg/day	49.5	51.8	53.8	59.1	59.4	61.5	52.1	54.7
Women								
Current smokers	18.8	17.0	15.4	13.8	9.9	9.1	7.6	13.8
Physically inactive	11.0	16.0	14.3	14.8	20.4	27.1	59.9	22.3
Daily alcohol consumption	13.1	13.5	14.5	14.6	15.3	13.3	11.5	13.7
At least five portions of fruit and veg/day	57.3	60.1	61.9	66.0	69.1	66.6	56.8	62.2
Unweighted N								
Men								
Current smokers	*240*	*391*	*637*	*693*	*522*	*466*	*439*	*3,388*
Physically inactive	*240*	*400*	*678*	*742*	*582*	*506*	*486*	*3,634*
Daily alcohol consumption	*207*	*335*	*573*	*661*	*507*	*432*	*362*	*3,077*
At least five portions of fruit and veg/day	*205*	*330*	*567*	*652*	*498*	*424*	*354*	*3,030*
Women								
Current smokers	*326*	*507*	*763*	*852*	*663*	*579*	*657*	*4,347*
Physically inactive	*326*	*518*	*820*	*910*	*698*	*628*	*716*	*4,616*
Daily alcohol consumption	*258*	*457*	*727*	*803*	*625*	*539*	*499*	*3,908*
At least five portions of fruit and veg/day	*255*	*455*	*721*	*796*	*622*	*529*	*485*	*3,863*

For variable definitions, see AH.2, AH.3, AH.9, AH.13 and AH.16. For related text, see H.18.

Table H8b. Health behaviours (%) by wealth group and gender: wave 7

	Wealth group in 2014–15				
	Lowest	**2nd**	**3rd**	**4th**	**Highest**
Men					
Current smokers	31.6	14.9	8.9	7.2	5.4
Physically inactive	33.7	20.7	12.2	10.0	6.2
Daily alcohol consumption	17.4	19.3	22.7	23.4	32.6
At least five portions of fruit and veg/day	43.3	47.7	58.9	57.9	64.6
Women					
Current smokers	24.0	16.8	10.3	5.6	5.9
Physically inactive	44.0	26.6	22.7	14.2	9.2
Daily alcohol consumption	6.8	9.6	11.9	14.8	24.8
At least five portions of fruit and veg/day	49.0	59.1	63.0	67.6	72.5
Unweighted N					
Men					
Current smokers	*456*	*524*	*667*	*733*	*780*
Physically inactive	*488*	*567*	*696*	*777*	*816*
Daily alcohol consumption	*375*	*459*	*597*	*704*	*728*
At least five portions of fruit and veg/day	*369*	*449*	*585*	*695*	*721*
Women					
Current smokers	*691*	*766*	*861*	*853*	*841*
Physically inactive	*729*	*799*	*893*	*890*	*882*
Daily alcohol consumption	*567*	*677*	*788*	*775*	*801*
At least five portions of fruit and veg/day	*552*	*672*	*773*	*775*	*795*

For variable definitions, see AH.3, AH.9, AH.13, AH.16, AH.17 and AH.19. For related text, see H.19.

Table HL1a. Fair or poor self-rated health (%), by age and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**15.5**	**18.4**	**21.6**	**24.1**	**28.9**	**29.6**	***1,718***
50–54	12.8	14.6	19.1	19.1	22.9	20.3	*428*
55–59	16.9	19.7	20.2	23.1	25.6	25.5	*435*
60–64	19.3	21.0	24.2	24.6	32.5	32.8	*317*
65–69	16.6	23.1	24.8	30.2	30.8	37.6	*274*
70–74	13.2	15.6	19.1	28.6	35.0	42.8	*172*
75–79	14.6	16.6	29.4	29.6	49.2	41.8	*74*
80+	[0]	[17.1]	[27.6]	[25.3]	[32.1]	[17.9]	*18*
Women	**18.3**	**21.6**	**25.8**	**26.3**	**29.3**	**32.8**	***2,228***
50–54	16.3	19.4	20.7	18.0	22.9	23.7	*510*
55–59	19.4	23.9	23.0	23.2	27.2	28.1	*539*
60–64	18.1	18.6	25.9	24.2	25.3	30.9	*408*
65–69	14.0	19.2	24.1	28.4	31.6	38.4	*386*
70–74	25.3	26.5	35.7	42.2	43.5	51.5	*238*
75–79	20.5	28.0	37.5	39.5	35.0	36.4	*104*
80+	[24.4]	[25.8]	[44.4]	[37]	[45.9]	[42.7]	*43*

For variable definitions, see AH.2, AH.5 and AH.15. For related text, see H.21.

Table HL1b. Fair or poor self-rated health (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men							***1,694***
Lowest	36.3	41.1	43.8	43.8	53.5	49.5	*163*
2nd	23.1	28.2	30.8	35.1	40.9	43.7	*258*
3rd	13.6	13.7	23.5	23.4	31.2	28.1	*344*
4th	13.1	15.6	15.6	18.4	20.3	24.7	*439*
Highest	8.1	10.4	10.3	13.7	16.4	17.7	*490*
Women							***2,183***
Lowest	32.8	38.9	47.0	43.2	49.1	49.6	*288*
2nd	28.4	28.6	31.8	35.8	37.0	38.5	*385*
3rd	16.9	21.9	25.4	24.7	28.2	34.7	*454*
4th	13.2	15.3	19.2	17.7	20.6	25.6	*494*
Highest	9.7	12.3	14.2	16.9	19.1	21.1	*562*

For variable definitions, see AH.5, AH.15, AH.17 and AH.19. For related text, see H.22.

Table HL2a. Diagnosed CHD (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**9.9**	**11.6**	**13.1**	**14.3**	**21.5**	**22.8**	**24.0**	***1,782***
50–54	3.5	5.3	6.2	7.8	12.1	13.3	14.4	*435*
55–59	7.4	9.7	10.7	11.6	18.4	19.8	21.6	*450*
60–64	13.5	14.4	16.1	16.9	24.3	24.9	26.3	*325*
65–69	13.8	14.5	16.3	17.5	27.4	28.2	29.6	*285*
70–74	18.6	20.1	23.3	25.7	35.5	36.7	36.8	*179*
75–79	17.7	20.9	22.9	23.0	34.0	37.7	38.3	*84*
80+	[19.8]	[20.8]	[21.1]	[21.5]	[31.4]	[31.3]	[20]	*24*
Women	**6.1**	**7.4**	**8.3**	**9.8**	**15.2**	**16.0**	**17.2**	***2,321***
50–54	1.7	2.4	2.8	3.0	5.6	5.7	7.2	*523*
55–59	3.4	4.7	5.2	6.2	9.7	10.1	10.4	*548*
60–64	5.8	7.3	8.0	9.8	15.3	15.6	17.2	*418*
65–69	8.9	10.2	11.3	12.3	20.9	23.2	24.4	*401*
70–74	10.3	12.5	14.1	18.2	27.8	29.4	30.6	*250*
75–79	14.2	15.3	17.0	20.6	25.7	25.6	27.0	*119*
80+	19.4	20.8	25.7	25.9	30.7	35.6	35.4	*62*

For variable definitions, see AH.2, AH.5 and AH.10. For related text, see H.23.

Table HL2b. Diagnosed CHD (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,758***
Lowest	15.8	18.0	20.1	22.1	32.4	34.8	36.6	*172*
2nd	10.6	11.3	12.3	13.9	23.9	25.8	26.0	*276*
3rd	11.2	14.2	15.1	16.5	23.7	24.7	25.7	*353*
4th	7.6	9.6	11.1	11.8	18.9	19.9	21.8	*456*
Highest	8.7	9.1	11.0	11.7	15.6	16.4	17.6	*501*
Women								***2,275***
Lowest	12.5	13.3	14.9	16.6	23.8	24.2	26.0	*303*
2nd	9.0	10.2	10.8	13.0	18.4	19.2	21.5	*414*
3rd	5.4	6.8	8.6	9.5	14.8	15.4	16.0	*468*
4th	3.4	4.7	4.8	5.9	11.8	12.7	13.4	*515*
Highest	3.8	5.2	5.6	6.5	9.7	11.0	11.8	*575*

For variable definitions, see AH.5, AH.10, AH.17 and AH.19. For related text, see H.24.

Table HL3a. Diagnosed diabetes (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**6.0**	**7.6**	**10.5**	**12.7**	**15.0**	**16.7**	**18.5**	***1,777***
50–54	3.2	4.8	6.2	8.4	10.8	13.3	16.2	*434*
55–59	6.3	7.4	10.7	12.7	15.5	17.1	19.0	*448*
60–64	8.2	9.3	13.4	16.4	18.8	19.8	22.0	*325*
65–69	8.6	10.7	13.4	14.8	16.5	17.1	17.7	*283*
70–74	6.7	10.2	13.9	17.1	17.6	20.4	22.4	*179*
75–79	3.4	5.8	9.1	9.1	13.0	14.3	13.5	*84*
80+	[3.9]	[3.6]	[3.5]	[16.3]	[16.7]	[15.5]	[12.5]	*24*
Women	**3.6**	**5.0**	**7.3**	**9.4**	**11.2**	**12.3**	**13.7**	***2,317***
50–54	1.4	2.9	3.6	6.0	6.7	7.6	9.2	*522*
55–59	3.8	4.8	7.3	9.2	10.8	12.2	12.9	*547*
60–64	3.7	4.1	6.9	9.2	10.8	11.4	12.7	*418*
65–69	4.0	6.4	8.8	9.7	13.5	15.1	15.5	*400*
70–74	6.0	8.3	12.5	15.5	17.4	19.4	21.3	*250*
75–79	5.9	6.5	8.5	10.4	12.4	12.8	16.5	*119*
80+	4.4	8.5	10.3	13.5	13.9	15.1	15.8	*61*

For variable definitions, see AH.2, AH.5 and AH.10. For related text, see H.23.

Table HL3b. Diagnosed diabetes (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,753***
Lowest	5.6	8.2	11.9	16.1	21.5	22.8	26.2	*171*
2nd	8.4	9.8	12.5	15.2	17.4	21.2	23.2	*274*
3rd	6.6	8.2	12.2	14.1	15.7	17.4	18.6	*353*
4th	5.7	7.5	9.4	11.6	13.8	14.7	16.9	*455*
Highest	4.6	5.6	8.2	9.6	11.0	12.3	13.3	*500*
Women								***2,271***
Lowest	6.5	11.0	15.4	20.5	22.3	24.5	28.0	*301*
2nd	4.3	5.7	8.0	10.5	12.4	14.4	15.9	*413*
3rd	4.2	5.2	7.3	9.2	11.8	12.4	13.0	*467*
4th	2.5	3.6	5.4	5.8	6.9	7.7	8.1	*515*
Highest	2.1	2.6	3.7	5.1	6.4	7.2	8.0	*575*

For variable definitions, see AH.5, AH.10, AH.17 and AH.19. For related text, see H.24.

Table HL4a. Diagnosed cancer (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**3.2**	**3.2**	**6.0**	**7.4**	**9.9**	**11.8**	**14.5**	***1,783***
50–54	1.1	1.2	1.6	2.4	3.7	4.6	6.1	*435*
55–59	1.8	1.8	3.9	4.6	8.4	10.1	12.2	*451*
60–64	3.3	3.3	7.0	8.8	11.0	12.9	17.1	*325*
65–69	7.1	7.2	11.9	13.7	16.8	19.5	23.4	*285*
70–74	7.6	7.8	11.9	14.3	16.5	18.9	23.0	*179*
75–79	0.0	0.0	6.5	9.8	11.0	14.6	15.4	*84*
80+	[8.5]	[8]	[19.4]	[24.4]	[24.9]	[31.2]	[26.4]	*24*
Women	**6.4**	**6.3**	**8.9**	**9.9**	**11.9**	**13.1**	**16.0**	***2,321***
50–54	4.0	4.0	5.9	7.1	8.4	10.0	13.3	*523*
55–59	6.8	6.8	10.0	11.5	13.7	15.3	17.5	*548*
60–64	7.8	7.5	10.2	11.2	13.2	14.0	16.4	*418*
65–69	5.5	5.3	8.6	9.2	11.8	12.1	15.2	*401*
70–74	6.0	5.9	6.7	7.6	9.0	11.1	13.7	*250*
75–79	11.3	11.1	15.6	17.6	21.1	21.4	27.1	*119*
80+	10.8	10.6	11.9	11.4	12.1	10.4	11.1	*62*

For variable definitions, see AH.2, AH.5 and AH.10. For related text, see H.25.

Table HL4b. Diagnosed cancer (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,759***
Lowest	3.7	3.7	6.9	8.3	9.3	11.9	15.7	*172*
2nd	4.0	3.9	7.6	8.9	11.8	14.2	16.7	*276*
3rd	3.0	3.1	6.1	6.9	9.1	11.1	13.2	*354*
4th	4.1	4.1	6.1	7.4	8.9	10.6	13.3	*456*
Highest	1.9	1.9	4.5	6.6	10.6	12.3	15.2	*501*
Women								***2,275***
Lowest	5.2	5.0	6.8	8.8	9.4	11.7	16.5	*303*
2nd	4.2	4.1	6.4	6.7	9.2	10.7	13.1	*414*
3rd	7.9	7.7	10.6	11.8	13.6	14.8	16.9	*468*
4th	8.3	8.2	11.1	13.0	15.7	16.5	20.0	*516*
Highest	5.5	5.4	8.5	8.9	11.1	11.6	14.1	*574*

For variable definitions, see AH.5, AH.10, AH.17 and AH.19. For related text, see H.26.

Table HL5a. Diagnosed depression (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**4.5**	**5.6**	**6.6**	**7.4**	**8.1**	**8.9**	**9.3**	***1,769***
50–54	6.0	7.2	8.6	10.6	12.3	12.5	12.9	*435*
55–59	5.8	7.8	8.8	8.8	9.5	10.1	11.2	*447*
60–64	3.3	4.1	5.5	6.5	6.8	8.6	9.0	*320*
65–69	3.7	4.0	5.0	5.0	5.5	7.4	7.5	*283*
70–74	1.6	1.6	1.5	1.5	1.5	2.0	1.9	*177*
75–79	1.2	2.4	2.2	2.2	2.1	2.1	2.3	*83*
80+	[6]	[5.8]	[5.7]	[5.7]	[5.7]	[6.2]	[7.3]	*24*
Women	**7.0**	**8.8**	**10.2**	**11.4**	**12.2**	**12.8**	**13.6**	***2,294***
50–54	9.4	11.8	14.0	15.3	16.8	17.6	18.4	*518*
55–59	9.8	12.4	13.6	15.1	16.0	16.9	17.3	*541*
60–64	6.2	8.3	9.8	10.8	12.0	12.2	13.1	*415*
65–69	3.2	3.4	4.6	6.1	6.4	7.3	8.4	*394*
70–74	4.5	5.6	6.5	8.0	8.5	7.8	8.4	*247*
75–79	5.1	5.8	6.3	6.3	6.3	7.3	8.7	*118*
80+	4.0	7.9	8.0	8.2	6.3	7.0	8.5	*61*

For variable definitions, see AH.2, AH.5 and AH.10. For related text, see H.27.

Table HL5b. Diagnosed depression (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,745***
Lowest	4.2	7.7	10.5	11.5	12.7	14.0	14.1	*172*
2nd	5.8	6.2	7.4	8.3	9.0	9.8	11.0	*273*
3rd	4.8	6.1	7.6	9.1	10.0	10.9	10.9	*353*
4th	4.7	6.0	5.9	6.4	7.2	8.1	8.7	*449*
Highest	3.6	4.0	4.5	4.7	4.9	5.3	5.5	*498*
Women								***2,247***
Lowest	9.9	13.4	15.2	16.6	18.1	18.4	19.3	*296*
2nd	6.8	8.8	10.1	12.0	13.4	13.8	14.4	*410*
3rd	7.6	9.3	10.8	11.5	12.1	13.0	13.9	*463*
4th	5.5	6.9	8.1	9.2	9.7	9.9	10.4	*510*
Highest	6.3	7.8	9.1	10.0	10.2	10.9	11.9	*568*

For variable definitions, see AH.5, AH.10, AH.17 and AH.19. For related text, see H.28.

Table HL6a. Self-reported hearing impairment (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**21.5**	**23.1**	**25.6**	**25.6**	**27.7**	**31.4**	**32.8**	***1,781***
50–54	15.2	13.8	17.9	18.3	17.8	20.6	25.3	*433*
55–59	19.8	20.2	23.9	24.3	23.6	28.8	30.2	*451*
60–64	23.1	26.4	27.5	29.0	27.8	33.0	35.2	*325*
65–69	24.6	33.0	31.5	29.9	35.3	35.5	37.1	*285*
70–74	28.7	32.5	31.7	28.9	44.7	48.6	39.4	*179*
75–79	36.7	31.9	40.6	38.5	49.4	50.5	45.8	*84*
80+	[32.8]	[27]	[36.5]	[45.5]	[25.5]	[40.2]	[47.3]	*24*
Women	**13.1**	**14.7**	**15.6**	**16.0**	**18.8**	**20.0**	**21.8**	***2,316***
50–54	10.8	9.6	11.0	8.4	11.3	12.2	12.7	*521*
55–59	9.2	13.0	11.2	13.3	13.8	14.9	16.2	*545*
60–64	12.8	14.7	14.6	14.0	16.0	15.1	17.3	*417*
65–69	15.5	16.0	16.5	17.1	20.4	20.7	26.5	*401*
70–74	17.2	19.2	28.8	25.5	32.8	38.7	35.1	*250*
75–79	21.4	21.0	20.9	28.2	29.3	34.9	39.0	*120*
80+	18.8	31.9	30.0	41.9	44.6	40.7	43.1	*62*

For variable definitions, see AH.2, AH.5 and AH.14. For related text, see H.29.

Table HL6b. Self-reported hearing impairment (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,757***
Lowest	24.1	27.5	25.8	29.2	30.6	33.2	32.3	*172*
2nd	32.5	28.1	31.1	29.4	37.4	38.6	42.1	*275*
3rd	22.7	24.0	27.5	26.9	26.3	32.0	33.1	*354*
4th	17.0	19.1	23.1	22.7	21.6	25.4	30.7	*456*
Highest	18.7	21.5	23.3	23.0	26.5	31.1	28.4	*500*
Women								***2,270***
Lowest	19.4	19.7	23.7	24.5	28.1	28.5	30.9	*302*
2nd	18.6	18.9	17.9	21.7	22.3	23.8	28.9	*413*
3rd	12.7	16.2	18.2	14.5	19.9	20.2	22.0	*467*
4th	9.8	10.8	9.7	9.9	13.1	16.7	15.4	*516*
Highest	9.2	10.8	11.9	12.5	13.8	14.2	15.4	*572*

For variable definitions, see AH.5, AH.14, AH.17 and AH.19. For related text, see H.30.

Table HL7a. Difficulties with one or more ADLs (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**11.9**	**13.0**	**14.9**	**15.4**	**16.3**	**18.2**	**20.4**	***1,773***
50–54	8.8	8.3	10.5	9.2	11.4	14.3	13.2	*433*
55–59	10.6	10.9	12.0	14.4	13.8	12.6	16.5	*449*
60–64	13.2	16.7	16.9	16.8	18.2	18.2	19.9	*322*
65–69	13.1	14.8	18.3	16.8	17.7	19.4	24.5	*282*
70–74	16.8	16.9	19.1	24.3	23.8	26.6	27.9	*179*
75–79	19.3	26.7	26.7	30.1	28.1	43.0	42.2	*84*
80+	[14.9]	[11.3]	[30.5]	[23.7]	[28.4]	[33.4]	[57.9]	*24*
Women	**14.3**	**16.8**	**17.3**	**18.7**	**20.7**	**21.5**	**23.4**	***2,318***
50–54	8.3	11.2	13.1	10.2	10.7	11.8	12.5	*522*
55–59	12.9	15.9	12.9	14.2	12.9	16.3	15.5	*548*
60–64	12.6	12.3	14.9	16.6	17.8	18.4	20.4	*416*
65–69	16.1	18.1	19.8	21.7	26.7	26.3	24.2	*401*
70–74	21.1	23.7	24.0	28.3	31.0	30.9	37.9	*249*
75–79	23.9	30.1	26.3	38.1	39.6	43.3	53.0	*120*
80+	30.4	37.1	41.7	42.2	62.0	47.0	55.9	*62*

For variable definitions, see AH.1, AH.2 and AH.5. For related text, see H.31.

Table HL7b. Difficulties with one or more ADLs (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,749***
Lowest	23.0	25.6	28.3	26.4	25.1	29.3	32.2	*172*
2nd	18.0	18.3	19.2	17.7	18.9	19.7	26.7	*272*
3rd	11.3	13.2	15.6	15.9	19.9	19.1	20.3	*351*
4th	9.6	10.2	11.3	12.8	14.4	15.5	16.3	*456*
Highest	7.2	7.6	9.4	11.1	9.1	13.8	14.7	*498*
Women								***2,272***
Lowest	30.0	28.9	32.1	36.7	35.8	30.4	38.8	*303*
2nd	17.3	20.0	20.1	22.2	28.4	29.0	30.5	*413*
3rd	13.3	17.5	18.6	16.6	19.5	22.4	22.3	*468*
4th	9.8	12.5	11.4	14.6	11.9	15.0	15.7	*515*
Highest	9.3	10.7	11.1	9.9	12.9	13.5	14.4	*573*

For variable definitions, see AH.1, AH.5, AH.17 and AH.19. For related text, see H.32.

Table HL8a. Walking speed (mean, m/s), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**1.01**	**0.98**	**0.96**	**0.94**	**0.92**	**0.89**	**0.83**	***578***
60–64	1.05	1.02	0.99	0.98	0.95	0.95	0.89	*236*
65–69	1.02	0.98	0.95	0.93	0.92	0.85	0.81	*203*
70–74	0.94	0.91	0.89	0.83	0.80	0.78	0.69	*117*
75–79	[0.93]	[0.84]	[0.89]	[0.8]	[0.77]	[0.67]	[0.67]	*22*
Women	**0.96**	**0.93**	**0.91**	**0.87**	**0.86**	**0.83**	**0.76**	***742***
60–64	0.99	0.98	0.95	0.92	0.92	0.89	0.83	*302*
65–69	0.96	0.94	0.90	0.87	0.84	0.81	0.75	*266*
70–74	0.91	0.85	0.83	0.78	0.75	0.70	0.64	*136*
75–79	[0.83]	[0.8]	[0.78]	[0.66]	[0.66]	[0.6]	[0.51]	*38*

For variable definitions, see AH.2, AH.5 and AH.18. For related text, see H.33.

Table HL8b. Walking speed (mean, m/s), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***574***
Lowest	[0.88]	[0.86]	[0.79]	[0.79]	[0.78]	[0.72]	[0.71]	*41*
2nd	0.94	0.87	0.87	0.86	0.86	0.78	0.72	*86*
3rd	0.98	0.98	0.94	0.91	0.88	0.87	0.83	*116*
4th	1.03	0.99	0.99	0.93	0.91	0.89	0.82	*153*
Highest	1.08	1.04	1.03	1.02	0.99	0.96	0.89	*178*
Women								***737***
Lowest	0.83	0.81	0.81	0.76	0.72	0.73	0.65	*81*
2nd	0.89	0.90	0.84	0.78	0.77	0.72	0.65	*124*
3rd	0.91	0.90	0.87	0.84	0.81	0.79	0.73	*169*
4th	0.99	0.96	0.93	0.88	0.88	0.84	0.78	*167*
Highest	1.05	1.01	0.99	0.96	0.95	0.89	0.83	*196*

For variable definitions, see AH.5, AH.17, AH.18 and AH.19. For related text, see H.34.

Table HL9a. Mean memory score, by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**10.5**	**10.7**	**10.6**	**10.4**	**10.3**	**10.2**	**9.5**	***1,680***
50–54	11.5	11.6	11.6	11.6	11.5	11.7	11.4	*412*
55–59	10.7	11.0	11.0	10.7	10.6	10.7	10.1	*427*
60–64	10.4	10.4	10.5	10.0	10.1	10.0	9.2	*314*
65–69	9.7	9.7	9.7	9.4	9.1	8.9	8.2	*268*
70–74	9.3	9.5	9.4	9.2	9.0	8.4	7.4	*169*
75–79	8.7	8.7	8.8	8.0	7.8	7.8	5.6	*72*
80+	[9.4]	[8.1]	[8.3]	[7.7]	[7.7]	[7.4]	[5.3]	*18*
Women	**10.8**	**11.1**	**11.1**	**10.9**	**10.7**	**10.6**	**9.9**	***2,187***
50–54	11.8	12.1	12.2	12.3	12.1	12.4	11.8	*502*
55–59	11.4	11.7	11.7	11.7	11.7	11.6	11.1	*529*
60–64	11.0	11.1	11.3	10.9	10.9	10.6	10.4	*403*
65–69	10.3	10.7	10.5	10.2	10.0	9.9	9.2	*377*
70–74	9.4	9.8	9.5	9.2	8.8	8.4	7.1	*235*
75–79	9.0	9.2	8.8	8.1	7.0	6.9	5.7	*98*
80+	[8.2]	[7.9]	[8.8]	[7.9]	[6.9]	[6.7]	[5.1]	*43*

For variable definitions, see AH.2, AH.5 and AH.8. For related text, see H.35.

Table HL9b. Mean memory score, by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,659***
Lowest	9.6	9.1	9.3	9.5	9.1	8.8	7.9	*157*
2nd	10.0	10.2	10.1	9.6	9.5	9.4	8.7	*254*
3rd	10.3	10.6	10.4	10.2	10.2	10.0	9.0	*340*
4th	10.7	10.9	10.9	10.6	10.7	10.8	10.0	*428*
Highest	11.0	11.2	11.4	11.2	10.9	10.9	10.4	*480*
Women								***2,143***
Lowest	9.4	9.9	9.9	9.3	9.2	9.2	8.1	*279*
2nd	10.5	10.7	10.5	10.3	10.2	10.1	9.2	*378*
3rd	10.7	11.2	11.0	11.1	10.7	10.6	9.8	*446*
4th	11.3	11.5	11.6	11.7	11.4	11.2	10.7	*485*
Highest	11.4	11.7	11.9	11.6	11.4	11.3	10.9	*555*

For variable definitions, see AH.5, AH.8, AH.17 and AH.19. For related text, see H.36.

Table HL10a. Current smoker (%), by age group and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**11.6**	**10.4**	**11.6**	**9.9**	**10.7**	**9.5**	**8.1**	***1,689***
50–54	14.4	13.7	14.4	12.9	13.8	12.0	10.4	*404*
55–59	16.2	12.8	15.5	12.5	12.9	11.8	11.1	*427*
60–64	11.9	10.7	12.1	10.9	12.6	12.9	9.7	*305*
65–69	7.8	7.7	7.9	6.9	7.8	6.1	5.3	*272*
70–74	3.0	3.5	4.4	2.8	3.4	1.9	1.2	*174*
75–79	2.3	2.4	2.3	1.2	1.2	1.2	1.4	*83*
80+	[0]	[0]	[0]	[0]	[0]	[0]	[0]	*24*
Women	**12.9**	**10.5**	**11.4**	**10.0**	**10.6**	**9.3**	**8.7**	***2,217***
50–54	19.0	16.8	17.9	16.2	17.1	14.9	14.3	*496*
55–59	12.0	9.2	10.2	9.0	9.7	8.7	7.8	*514*
60–64	13.2	9.5	10.7	9.4	9.8	9.1	8.0	*400*
65–69	10.0	8.4	8.9	7.7	8.6	7.1	6.3	*391*
70–74	10.6	8.9	10.2	8.3	8.6	6.7	8.0	*244*
75–79	6.6	5.9	5.9	5.1	5.2	5.0	5.1	*117*
80+	3.2	0.0	0.0	0.0	0.0	0.0	0.0	*55*

For variable definitions, see AH.2, AH.5 and AH.16. For related text, see H.37.

Table HL10b. Current smoker (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,665***
Lowest	30.7	26.4	28.9	28.3	28.0	23.0	22.8	*154*
2nd	19.5	17.5	18.8	15.3	15.7	15.2	10.4	*259*
3rd	8.3	9.0	9.6	8.2	9.5	7.3	7.3	*337*
4th	9.0	6.8	7.9	6.3	6.7	6.6	5.0	*441*
Highest	5.7	4.9	5.4	3.5	4.1	3.9	3.6	*474*
Women								***2,171***
Lowest	24.3	22.7	23.6	21.0	22.6	20.3	20.7	*282*
2nd	18.7	15.2	16.4	15.9	16.1	13.2	10.6	*392*
3rd	8.8	7.2	7.4	6.1	6.1	5.8	5.2	*446*
4th	11.9	8.9	9.9	7.9	8.2	7.1	6.9	*500*
Highest	7.0	4.6	5.0	3.9	4.4	3.5	3.6	*551*

For variable definitions, see AH.5, AH.16, AH.17 and AH.19. For related text, see H.38.

Table HL11a. Daily alcohol consumers (%), by age and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**38.8**	**30.7**	**30.2**	**31.0**	**26.6**	**26.9**	**26.4**	**1,207**
50–54	35.4	28.8	28.9	27.3	26.5	26.5	25.5	*307*
55–59	40.4	31.3	30.7	30.5	26.0	24.8	25.4	*305*
60–64	42.0	32.7	32.3	37.5	30.6	31.2	32.1	*240*
65–69	40.2	28.6	29.4	29.4	23.0	27.5	22.9	*200*
70–74	38.3	35.5	31.0	35.6	30.8	26.8	30.7	*103*
75–79	[29.4]	[21.7]	[24.3]	[26.2]	[15.3]	[16.2]	[18.8]	*41*
80+	[50.3]	[58.1]	[41.3]	[32.9]	[31.5]	[30.1]	[13.5]	*11*
Women	**25.1**	**20.2**	**18.6**	**17.7**	**17.1**	**16.2**	**14.9**	***1,530***
50–54	22.7	17.2	16.0	15.7	16.4	15.3	14.9	*367*
55–59	24.0	20.8	18.0	17.5	16.5	16.6	14.6	*407*
60–64	28.1	25.4	23.1	18.5	17.6	18.5	15.7	*301*
65–69	24.6	18.5	17.8	18.4	17.4	15.1	16.1	*257*
70–74	25.8	19.5	20.7	18.7	17.4	16.4	15.2	*136*
75–79	[30.5]	[16.3]	[12]	[21]	[20.1]	[11.9]	[8.6]	*49*
80+	[36.5]	[25.2]	[39.7]	[31.5]	[23.2]	[23.2]	[8.7]	*13*

For variable definitions, see AH.2, AH.3 and AH.5. For related text, see H.39.

Table HL11b. Daily alcohol consumers (%), by wealth group and gender: waves 1 to 7

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,193***
Lowest	28.0	14.3	14.8	16.7	10.0	13.8	14.1	*89*
2nd	34.2	27.8	29.5	26.1	24.6	20.5	22.2	*175*
3rd	28.2	21.3	21.4	23.0	20.5	22.5	21.2	*239*
4th	35.6	28.8	27.6	31.1	23.6	25.0	24.4	*311*
Highest	52.9	44.0	43.1	43.5	40.0	39.1	37.9	*379*
Women								***1,501***
Lowest	8.6	5.5	5.6	8.4	6.3	7.2	8.1	*153*
2nd	15.2	13.0	10.9	10.7	9.7	7.5	10.2	*253*
3rd	22.3	14.9	12.2	11.9	12.7	10.7	9.6	*326*
4th	28.7	23.5	22.0	20.9	19.9	21.0	17.8	*352*
Highest	36.8	32.3	31.6	28.9	28.4	27.1	23.7	*417*

For variable definitions, see AH.3, AH.5, AH.17 and AH.19. For related text, see H.40.

Table HL12a. Physical inactivity (%), by age and gender: waves 1 to 7

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men	**7.4**	**7.3**	**8.4**	**10.3**	**13.9**	**16.3**	**20.2**	***1,764***
50–54	5.6	5.0	6.6	6.2	9.7	10.4	10.1	*429*
55–59	7.7	8.9	8.5	11.1	11.8	13.5	15.8	*447*
60–64	11.0	8.1	8.3	10.0	13.8	14.6	17.7	*321*
65–69	5.5	6.4	8.8	11.9	16.9	16.6	23.0	*281*
70–74	5.6	6.0	8.1	12.4	17.4	22.5	32.5	*178*
75–79	12.4	15.4	15.7	18.7	24.1	45.4	54.1	*84*
80+	[4.5]	[4.3]	[19.7]	[29.2]	[45.7]	[54]	[82.3]	*24*
Women	**12.7**	**12.1**	**14.6**	**20.8**	**21.8**	**24.9**	**30.0**	***2,305***
50–54	9.5	9.7	10.7	12.4	11.0	12.6	14.0	*519*
55–59	8.9	8.3	9.6	13.3	14.2	13.7	17.2	*543*
60–64	9.9	6.5	9.7	13.2	15.5	18.7	21.1	*413*
65–69	12.3	11.7	16.9	22.2	24.6	25.9	33.0	*399*
70–74	20.3	21.2	21.8	36.8	39.1	46.2	55.5	*250*
75–79	21.5	24.4	28.3	51.2	46.6	61.9	74.3	*120*
80+	41.9	39.8	46.4	56.4	63.2	75.5	81.5	*61*

For variable definitions, see AH.2, AH.5 and AH.13. For related text, see H.41.

Table HL12b. Physical inactivity (%), by wealth and gender: waves 1 to 7

Wealth group 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7	*Unwted N*
Men								***1,740***
Lowest	21.4	21.1	25.3	26.3	34.1	34.6	41.2	*169*
2nd	10.7	10.8	11.0	14.4	20.1	22.7	31.9	*270*
3rd	5.6	7.4	6.5	9.8	10.6	14.6	17.0	*348*
4th	4.5	3.2	4.7	5.7	8.9	10.2	13.5	*456*
Highest	4.1	3.7	4.4	5.5	7.4	10.5	11.4	*497*
Women								***2,259***
Lowest	25.6	25.6	32.8	40.6	41.1	43.6	53.2	*298*
2nd	17.1	17.4	17.6	26.4	30.1	33.7	38.7	*411*
3rd	14.0	10.6	14.8	19.1	19.0	23.9	28.8	*468*
4th	7.0	6.4	9.2	12.5	10.3	14.6	18.4	*508*
Highest	7.1	7.6	6.2	12.0	14.5	15.4	18.6	*574*

For variable definitions, see AH.5, AH.13, AH.17 and AH.19. For related text, see H.42.