

The Dynamics of Ageing

Evidence from the English Longitudinal
Study of Ageing 2002-10

Wave 5



Editors:
James Banks
James Nazroo
Andrew Steptoe

ELSA

The Dynamics of Ageing

**EVIDENCE FROM THE ENGLISH LONGITUDINAL STUDY OF AGEING
2002–10
(WAVE 5)**

October 2012

Matt Barnes
Hayley Cheshire
Rowena Crawford
Panayotes Demakakos
Cesar de Oliveira
David Hussey
Stephen Jivraj
Michael Marmot
James Nazroo
Zoë Oldfield
Andrew Phelps
Andrew Steptoe
Gemma Tetlow
Natasha Wood
Paola Zaninotto

Editors:

James Banks, James Nazroo and Andrew Steptoe

**The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE**

Published by

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE
Tel: +44-20-7291 4800
Fax: +44-20-7323 4780
Email: mailbox@ifs.org.uk
Internet: www.ifs.org.uk

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, the National Centre for Social Research, and the School of Social Sciences at the University of Manchester.

© The Institute for Fiscal Studies, October 2012

ISBN: 978-1-903274-92-7

Printed by

PurePrint Group
Bellbrook Park
Uckfield
East Sussex TN22 1PL

Contents

	List of figures	v
	List of tables	vi
1.	Introduction <i>Michael Marmot and Andrew Steptoe</i>	1
2.	The evolution of pension wealth and contribution dynamics <i>Rowena Crawford and Gemma Tetlow</i>	10
3.	Change in social detachment in older age in England <i>Stephen Jivraj, James Nazroo and Matt Barnes</i>	48
4.	The psychological well-being, health and functioning of older people in England <i>Andrew Steptoe, Panayotes Demakakos and Cesar de Oliveira</i>	98
5.	Methodology <i>Hayley Cheshire, David Hussey, Andrew Phelps and Natasha Wood</i>	183
Reference tables		
E.	Economics domain tables <i>Zoë Oldfield</i>	214
S.	Social domain tables <i>Stephen Jivraj and James Nazroo</i>	259
H.	Health domain tables <i>Paola Zaninotto and Andrew Steptoe</i>	294

Figures

Figure 2.1	Pension coverage, by cohort and sex	15
Figure 2.2	Employer and personal pension coverage, by cohort and sex	16
Figure 2.3	Mean real pension wealth, by cohort, sex and age	19
Figure 2.4	Mean real family pension wealth, by cohort and age	20
Figure 2.5	Mean family net (non-pension) wealth, by cohort and age	21
Figure 2.6	Age of first drawing a private pension: men	23
Figure 2.7	Age of first drawing a private pension: women	24
Figure 2.8	Percentage of private pension income recipients working, by age and ELSA wave	27
Figure 2.9	Pension dynamics around retirement (retirement = point at which individual starts to self-define as 'retired')	32
Figure 2.10	Pension dynamics around retirement (retirement = point at which individual leaves full-time work)	33
Figure 2.11	Total family net income before and after individual's retirement	35
Figure 2.12	Composition of average income, pre- and post-retirement	38
Figure 2A.1	Defined benefit and defined contribution pension coverage, by cohort	40
Figure 3.1	Prevalence of social detachment in each domain by sex, 2002–03 to 2010–11, with 95% confidence intervals	55
Figure 3.2	Prevalence of social detachment in each domain by marital status and sex, 2010–11	58
Figure 3.3	Prevalence of social detachment in each domain by wealth quintile and sex, 2010–11	61
Figure 3.4	Prevalence of social detachment in each domain by health and sex, 2010–11	64
Figure 3.5	Prevalence of social detachment in each domain by rurality and sex, 2010–11	67
Figure 3.6	Prevalence of social detachment in each domain by access to transport and sex, 2010–11	69
Figure 3.7	Significant odds ratios of movement into detachment by domain and wealth quintile from logistic regression model	76
Figure 3.8	Significant odds ratios of movement into detachment by domain and education level from logistic regression model	76
Figure 3.9	Significant odds ratios of movement into detachment by domain and age group from logistic regression model	77
Figure 3.10	Significant odds ratios of movement into detachment by domain and marital status from logistic regression model	77
Figure 3.11	Significant odds ratios of movement into detachment by domain and change in marital status from logistic regression model	79
Figure 4.1	Well-being measures, age and sex in 2010–11	107
Figure 4.2	Well-being measures and total net non-pension household wealth in 2010–11	109
Figure 4.3	Well-being measures, marital status and age in 2010–11	110
Figure 4.4	Well-being measures, limiting long-standing illness and age in 2010–11	113
Figure 4.5	Well-being measures, ADL limitations and age in 2010–11	115
Figure 4.6	Well-being measures, level of physical activity and age in 2010–11	118
Figure 4.7	Well-being measures, cognitive function and age in 2010–11	121
Figure 4.8	Well-being measures, sex and age between 2002–03 and 2010–11, based on age in 2002–03	124
Figure 4.9	Well-being measures and wealth between 2002–03 and 2010–11, based on wealth in 2010–11	127
Figure 4.10	Enjoyment of life and survival	133

Tables

Table 2.1	Work transitions around point of first drawing a private pension income, by characteristics	25
Table 2.2	Percentage in self-employment among workers with accrued rights to a private pension scheme, by whether started drawing an income from a private pension scheme: men	28
Table 2.3	Mean hours worked per week among workers with accrued rights to a private pension scheme, by whether started receiving an income from a private pension scheme: men	29
Table 2.4	Mean real private pension income among workers who have started drawing an income from a private pension scheme: men and women	30
Table 2.5	Comparison of average family net income before and after leaving full-time work, by characteristics	37
<i>Appendix 2A</i>		40
Table 2A.1	Private pension wealth (across all individuals): ELSA wave 5 (2010–11)	
Table 2A.2	Private pension wealth (across individuals with a private pension): ELSA wave 5 (2010–11)	
Table 2A.3	Percentage working among those with and without accrued rights to a private pension scheme: men	
Table 2A.4	Percentage working among those with and without accrued rights to a private pension scheme: women	
Table 2A.5	Percentage in self-employment among workers with accrued rights to a private pension scheme, by whether started drawing an income from a private pension scheme: women	
Table 2A.6	Mean hours worked per week among workers with accrued rights to a private pension scheme, by whether started receiving an income from a private pension scheme: women	
Table 2A.7	Comparison of average family net income before and after starting to self-define as ‘retired’, by characteristics	
Table 3.1	Social detachment trajectories across transition points by domain, 2002–03 to 2010–11	72
Table 3.2	Change in marital, employment, limiting long-standing illness and access to transport status across transition points, 2002–03 to 2010–11	74
<i>Appendix 3A</i>		84
Table 3A.1	Prevalence of civic participation detachment by age, sex and wave, 2002–03 to 2010–11	
Table 3A.2	Prevalence of leisure activities detachment by age, sex and wave, 2002–03 to 2010–11	
Table 3A.3	Prevalence of cultural engagement detachment by age, sex and wave, 2002–03 to 2010–11	
Table 3A.4	Prevalence of social networks detachment by age, sex and wave, 2002–03 to 2010–11	
Table 3A.5	Prevalence of overall social detachment by age, sex and wave, 2002–03 to 2010–11	
Table 3A.6	Prevalence of social detachment by domain, sex and marital status, 2010–11	
Table 3A.7	Prevalence of social detachment by domain, sex and wealth quintile, 2010–11	
Table 3A.8	Prevalence of social detachment by domain, sex and education, 2010–11	
Table 3A.9	Prevalence of social detachment by domain, sex and economic activity, 2010–11	
Table 3A.10	Prevalence of social detachment by domain, sex and self-rated health, 2010–11	
Table 3A.11	Prevalence of social detachment by domain, sex and limiting long-standing illness, 2010–11	
Table 3A.12	Prevalence of social detachment by domain, sex and limitations in ADLs, 2010–11	
Table 3A.13	Prevalence of social detachment by domain, sex and rurality of area of residence, 2010–11	

Table 3A.14	Prevalence of social detachment by domain, sex and access to transport, 2010–11	
Table 3A.15	Trajectories of civic participation detachment by age and sex, 2002–03 to 2010–11	
Table 3A.16	Trajectories of leisure activities detachment by age and sex, 2002–03 to 2010–11	
Table 3A.17	Trajectories of cultural engagement detachment by age and sex, 2002–03 to 2010–11	
Table 3A.18	Trajectories of social networks detachment by age and sex, 2002–03 to 2010–11	
Table 3A.19	Trajectories of overall social detachment by age and sex, 2002–03 to 2010–11	
Table 3A.20	Odds ratio of moving into detachment by baseline characteristics at transition point from logistic regression model	
Table 3A.21	Odds ratio of moving into detachment by change in characteristics across transition points from logistic regression model	
Table 4.1	Summary of regressions of psychological well-being on health outcomes	129
Table 4.2	Enjoyment of life and mortality	134
Table 4.3	Mortality in the complete sample: proportional hazards model including all covariates	135
Table 4.4	Satisfaction with life and mortality	136
<i>Appendix 4A</i>		<i>143</i>
Table 4A.1	Elevated depressive symptoms by age and sex in wave 5	
Table 4A.2	Enjoyment of life by age and sex in wave 5	
Table 4A.3	Positive affect by age and sex in wave 5	
Table 4A.4	Eudemonic well-being by age and sex in wave 5	
Table 4A.5	Life satisfaction by age and sex in wave 5	
Table 4A.6	Elevated depressive symptoms by age and wealth in wave 5	
Table 4A.7	Enjoyment of life by age and wealth in wave 5	
Table 4A.8	Positive affect by age and wealth in wave 5	
Table 4A.9	Eudemonic well-being by age and wealth in wave 5	
Table 4A.10	Life satisfaction by age and wealth in wave 5	
Table 4A.11	Elevated depressive symptoms by age and marital status in wave 5	
Table 4A.12	Enjoyment of life by age and marital status in wave 5	
Table 4A.13	Positive affect by age and marital status in wave 5	
Table 4A.14	Eudemonic well-being by age and marital status in wave 5	
Table 4A.15	Life satisfaction by age and marital status in wave 5	
Table 4A.16	Elevated depressive symptoms by age and paid employment in wave 5	
Table 4A.17	Enjoyment of life by age and paid employment in wave 5	
Table 4A.18	Positive affect by age and paid employment in wave 5	
Table 4A.19	Eudemonic well-being by age and paid employment in wave 5	
Table 4A.20	Life satisfaction by age and paid employment in wave 5	
Table 4A.21	Elevated depressive symptoms by age and volunteering in wave 5	
Table 4A.22	Enjoyment of life by age and volunteering in wave 5	
Table 4A.23	Positive affect by age and volunteering in wave 5	
Table 4A.24	Eudemonic well-being by age and volunteering in wave 5	
Table 4A.25	Life satisfaction by age and volunteering in wave 5	
Table 4A.26	Elevated depressive symptoms by age and self-rated health in wave 5	
Table 4A.27	Enjoyment of life by age and self-rated health in wave 5	
Table 4A.28	Positive affect by age and self-rated health in wave 5	
Table 4A.29	Eudemonic well-being by age and self-rated health in wave 5	
Table 4A.30	Life satisfaction by age and self-rated health in wave 5	
Table 4A.31	Elevated depressive symptoms by age and limiting long-standing illness in wave 5	

Table 4A.32	Enjoyment of life by age and limiting long-standing illness in wave 5
Table 4A.33	Positive affect by age and limiting long-standing illness in wave 5
Table 4A.34	Eudemonic well-being by age and limiting long-standing illness in wave 5
Table 4A.35	Life satisfaction by age and limiting long-standing illness in wave 5
Table 4A.36	Elevated depressive symptoms by age and cardiovascular morbidity in wave 5
Table 4A.37	Enjoyment of life by age and cardiovascular morbidity in wave 5
Table 4A.38	Positive affect by age and cardiovascular morbidity in wave 5
Table 4A.39	Eudemonic well-being by age and cardiovascular morbidity in wave 5
Table 4A.40	Life satisfaction by age and cardiovascular morbidity in wave 5
Table 4A.41	Elevated depressive symptoms by age and limitation in ADLs in wave 5
Table 4A.42	Enjoyment of life by age and limitation in ADLs in wave 5
Table 4A.43	Positive affect by age and limitation in ADLs in wave 5
Table 4A.44	Eudemonic well-being by age and limitation in ADLs in wave 5
Table 4A.45	Life satisfaction by age and limitation in ADLs in wave 5
Table 4A.46	Elevated depressive symptoms by age and mobility impairment in wave 5
Table 4A.47	Enjoyment of life by age and mobility impairment in wave 5
Table 4A.48	Positive affect by age and mobility impairment in wave 5
Table 4A.49	Eudemonic well-being by age and mobility impairment in wave 5
Table 4A.50	Life satisfaction by age and mobility impairment in wave 5
Table 4A.51	Elevated depressive symptoms by age and lack of physical activity in wave 5
Table 4A.52	Enjoyment of life by age and lack of physical activity in wave 5
Table 4A.53	Positive affect by age and lack of physical activity in wave 5
Table 4A.54	Eudemonic well-being by age and lack of physical activity in wave 5
Table 4A.55	Life satisfaction by age and lack of physical activity in wave 5
Table 4A.56	Elevated depressive symptoms by age and smoking status in wave 5
Table 4A.57	Enjoyment of life by age and smoking status in wave 5
Table 4A.58	Positive affect by age and smoking status in wave 5
Table 4A.59	Eudemonic well-being by age and smoking status in wave 5
Table 4A.60	Life satisfaction by age and smoking status in wave 5
Table 4A.61	Elevated depressive symptoms by age and alcohol consumption in wave 5
Table 4A.62	Enjoyment of life by age and alcohol consumption in wave 5
Table 4A.63	Positive affect by age and alcohol consumption in wave 5
Table 4A.64	Eudemonic well-being by age and alcohol consumption in wave 5
Table 4A.65	Life satisfaction by age and alcohol consumption in wave 5
Table 4A.66	Elevated depressive symptoms by age and fruit and vegetable consumption in wave 5
Table 4A.67	Enjoyment of life by age and fruit and vegetable consumption in wave 5
Table 4A.68	Positive affect by age and fruit and vegetable consumption in wave 5
Table 4A.69	Eudemonic well-being by age and fruit and vegetable consumption in wave 5
Table 4A.70	Life satisfaction by age and fruit and vegetable consumption in wave 5
Table 4A.71	Elevated depressive symptoms by age and cognitive function in wave 5
Table 4A.72	Enjoyment of life by age and cognitive function in wave 5
Table 4A.73	Positive affect by age and cognitive function in wave 5
Table 4A.74	Eudemonic well-being by age and cognitive function in wave 5
Table 4A.75	Life satisfaction by age and cognitive function in wave 5
Table 4A.76	Elevated depressive symptoms by age and use of public transport in wave 5
Table 4A.77	Enjoyment of life by age and use of public transport in wave 5
Table 4A.78	Positive affect by age and use of public transport in wave 5
Table 4A.79	Eudemonic well-being by age and use of public transport in wave 5
Table 4A.80	Life satisfaction by age and use of public transport in wave 5
Table 4A.81	Elevated depressive symptoms by age and attendance at religious services in wave 5

Table 4A.82	Enjoyment of life by age and attendance at religious services in wave 5	
Table 4A.83	Positive affect by age and attendance at religious services in wave 5	
Table 4A.84	Eudemonic well-being by age and attendance at religious services in wave 5	
Table 4A.85	Life satisfaction by age and attendance at religious services in wave 5	
Table 4A.86	Elevated depressive symptoms by age and sex (waves 1 to 5)	
Table 4A.87	Enjoyment of life by age and sex (waves 1 to 5)	
Table 4A.88	Eudemonic well-being by age and sex (waves 1 to 5)	
Table 4A.89	Life satisfaction by age and sex (waves 2 to 5)	
Table 4A.90	Elevated depressive symptoms by age and wealth (waves 1 to 5)	
Table 4A.91	Enjoyment of life by age and wealth (waves 1 to 5)	
Table 4A.92	Eudemonic well-being by age and wealth (waves 1 to 5)	
Table 4A.93	Life satisfaction by age and wealth (waves 2 to 5)	
Table 5.1	Risk module response rates	189
Table 5.2	Respondents, by sample type: Cohort 1	190
Table 5.3	Core member respondents, by situation in wave 5 (2010–11): Cohort 1	190
Table 5.4	Respondents, by sample type: Cohort 3	191
Table 5.5	Core member respondents, by situation in wave 5 (2010–11): Cohort 3	191
Table 5.6	Respondents, by sample type: Cohort 4	191
Table 5.7	Core member respondents, by situation in wave 5 (2010–11): Cohort 4	192
Table 5.8	Reasons for non-response: core members in Cohort 1	193
Table 5.9	Reasons for non-response: core members in Cohort 3	193
Table 5.10	Reasons for non-response: core members in Cohort 4	194
Table 5.11	Status of original Cohort 1 core members at wave 5	194
Table 5.12	Status of original Cohort 3 core members at wave 5	195
Table 5.13	Status of original Cohort 4 core members at wave 5	196
Table 5.14	Achieved sample of Cohort 1 core members, by age in 2010–11 and sex	196
Table 5.15	Wave 5 (2010–11) main interview response for Cohort 1 core members who took part in waves 1–4, by age in 2002–03 and sex	197
Table 5.16	Achieved sample of Cohort 3 core members, by age in 2010–11 and sex	197
Table 5.17	Achieved sample of Cohort 4 core members, by age in 2010–11 and sex	198
Table 5.18	Proxy interview sample (Cohort 1), by age in 2010–11 and sex	198
Table 5.19	Household population estimates	202
Table 5.20	Achieved (combined) sample of core members, by age in 2010–11 and sex	203
<i>Appendix 5B</i>		208
Table 5B.1	Status of Cohort 1 core members at wave 5, by age and non-housing wealth quintile in 2002–03	
Table 5B.2	Status of Cohort 1 core members at wave 5, by age and equivalised income quintile in 2002–03	
Table 5B.3	Status of Cohort 1 core members at wave 5, by age and level of education in 2002–03	
Table 5B.4	Status of Cohort 1 core members at wave 5, by age, sex and marital status in 2002–03	
Table 5B.5	Status of Cohort 1 core members at wave 5, by age and sex in 2002–03	
Table 5B.6	Status of Cohort 1 core members at wave 5, by age and working status in 2002–03	

Reference tables

Economics domain tables

225

Table E1a	Mean unequivalised net weekly family income, by age and family type: wave 5
Table E1b	Mean equivalised net weekly family income, by age and sex: wave 5
Table E2a	Distribution of total net weekly unequivalised family income, by age and family type: wave 5
Table E2b	Distribution of total net weekly equivalised family income, by age and sex: wave 5
Table E3	Mean and median wealth, by age and family type: wave 5
Table E4	Distribution of total net non-pension wealth, by age and family type: wave 5
Table E5a	Private pension membership, by age and sex: workers and non-workers under State Pension Age: wave 5
Table E5b	Private pension membership, by age and sex: workers under State Pension Age: wave 5
Table E6	Mean equivalised weekly household spending, by age and family type: wave 5
Table E7	Mean self-reported chances of having insufficient resources to meet needs at some point in the future, by age, sex and income group: wave 5
Table E8	Labour market participation, by age, sex and wealth group: individuals aged under 75 only: wave 5
Table E8N	Sample sizes for Table E8
Table E9	Mean self-reported chances of working at future target ages, by age, sex and wealth: wave 5
Table E9N	Sample sizes for Table E9
Table E10	Whether health limits kind or amount of work, by age, sex and wealth: wave 5
Table E11	Mean self-reported chances of health limiting ability to work at age 65 (workers aged under 65 only), by age, sex and wealth group: wave 5
Table E11N	Sample sizes for Table E11
Table EL1a	Mean equivalised weekly family total income, by baseline (wave 1) age and family type
Table EL1b	Mean equivalised weekly family earned income, by baseline (wave 1) age and family type
Table EL1c	Mean equivalised weekly family private pension income, by baseline (wave 1) age and family type
Table EL1d	Mean equivalised weekly family state pension and benefit income, by baseline (wave 1) age and family type
Table EL1e	Mean equivalised weekly family asset and other income, by baseline (wave 1) age and family type
Table EL2a	Mean equivalised weekly family total income, by baseline (wave 1) age and education
Table EL2b	Mean equivalised weekly family earned income, by baseline (wave 1) age and education
Table EL2c	Mean equivalised weekly family private pension income, by baseline (wave 1) age and education
Table EL2d	Mean equivalised weekly family state pension and benefit income, by baseline (wave 1) age and education
Table EL2e	Mean equivalised weekly family asset and other income, by baseline (wave 1) age and education
Table EL3	Interquartile ratio of total equivalised net family income, by baseline (wave 1) age and family type
Table EL4a	Persistency of making pension contributions in waves when observed to be under State Pension Age, by age, sex and wealth group: aged under 65 and employed or self-employed at baseline only
Table EL4b	Persistency of making pension contributions in waves when observed to be under State Pension Age, by sex and wealth group: employed or self-employed in all waves observed below State Pension Age

Table EL5	Persistence of self-reported financial difficulties and persistence of managing very well financially, by age and family type
Table EL6a	Persistence of having too little money to do three or more items of the material deprivation index (waves 2–5), by education and family type: aged 50–SPA
Table EL6b	Persistence of having too little money to do three or more items of the material deprivation index (waves 2–5), by education and family type: aged SPA–74
Table EL6c	Persistence of having too little money to do three or more items of the material deprivation index (waves 2–5), by education and family type: aged 75+
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 2–5, by age and wealth group
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 2–5, by age and wealth group
Table EL8	Percentage not employed or self-employed at baseline (wave 1) and, of those, percentage in employment or self-employment at waves 2–5, by age and sex
Table EL9a	Persistency of health problem limiting ability to work in waves 1–5, by age and wealth group: men aged under 75 at baseline only
Table EL9b	Persistency of health problem limiting ability to work in waves 1–5, by age and wealth group: women aged under 75 at baseline only

Social domain tables

269

Table S1a	Marital status, by age and sex: wave 5
Table S1b	Marital status, by wealth group and sex: wave 5
Table S2a	Ethnicity, by age and sex: wave 5
Table S2b	Ethnicity, by wealth group and sex: wave 5
Table S3a	Religion, by age and sex: wave 5
Table S3b	Religion, by wealth group and sex: wave 5
Table S4a	Use internet and/or email, by age and sex: wave 5
Table S4b	Use internet and/or email, by wealth group and sex: wave 5
Table S5a	Mean total hours of TV watched per week, by age and sex: wave 5
Table S5b	Mean total hours of TV watched per week, by wealth group and sex: wave 5
Table S6a	Taken holiday (in UK or abroad) in last 12 months, by age and sex: wave 5
Table S6b	Taken holiday (in UK or abroad) in last 12 months, by wealth group and sex: wave 5
Table S7a	Use of public transport, by age and sex: wave 5
Table S7b	Use of public transport, by wealth group and sex: wave 5
Table S8a	Find it difficult to get to services, by age and sex: wave 5
Table S8b	Find it difficult to get to services, by wealth group and sex: wave 5
Table S9a	Satisfaction with accommodation, by age and sex: wave 5
Table S9b	Satisfaction with accommodation, by wealth group and sex: wave 5
Table S9c	Satisfaction with accommodation, by tenure and sex: wave 5
Table S10a	Satisfaction with area, by age and sex: wave 5
Table S10b	Satisfaction with area, by wealth group and sex: wave 5
Table S10c	Satisfaction with area, by tenure and sex: wave 5
Table S11a	Voluntary work frequency, by age and sex: wave 5
Table S11b	Voluntary work frequency, by wealth group and sex: wave 5
Table S12a	Cared for someone in last month, by age and sex: wave 5
Table S12b	Cared for someone in last month, by wealth group and sex: wave 5
Table S13a	Receives help with mobility, ADL or IADL problems, by age and sex: wave 5
Table S13b	Receives help with mobility, ADL or IADL problems, by wealth group and sex: wave 5
Table S14a	Mean number of close relationships with children, family and friends, by age and sex: wave 5

Table S14b	Mean number of close relationships with children, family and friends, by age and wealth group: wave 5
Table S15a	Self-perceived social standing in society, by age and sex: wave 5
Table S15b	Self-perceived social standing in society, by wealth group and sex: wave 5
Table S16a	Mean self-perceived chance of living to 85, by age and sex: wave 5
Table S16b	Mean self-perceived chance of living to 85, by wealth group and sex: wave 5
Table SL1a	Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–5, by age and sex
Table SL1b	Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–5, by wealth group and sex
Table SL2a	Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–5, by age and sex
Table SL2b	Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–5, by wealth group and sex
Table SL2c	Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–5, by age and sex
Table SL2d	Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–5, by wealth group and sex
Table SL3a	Percentage been on holiday in last year at baseline (wave 1) and, of those, percentage still been on holiday in last year at waves 2–5, by age and sex
Table SL3b	Percentage been on holiday in last year at baseline (wave 1) and, of those, percentage still been on holiday in last year at waves 2–5, by wealth group and sex
Table SL4a	Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–5, by age and sex
Table SL4b	Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–5, by wealth group and sex
Table SL4c	Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–5, by age and sex
Table SL4d	Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–5, by wealth group and sex
Table SL5a	Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–5, by age and sex
Table SL5b	Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–5, by wealth group and sex
Table SL5c	Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–5, by age and sex
Table SL5d	Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–5, by wealth group and sex
Table SL6a	Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–5, by age and sex
Table SL6b	Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–5, by wealth group and sex

Health domain tables

302

Table H1a	Self-rated health, by age and sex: wave 5
Table H1b	Self-rated health, by wealth group and sex: wave 5
Table H2a	Limiting long-standing illness, by age and sex: wave 5
Table H2b	Limiting long-standing illness, by wealth group and sex: wave 5
Table H3a	Diagnosed health conditions, by age and sex: wave 5
Table H3b	Diagnosed health conditions, by wealth group and sex: wave 5
Table H4a	Mean walking speed, by age and sex: wave 5
Table H4b	Mean walking speed, by wealth group and sex: wave 5
Table H5a	One or more limitations with ADLs and IADLs, by age and sex: wave 5
Table H5b	One or more limitations with ADLs and IADLs, by wealth group and sex: wave 5

Table H6a	Mean cognitive function, by age and sex: wave 5
Table H6b	Mean cognitive function, by wealth group and sex: wave 5
Table H7a	Health behaviours, by age and sex: wave 5
Table H7b	Health behaviours, by wealth group and sex: wave 5
Table H8a	Participation in NHS cancer screening, by age and sex: wave 5
Table H8b	Participation in NHS cancer screening, by wealth group and sex: wave 5
Table H9	Diabetes and smoking quality-of-care indicators: wave 5
Table H10	Diabetes and smoking quality-of-care indicators, by age and sex: wave 5
Table HL1a	Fair or poor self-rated health, by age and sex: waves 1 to 5
Table HL1b	Fair or poor self-rated health, by wealth group and sex: waves 1 to 5
Table HL2a	Diagnosed CHD, by age and sex: waves 1 to 5
Table HL2b	Diagnosed CHD, by wealth group and sex: waves 1 to 5
Table HL3a	Diagnosed diabetes, by age and sex: waves 1 to 5
Table HL3b	Diagnosed diabetes, by wealth group and sex: waves 1 to 5
Table HL4a	Diagnosed depression, by age and sex: waves 1 to 5
Table HL4b	Diagnosed depression, by wealth group and sex: waves 1 to 5
Table HL5a	Mean walking speed, by age and sex: waves 1 to 5
Table HL5b	Mean walking speed, by wealth group and sex: waves 1 to 5
Table HL6a	One or more limitations with ADLs, by age and sex: waves 1 to 5
Table HL6b	One or more limitations with ADLs, by wealth group and sex: waves 1 to 5
Table HL7a	Mean cognitive function (memory), by age and sex: waves 1 to 5
Table HL7b	Mean cognitive function (memory), by wealth group and sex: waves 1 to 5
Table HL8a	Current smoking, by age and sex: waves 1 to 5
Table HL8b	Current smoking, by wealth group and sex: waves 1 to 5
Table HL9a	Physical inactivity, by age and sex: waves 1 to 5
Table HL9b	Physical inactivity, by wealth group and sex: waves 1 to 5

1. Introduction

Michael Marmot *University College London*

Andrew Steptoe *University College London*

Pensions and economic circumstances, social engagement, and health and well-being of older people are of great concern to the public and to policymakers. These three topics form the basis of this report from wave 5 of the English Longitudinal Study of Ageing (ELSA). Data collection for wave 5 of ELSA took place between July 2010 and June 2011 inclusive. This was a period of considerable change and strain in England. The United Kingdom officially came out of recession in early 2010, but economic forecasts were revised downwards over the rest of the year, with little improvement in 2011. Interest rates remained very low throughout the period of data collection, negatively affecting older people reliant on the interest from savings. The General Election in May 2010 saw the installation of the Conservative / Liberal Democrat coalition and signalled the start of a new period of austerity, with major impacts on departmental budgets announced in the Autumn 2010 Spending Review. The White Paper *Equity in Excellence: Liberating the NHS*, published in June 2010, proposed fundamental changes in the organisation of the health service in England and Wales, stimulating hostile debate over subsequent months. The Commission on the Funding of Care and Support, chaired by Andrew Dilnot, was launched in July 2010 and produced an important report a year later on the funding of social care that continues to be debated. The Pensions Act of 2011 decreed a speeding in the timescale of changes to the State Pension Age (SPA), with the introduction of a SPA of 66 for both men and women by 2020. The winter of 2010–11 was the second coldest for 25 years and there were an estimated 25,700 excess winter deaths in England and Wales, predominantly among the elderly.

It is against this background that information was collected from 10,274 participants in ELSA, including 9090 ‘core’ participants (age-eligible sample members who participated the first time they were approached to join the ELSA study). Data were obtained using a Computer-Aided Personal Interview (CAPI) in the participants’ homes, coupled with a self-completion questionnaire. There was no nurse visit for the collection of biological data in wave 5, since nurse visits take place on alternate waves. In addition, a subsample of 1063 ELSA participants completed a module on financial risk using experimental methods developed by economists and psychologists for assessing risk preferences and deferred gratification.

ELSA is now a mature study, with five waves of data and eight years of follow-up. The immense amount of cross-sectional and longitudinal information available has made it increasingly difficult to prepare a summary report that does justice to the diverse elements of the study. For example, the wave 4 report contained nine substantive chapters, but necessarily omitted large tracts of interesting demographic, psychosocial and cognitive data. This report therefore has a different structure, and it is one that we propose to adopt

Introduction

for the future. What we have done is to prepare three thematic chapters addressing important issues in the economic, social and health domains (Chapters 2 to 4). These are accompanied by a detailed set of tables (Sections E, S and H) summarising important variables collected in ELSA from both a cross-sectional and a longitudinal perspective. The advantage of this format is that we have been able to present much more of the data than was previously possible. In future reports, these tables will be updated to provide a comprehensive overview of the wealth of information about ageing collected in ELSA.

The topics of the three thematic chapters were selected through discussion with the representatives of the government departments that contribute to the funding of ELSA and they focus on issues that are important from both the policy and scientific perspectives.

Pension wealth

Pension wealth was selected as the central topic in the economic domain for this report for several reasons. Although less affluent sectors of the population rely on the state pension in retirement, many people in middle- and higher-earning sectors contribute to private pensions. These schemes have a strong impact on the income that people enjoy in retirement, but there have been major changes in saving schemes over recent decades. For example, there has been a rise in defined contribution pensions – in which the benefit paid depends on the contributions made and the fund accumulated and on the asset prices prevailing – at the expense of defined benefit pensions, in which the benefit depends on salary and years in the scheme and is usually protected against inflation. Until 1987, private pension schemes were run by employers, but since then there has been an explosion in personal pension schemes. Because of these changes, there may be cohort differences in the pension environment within the ELSA sample, depending on when the person was born. The analyses in Chapter 2 provide a detailed summary of pension wealth in ELSA and have generated a number of interesting findings, three of which are highlighted here.

Private pension coverage is extensive

The majority of men and women in ELSA have private pensions. Over 80% of men and 60% of women in 2010–11 were actively contributing to private pensions, were receiving income from private pensions or had contributed at some time in the past. The proportion has remained relatively stable across cohorts born in 1929–32 up to 1953–56 among men, but the coverage has increased substantially among younger compared with older women. These findings emphasise that what happens to private pensions is of importance to the majority of the population. There is very little evidence of changes in pension wealth across cohorts of participants born in different periods.

Working while drawing a pension

The traditional assumption is that people work until they retire, at which point they start drawing their pensions. ELSA shows that this model is being increasingly replaced by a more dynamic scenario in which work and pensions

operate hand in hand. Nearly half of men and a third of women aged 60–64 years who received private pension income were still in work. Often, these individuals were working reduced hours, taking a more gradual approach to retirement than the traditional abrupt cessation of work. Such people were more likely than others to be self-employed, so had greater discretion over their pattern of work than is sometimes the case in other organisations. We are currently in an era when the State Pension Age is rising, so there is growing concern about extending working lives. The ELSA results remind us of the complex personal decisions surrounding working at older ages and how processes such as contributing to a pension are set in train many years before retirement.

Income and wealth in retirement

How well off are people during their retirement years? This is a fundamental concern both to individuals as they make decisions about when to stop work and to policymakers and organisations trying to ensure that older people live comfortably. The findings from ELSA show that, on average, income after retirement is around 70–75% of pre-retirement family income. This simple statement is underpinned by a complex array of calculations and sophisticated economic modelling, taking into account tax, inflation and pre-retirement income. Interestingly, this ‘replacement rate’ – the extent to which pre-retirement income is replaced by pensions and other income – did not vary greatly by factors such as sex, educational background or whether the person had health problems. There was, however, a strong association with pre-retirement income. Participants with low pre-retirement incomes had a high replacement rate, so their income following retirement was as high as or even higher than their income before retirement. But for people on high pre-retirement incomes, the reverse was the case: those in the top quartile of pre-retirement income saw their incomes fall by 40% following retirement. One can speculate why this might be the case. Perhaps high earners don’t feel they need such high incomes after retirement, or perhaps they don’t appreciate the amount of investment needed in pension plans and other savings in order to maintain their affluent standards of living. These results are intriguing and deserve further analysis. What is certain is that research of this kind would not be possible without the collection of comprehensive financial data on a longitudinal basis.

Social detachment

Social engagement is closely intertwined with successful and healthy ageing. Older people who are not involved in social activity are at increased risk of having lonely and unsatisfying later years, poorer health and impaired cognitive function. However, social participation is a complex phenomenon with many different components; for example, a person might show high levels of civic participation, being actively involved in environmental or neighbourhood groups, but at the same time have a limited social network of friends and family. The ELSA analyses described in this report explore the facets of social detachment rather than attachment and distinguish four different domains of social detachment: low civic participation; limited involvement in leisure activities, clubs or classes; cultural disengagement; and

Introduction

impoverished social networks involving friends, family and children. Among the findings described in Chapter 3 are the following:

Some forms of detachment are more common than others

We have found that over one-in-six ELSA participants were detached from at least three forms of social engagement. This subgroup can be described as severely socially isolated, and the proportion has remained relatively stable in ELSA since 2002–03. Perhaps not surprisingly, such detachment is more common among individuals who never married or have been separated/divorced or widowed than among members of couples. There is a very marked socio-economic gradient, with rates of overall social detachment ranging from just 5% in the richest quintile of the population to nearly 35% in the poorest quintile. However, this pattern does not tell the whole story. Older people are much more likely to be detached from civic participation or leisure activity than from cultural engagement or social networks.

Health, age and transport matter

Poor health is a strong correlate of low levels of civic participation, leisure activity and cultural engagement, but has little association with the extent of social networks. Age takes its toll on involvement in leisure and cultural activities, but has less impact on civic participation and social network engagement. Interestingly, there is little association with living in rural rather than urban areas. But limited access to public or private transport shows a powerful association with low civic participation, limited leisure activity and low cultural engagement. These findings challenge a simplistic view of social detachment and indicate that different dimensions are patterned differently across the spectrum of older people. Nonetheless, focusing on poorer, less healthy older people with little access to transport is likely to have the greatest impact in alleviating social isolation.

Social detachment changes over time

An advantage of investigating social involvement in a longitudinal study such as ELSA is that it is possible to study the evolution of detachment over time. Our results show that detachment is not stable, but that people move into and out of different domains of social detachment as years pass. More than a third of ELSA respondents moved into and/or out of detachment from civic participation and leisure and cultural activities across the waves of data collection. Wealth emerged as a powerful determinant of moves into social detachment, with more affluent respondents being less likely to become socially detached. Those with medium or higher education were also at reduced risk of becoming socially detached, highlighting the importance of earlier life experience and life chances for later social function.

Health and well-being

There is great interest in several countries around the world in examining well-being of the population. This follows many critiques of the narrowness of using GDP as a measure of a country's progress. ELSA has included a variety of measures of well-being, as well as measures of psychological and physical health. Unlike many surveys, ELSA included assessments of different aspects

of subjective or psychological well-being, including evaluative well-being (life satisfaction), affective well-being (happiness and enjoyment of life) and eudemonic well-being (sense of purpose and meaning in life). This has provided the opportunity to take a more nuanced view of well-being in relation to health.

Socio-economic factors, age and well-being

We found that the different elements of psychological well-being had a curvilinear relationship with age in 2010–11, being higher in respondents aged 60–69 and 70–79 than in older or younger participants. A similar pattern has been reported before in high-income countries, where well-being is higher in young adults and older people than it is among men and women in their 40s and 50s. The explanation for this pattern has not been completely established, but it may relate to the multiple demands of work and domestic responsibilities in middle age.

There is a pronounced socio-economic gradient in psychological well-being, with greater well-being in more affluent sectors of the population. The effects are stronger for evaluative and eudemonic aspects of well-being than for measures of positive affect and enjoyment of life. Both paid employment and volunteering were associated with greater psychological well-being in 2010–11. Higher psychological well-being was also associated with being married (as opposed to never married, divorced/separated or widowed), being physically active, not smoking and better cognitive function.

There has been a small but consistent deterioration in affective well-being between 2002–03 and 2010–11 in ELSA, with similar patterns in different age groups. Life satisfaction has not shown comparable trends over this period.

Health and well-being are linked

There were strong cross-sectional associations between psychological well-being and health, particularly in relation to chronic illness and disability, albeit with variations across different aspects of well-being. The relation between health and psychological well-being can go both ways, and health is often regarded as one of the important determinants of well-being. In ELSA, we have been able to use the longitudinal design to test the possibility that well-being predicts future health. We found that psychological well-being in 2004–05 predicted the onset of disability, slower walking speed, impaired self-rated health and the incidence of coronary heart disease in 2010–11, in people who were initially free of these problems. Associations were stronger for affective and eudemonic well-being than for life satisfaction, highlighting the fact that different elements of well-being have distinctive properties. By contrast, psychological well-being was not a reliable predictor of the development of memory impairment over this period.

Further evidence that psychological well-being can predict future health comes from mortality follow-up. Survival over an average of more than nine years was associated with greater enjoyment of life in 2002–03. Effects were large, with the risk of dying being around three times greater among individuals in the lowest compared with the highest third of enjoyment of life, and were independent of age, sex, ethnicity, wealth, education, baseline health and other factors. We do not currently know the mechanisms underlying these effects.

They may relate to the biological correlates of psychological well-being or to more subtle aspects of lifestyle that are associated with greater levels of well-being. But these findings concerning the development of poor health and mortality suggest that measuring psychological well-being may help identify individuals at risk of future health problems and functional impairment.

Methodology

Chapter 5 gives information on the approaches used for fieldwork, sample design, response rates, content of the ELSA interview and weighting strategies used in this report. A brief summary of the design is given here. The original ELSA sample was drawn from households previously responding to the Health Survey for England (HSE) in the years 1998, 1999 and 2001. Individuals were eligible for interview if they were born before 1 March 1952, had been living in a responding HSE household and were, at the time of the ELSA 2002–03 interview, still living in a private residential address in England. In addition, partners under the age of 50 years, and new partners who had moved into the household since HSE, were also given a full interview. All participants who were recruited for the first wave of ELSA or have since become partners of such people are known as Cohort 1.

In the second wave, which took place in 2004–05, the core members and their partners were eligible for further interview, provided they had not refused any further contact after the first interview. In the third wave, the aim was to supplement the original cohort with people born between 1 March 1952 and 29 February 1956 so that the ELSA sample would again cover people aged 50 and over. The new recruits were sourced from the 2001–04 HSE years. Respondents met the eligibility criteria if they had been living in a responding HSE household and were, at the time of the ELSA 2006–07 interview, still living in a private residential address in England. Partners were also eligible to be interviewed. The fourth wave of ELSA took place in 2008–09 and the original cohort was supplemented with a refreshment sample of HSE respondents born between 1 March 1933 and 28 February 1958, taken from HSE 2006.

The fieldwork for wave 5 was carried out in 2010–11. Core members are represented by people eligible from HSE who took part in ELSA wave 1 plus the refreshment samples added in waves 3 and 4. The analyses contained in this report are predominantly based on data provided by the core members only.

In waves 1 to 5, there was a face-to-face interview and a self-completion form. In waves 2 and 4, there was also a nurse visit. At wave 3, on a separate occasion from the main interview, all respondents were asked to participate in a life-history interview (used for capturing information on lifetime family circumstances, place of residence, employment and major health events).

Broad topics covered in every wave include household composition, employment and pension details, housing circumstances, income and wealth, self-reported diseases and symptoms, tests of cognitive performance and of gait speed, health behaviours, social contacts and selected activities, and a measure of quality of life. The content of the wave 5 interview was largely the

same as in previous waves; it did, however, include some new topics such as questions on the use of cancer screening services and on pet ownership. A new module on financial risk was also given to a pre-selected group of respondents to measure attitudes to accepting different levels of risk when faced with the potential of earning a small but real amount of prize money. The module also examines people's willingness to delay receiving the prize money in order to receive a greater financial reward than would otherwise have been the case.

As with the previous waves, a self-completion questionnaire also formed part of the main interview and for wave 5 it contained new questions on discrimination, religiosity and positive well-being.

Academics, policymakers 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 datasets: <http://www.esds.ac.uk/findingData/elsaTitles.asp>
- ESDS Nesstar Catalogue: <http://nesstar.esds.ac.uk/webview/index.jsp>

Reporting conventions

Many of the analyses in this report use information from the core members of ELSA. The remaining data come from interviews with the partners of core members. Cross-sectional analyses based on core members at wave 5 provide the largest available number of participants. Proxy interviews have been excluded, mainly because a much-reduced set of information is available for these people.

Cross-sectional analyses have been weighted so that estimates should reflect the situation among over-50s in England. The longitudinal weight available for analyses has been used for many of the longitudinal analyses unless the weighting made no substantive difference. Both sets of weights are 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

The fieldwork for wave 6 of ELSA commenced in May 2012 and includes a face-to-face interview and a nurse visit. The study is at the leading edge both in survey methodology and in 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.

Acknowledgements

ELSA is a unique multidisciplinary study that would not have been achievable without the efforts of a large number of people. A small committee chaired by Professor Andrew Steptoe and made up of James Banks, Margaret Blake, Richard Blundell, Sam Clemens, Sir Michael Marmot, James Nazroo, Zoë Oldfield, Andrew Phelps and Nina Rogers manages the study. The past inputs of Carli Lessof and Kate Taylor to this committee are gratefully acknowledged.

We recognise and greatly appreciate the support we have received from a number of different sources. We are most indebted to those people who have given up their time and welcomed interviewers and nurses into their homes on up to nine occasions. We hope that, in future years, our participants continue to commit to ELSA, helping us to understand further the dynamics in health, wealth and behaviours of the ageing population. Vital to the success of the survey has been the over 300 dedicated interviewers whose commitment to the study has been so important.

The organisation of and research on ELSA are coordinated between four main institutions: University College London (UCL), the Institute for Fiscal Studies (IFS), the University of Manchester and the National Centre for Social Research (NatCen). There is also close collaboration with colleagues at the University of East Anglia, who are important researchers on the study. The study has involved a great many individuals in each of these institutions, some of whom are reflected in the authorship of chapters in this report.

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 Judith Payne for her fastidious copy-editing of the final manuscript and to Emma Hyman and Stephanie Seavers for their continued guidance of the report during the different stages of publication.

The ELSA research team has been guided by two separate groups. The consultants to the study, who have provided specialist advice, are Mel Bartley, Lisa Berkman, David Blane, Axel Börsch-Supan, Nicholas Christakis, Hideki Hashimoto, Michael Hurd, Hal Kendig, David Laibson, Kenneth Langa, Johan Mackenbach, John McArdle, David Melzer, Marcus Richards, Kenneth Rockwood, Paul Shekelle, Johannes Siegrist, James Smith, Robert Wallace, David Weir and Robert Willis. The ELSA advisory group to the study is chaired by Baroness Sally Greengross; its members are Michael Bury, Richard Disney, Emily Grundy, Ruth Hancock, Sarah Harper, Tom Kirkwood, Carol Propper, Tom Ross, Jacqui Smith, Anthea Tinker, Christina Victor and Alan Walker.

Finally, the study would not be possible without the support of its funders. Funding for the first six waves of ELSA has been provided by the US Institute on Aging, under the stewardship of Richard Suzman, and several UK government departments. The departments that contributed to the fifth wave of data collection are Communities and Local Government, Department of Health, Department for Transport, Department for Work and Pensions, Her Majesty's Revenue & Customs and the Office for National Statistics. This UK

government funding and our interactions with UK government departments' representatives have been coordinated by the Office for National Statistics through the longitudinal data strategy and we are grateful for its role in the development of the study. We are particularly grateful to Dawn Snape, who did most of the coordinating work during 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.

2. The evolution of pension wealth and contribution dynamics

Rowena Crawford *Institute for Fiscal Studies*

Gemma Tetlow *Institute for Fiscal Studies*

The analysis in this chapter shows that:

- Private pension coverage in the UK is high: 83% of men and 61% of women aged 52 and over in 2010–11 had at some point accrued rights to a private pension.
 - Overall private pension coverage among men born in different years varies relatively little, although younger cohorts of men are more likely to have contributed to a personal pension than those born earlier.
 - Coverage of both employer pensions and personal pensions has increased across successive generations of women.
- Among those who have a private pension, we find no evidence of significant increases (or decreases) in the amounts of wealth held in this form across successive cohorts of men and women.
- While pension wealth is decumulated through retirement, we find that holdings of other forms of family wealth do not, on average, decline with age.
- Men are most likely to start drawing a private pension income at age 60 or 65, while women are most likely to start drawing at age 60. On average, incomes from personal pensions start to be drawn later than those from employer-provided pensions.
- Starting to draw a private pension income is not synonymous with leaving the labour market: in 2010–11, 47% of men and 31% of women aged 60–64 who were in receipt of an income from a private pension were still in work. The propensity to continue in work after starting to draw a private pension has increased over time.
 - Average hours of work are, however, lower among workers who are receiving a private pension income than among those who have accrued rights to a private pension but have not yet started drawing it.
 - Workers who are in receipt of a private pension income are also more likely to be self-employed than those who have not yet started drawing their private pension income.
- Women are more likely than men to leave work at the point that they start drawing their private pension income, as are older individuals and those who report having a work-limiting disability.

- The proportion of individuals contributing to a private pension increases in the years leading up to retirement, where retirement is defined as leaving full-time work. However, there is little indication that average pension contributions are generally increased in the run-up to retirement, though the period before retirement that we observe may be too short to identify such an effect.
- On average, family net (after-tax) income after retirement (that is, after individuals have left full-time work) is found to be 72% of pre-retirement family net income, after adjusting pre- and post-retirement income levels for inflation.
 - This ‘replacement rate’ is on average around 70–75% for a range of subgroups split according to sex, education, health problems and wealth.
 - However, the replacement rate is found to be negatively correlated with the level of pre-retirement net income: the average replacement rate was 105% among those in the lowest quartile of pre-retirement income, compared with 61% among those in the highest income quartile.
- Net private pension income in retirement replaces, on average, 25% of net pre-retirement family income; this percentage is higher among individuals with higher levels of education and among individuals with higher levels of non-pension wealth.

2.1 Introduction

The well-being of older people continues to be an important policy consideration. Since state pensions in the UK provide only a relatively low level of income compared with what many mid and high lifetime earners will have enjoyed during their working lives, private pension saving has always played and continues to play a very important role in providing income to older people in retirement. What sort of pension arrangements individuals have, how much they have contributed to their pensions, and when and how they decide to draw them can have a significant impact on individuals’ incomes in retirement. The private pension saving environment has also evolved dramatically over recent decades, with the introduction of personal pensions in the late 1980s, the decline in prevalence of defined benefit pensions among private sector employees and the growth in female labour force participation, meaning that the number of people with private pensions, and the types that they have, have changed significantly. For all these reasons, it is interesting to examine how much pension wealth individuals have, how this has changed across cohorts, how much individuals contribute to private pensions in the run-up to retirement and how their income changes as they make the transition into retirement.

ELSA provides a rich source of information on individuals’ private pension provision and their labour market activity at older ages. This enables us to look at how different cohorts have interacted with the private pension market. Furthermore, ELSA allows us to follow individuals over time to look at how

and when they change their pension membership and/or their pension contribution rates, to examine how their pension wealth evolves over time in both the accumulation and decumulation phases, and to investigate pension and income dynamics around the point of retirement.

This chapter proceeds as follows. Section 2.2 starts by describing the sample used and defining some commonly used terms. Section 2.3 then begins the analysis by considering private pension coverage and how this differs between younger and older cohorts, in terms of both total pension coverage and the coverage of different types of pensions. Section 2.4 focuses on private pension wealth, both on how the overall levels of wealth differ between cohorts and on how pension wealth is decumulated as individuals age, particularly compared with other types of wealth. Section 2.5 investigates dynamics around retirement, first considering when individuals choose to start drawing their pension income and how that relates to them leaving paid work. It goes on to investigate how individuals' private pension contributions change as they approach retirement and finally examines how family income changes as individuals make the transition into retirement. Section 2.6 concludes.

2.2 Methods

2.2.1 Sample and analysis

The complete ELSA sample consists of people from three different sample draws: (a) the original ELSA sample that was drawn in 2002–03 and consisted of people then aged 50 or older; (b) the refreshment sample that was added to ELSA in 2006–07 and consisted of people then aged 50–54; and (c) the refreshment sample that was added to ELSA in 2008–09 and comprised people aged 50–74. The analysis presented in this chapter uses all core members from each of the sample draws for whom the relevant information was available.

The exact sample in use depends on the type of analysis being conducted. For some analysis, we focus on looking at differences between four-year date-of-birth 'cohorts' – for example, comparing individuals born in 1929–32 with individuals born in 1933–36. In Section 2.3, we pool observations from different waves of ELSA for each cohort (in order to focus on time-constant differences between cohorts), while Section 2.4 presents figures separately for each wave of ELSA for each cohort (in order to highlight differing time/age trends for the different cohorts).

The analysis in Section 2.5 makes explicit use of the longitudinal nature of the data to look at specific transitions in individuals' circumstances. In this type of analysis, the sample is restricted to those individuals observed for a number of years before and after the transition point of interest. There is less scope for making comparisons between cohorts in these cases, since – even with five waves of data – individuals observed making the transitions of interest (e.g. moving into retirement) tend to come from similar cohorts and the sample sizes are much smaller.

Much of the analysis presented in this chapter is weighted using either the cross-sectional or longitudinal weights. Analysis in Section 2.3, which uses cross-sections of data from each wave of ELSA, is weighted using the relevant

wave's cross-sectional weights. The analysis in Section 2.4, which is restricted to include only the subsample of individuals observed in all five waves of ELSA, uses the 2010–11 longitudinal weights. The weighting strategy is discussed in Chapter 5. Analysis in Section 2.5 is restricted to the subsample of individuals observed making certain 'transitions'. This analysis is not weighted, as neither the standard cross-sectional nor the standard longitudinal weights provided with the ELSA data would appropriately correct for sample selection in this case.

2.2.2 Definitions

Pension membership: An individual is defined as being a member of a private pension if they have one (or more) private pension to which they can still contribute, in which they have retained rights or from which they are drawing an income. 'Membership' is used interchangeably with 'coverage' throughout this chapter.

Private pension: A private pension is defined as any pension product excluding state pensions. The set of private pensions is equal to the set of employer pensions plus the set of personal pensions or, equivalently, to the set of defined benefit pensions plus the set of defined contribution pensions.

Current pension: A current pension is defined as a private pension to which an individual (or their employer) is contributing or to which they could contribute if they wanted.

Retained pension: A retained pension is defined as a private pension in which an individual has accumulated rights but to which they can no longer make contributions and from which they have not yet started drawing an income.

Employer pension: An employer pension is defined as a private pension that an individual reported to be provided by their employer or that an individual reported to be a Group Personal Pension. An employer pension that is 'current' may be contributed to by the employer, the employee or both.

Personal pension: A personal pension is defined as a private pension that an individual reported to be a Private Personal Pension, a Stakeholder Pension, an S226 plan, a retirement annuity pension, a self-invested personal pension or another type of retirement saving scheme. A personal pension that is 'current' may be contributed to by an employer (if the individual is an employee), the individual or both.

Defined benefit pension: A DB pension is a pension where the benefit paid depends on some function of salary and years of tenure in the scheme.

Defined contribution pension: A DC pension is a pension where the benefit paid depends on the contributions made, the investment return on the accumulated fund and the annuity rate available when the fund is annuitised.

Cohort: A four-year date-of-birth 'cohort' refers to individuals born within a particular four-year window. Seven of these cohorts are considered in this chapter: 1929–32, 1933–36, 1937–40, 1941–44, 1945–48, 1949–52 and 1953–56. The oldest cohort considered (those born between 1929 and 1932 inclusive) were aged between 69 and 74 when first observed in ELSA in 2002–03 and were aged between 77 and 82 by 2010–11. The youngest cohort considered (those born between 1953 and 1956 inclusive) is the youngest

Pensions

cohort observed in three waves of ELSA, being aged between 50 and 54 in 2006–07 and between 54 and 58 in 2010–11.

Education: Education level is defined using the self-reported age of first leaving full-time education. Individuals are grouped into three categories: those who left at or below the compulsory school-leaving (CSL) age that applied in the UK to their cohort (referred to as ‘low’ education); those who left school after the CSL but before age 19 (referred to as ‘mid’ education); and those who left at or after age 19 (referred to as ‘high’ education).

Family: A family refers to a single man, a single woman or a couple, along with any children aged under 18 who live in the household.

Total (non-pension) wealth: Measured at the family level, this is the sum of net primary housing wealth, net physical wealth (other property wealth, business wealth and other physical assets) and net financial wealth. To aid comparison of wealth figures from different waves of ELSA, total (non-pension) wealth is adjusted for inflation (using growth in the retail price index, RPI) and is expressed in March 2012 prices.

Total (non-pension) non-housing wealth: Measured at the family level, this is the sum of net financial wealth and net physical wealth. In other words, it is equal to total (non-pension) wealth excluding the net value of primary housing wealth. To aid comparison of wealth figures from different waves of ELSA, total (non-pension) non-housing wealth is adjusted for inflation (using growth in the RPI) and is expressed in March 2012 prices.

Full-time work: An individual is counted as being in full-time work if they report doing paid work (employment or self-employment) for 35 hours or more per week.

Throughout this chapter, F-tests have been used to assess the statistical significance of the observed differences. Differences referred to in the text are significant at no less than the 5% level.

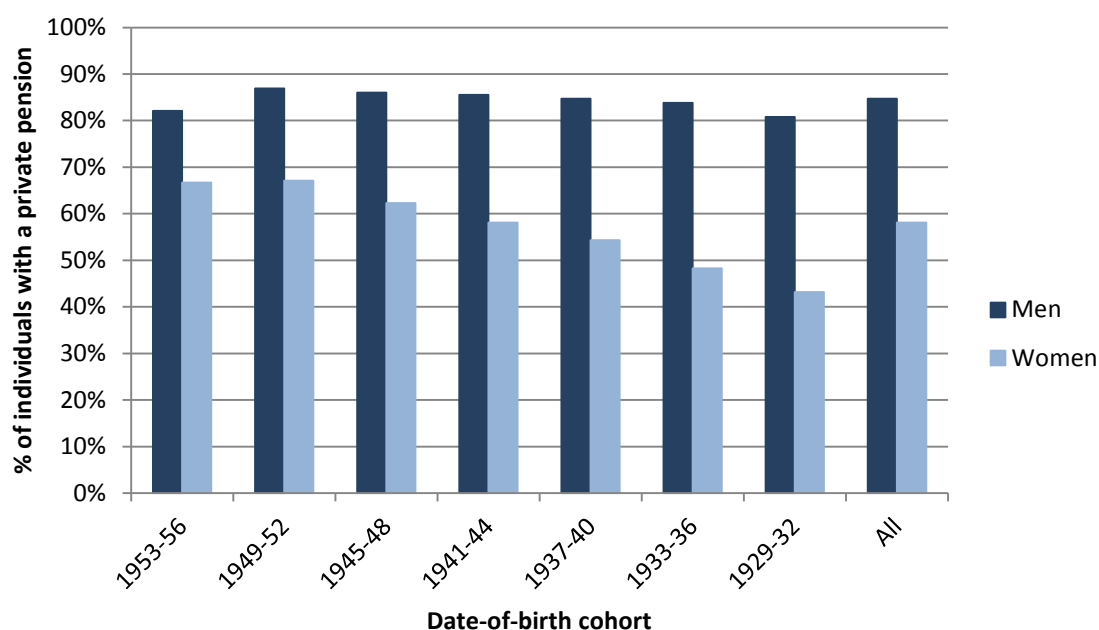
2.3 Changes in pension coverage

Private pension coverage is high among older individuals in England – 71% of individuals aged 52 and over had accrued rights to a private pension (which they were still contributing to, had retained rights in or were drawing an income from) in 2010–11. Coverage was higher among men than women, at 83% compared with 61%. However, given the constantly evolving nature of the private pension market in the UK and the substantial reforms that have occurred over the last few decades, it is interesting to examine how private pension coverage has changed across cohorts, both in terms of total private pension coverage and in terms of the types of pensions that individuals hold. Such analysis is the subject of this section. Individuals are defined as being ‘covered’ by a pension if they have ever accrued any rights to a private pension, and thus this measure essentially captures ‘lifetime coverage’. In other words, it is a stock variable, which should generally not go down as people age. In addition, at older ages it should generally not go up either, since few individuals start to contribute to a pension for the first time after, say, age 60. In this section, therefore, we focus on differences in coverage between

cohorts, rather than by age. Small variation in this lifetime coverage could, however, mask big variations in the length of time spent contributing to a pension or the amount of pension rights accumulated. This is addressed in the next section, which considers changes in accumulated pension wealth.

Figure 2.1 uses all five waves of ELSA to show how pension membership varies between successive cohorts. Total pension coverage has been relatively stable across successive cohorts of men, at around 80–90%. By contrast, pension coverage among women is lower than that among men and exhibits clear cohort differences. Among women born in 1929–32, on average 43% are covered by a private pension, while coverage is 67% among women born in 1949–52.

Figure 2.1. Pension coverage, by cohort and sex



Notes: Pooled ELSA 2002–03 to 2010–11. Sample size is 18,164 repeat observations of 5649 men and 21,460 repeat observations of 6492 women. Regression analysis of pension coverage on a set of cohort dummies is used to test for statistically significant differences between cohorts, assuming no time or age effects. Such analysis shows that for men the only consecutive cohorts that are significantly different from one another are the 1953–56 and 1949–52 cohorts and the 1933–36 and 1929–32 cohorts, while for women all consecutive cohorts are significantly different from one another with the exception of the 1953–56 and 1949–52 cohorts. Figures are weighted.

The increase in pension coverage among later cohorts of women, which is not observed for men, could arise for a number of reasons, including: increased labour market attachment of women in these cohorts; changes in UK law that removed the right for employers to exclude part-time employees from their occupational pension schemes;¹ and changes in social norms regarding whether women in couples undertake independent retirement saving.²

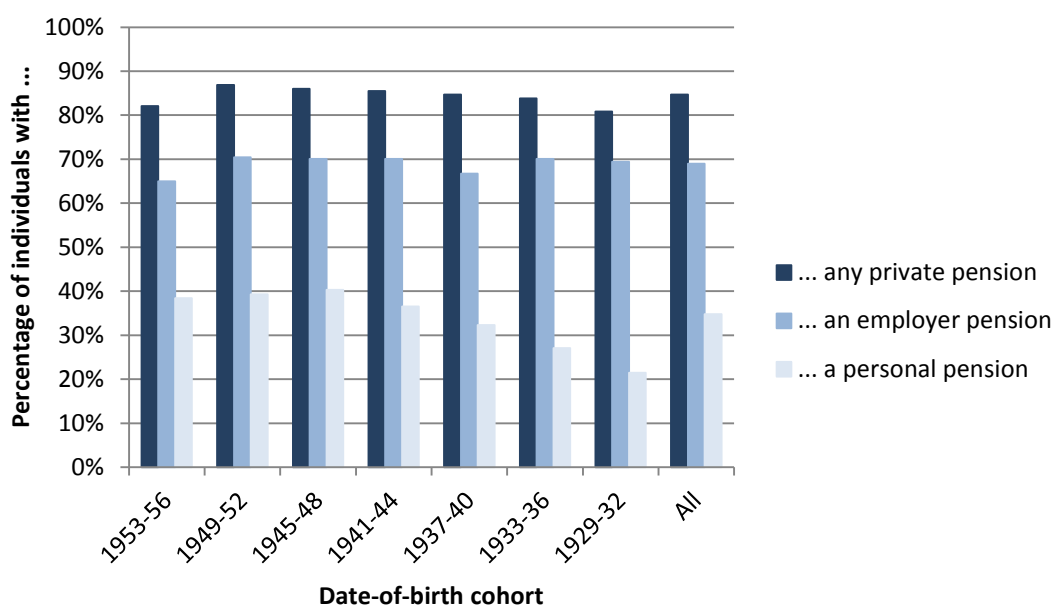
¹ Historically, employers often restricted access to their occupational pension schemes to full-time employees, which disproportionately excluded women, who were more likely to work part-time. However, in 1994, two judgements made by the European Court of Justice said that an occupational pension scheme that excluded part-time workers could be in contravention of

Evidence from the ELSA ‘life history’ interview – fielded as part of the 2006–07 wave – suggests that labour market attachment has been higher among younger cohorts. For example, those born in 1929–32 worked on average 22.7 years between ages 16 and 50 (inclusive), compared with 25.9 years among those born in 1953–56. Those born in 1929–32 spent on average 17.0 years in full-time work, compared with 18.9 years among those born in 1953–56. However, while these differences between cohorts are statistically significant, they are quantitatively quite small, and they are unlikely to be the sole driver of the cohort differences in lifetime pension coverage shown in Figure 2.1.

Figure 2.2 describes cohort differences in coverage of *employer pensions* and *personal pensions* separately, for men in panel A and for women in panel B. As with overall pension coverage, women in younger cohorts are more likely to be covered by an employer pension than women in older cohorts. This effect is not generally observed among successive cohorts of men. Again, this could arise from women in younger cohorts having spent longer in employment, being more likely to have been offered access to a pension by their employer and/or being more likely to join an available pension scheme.

Figure 2.2. Employer and personal pension coverage, by cohort and sex

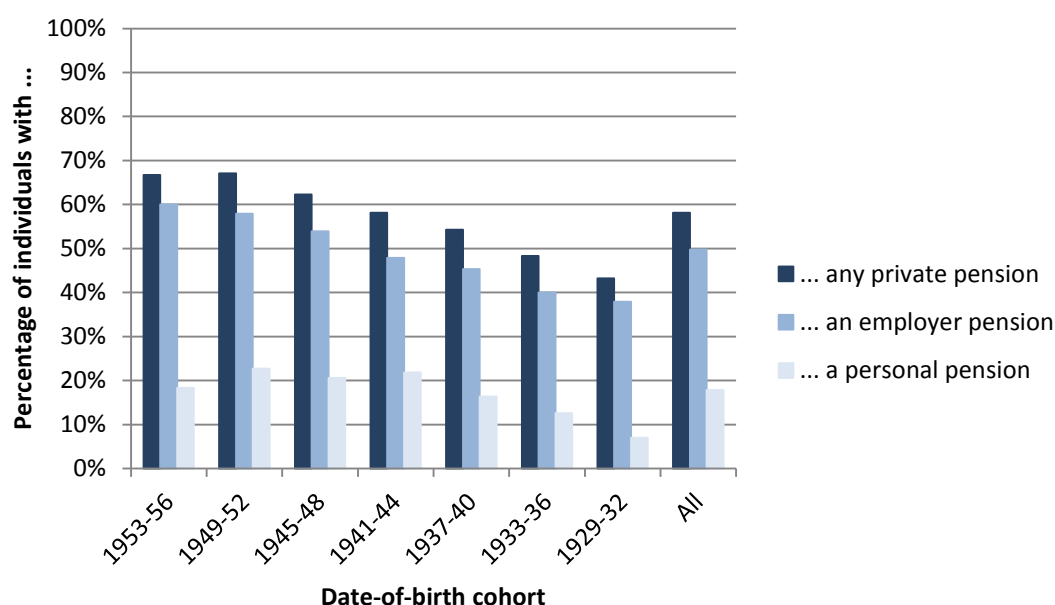
A. Men



European equal pay laws. From then on, the exclusion of part-time workers from occupational pension schemes was often challenged in the UK courts, before the Part-Time Workers (Prevention of Less Favourable Treatment) Regulations 2000 legislated that, unless employers can objectively justify exclusion, part-time employees have to be provided with access to pension schemes on a no less favourable basis than their full-time counterparts. For more information, see <http://www.justice.gov.uk/tribunals/employment/part-time-workers/history>.

² For a discussion of how the changing economic role of women might affect retirement saving behaviour, see Shek-wai Hui, Vincent and Woolley (2011), for example.

B. Women



Notes: Pooled ELSA 2002–03 to 2010–11. Sample size is 18,164 repeat observations of 5649 men and 21,460 repeat observations of 6492 women. Where individuals are observed more than once and have differing pension status over time, their average (mean) pension coverage status is used. Regression analysis of pension coverage on a set of cohort dummies is used to test for statistically significant differences between cohorts, assuming no time or age effects. Figures are weighted.

Personal pensions are a more recent phenomenon than employer pensions, having only been available since the late 1980s. Membership of these pensions is less prevalent than membership of employer pensions: 59% of ELSA respondents in 2010–11 were covered by an employer pension but only 26% of respondents were covered by a personal pension. Figure 2.2 shows that, in contrast to employer pensions, there are discernible cohort effects in personal pension coverage for both men and women, with each successive cohort between 1929–32 and 1940–44 exhibiting statistically significantly higher coverage. This is consistent with the facts that personal pensions were first introduced in 1987 – when these later cohorts were aged 47 and under, and thus might have been more likely to have taken out this new type of pension than older individuals at that stage, who may already have had established pension provision – and that younger individuals were given much stronger inducements to join these schemes (Disney, Emmerson and Wakefield, 2008).

Among men, personal pensions are more prevalent among the younger cohorts, while overall coverage of employer pensions and of any pensions is approximately constant across the cohorts. The implication of these three facts is that the rising coverage of personal pensions among the younger cohorts compared with older ones must have been happening among a group who were also covered at some point by employer pensions.

An alternative way of thinking about types of private pensions is not in terms of who provides them (the employer/personal pension distinction), but in terms of how the pension benefits are determined. In the UK, there are two broad categories: defined benefit (DB) pensions and defined contribution (DC)

pensions. Figure 2A.1 in the appendix to this chapter describes cohort differences in coverage of DB and DC pensions separately, for men in panel A and for women in panel B. The picture for DB pensions is similar to that for employer pensions, while the picture for DC pensions is similar to that for personal pensions.

2.4 The evolution of pension wealth

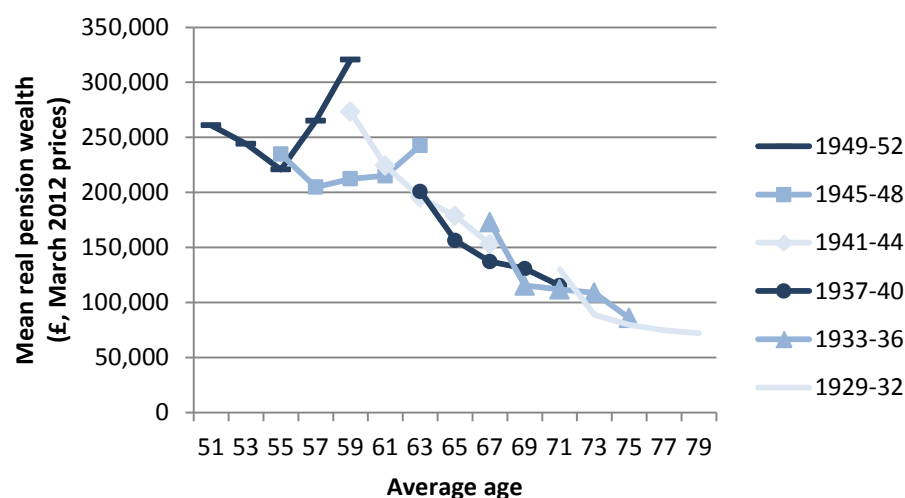
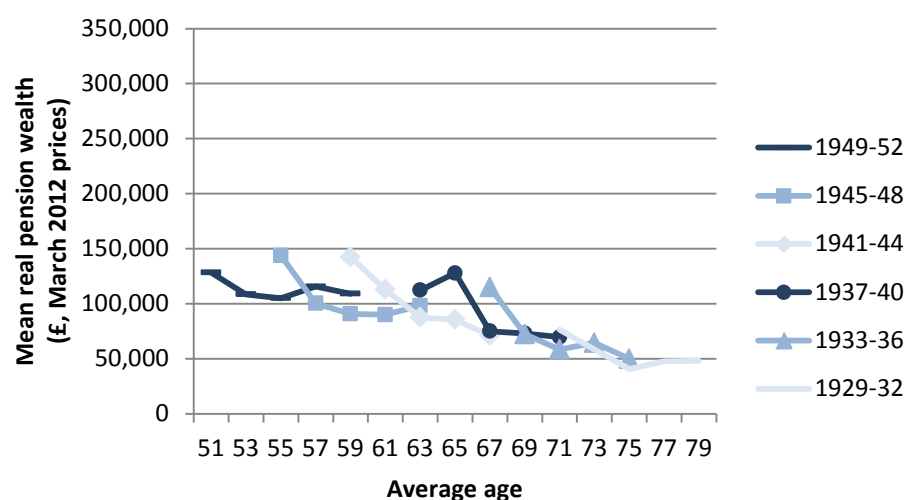
While changing pension coverage across cohorts is of interest, it can be misleading if used as the sole indicator of individuals' private pension saving behaviour, as it could disguise significant changes in the *amount* of private pension saving that individuals in different cohorts have done. This section therefore investigates private pension wealth holdings among those covered by a private pension, and how these have changed between cohorts and as individuals aged.

The focus in this section is on the sample of individuals who are observed in all waves of ELSA and who were covered by a pension in 2002–03. The advantages of these restrictions are that the effects of differential mortality (in other words, that those with lower pension wealth may be more likely to attrit from the sample or die as the sample ages) are minimised and that there are no compositional effects from people who *become* covered by a pension at older ages.

Section 2.4.1 considers cohort differences in pension wealth holdings among those covered by a private pension, while Section 2.4.2 considers the decumulation of pension wealth as individuals age and how this compares with changes in other family wealth. All wealth figures are adjusted for changes in the price level, using the retail price index (RPI) in the month in which the individual was interviewed, and are expressed in March 2012 prices. Increases in this so-called *real* wealth therefore reflect increases in purchasing power, rather than just the effect of an increase in the general level of prices over time (inflation). To aid comparison with other forms of wealth described in Chapter E, Table 2A.1 in the appendix to this chapter describes the 2010–11 distribution of private pension wealth in January 2011 prices across all individuals by age and sex, while Table 2A.2 describes the distribution across individuals with private pension wealth.

2.4.1 Cohort differences in pension wealth

Figure 2.3 uses all five waves of ELSA to show how real pension wealth varies between successive cohorts; panel A shows the figures for men and panel B shows the figures for women. Each line relates to a four-year date-of-birth 'cohort' (e.g. individuals born in 1929–32) and each point on the line represents average pension wealth among that cohort in a given wave of ELSA, plotted against the average age of that cohort in that wave of ELSA. For example, the furthest right point in panel A indicates that, among men born between 1929 and 1932 inclusive, average pension wealth in 2010–11 (ELSA wave 5) was £72,238 (in March 2012 prices) when the average age of these men was 79.

Figure 2.3. Mean real pension wealth, by cohort, sex and age**A. Men****B. Women**

Notes: Sample is those who were covered by a private pension in 2002–03 and are observed in all five waves of ELSA. Reported pension wealth is deflated by the retail price index (RPI) in the month of interview and so all wealth figures are in March 2012 prices. Increases in this *real* pension wealth therefore reflect actual increases in purchasing power. Figures are weighted.

If there were no time effects, looking along a line would indicate how real pension wealth has changed for a given cohort as they age, while comparing lines vertically for a given age would indicate how real pension wealth at a given age has changed between successive cohorts. However, it is likely that there are important time effects affecting observed real pension wealth. For example, everyone with an unannuitised DC pension fund, regardless of age and cohort, will be affected by the asset prices prevailing at a given point in time. Looking along a cohort line in Figure 2.3 therefore indicates changes in real pension wealth that arise from both ageing and time, while comparing cohort lines vertically indicates differences that arise from both cohort effects and time effects.

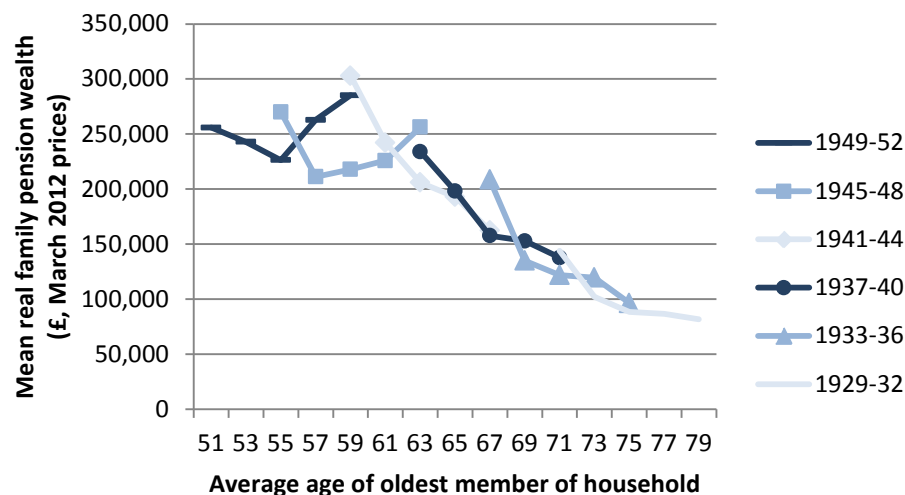
It is not possible to distinguish between age, time and cohort effects without assuming something about the functional form of the relationship between pension wealth and at least one of these factors. Looking at Figure 2.3, there appears to be an underlying pattern that, at least for men, real pension wealth increases at younger ages and then decreases again. If we assume that real pension wealth has a quadratic relationship with age, and then estimate the cohort differences in real pension wealth by regressing pension wealth on age, age squared, a set of time dummies and a set of cohort dummies, we find that – after controlling for age and time effects – there are no significant differences in pension wealth among pension members across different cohorts for either men or women.

2.4.2 Decumulation of pension and non-pension wealth

Figure 2.3 showed that pension wealth declines with age, but this is unsurprising since, once pensions are in receipt, the amount of pension wealth held will decline over time. Even if the pension income is not spent, it will still cease to be counted as pension wealth and will accumulate instead in other financial savings. However, it is interesting to investigate how rapidly pension wealth is ‘consumed’ relative to other wealth holdings.

This analysis is conducted at the family level since non-pension wealth is generally collected at the family level in ELSA (because many assets are jointly owned by couples). Figure 2.4 starts by describing mean real pension wealth at the family level, by age and cohort. This is analogous to Figure 2.3, which was at the individual level, and shows the same pattern of average pension wealth declining with age after around age 60 and little evidence of cohort effects.

Figure 2.4. Mean real family pension wealth, by cohort and age



Notes: Sample is families in which the oldest member is observed in all five waves. Age and cohort are defined for the oldest individual in the family. Figures are weighted.

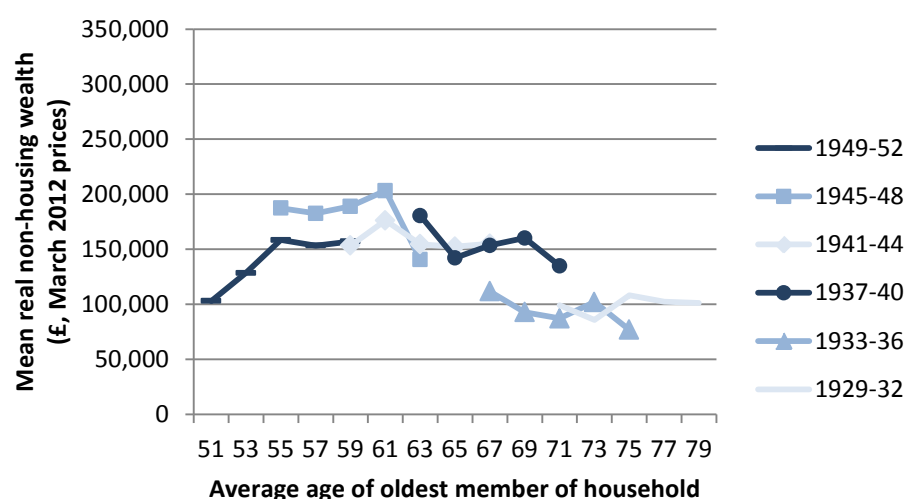
The profiles for real pension wealth can then be compared with those for real net non-pension wealth, shown in Figure 2.5. Panel A shows mean family real net non-housing wealth by age and cohort, while panel B shows mean family real net primary housing wealth. There is little suggestion that, on average, either of these sources of wealth is substantially decumulated as individuals

age. Net non-housing wealth seems broadly constant with age, though with a significant difference in the level between the oldest two cohorts (the 1929–32 and 1933–36 cohorts) and the rest.

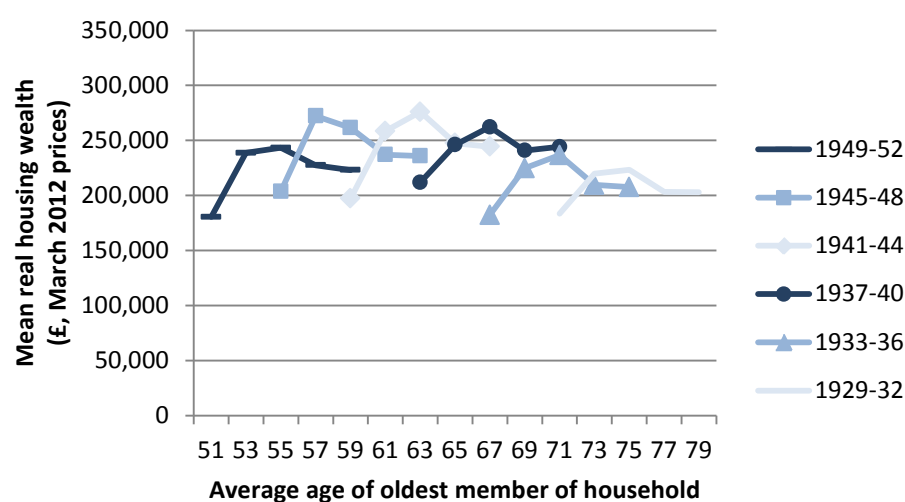
The profiles for net primary housing wealth seem to be predominantly driven by time effects – essentially house price changes. For example, all cohorts experienced a significant increase in primary housing wealth between 2002–03 and 2004–05, irrespective of their age at the time, which arose from the particularly rapid increase in house prices over that period. Similarly, most cohorts exhibited a decline in average real housing wealth between 2006–07 and 2008–09, which coincided with the recession and sharp fall in UK house prices. Abstracting from these time trends, there is little suggestion that individuals consume their housing wealth in retirement.

Figure 2.5. Mean family net (non-pension) wealth, by cohort and age

A. Net non-housing wealth



B. Net primary housing wealth



Notes: Sample is families in which the oldest member is observed in all five waves. Age and cohort are defined for the oldest individual in the family. Figures are weighted.

This analysis therefore suggests that the main source of funding for consumption in retirement is pension wealth, rather than the drawing down of other financial or housing assets. This is consistent with other literature that has found that, on average, pensioner households have lower expenditure than their incomes and therefore are saving and accumulating, rather than decumulating, non-pension wealth. For example, Banks, Blundell and Tanner (1998) found, from looking at mean spending and income by age across cohorts in the Family Expenditure Survey, that at retirement the drop in spending is greater than the drop in income (in other words, that the savings rate increases).

2.5 Pension and income dynamics around retirement

This section exploits the longitudinal nature of ELSA to investigate dynamics around retirement. In particular, we examine how individuals' private pension contributions change as they approach retirement and how individuals' incomes change around the point of retirement. An important precursor to such analysis is describing *when* individuals retire – both in terms of the ages at which individuals retire and in terms of what is actually meant by 'retirement'. What 'retirement' means to different individuals and how they move towards that are interesting questions in their own right but beyond the scope of this chapter. Here we consider three important discrete transitions: the point at which an individual starts to *define* themselves as 'retired'; the point at which they leave full-time work; and the point at which they start drawing an income from a private pension. For some individuals these transitions will occur at the same point in time, but for many individuals they will not. This section therefore starts by examining when individuals choose to start drawing their private pension income and how this relates to the timing of leaving paid employment or self-employment. It then goes on to consider pension contribution and income dynamics around retirement.

2.5.1 Age of private pension receipt

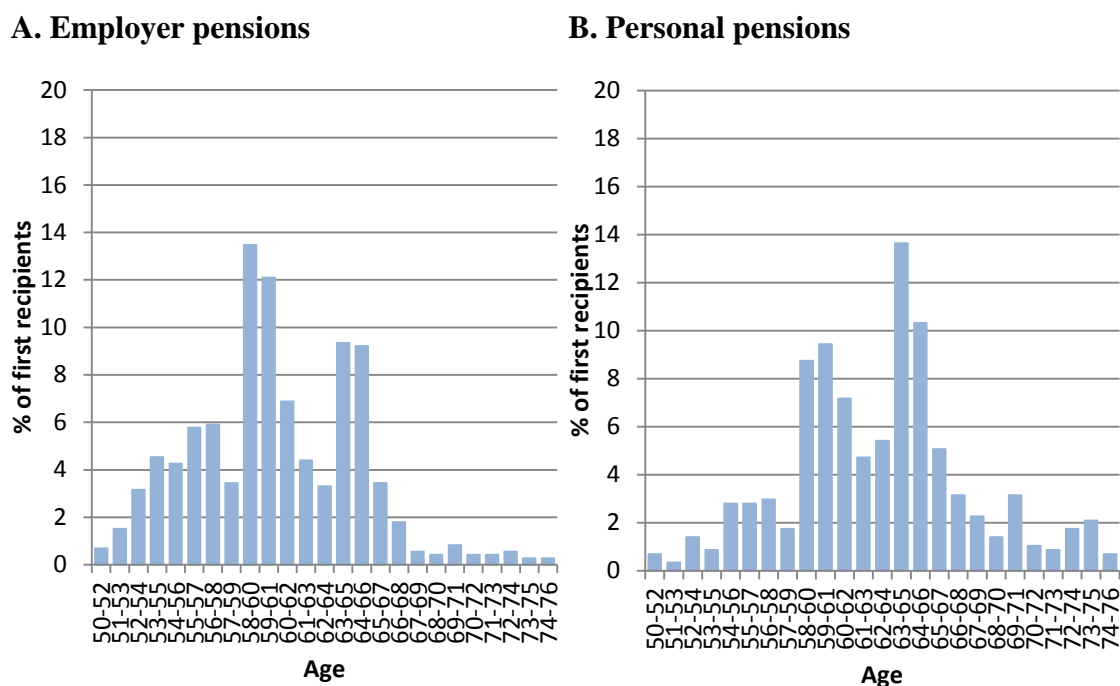
Using the longitudinal element of ELSA, we can look at the age at which individuals first start drawing an income from a private pension scheme. In each wave of ELSA, we capture whether an individual has an income from a private pension scheme, and (provided they responded to the previous wave) we know whether they were also receiving this income two years earlier. Pairing up these observations, we can establish at what age (within a two-year window) the individual started to draw the pension income. Figure 2.6 pools observations on men in each pair of consecutive ELSA waves and, within the sample who are observed to start drawing a pension for the first time, shows the distribution of ages at which this happened. Each category along the horizontal axes indicates the age range within which individuals start to draw a pension – for example, '59–61' indicates that an individual was observed at age 59 in one ELSA wave without a private pension income and was then observed two years later (aged 61) with a private pension income. Panel A shows the age distribution for first drawing an employer pension, while panel

B shows the distribution for first drawing a personal pension. Figure 2.7 shows the equivalent figures for women.

Men are found to be most likely to start drawing a pension income around the ages of 60 or 65: 24% of men who are observed to start drawing a private pension for the first time do so either between 58 and 60 or between 59 and 61, while 22% do so either between 63 and 65 or between 64 and 66. These two peaks correspond to commonly used Normal Pension Ages (NPAs) in employer pension schemes – frequently 60 and 65 – and the State Pension Age (SPA) for men, which is currently 65. Men are more likely to start drawing an employer pension at the age of 60 than at 65 – consistent with age 60 being a common NPA in employer-provided schemes (particularly in the public sector). Meanwhile, men are more likely to draw a personal pension at 65 than at 60. Personal pensions do not have explicit NPAs; however, the SPA may act as a signal of the age at which individuals believe it is appropriate to draw their private pension.

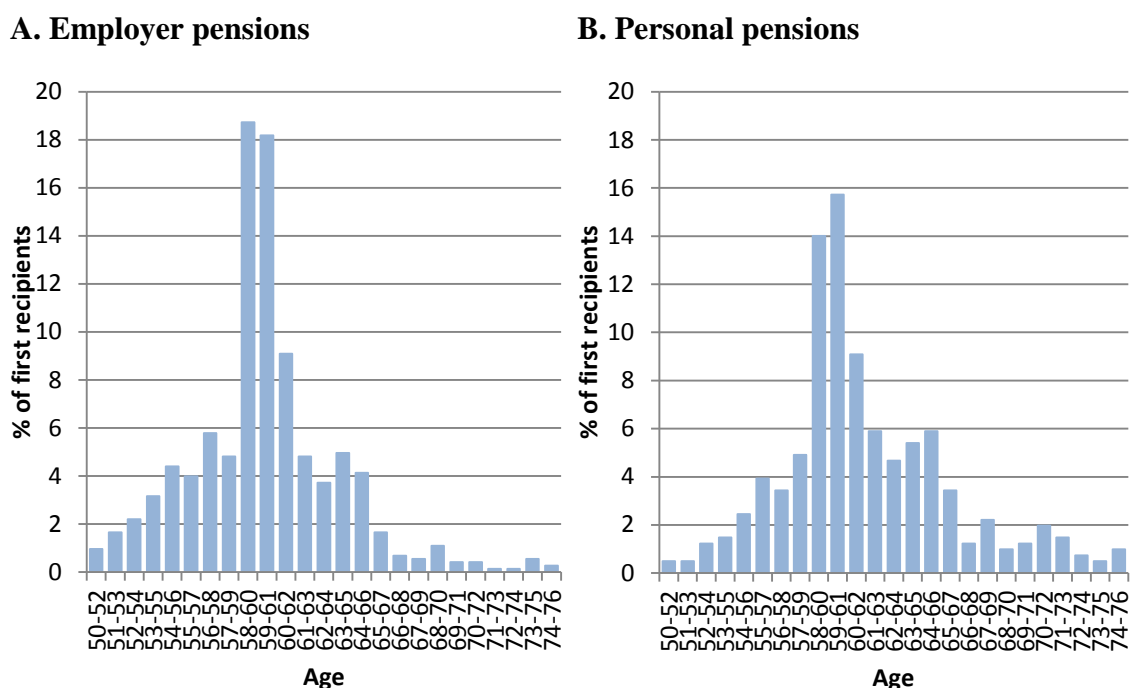
Among men who are observed to start drawing a private pension for the first time, 26% have both an employer pension and a personal pension that they could draw in future. Within this subsample of men, 23% of those who are observed drawing their employer pension either between 58 and 60 or between 59 and 61 also drew their personal pension between those ages, while 76% first drew their personal pension at a later age. This again suggests that, since personal pensions do not have explicit NPAs, many men choose to draw them after their employer pensions, and often at the SPA.

Figure 2.6. Age of first drawing a private pension: men



Notes: The sample is men observed to start drawing a private pension income for the first time (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). N=727 for employer pensions and N=572 for personal pensions. Figures are unweighted.

Figure 2.7. Age of first drawing a private pension: women



Notes: The sample is women observed to start drawing a private pension income for the first time (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). N=726 for employer pensions and N=507 for personal pensions. Figures are unweighted.

For women, around age 60 is the single most common time to start drawing a pension: 40% of women who are observed to start drawing a private pension for the first time do so either between 58 and 60 or between 59 and 61. This is a commonly used NPA in employer schemes and was also the SPA for women during this period. However, it is worth noting that among women who are observed to start drawing their pension for the first time, over 30% do so above age 60 and 28% do so before age 60.

2.5.2 Private pension receipt and working

Starting to receive an income from a private pension and leaving paid work do not, for most people, happen simultaneously. One way to demonstrate this is to exploit the longitudinal nature of ELSA and focus on the sample of individuals observed drawing a private pension income for the first time (as in Section 2.5.1). For these individuals, we can look at their reported labour market activity in the ELSA wave in which we first observe them drawing a private pension income and the wave before. Individuals can be observed making one of four transitions around the time they start to draw their private pension income: staying in paid work, leaving work, remaining out of work or entering work. Table 2.1 shows the proportion of individuals making each of these transitions, and also provides a comparison of these proportions for individuals with different characteristics.

Across all individuals, 68.6% were in work immediately prior to drawing their private pension. Among these, around four-in-nine (or 30.7% of all those who started drawing a private pension income) left work when they first started to draw their pension income, while five-in-nine stayed in work. On the other

hand, 28.8% of individuals were not in work in the wave before they are first observed drawing a private pension income and continued not to be in work once they started receiving their pension.

Table 2.1. Work transitions around point of first drawing a private pension income, by characteristics

<i>% of individuals</i>	Paid work transition				<i>Unweighted N</i>
	Stay in work	Leave work	Remain out of work	Enter work	
All	37.9	30.7	28.8	2.6	1171
Men	40.6	29.5	27.1	2.9	621
Women	34.9	32.0	30.7	2.4	550
Aged 50–54	52.5	21.3	24.6	1.6	61
Aged 55–59	45.6	34.6	17.3	2.6	272
Aged 60–64	39.3	31.0	27.2	2.5	562
Aged 65–69	27.4	30.4	38.3	3.9	230
Low education	35.2	29.5	33.2	2.0	488
Mid education	38.6	31.8	25.6	4.0	425
High education	42.4	30.7	25.6	1.3	238
<i>Total non-pension wealth group</i>					
Lowest	26.0	22.0	51.0	1.0	100
2	38.8	27.1	30.9	3.2	188
3	38.6	36.6	24.0	0.8	246
4	37.7	30.3	29.5	2.5	244
Highest	38.2	32.0	25.6	4.2	359
<i>Report a work-limiting health problem when first drawing private pension income</i>					
No	44.8	29.4	23.1	2.7	888
Yes: temporary	17.2	35.0	46.5	1.3	157
Yes: >3 months	15.2	34.4	46.4	4.0	125
<i>Private pension income from a:</i>					
Personal pension	41.5	25.1	30.1	3.2	402
Employer pension	35.4	33.8	28.4	2.3	869
<i>Have other private pension not yet in receipt</i>					
No	27.5	35.2	34.5	2.8	863
Yes	67.2	17.9	12.7	2.3	308

Notes: The sample is all individuals observed to start drawing a private pension income for the first time (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). Figures are unweighted.

Looking across individuals with different characteristics, women are slightly more likely to leave work when they first start to draw a private pension income than men. Older individuals are less likely to be in work before starting to draw their private pension income than younger individuals and, among those who are in work, older individuals are more likely to leave work when they start drawing their pension than younger individuals. Unsurprisingly, individuals who report a work-limiting health problem just before they are first observed drawing a private pension income are both less likely to be in work before they start to draw that pension and more likely to leave work once they are receiving a pension income. Individuals are more

likely to leave work when they start to draw a private pension income if that income is from an employer pension than if it is from a personal pension: among individuals who are observed to start drawing a private pension income for the first time, 25.1% of those for whom that pension is a personal pension leave work, compared with 33.8% of those for whom it is an employer pension. Finally, individuals are much more likely to stay in work if they also have another private pension (or pensions) not yet in receipt.

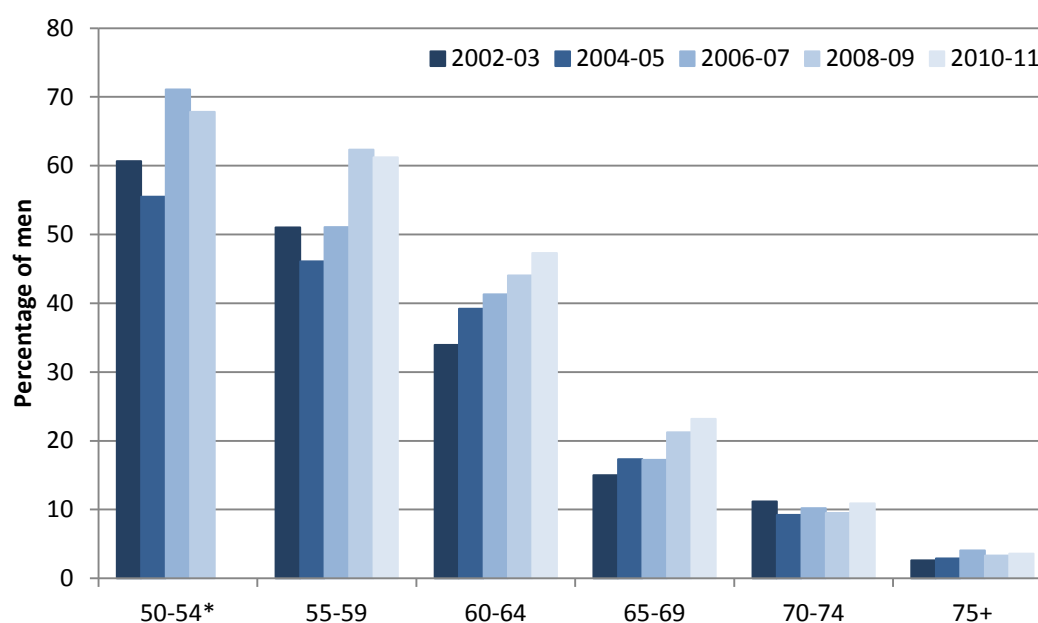
An interesting policy question is whether the relationship between working and drawing a private pension income has become less strong over time. One particular reason why this might be expected is that the government introduced reforms in 2006 that would allow people to draw their occupational pension while continuing to work for the same employer (previously, they would have to have left their employer in order to claim their pension). This might be expected to increase the proportion of people working whilst drawing a private pension.

Figure 2.8 shows, for each wave of ELSA, the percentage of private pension income recipients in each age group who are working. Among men aged 50–59 in wave 5 who were receiving private pension income, over 60% were also in some form of paid work. Among women in the same age group, over half were in work. This compares with an employment rate among all men aged 50–59 of around 80%, and of around 70% for women of the same age. As would be expected, this proportion declines at older ages – among private pension recipients aged 70–74, around 10% of men and around 5% of women reported also being in paid work. For comparison, a complete set of figures for employment rates among those with and without private pensions (in receipt) are provided in Tables 2A.3 (men) and 2A.4 (women) in the appendix to this chapter.

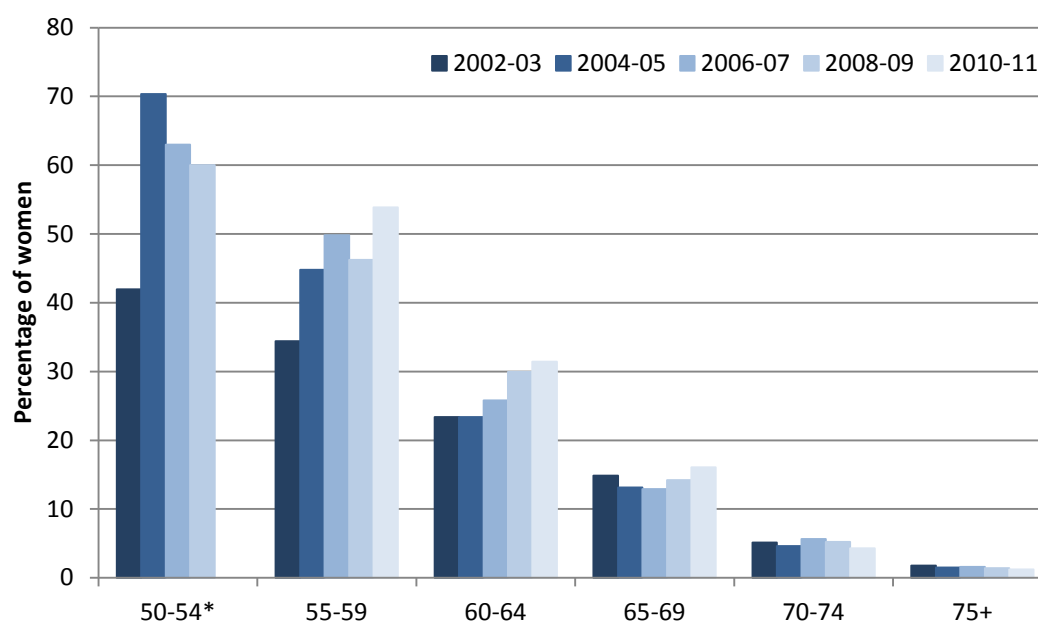
The proportion of private pension income recipients in work has been increasing across ELSA waves, particularly among men and women aged 55–69. This is consistent with the current and previous governments' ambition to extend working lives and with changes in government policy that have sought to make it easier for individuals to remain in work while drawing a private pension. Importantly for this last point, the increase in the proportion of those working while receiving a private pension income has been greater than the general increase in the proportion of people of these ages with accrued pension rights who work. For example, between 2002–03 and 2010–11, there was a 9.1 percentage point increase in the proportion of men aged 60–64 with any accrued pension rights in work, but a 13.4 percentage point increase in the proportion of men aged 60–64 claiming a private pension who were in work. The same is true of women: between 2002–03 and 2010–11, there was a 6.1 percentage point increase in the proportion aged 60–64 with accrued pension rights in work, but an 8.1 percentage point increase in the proportion of those aged 60–64 and claiming a private pension who were in work. However, there is no obvious discrete change in behaviour associated with the specific policy reform in 2006 mentioned above.

Figure 2.8. Percentage of private pension income recipients working, by age and ELSA wave

A. Men



B. Women



* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Percentages are not shown for those aged 50–54 in 2010–11 due to small sample sizes. The sample is individuals who are observed receiving income from a private pension. Figures are weighted.

Among members of private pension schemes who are in paid work, those who have already started receiving a private pension income are significantly more likely to be self-employed than those who have not yet started drawing one. Table 2.2 shows, for each wave of ELSA, what fraction of male workers who

Pensions

were members of a private pension scheme were self-employed (as opposed to employed). The sample in the table is split according to age and whether or not the worker was already receiving a private pension income. It is clear that individuals working while receiving a private pension income are much more likely to be self-employed than those who are working but not yet receiving one: for example, in 2010–11, 20.6% of working pension members who were not receiving a private pension income were in self-employment, compared with 30.6% of those who were already receiving a private pension income.³ However, it cannot be established from this table alone whether this is because self-employed people are more likely to continue working after starting to draw a private pension, or whether people are more likely to enter self-employment when they start drawing a pension (or both). Examining these pathways, exploiting the longitudinal data now available from ELSA, would be an interesting topic for further research.

Table 2.2. Percentage in self-employment among workers with accrued rights to a private pension scheme, by whether started drawing an income from a private pension scheme: men

Whether receiving private pension income	Age					All (50–74)
	50–54*	55–59	60–64	65–69	70–74	
2002–03						
Not receiving	19.0	18.6	18.0	-	-	18.7
Receiving	26.4	29.5	27.2	39.7	38.1	31.0
All	19.8	20.7	21.6	37.8	36.3	21.8
2004–05						
Not receiving	17.1	20.6	20.4	-	-	19.8
Receiving	27.5	22.1	24.1	36.5	[49.5]	28.9
All	18.4	20.8	22.0	36.7	[48.5]	22.5
2006–07						
Not receiving	17.1	20.8	20.9	-	-	19.6
Receiving	[23.5]	20.7	31.7	25.5	[46.9]	28.1
All	17.7	20.8	25.6	26.8	[46.9]	22.0
2008–09						
Not receiving	16.2	20.0	23.4	-	-	19.7
Receiving	[13.2]	27.8	26.6	36.4	39.5	28.3
All	15.8	21.7	24.8	37.1	40.5	22.4
2010–11						
Not receiving	17.9	18.2	24.5	-	-	20.6
Receiving	-	25.5	30.9	31.0	51.3	30.6
All	16.9	19.9	27.8	33.0	52.0	24.6

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Sample is men with accrued rights to a private pension scheme who are in work. Figures are weighted.

³ The same overall picture also holds for women – see Table 2A.5 in the appendix to this chapter.

Table 2.3. Mean hours worked per week among workers with accrued rights to a private pension scheme, by whether started receiving an income from a private pension scheme: men

Whether receiving private pension income	Age					All (50–74)
	50–54*	55–59	60–64	65–69	70–74	
2002–03						
Not receiving	44.5	43.1	41.7	-	-	43.5
Receiving	39.8	35.6	32.2	21.9	17.2	31.5
All	44.1	41.8	38.4	22.7	17.7	40.9
2004–05						
Not receiving	42.7	42.5	40.0	-	-	42.0
Receiving	38.3	33.2	33.5	22.4	[17.4]	30.8
All	42.2	40.8	37.2	24.3	[18.2]	38.9
2006–07						
Not receiving	43.7	42.1	40.8	-	-	42.5
Receiving	[41.0]	35.3	32.2	22.0	[18.9]	31.4
All	43.4	40.7	37.4	23.5	[18.9]	39.6
2008–09						
Not receiving	42.9	41.3	41.9	-	-	42.0
Receiving	[38.6]	35.1	32.4	22.9	18.2	31.5
All	42.3	40.1	37.9	24.7	18.2	39.0
2010–11						
Not receiving	41.5	40.9	38.7	-	-	40.5
Receiving	-	37.6	33.0	23.7	17.5	31.7
All	40.6	40.3	35.9	26.0	16.9	37.3

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Sample is men with accrued rights to a private pension scheme who are in work. Figures are weighted.

Unsurprisingly perhaps, individuals who continue to work while receiving an income from a private pension work fewer hours on average than people of the same age who have accrued private pension rights but have not yet started drawing an income. Table 2.3 shows the average weekly hours of working men with accrued pension rights, split according to whether or not they are receiving any private pension income. While Figure 2.8 showed that younger cohorts are more likely to work whilst claiming a private pension income, there appears to be little difference across cohorts in the average hours worked among working men at any given age while receiving private pension income. Table 2A.6 in the appendix shows the equivalent information for women. Again, women working whilst receiving income from a private pension work fewer hours on average than those working and not receiving private pension income.

This subsection demonstrates that starting to receive an income from a private pension does not necessarily coincide with leaving the labour market. Many individuals have already left work before starting to draw a private pension, while others continue to work even after starting to draw one. There has also

been an increase over time in the proportion of individuals, both men and women, who work whilst drawing a private pension, which has coincided with government policies to encourage people to extend their working lives.

However, the analysis in this subsection is not able to indicate whether more people are working whilst drawing a private pension because they enjoy working, or whether it is because they need to supplement the income provided by their private pension. While there is not the capacity to address this important question fully here, Table 2.4 sheds some light on this area by showing, for each wave of ELSA, the average weekly pension income of those receiving a private pension income, with individuals grouped according to their age and whether or not they are working. This table indicates a number of interesting patterns. For example, for individuals aged under 65, mean pension income tends to be lower among those in work than among those not in work. However, this picture reverses above the SPA. More detailed analysis is required to examine this fully and it is therefore an important area for further research.

Table 2.4. Mean real private pension income among workers who have started drawing an income from a private pension scheme: men and women

<i>Weekly net private pension income (£)</i>	Age					All (50–74)
	50–54*	55–59	60–64	65–69	70–74	
2002–03						
Not working	200.3	190.9	155.0	141.1	120.7	144.9
Working	170.8	190.6	168.6	145.3	157.1	168.8
All	183.6	190.8	159.0	141.7	124.1	150.6
2004–05						
Not working	[247.0]	210.3	158.3	145.2	127.0	151.4
Working	[166.2]	164.9	149.4	164.4	[120.5]	156.1
All	199.6	189.6	155.4	148.2	[126.5]	152.5
2006–07						
Not working	-	209.6	171.5	135.4	137.4	151.9
Working	[118.1]	168.0	152.5	[159.7]	[130.1]	153.0
All	132.0	188.5	164.9	139.2	[136.8]	152.2
2008–09						
Not working	[270.6]	199.0	174.8	152.2	137.7	159.5
Working	[126.2]	170.5	165.0	141.3	142.0	156.5
All	176.6	183.0	171.1	150.2	138.0	158.6
2010–11						
Not working	-	179.4	167.5	159.8	139.8	157.1
Working	-	149.5	150.0	148.6	216.5	153.6
All	159.2	161.9	160.5	157.5	145.9	156.1

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Sample is individuals observed receiving income from a private pension. Real pension income is pension income deflated by the retail price index, expressed in March 2012 prices. Figures are weighted.

2.5.3 Changes in pension contributions around retirement

In this subsection, we examine how individuals' private pension contributions change as they approach retirement. There are a number of reasons why individuals might be expected to change their pension contribution behaviour in the run-up to retirement. For example, they may become better informed about their accumulated pension wealth to date and how that compares with their likely pension needs; this could lead them to increase or decrease their pension saving, depending on what they discover. Alternatively, individuals may always have planned to increase pension contributions in the immediate run-up to retirement. One reason for this is the incentives created by the UK tax system: since pension contributions are exempt from income tax and one-quarter of accumulated pension saving can be taken as a tax-free lump sum at the point of retirement, it can be tax-advantageous to divert saving into pension contributions in the years leading up to retirement. The incentive to do so is greater in the years immediately prior to retirement since, compared with during the rest of working life, consumption needs are likely to be relatively low and marginal tax rates on income relatively high, and the number of years before the pension wealth can be claimed is small.⁴

Figure 2.9 takes retirement to be the point at which an individual starts to define themselves as 'retired' and focuses on the sample of individuals who are observed making a 'sharp transition' into retirement.⁵ Panel A shows, in the years around retirement, the proportion of individuals in work, the proportion with a current pension and the proportion with a current DC pension. Retirement (year 0) is associated with a clear drop-off in the proportion of individuals working and in the proportion with a current pension, and a slightly smaller decline in the proportion of individuals with a current DC pension.

Panel B shows, among those with a current DC pension, the mean, median and 75th percentile of individual pension contributions. The average pension contribution, as measured by the mean, shows a relatively large spike around two years prior to retirement. However, since this effect is notably absent when looking at median contributions, it looks to be the result of a relatively small number of individuals making particularly large contributions immediately prior to retirement, rather than a general trend that all individuals tend to increase their contributions just before retirement.

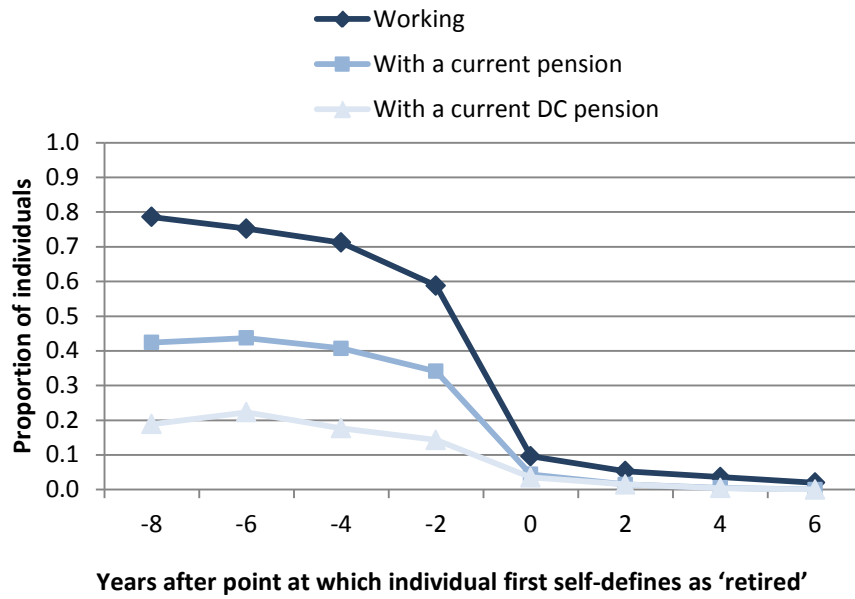
Figure 2.10 repeats the analysis of Figure 2.9 but taking 'retirement' to be the point at which an individual leaves full-time work. Again it focuses on the sample of individuals who are observed making a 'sharp transition' into

⁴ In fact, those with no (or little) previous pension saving have the added incentive that 'trivial commutation' rules allow pension funds worth less than a certain threshold (£18,000 in 2012–13) to be taken as a lump sum in retirement without the need to purchase an annuity.

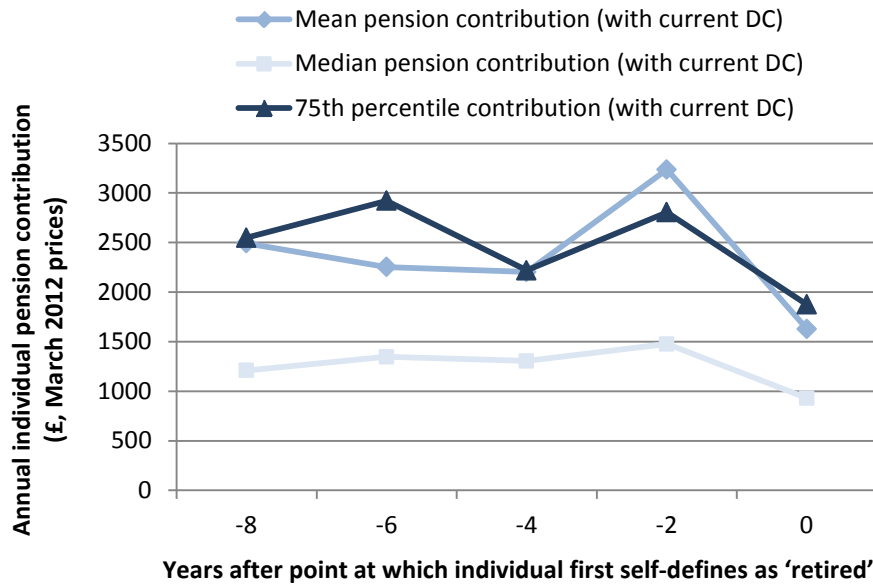
⁵ A 'sharp transition' into retirement means that an individual is observed making one switch from non-retirement into retirement. That is, in all waves in which they are observed before that point, they do not declare themselves to be retired; and in all subsequent waves of observation, they say they are retired. 56% of individuals who report themselves as retired in at least one wave of ELSA and as something else in at least one wave of ELSA are observed to make a 'sharp transition' into retirement.

Figure 2.9. Pension dynamics around retirement
(retirement = point at which individual starts to self-define as ‘retired’)

Panel A



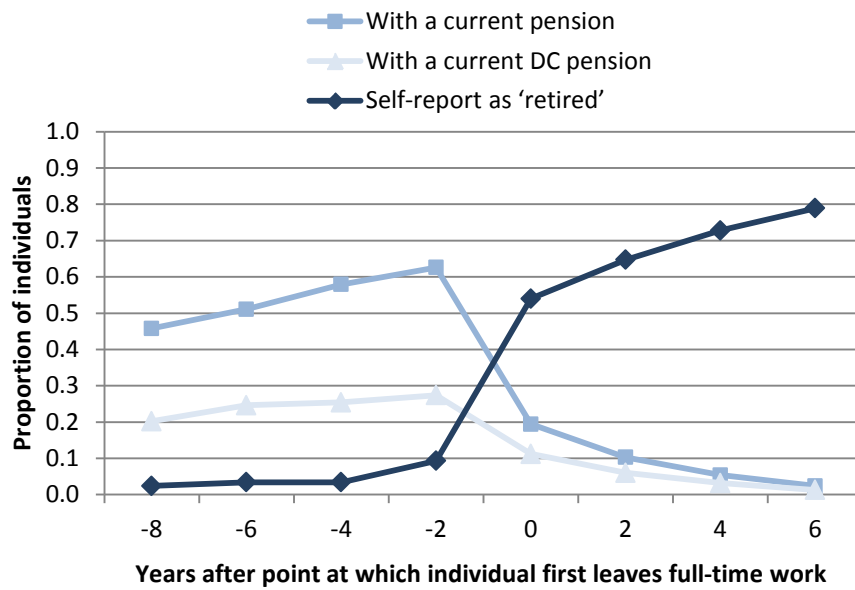
Panel B



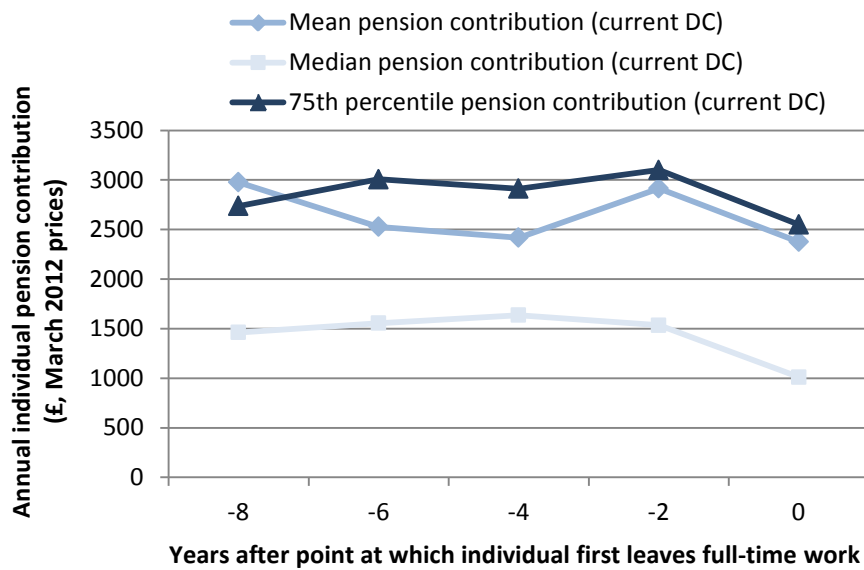
Notes: Sample is 2207 individuals, of whom 652 are observed at Y=-8, 1069 at Y=-6, 1491 at Y=-4, 2207 at Y=-2, 2207 at Y=0, 1555 at Y=2, 1138 at Y=4 and 716 at Y=6. Pension contributions are individual contributions only and do not include employer contributions. Figures are unweighted.

Figure 2.10. Pension dynamics around retirement
 (retirement = point at which individual leaves full-time work)

Panel A



Panel B



Notes: Sample is 1451 individuals, of whom 442 are observed at Y=-8, 725 at Y=-6, 974 at Y=-4, 1451 at Y=-2, 1451 at Y=0, 1099 at Y=2, 726 at Y=4 and 477 at Y=6. Pension contributions are individual contributions only and do not include employer contributions. Figures are unweighted.

retirement.⁶ On this definition of retirement, there is an increase in the proportion of individuals with a current pension (and in the proportion with a current DC pension) in the run-up to retirement. Looking at pension contributions among those individuals making pension contributions to current DC pensions, there is only a very slight upwards trend in the median and 75th percentile. However, since there is an increase in pension membership in the run-up to retirement, it is possible that an increase in pension contributions by those who always had a current DC pension is being disguised by those individuals who start making pension contributions making contributions that are lower than average. Across all those contributing to a DC pension in the run-up to retirement, the mean contribution level spikes up around two years prior to retirement, indicating the presence of relatively large outliers. While this could be the result of measurement error in the data, it could also be a genuine indication that a small number of individuals understand the tax incentives surrounding pension contributions and are able to make particularly large contributions immediately prior to retirement.

While the figures presented in this subsection show little evidence of individuals in general increasing their pension contributions in the run-up to retirement, it is important to recall that individuals are only observed for a limited period prior to retirement – at most eight years and, for half of the sample, only for a maximum of four years before ‘retirement’. It is therefore quite possible that individuals do increase their pension saving in the run-up to retirement, but that they are more forward-looking than our data and analysis can allow for, and increase their pension saving more than, say, eight years in advance of retirement.

2.5.4 Changes in income around retirement

The financial well-being of older people is an important policy consideration, and the direct object of concern is often the likely adequacy or otherwise of individuals’ retirement resources. ‘Adequacy’ is, of course, a subjective term and can be interpreted as meaning different things. For example, having adequate resources could be interpreted as simply having a high enough income to be able to purchase the necessities such as housing, food and clothing. Alternatively, it could be interpreted as being able to achieve a certain replacement of pre-retirement consumption, and so avoiding an unacceptable fall in living standards in retirement.

In this subsection, we again make use of the longitudinal nature of the ELSA data to look at the change in family net income that occurs around the point at which an individual retires. By comparing average family net income among individuals when they are observed as retired with average family net income in previous waves of ELSA, we can get some idea of the average replacement rate – that is, the degree to which pre-retirement earnings and other income are

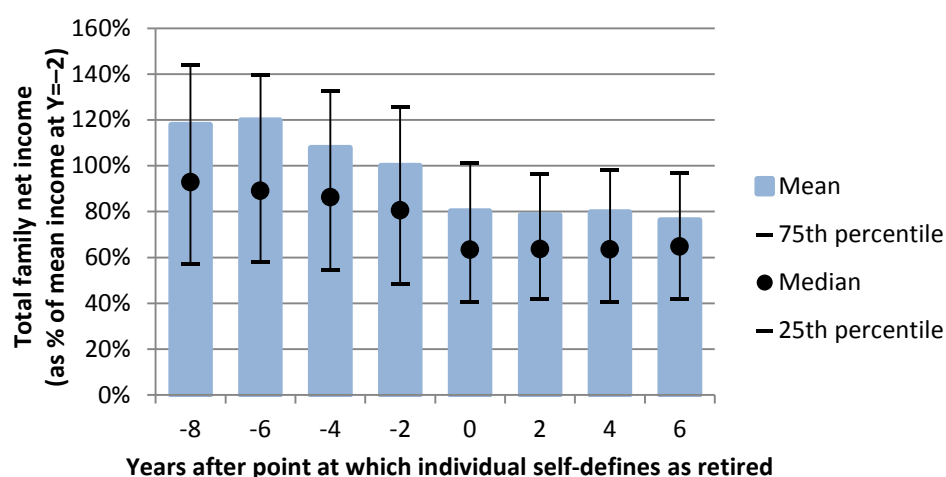
⁶ 65% of individuals who report themselves as in full-time work in at least one wave of ELSA and not in full-time work in at least one wave of ELSA are observed to make a ‘sharp transition’ into retirement.

replaced by pensions and other forms of income once an individual has retired.⁷

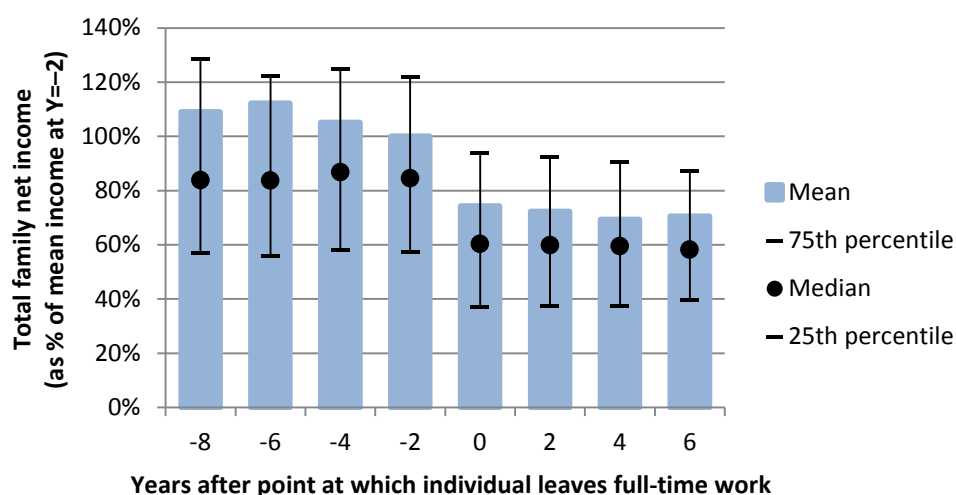
Figure 2.11 shows, for the sample of individuals observed making a ‘sharp transition’ into retirement, the distribution of family net income in each year

Figure 2.11. Total family net income before and after individual’s retirement

A. Retirement = point at which individual self-defines as ‘retired’



B. Retirement = point at which individual leaves full-time work



Notes: The sample is individuals observed making a ‘sharp transition’ into retirement (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). Sample for panel A is 2207 individuals, of whom 652 are observed at Y=-8, 1069 at Y=-6, 1491 at Y=-4, 2207 at Y=-2, 2207 at Y=0, 1555 at Y=2, 1138 at Y=4 and 716 at Y=6. Sample for panel B is 1451 individuals, of whom 442 are observed at Y=-8, 725 at Y=-6, 974 at Y=-4, 1451 at Y=-2, 1451 at Y=0, 1009 at Y=2, 726 at Y=4 and 477 at Y=6. Figures are unweighted.

⁷ Total net income is defined at the family level since some income streams are collected only at the family level in ELSA (including asset income, as many assets are jointly held within couples, and benefit income, since many benefit entitlements are assessed based on family income).

around the point of retirement. Incomes in each year are expressed as a percentage of mean income two years before retirement ($Y=-2$). For example, the figures shown in panel A for -2 on the horizontal axis indicate that median net income among individuals two years before retirement is equal to 80.5% of mean net income among the same group, while the 75th percentile of net income among this group is 125.5% of mean net income. Taking the figures shown for $Y=0$, the bar for the mean indicates that mean income of individuals in the year of retirement is equal to 80.2% of mean income among individuals two years before retirement.

Retirement is defined in panel A as the point at which an individual starts to self-define as 'retired', while in panel B it is defined as the point at which an individual leaves full-time work. In both cases, those who are 'retired' ($Y=0$ or greater) have lower average family net income, though only by an average 21% in the former case (and 29% in the latter case), compared with net incomes two years prior to retirement. This implies a mean replacement rate of immediate pre-retirement net income of 79% (71%), which is broadly in line with the findings of previous literature (Blundell and Tanner, 1999; Bardasi, Jenkins and Rigg, 2002).

While Figure 2.11 shows how average family net incomes vary across groups observed just pre- and post-retirement, there will clearly be a lot of variation in replacement rates at the individual level. There are also likely to be some characteristics that tend to be associated with a higher or lower replacement rate in retirement. To investigate this second issue, Table 2.5 shows average pre-retirement income, average post-retirement income and the implied average replacement rate, across individuals with different characteristics. Retirement is defined in this table as leaving full-time work; an equivalent table where retirement is defined as the point at which an individual starts to self-define as 'retired' is provided in the appendix (Table 2A.7).

There seems to be little systematic difference in the relationship between average pre- and post-retirement income for many of the groups shown – mean family net income post-retirement is around 70–75% of its pre-retirement level for both sexes, all education groups and the wealth quintiles. There is, however, a clear pattern of drops in average income being larger the higher was pre-retirement income. The quarter of the sample with the lowest pre-retirement incomes (£303 per week on average) are actually found to have slightly higher income on average after retirement (£319). This contrasts with the quarter of the sample with the highest pre-retirement incomes (£1381 a week on average), who are found to have average net incomes post-retirement that are just 60.6% of this level.⁸ A declining average replacement rate with income is consistent both with the theoretical arguments and with previous empirical research surveyed in Pensions Commission (2004).

⁸ Income groups are defined by ordering individuals who are observed making the transition into retirement according to their net family income, and then dividing them into four equally sized groups (or 'quartiles'). Group sizes may not be exactly equal if borderline individuals have the same level of income.

Table 2.5. Comparison of average family net income before and after leaving full-time work, by characteristics

	Mean family net income (£ per week)		Replacement rate	Replacement by private pension income	<i>Unweighted N</i>
	Average pre-retirement	Average post-retirement			
All	738	531	71.9%	24.7%	1408
Men	744	520	69.9%	25.7%	826
Women	730	546	74.8%	23.4%	582
Low education	597	408	68.4%	19.6%	549
Mid education	751	556	74.0%	24.8%	524
High education	986	720	73.0%	30.3%	310
<i>Work-limiting health problem (at Y=0)</i>					
No	782	565	72.3%	25.2%	1025
Yes	617	439	71.2%	23.8%	370
<i>Wealth quartile (at Y=0)</i>					
Lowest	542	388	71.5%	17.6%	349
2	622	459	73.7%	24.0%	351
3	760	529	69.7%	25.1%	352
Highest	1031	748	72.5%	28.6%	350
<i>Income quartile (at Y=-2)</i>					
Lowest	303	319	105.1%	26.9%	354
2	532	417	78.4%	24.9%	351
3	739	552	74.8%	25.1%	351
Highest	1381	837	60.6%	24.0%	352

Notes: The sample is individuals observed making a 'sharp transition' of leaving full-time work (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). Replacement rate is calculated as mean (average post-retirement income) divided by mean (average pre-retirement income). Income and wealth quartiles are calculated for the specific sample being analysed here. Wealth quartiles are defined based on total family net non-pension wealth. Figures are unweighted.

Table 2.5 also describes the replacement of average pre-retirement net income by average private pension income in retirement. Private pension income after retirement amounts to 24.7% of average pre-retirement family net income among the whole sample of individuals observed making a 'sharp transition' into retirement, but this differs markedly for some subgroups. In particular, the proportion of average pre-retirement income replaced by average private pension income is higher for those with higher levels of education and for those with higher levels of non-pension wealth.

Across all subgroups identified in Table 2.5, the proportion of average pre-retirement family net income replaced by private pension income after retirement is relatively low. This indicates that there is strong reliance on other sources of income in retirement, aside from just private pensions. This is explored in more detail in Figure 2.12, which gives the composition of average pre-retirement income and average post-retirement income.

Figure 2.12. Composition of average income, pre- and post-retirement (retirement = point at which individual leaves full-time work)



Notes: Family net income pre-retirement (post-retirement) is calculated as the mean of family net income across the years the individual is observed before (after) retirement. Mean family net income is then the average of that across all individuals. N=1408. Figures are unweighted.

It shows that families already receive some income from private and state pensions in the period we have defined as ‘pre-retirement’, and conversely continue to receive some earned income in the period we have defined as ‘post-retirement’ – either because the ‘retiring’ individual continues to work part-time (recall that ‘retirement’ here is defined as leaving full-time work) or because another member of the family is earning employment income. Comparing post-retirement private pension income with pre-retirement earned income (that is, employment and self-employment earnings) suggests that, on average, private pension income replaces 32.0% of pre-retirement earned income (compared with the 24.7% of all pre-retirement income mentioned above).

On average, unearned income post-retirement replaces 48.3% of all pre-retirement income (or 62.6% of all earned pre-retirement income), while state and private pension income post-retirement replaces on average 49.3% of pre-retirement earned income. State pension income is a relatively important source of income post-retirement, on average amounting to nearly £100 per week (equivalent to 13.3% of average pre-retirement income), as is asset income, on average amounting to around £52 per week after retirement (equivalent to 7.0% of average pre-retirement income).

Further exploration of the relationships between income and living standards before and after retirement is possible with ELSA and is one of the key strengths of such longitudinal data. A full examination of them is the subject of other ongoing work.

2.6 Conclusions

The longitudinal data available from ELSA provide an invaluable resource for examining the evolution of pension wealth and the dynamics around retirement such as labour market behaviour, pension saving (and dissaving) and the income changes experienced by families as they make the transition into retirement. This chapter has provided an overview of these issues using the first five waves of ELSA (from 2002–03 to 2010–11). The analysis has examined how private pension wealth evolves as individuals approach and move through retirement. While ages 60 and 65 are the most common times to start drawing income from a private pension, a significant number of people are found to draw their pensions at other ages. This chapter has shown that many people continue working while drawing income from a private pension and that the prevalence of this has been increasing over time, although on average pension recipients work fewer hours than those who have not yet drawn a pension and they are more likely to be self-employed. Making use of the longitudinal dimension of ELSA and the detailed information collected on sources and levels of income, this chapter has also shown that, on average, families' incomes after leaving full-time work are 72% of the pre-retirement level. The observed replacement rate is higher for families with lower pre-retirement income than it is for those with higher pre-retirement income.

This chapter has highlighted a number of interesting patterns relating to pension wealth and pension income from the first five waves of ELSA. However, there is considerable scope for further interesting analysis of all the areas discussed here. Such analysis could also draw on some of the other strengths of the ELSA data – for example, the life history information and linked administrative data.

References

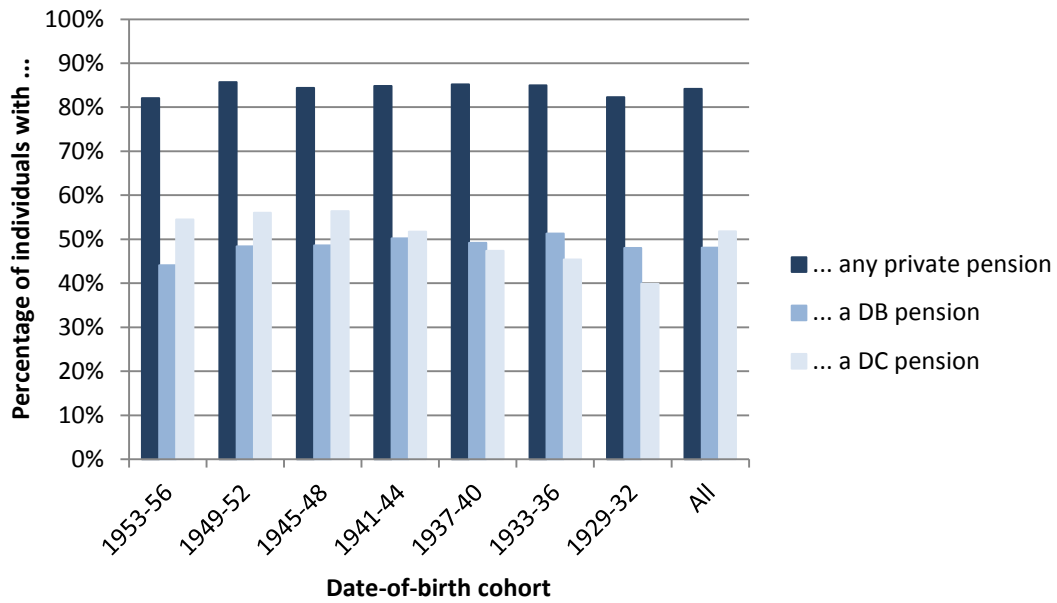
- Banks, J., Blundell, R. and Tanner, S. (1998), 'Is there a retirement-savings puzzle?', *American Economic Review*, vol. 88, pp. 769–88.
- Bardasi, E., Jenkins, S. and Rigg, J. (2002), 'Retirement and the income of older people: a British perspective', *Ageing and Society*, vol. 22, pp. 131–59.
- Blundell, R. and Tanner, S. (1999), 'Labour force participation and retirement in the UK', paper prepared for the US National Academy of Sciences, Institute for Fiscal Studies.
- Disney, R., Emmerson, C. and Wakefield, M. (2008), 'Pension provision and retirement saving: lessons from the United Kingdom', *Canadian Public Policy*, vol. 34(s1), pp. 155–76.
- Pensions Commission (2004), *Pensions: Challenges and Choices*, First Report of the Pensions Commission, London: The Stationery Office.
- Shek-wai Hui, T., Vincent, C. and Woolley, F. (2011), 'Understanding gender differences in retirement saving decisions', Social Research and Demonstration Corporation (http://www.srdc.org/uploads/gender_differences_en.pdf).

Appendix 2A

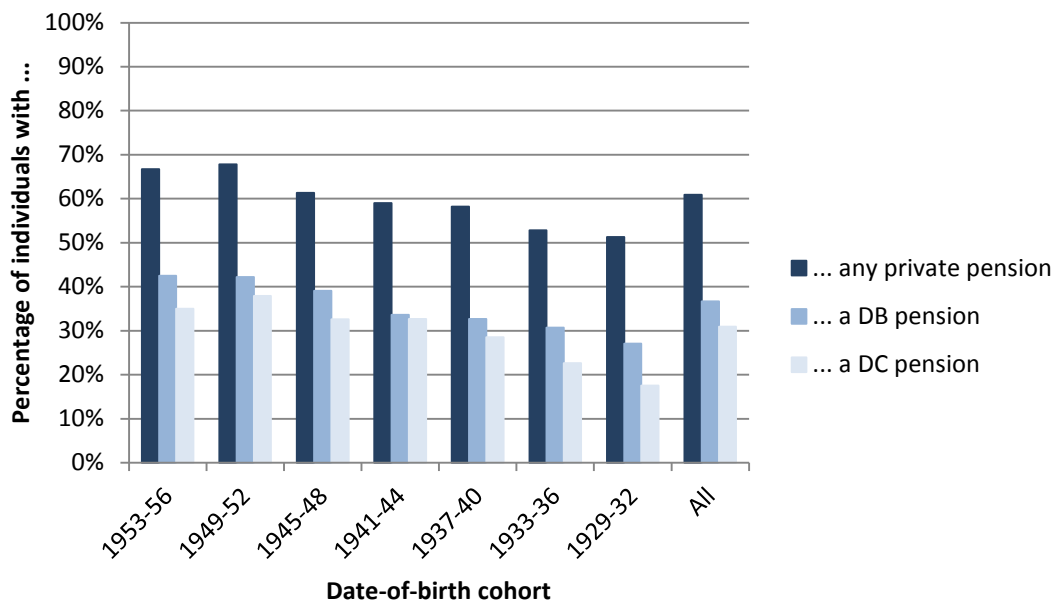
Tables and figures on pension wealth and contribution dynamics

Figure 2A.1. Defined benefit and defined contribution pension coverage, by cohort

A. Men



B. Women



Notes: Pooled ELSA 2006–07 to 2010–11. Sample is 10,946 repeat observations of 4626 men and 13,115 repeat observations of 5442 women. Figures are weighted.

**Table 2A.1. Private pension wealth (across all individuals):
ELSA wave 5 (2010–11)**

	Mean (£000s)	10 th %ile (£000s)	25 th %ile (£000s)	Median (£000s)	75 th %ile (£000s)	90 th %ile (£000s)	<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
Men	150.3	0.0	11.3	64.3	179.0	357.2	4015	4056
52–54	158.1	0.0	22.4	75.1	188.8	432.0	101	101
55–59	224.8	0.0	16.2	96.0	267.2	496.8	786	790
60–64	209.3	0.0	18.7	113.3	243.2	460.5	872	880
65–69	129.6	0.0	15.3	76.2	183.3	318.1	707	713
70–74	97.9	0.0	13.6	56.8	135.1	225.6	650	652
75–79	67.8	0.0	9.5	40.9	95.0	167.5	453	460
80+	39.0	0.0	2.2	21.8	57.5	101.5	446	460
Women	61.7	0.0	0.0	8.8	56.7	156.1	4973	5034
52–54	97.0	0.0	0.0	8.8	47.0	197.4	114	114
55–59	121.5	0.0	0.0	23.4	110.8	290.8	961	963
60–64	69.9	0.0	0.0	20.2	83.3	198.9	1092	1096
65–69	49.5	0.0	0.0	11.2	66.6	141.5	817	821
70–74	37.0	0.0	0.0	7.7	46.7	106.1	734	737
75–79	28.4	0.0	0.0	0.4	27.7	79.5	559	565
80+	13.9	0.0	0.0	0.2	17.3	41.3	696	738
All	103.2	0.0	0.0	27.8	111.9	261.2	8988	9090
52–54	127.1	0.0	0.0	30.9	150.1	392.4	215	215
55–59	172.2	0.0	1.2	49.8	195.0	414.0	1747	1753
60–64	138.0	0.0	0.0	48.8	174.1	343.4	1964	1976
65–69	88.1	0.0	0.0	37.4	119.7	246.1	1524	1534
70–74	65.8	0.0	0.0	27.0	85.1	168.8	1384	1389
75–79	46.2	0.0	0.0	16.4	59.3	124.8	1012	1025
80+	23.7	0.0	0.0	6.8	31.8	67.6	1142	1198

Notes: All values are expressed in January 2011 prices using the retail price index. Sample is all core members of the 2010–11 ELSA sample. Figures are weighted.

**Table 2A.2. Private pension wealth (across individuals with a private pension):
ELSA wave 5 (2010–11)**

	Mean (£000s)	10 th %ile (£000s)	25 th %ile (£000s)	Median (£000s)	75 th %ile (£000s)	90 th %ile (£000s)	Wted N	Unwted N
Men	181.3	12.0	34.9	93.9	213.2	394.2	3381	3400
52–54	184.2	22.1	42.9	102.1	259.4	491.0	85	85
55–59	269.7	17.2	47.5	145.9	311.8	544.2	662	665
60–64	249.2	17.7	53.4	153.6	291.2	509.2	746	753
65–69	156.5	16.0	45.2	105.8	209.9	347.3	596	599
70–74	117.1	12.7	38.9	77.9	151.1	252.0	550	551
75–79	81.5	9.5	25.3	53.3	111.4	187.5	386	388
80+	50.2	5.6	14.5	33.4	68.0	114.9	356	359
Women	99.7	4.3	13.6	40.0	102.3	218.2	3135	3148
52–54	116.0	4.6	13.4	34.2	167.0	392.4	71	71
55–59	174.3	6.2	19.7	65.8	179.2	374.3	688	689
60–64	112.0	8.4	25.0	64.5	145.4	248.4	706	709
65–69	80.8	5.6	17.3	49.5	101.2	188.5	514	514
70–74	63.5	4.5	14.1	38.9	82.3	136.8	442	442
75–79	53.7	3.2	10.0	26.6	61.0	114.7	311	313
80+	25.2	0.4	4.4	14.4	34.3	56.6	403	410
All	144.1	7.1	22.0	64.7	165.1	329.5	6516	6548
52–54	155.5	7.1	22.6	71.4	176.9	432.0	156	156
55–59	225.3	8.8	30.9	97.8	252.8	481.8	1350	1354
60–64	189.4	11.1	33.9	105.5	220.0	416.0	1452	1462
65–69	123.0	8.4	26.2	75.4	167.3	285.8	1110	1113
70–74	93.6	7.9	22.5	56.2	121.2	202.5	992	993
75–79	69.4	6.3	16.6	40.8	89.9	152.5	697	701
80+	37.1	2.0	8.0	22.1	47.5	83.7	759	769

Notes: All values are expressed in January 2011 prices using the retail price index. Sample is core members of the 2010–11 ELSA sample who report that they have a private pension to which they are currently contributing, in which they have retained rights or from which they are receiving an income. Figures are weighted.

Table 2A.3. Percentage working among those with and without accrued rights to a private pension scheme: men

	Age						All (50+)
	50–54*	55–59	60–64	65–69	70–74	75+	
2002–03							
Covered by private pension	88.3	78.7	51.8	17.0	11.6	2.8	47.8
Not receiving	93.1	90.8	78.2	-	-	-	89.6
Receiving	60.7	51.0	33.9	15.0	11.2	2.6	20.1
No private pension	44.7	39.1	28.2	13.7	6.7	3.0	19.9
All	83.5	73.1	48.3	16.5	10.7	3.1	43.0
2004–05							
Covered by private pension	85.6	77.2	53.0	19.2	9.7	2.9	41.9
Not receiving	93.1	90.5	74.5	-	-	-	87.2
Receiving	55.5	46.1	39.2	17.3	9.2	2.9	19.4
No private pension	-	-	-	-	-	-	29.3
All	83.2	73.9	51.2	18.5	9.4	3.1	39.0
2006–07							
Covered by private pension	92.0	79.1	58.5	18.3	10.2	4.2	47.0
Not receiving	95.0	91.6	85.9	-	-	-	91.3
Receiving	71.1	51.1	41.3	17.2	10.2	4.0	21.8
No private pension	-	-	-	-	-	-	52.3
All	86.9	75.7	55.3	17.8	9.6	3.6	43.8
2008–09							
Covered by private pension	89.3	83.4	60.5	23.1	9.6	3.3	48.6
Not receiving	93.6	91.8	86.7	-	-	-	90.6
Receiving	67.8	62.3	44.0	21.2	9.5	3.3	24.3
No private pension	[43.0]	54.6	49.7	[36.1]	[18.1]	-	42.2
All	83.8	78.1	57.1	23.7	9.9	3.1	45.7
2010–11							
Covered by private pension	85.7	81.0	60.9	25.8	11.3	3.6	42.5
Not receiving	92.9	89.2	88.2	-	-	-	88.6
Receiving	-	61.2	47.3	23.2	10.9	3.6	24.4
No private pension	-	-	-	-	-	-	45.6
All	80.5	77.8	57.3	25.9	11.4	4.0	40.6

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Note: Figures are weighted.

Pensions

Table 2A.4. Percentage working among those with and without accrued rights to a private pension scheme: women

	Age						All (50+)
	50–54*	55–59	60–64	65–69	70–74	75+	
2002–03							
Covered by private pension	89.3	73.6	37.2	17.2	5.1	1.8	49.0
Not receiving	92.5	83.6	81.7	-	-	-	87.9
Receiving	41.9	34.4	23.4	14.9	5.1	1.8	14.6
No private pension	48.6	43.0	22.1	10.3	3.7	0.9	16.1
All	75.8	61.1	30.4	13.0	4.1	1.0	30.8
2004–05							
Covered by private pension	87.7	77.0	38.1	15.4	4.6	1.5	42.5
Not receiving	89.1	85.3	86.5	-	-	-	86.3
Receiving	70.3	44.8	23.4	13.1	4.6	1.5	14.8
No private pension	-	[51.3]	[23.0]	-	-	-	28.8
All	73.9	66.5	31.3	12.8	5.1	0.9	27.5
2006–07							
Covered by private pension	90.5	76.9	42.1	14.6	5.6	1.6	44.3
Not receiving	92.5	83.4	87.6	-	-	-	87.1
Receiving	63.0	49.8	25.8	12.9	5.6	1.6	15.2
No private pension	53.2	[63.4]	-	-	-	-	48.7
All	78.0	66.3	35.3	12.3	5.6	1.1	32.1
2008–09							
Covered by private pension	87.3	77.1	43.1	15.9	5.5	1.4	42.9
Not receiving	90.9	85.0	83.0	-	-	-	86.1
Receiving	60.0	46.3	29.9	14.2	5.2	1.4	16.0
No private pension	51.6	42.8	34.4	18.4	4.8	-	33.2
All	74.7	67.5	37.0	14.6	5.3	1.0	31.3
2010–11							
Covered by private pension	89.5	79.0	43.3	17.5	4.5	1.2	36.0
Not receiving	95.4	85.9	85.1	-	-	-	85.8
Receiving	-	53.9	31.4	16.0	4.3	1.2	15.9
No private pension	-	-	[26.4]	-	-	-	29.9
All	76.8	69.5	36.6	15.3	5.7	1.4	28.6

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Note: Figures are weighted.

Table 2A.5. Percentage in self-employment among workers with accrued rights to a private pension scheme, by whether started drawing an income from a private pension scheme: women

Whether receiving private pension income	Age					All (50–74)
	50–54*	55–59	60–64	65–69	70–74	
2002–03						
Not receiving	9.1	6.9	10.2	-	-	8.5
Receiving	-	17.2	21.9	27.8	-	22.0
All	9.1	7.9	15.8	26.0	-	10.6
2004–05						
Not receiving	8.7	10.2	7.7	-	-	9.5
Receiving	-	22.1	20.5	20.3	-	20.6
All	8.5	11.6	13.7	19.5	-	11.8
2006–07						
Not receiving	7.7	10.3	3.4	-	-	8.5
Receiving	-	22.3	22.3	[22.7]	-	22.2
All	7.8	11.8	12.0	21.6	-	11.2
2008–09						
Not receiving	7.6	7.6	6.8	-	-	7.9
Receiving	-	-	18.5	25.7	-	20.8
All	7.5	7.5	12.9	25.0	-	10.8
2010–11						
Not receiving	3.8	3.8	9.3	-	-	8.6
Receiving	-	-	21.2	22.7	-	19.8
All	3.6	3.6	16.1	20.0	-	12.0

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Sample is women with accrued rights to a private pension scheme who are in work. Figures are weighted.

Table 2A.6. Mean hours worked per week among workers with accrued rights to a private pension scheme, by whether started receiving an income from a private pension scheme: women

Whether receiving private pension income	Age					All (50–74)
	50–54*	55–59	60–64	65–69	70–74	
2002–03						
Not receiving	32.1	31.7	28.5	-	-	31.6
Receiving	-	22.3	23.7	19.8	-	22.3
All	32.0	30.9	26.5	19.7	-	30.4
2004–05						
Not receiving	32.3	31.6	28.1	-	-	31.3
Receiving	-	25.6	19.8	19.8	-	21.8
All	31.9	31.0	24.5	19.7	-	29.5
2006–07						
Not receiving	33.4	30.5	29.2	-	-	31.4
Receiving	-	25.7	20.5	[16.9]	-	21.6
All	33.2	30.0	25.8	16.8	-	29.8
2008–09						
Not receiving	33.3	33.3	29.1	-	-	31.6
Receiving	-	-	20.4	16.4	-	21.6
All	32.6	32.6	24.9	17.0	-	29.7
2010–11						
Not receiving	31.5	31.5	29.8	-	-	31.4
Receiving	-	-	22.1	16.3	-	22.8
All	31.5	31.5	25.7	16.6	-	29.0

* In 2004–05 and 2010–11, no refreshment sample was added and so the core sample only contains those aged 52–54.

Notes: Sample is women with accrued rights to a private pension scheme who are in work. Figures are weighted.

Table 2A.7. Comparison of average family net income before and after starting to self-define as ‘retired’, by characteristics

	Mean family net income (£ per week)		Replacement rate	Replacement by private pension income	<i>Unwtd</i> <i>N</i>
	Average pre- retirement	Average post- retirement			
All	579	453	78.2%	28.3%	2154
Men	629	473	75.3%	30.3%	874
Women	546	440	80.6%	26.8%	1280
Low education	451	361	80.1%	22.1%	1033
Mid education	605	479	79.2%	29.5%	726
High education	915	681	74.4%	36.0%	354
<i>Work-limiting health problem (at Y=0)</i>					
No	646	493	76.3%	29.7%	1387
Yes	457	383	83.9%	25.0%	737
<i>Wealth quartile (at Y=0)</i>					
Lowest	374	323	86.4%	17.6%	536
2	475	384	80.8%	27.5%	536
3	619	466	75.4%	30.0%	534
Highest	851	640	75.2%	32.6%	529
<i>Income quartile (at Y=-2)</i>					
Lowest	190	249	131.3%	22.8%	543
2	388	362	93.4%	25.6%	541
3	587	475	80.9%	31.8%	534
Highest	1160	730	63.0%	28.4%	536

Notes: The sample is individuals observed making a ‘sharp transition’ into self-defined retirement (pooling together those observed doing so in 2004–05, 2006–07, 2008–09 and 2010–11). Replacement rate is calculated as mean (average post-retirement income) divided by mean (average pre-retirement income). Income and wealth quartiles are calculated for the specific sample being analysed here. Wealth quartiles are defined based on total family net non-pension wealth. Figures are unweighted.

3. Change in social detachment in older age in England

Stephen Jivraj *University of Manchester*

James Nazroo *University of Manchester*

Matt Barnes *National Centre for Social Research*

Social detachment can be described as disengagement from participation in a range of societal activities. These activities can involve formal participation in organised groups, visits to communal leisure facilities, and informal contact with family and friends. As such, social detachment can be considered a multidimensional construct. Markers of social detachment have been collected at each wave of ELSA, with small changes in coverage from wave to wave. This provides an opportunity to examine, within the older population, both the dynamics and the drivers of social detachment.

The ELSA data allow us to consider four broad domains of social detachment: civic participation, leisure activities, cultural engagement and social networks. This chapter provides both cross-sectional and longitudinal analyses of these domains of social detachment and an overall composite measure for waves 1 to 5. Cross-sectional analysis is conducted to show the correlates of social detachment and longitudinal analysis is conducted to show what drives movement into social detachment as the ELSA sample ages.

The cross-sectional analysis in this chapter shows that:

- The prevalence of social detachment was stable in the population aged 52 and above during the period 2002–03 to 2010–11.
- In 2010–11, almost one-in-five older adults were detached from three or more domains of social detachment.
- Almost half were detached from civic participation and leisure activities.
- However, only one-in-twenty older adults were detached from social networks.
- In 2010–11, women were more likely to be detached from leisure activities than men, but less likely to be detached from civic participation, cultural engagement and social networks.
- Individuals aged 80 and over were more likely to be detached from leisure activities and cultural engagement than those aged 50–79.
- Older adults who are single, separated or divorced, or widowed were more likely to be detached from three or more domains than those in a couple.
- Poorer, unhealthier and lowly-educated older adults were more likely to be detached from civic participation, leisure activities and cultural engagement than wealthier, healthier and better-educated older adults.

- Access to private or public transport is associated with social detachment. Older adults with limited access to transport were more likely to be detached from civic participation, leisure activities and cultural engagement.

The longitudinal analysis in this chapter shows that:

- Although overall levels of social detachment generally remained constant over time, many older people moved into and out of social detachment during the period 2002–03 to 2010–11.
- There was large variation in individual-level change in social detachment by domain during 2002–03 to 2010–11.
- The social networks domain was the most stable, with the vast majority of older adults remaining never detached.
- In contrast, two-in-five older adults moved into or out of detachment in the civic participation and leisure activities domains.
- More than half of those who moved into or out of detachment in each domain changed their status more than once (i.e. moved into detachment and then out of detachment or vice versa).
- Individuals aged 60 and over were more likely to remain never detached from civic participation than those aged 50–59.
- In contrast, younger individuals were more likely to remain never detached from cultural engagement than older individuals.
- Women were more likely to remain never detached from social networks than men, particularly at younger ages.
- A higher proportion of women were always detached from leisure activities than of men.
- Wealth is the most consistent driver of movement into social detachment across domains. Poorer older adults are more likely to move into social detachment than those who are richer, with the exception of the social networks domain.
- Better-educated, healthier and widowed individuals are less likely to move into social detachment in the leisure activities and cultural engagement domains as well as the overall composite measure.
- Becoming separated or divorced from a partner, developing a limiting long-standing illness or no longer having access to transport makes it more likely for an individual to become detached from three or more domains of social detachment.

3.1 Introduction

Social engagement is considered as an important element contributing towards successful ageing. There is compelling evidence that involvement with societal activities has positive outcomes for people in older age. Studies have found that engagement with societal activities is associated with lower

Social detachment

mortality, better physical health, fewer depressive symptoms, higher cognitive function and improved subjective well-being (Hawkins, Foose and Binkley, 2004; Niti et al., 2008; Chiao, Weng and Botticello, 2011; Jang and Chiriboga, 2011; Thomas, 2011a). There is also evidence to suggest that detachment from societal activity has negative consequences on life outcomes. Social detachment has been shown to be associated with higher rates of morbidity and mortality, depression and cognitive decline (Agahi and Parker, 2008; Thomas, 2012).

The causal processes through which these effects operate are not entirely clear and it is not clear whether reverse causality of an effect of health on social detachment is more important. However, social integration theory suggests that social attachments shape resources, provide a sense of purpose, and increase motivation and social pressures to take care of one's own health and well-being (Thomas, 2011b). Thomas (2011b) suggests, for example, that social integration may enhance the flow of information and encourage more effective utilisation of health services. Social attachment may also act as a safeguard against stressful life events as well as influence health through physiological pathways. Social activity theory indicates that well-being in older adults is promoted by participation in social and leisure activities and that these activities help with the transition from work to retirement (Adams, Leibbrandt and Moon, 2010). Regardless of the health and well-being benefits of remaining socially active in later life, it is important to ensure that the ability to participate in societal activities is open to all individuals.

The detachment from societal activities of older people has attracted considerable attention from policymakers. This is in part due to the beliefs that older people are more susceptible to detachment and that the consequences on their health are likely to be more severe. Policies to alleviate the effects of social detachment have been outlined in the *Healthy Lives, Healthy People* White Paper (HM Government, 2010). It states that local government and central government 'will work in partnership with businesses, voluntary groups and older people in creating opportunities to become active, remain socially connected, and play an active part in communities – avoiding social isolation and loneliness' (para. 3.67). The Department for Work and Pensions has provided one-off 'Active at 60' grants to voluntary and community groups to establish Community Agents in their area. The £1 million initiative involved volunteers working with people typically in their 60s to help them take the first step in trying something new, understand how they will benefit from being more active, and build social contacts to help being active become part of their routine.

To identify groups 'at risk' of social detachment, it is important to recognise what drives withdrawal from societal activity. Activity theory suggests that in response to stressful life events, such as widowhood or disability, older adults may increase their social participation to preserve their self-identity and compensate for a loss of other social roles (Utz et al., 2002). Activity theory can therefore be used to hypothesise that changes in marital, health and employment status may lead to increased social involvement. Nonetheless, there is little empirical support to suggest that activity either increases or decreases after stressful life events, including widowhood. There is, however, support for continuity theory, which suggests that as individuals progress from

‘middle’ to ‘old’ age they will not change their involvement in activities but become more of what they have always been, even in the face of stressful life events (Agahi, Ahacic and Parker, 2006; Donnelly and Hinterlong, 2010).

This chapter is structured as follows. Section 3.2 outlines the analytical approach used, including how our measure of social detachment is constructed. Section 3.3 describes how the prevalence of each domain of social detachment in the older population has changed across each cross-sectional ELSA survey wave during 2002–03 to 2010–11. Section 3.4 shows how social detachment varies by characteristics such as age, sex, marital status, employment status, wealth, self-reported health, limiting long-standing illness and access to transport in the population aged 52 and over in 2010–11. Section 3.5 compares individual dynamics to show the level of movement into and out of social detachment and how these trajectories differ by age and sex. Section 3.6 presents results of multivariate analysis of change in social detachment between 2002–03 and 2010–11, which aims to identify the factors that contribute independently to movement into social detachment. These include transitions in marital status, employment, health and access to transport, to see whether longitudinal change in individual characteristics drives movement into social detachment. Section 3.7 provides conclusions.

3.2 Methods

3.2.1 Sample

Two different samples from ELSA are used in the analysis. The core sample members aged 52 and over from each cohort in ELSA that responded to waves 1 to 5 are used for cross-sectional analysis in Sections 3.3 and 3.4. The core sample members that responded to each of the five waves during 2002–03 to 2010–11 are used for longitudinal analysis in Sections 3.5 and 3.6. This includes people aged 50 and over in 2002–03. A weighting factor is used to correct for non-response in all of the analysis.

3.2.2 Measures of social detachment

It is uncertain which types of societal involvement contribute most towards positive health and well-being outcomes. For example, Wang, Xu and Pei (2012) report, in a systematic review of observational and intervention studies, that mental and physical leisure activities may protect against cognitive decline and dementia. The evidence for other leisure activities (e.g. social networks) is inconclusive. Adams, Leibbrandt and Moon’s (2010) review, however, finds most support for the impact of informal social activities, such as visiting friends, on well-being outcomes in older age. Jenkins (2011) has used ELSA data from waves 1–3 to show that, when controlling for other factors, participation in music, arts and evening classes are significantly associated with changes in subjective well-being, but participation in formal education classes or gym membership are not. Nazroo and Matthews (2012) have found that volunteering has positive effects on well-being outcomes including quality of life, life satisfaction and depressive symptoms. They used data from ELSA waves 2–4 for those above State Pension Age.

Social detachment

It is therefore important to unpack the multidimensional construct of social detachment. We constructed four domains of social detachment that build on the measures developed by Tomaszewski and Barnes (2008). The domains are civic participation, leisure activities, cultural engagement and social networks. The thresholds of detachment for each domain are intended to separate those respondents who are detached from social activity, rather than to indicate the degree to which they are engaged or disengaged. The domains exclude indicators that are common to all people (e.g. eating out) to avoid identifying only those in extreme forms of social detachment. They also exclude indicators that measure sedentary activities that do not involve travelling outside the home (e.g. watching TV) or involve a very limited form of irregular engagement (e.g. voting). The indicators that comprise each domain are described below.

Civic participation

- We define individuals as detached from civic participation if they are not a member of: a political party, trade union or environmental group; a tenants' or neighbourhood group or neighbourhood watch; a church or religious group; or a charitable association; and did not do voluntary work at least once in the last year.

Leisure activities

- We define individuals as detached from leisure activities if they are not a member of: an education, arts or music group or evening class; a social club; a sports club, gym or exercise class; or other organisation, club or society.

Cultural engagement

- We define individuals as detached from cultural engagement if they did not go to a cinema, an art gallery or museum, or a theatre, concert or opera performance at least once in the last year.

Social networks

- We define individuals as detached from social networks if they do not have any friends, children or other immediate family or if they have friends, children or other immediate family but have contact with all of them (meeting, phoning or writing) less than once a week.

Composite measure

- We define those individuals who are detached from three or more domains as socially detached on an overall composite measure of social detachment.

3.2.3 Classificatory measures

The classificatory measures are grouped into socio-demographic, socio-economic, health and disability, and access to amenities. The socio-demographic measures used are age, sex and marital status. Employment status, education and wealth are used as indicators of socio-economic status. The health and disability measures used are self-reported health, limiting long-standing illness (LLSI) and limitations in activities of daily living and

instrumental activities of daily living. Access to amenities is measured by the rurality of an area of residence and by access to transport.

Socio-demographic

- Age is grouped into four categories: 50–59, 60–69, 70–79, and 80 and over.
- Marital status is categorised into four categories according to an individual's current and previous relationships: single (i.e. not cohabiting and never been married or in a civil partnership); married, in a civil partnership or cohabiting; separated or divorced and single (i.e. not cohabiting); and widowed and single (i.e. not cohabiting).

Socio-economic

- Employment status, at the time interviewed, is grouped into four categories: employed full-time (i.e. usually work for 35 hours or more per week); employed part-time (i.e. usually work for less than 35 hours per week); retired; and other inactive (i.e. unemployed, permanently sick or disabled, or looking after family).
- Education is measured using the age an individual first left full-time education. Individuals are grouped into three categories: those who left at or before the compulsory school-leaving age that applied in the UK to their cohort (referred to as 'low' education); those leaving school after compulsory school-leaving age but before age 19 (referred to as 'mid' education); and those leaving at or after age 19 (referred to as 'high' education).
- Wealth is measured as family unit non-pension wealth. This includes all financial assets, property, other physical assets and assets of any businesses owned by the individual and their partner (where applicable). The measure is net of debt, including mortgages. Individuals are grouped by the family unit into quintiles 1 to 5 from lowest wealth to highest wealth.

Health and disability

- Self-reported health is measured by a question that asks individuals how their health is on a five-point scale: excellent, very good, good, fair or poor. This question was not asked in this form in wave 3 and therefore is not included in the longitudinal analysis. Whether an individual has a limiting long-standing illness is determined by whether a long-standing illness is reported and whether the illness they have is likely to affect them over a period of time such that it limits activities in some way.
- Disability is measured using the number of limitations in activities of daily living (ADLs) and instrumental activities of daily living (IADLs) reported by the respondent. The ADLs comprise having problems because of health or memory in dressing, walking, bathing, eating, getting out of bed, and using the toilet. The IADLs comprise preparing a hot meal, shopping for groceries, making telephone calls, taking medication, doing work around the house and managing money. Individuals are grouped in three disability

Social detachment

categories: no limitations in ADLs or IADLs; one or two limitations in ADLs or IADLs; and three or more limitations in ADLs or IADLs.

Access to amenities

- The rurality of an area of residence is measured using a rural–urban definition of land use and population density produced by a number of governmental agencies, including the Department for Environment, Food and Rural Affairs (Bibby and Shepherd, 2004). The rural–urban definition is applied to the Census Output Area that each individual lives in. The definition has three categories: urban, town and village.
- Access to transport is measured by use of a car (as a driver or passenger) and use of public transport. A lack of access to public transport is measured by those who state they never use public transport or use it once a month or less because of an access restriction including lack of availability, high cost and health conditions. The most common reason for not using public transport more often is that an individual feels they do not need to. Older adults who cite this as a reason are not considered as lacking access to transport even if they do not have access to a car, because of the likely dependence on social detachment. For example, older adults who are socially detached are likely to say they do not need to use public transport because they have nowhere to go.

3.2.4 Analysis

There are two types of analysis presented in this chapter. First, cross-sectional analysis compares social detachment in the sample aged 52 and over that responded to waves 1–5. The aim is to assess whether there has been population change in levels of social detachment and the relationship between social detachment and socio-demographic, socio-economic, health and access to amenities characteristics during 2002–03 to 2010–11.

Second, longitudinal analysis of social detachment is conducted for those sample members aged 50 and over in wave 1 who have responded to each wave of ELSA. The aim is to examine the individual change in social detachment and how movement into detachment is related to key drivers, including changes in marital, employment and health statuses. Logistic regression models are used to examine these effects whilst controlling for constant socio-demographic, socio-economic, health and access to amenities characteristics.

3.3 Population change in social detachment during 2002–03 to 2010–11

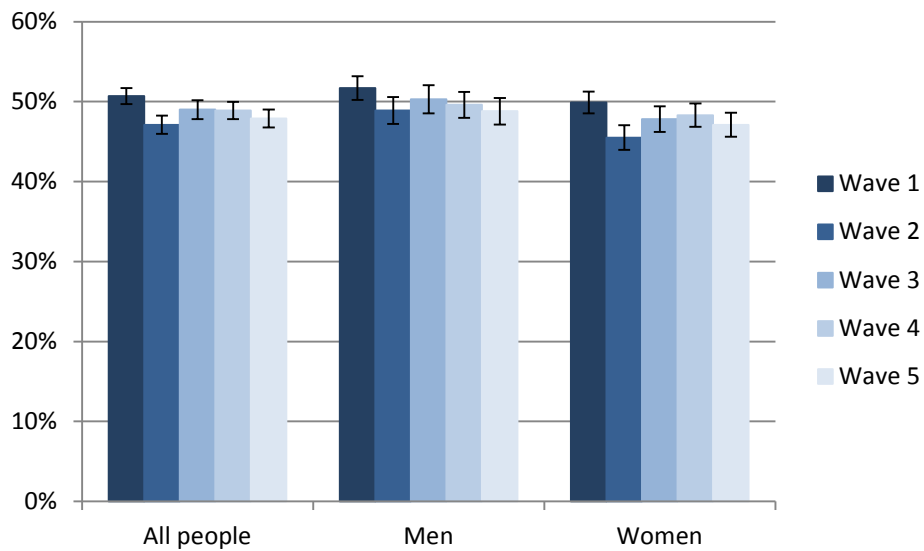
Social detachment and age and sex

The prevalence of social detachment across waves 1–5 for each domain and the overall composite measure are shown by sex in Figure 3.1 and by age and sex in Tables 3A.1–3A.5. The proportion of older adults detached in each domain was fairly stable at each wave between 2002–03 and 2010–11.

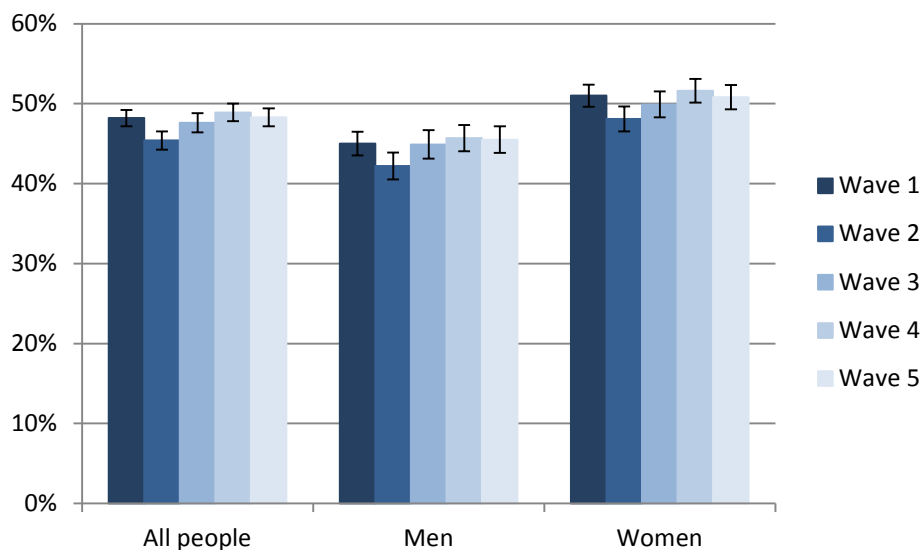
In 2010–11, almost half of respondents (48%) were detached on the civic participation domain. This is a small but significant decline compared with 2002–03, when 51% of respondents were detached from civic participation. Across each wave, a slightly lower proportion of women were detached from civic participation than men. The prevalence was fairly constant across each wave for men aged 52–79 and women aged 52–59. There was a decline in the level of detachment after wave 1 and then an increase after wave 2 for men aged 80 and over and for women aged 60 and above.

Figure 3.1. Prevalence of social detachment in each domain by sex, 2002–03 to 2010–11, with 95% confidence intervals

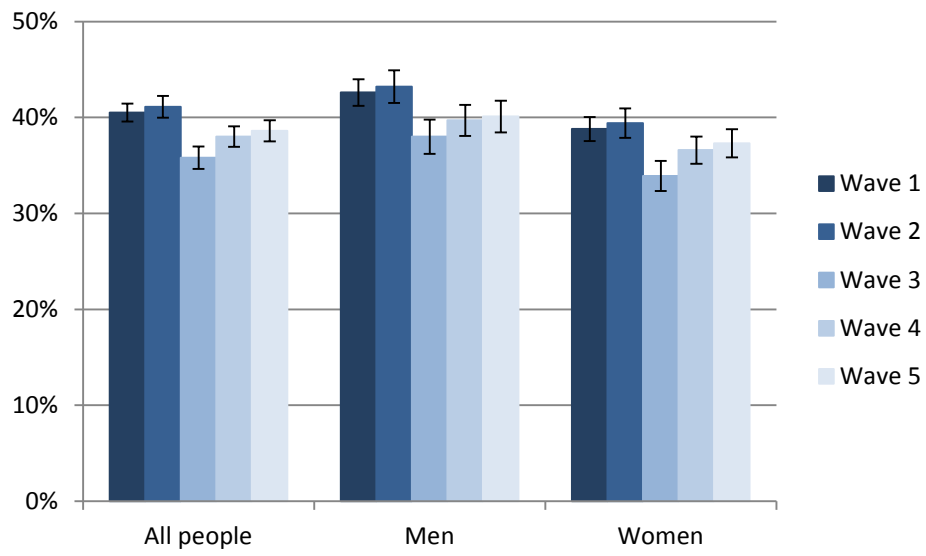
a) Civic participation



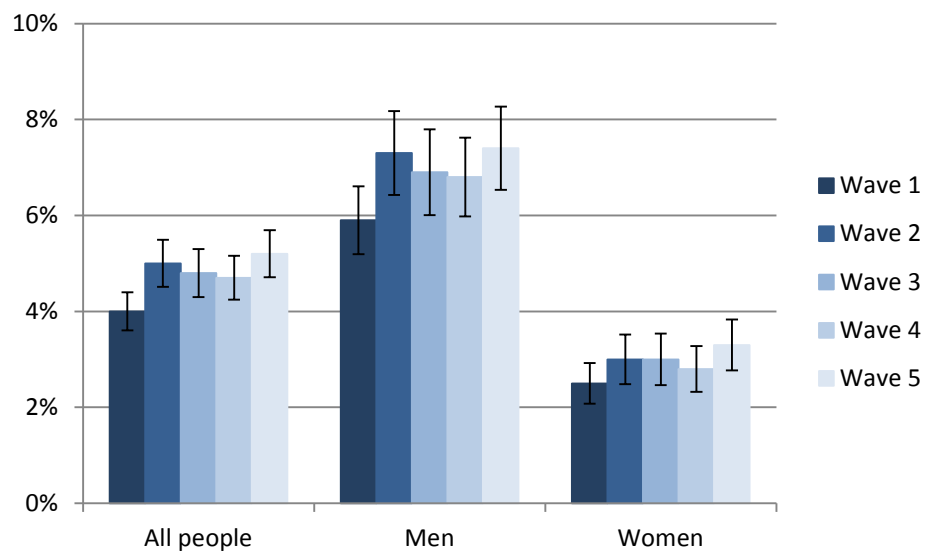
b) Leisure activities



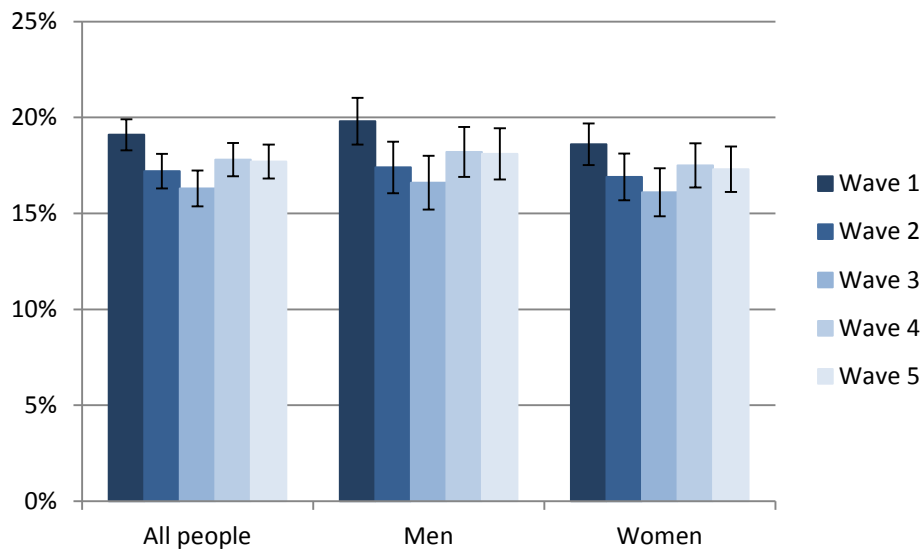
c) Cultural engagement



d) Social networks



e) Overall social detachment



There was a similar level of detachment from leisure activities during 2002–03 to 2010–11 as from civic participation. In 2010–11, 48% of individuals were detached from leisure activities. In contrast to civic participation, women (51%) were significantly more likely to be detached from leisure activities than men (46%). The proportion of men and women detached from leisure activities declined after wave 1 and increased thereafter. The decline between waves 1 and 2 was greatest in men and women aged 70 and above.

The proportion of men and women detached from cultural engagement declined rapidly between waves 2 and 3 and increased thereafter. This was consistent for both men and women. By 2010–11, 40% of men compared with 37% of women were detached from cultural engagement. The change over time in cultural engagement detachment varied by age in men and women. For example, there was a sharp decline in cultural engagement detachment in men aged 80 and over during 2002–03 to 2010–11, whereas men aged 70–79 increased such detachment sharply after wave 3. Men and women aged 52–59 slightly increased their detachment from cultural engagement during waves 1–5.

The proportion of individuals detached from social networks was considerably lower than any other social detachment domain across each wave. In 2010–11, one-in-twenty individuals were detached from social networks. The prevalence for men (7%) was double that for women (3%). While older men (aged 80 and over) were more socially isolated than younger men (aged 52–79) in wave 1, they were less socially isolated than younger men by wave 3. The percentage of men aged 80 and over detached from social networks declined from 9% in wave 1 to 5% in wave 5. There was a slight increase in the proportion of younger men and women detached from social networks during 2002–03 to 2010–11.

In 2010–11, more than one-in-six men and women were detached on the composite measure of social detachment (i.e. detached from three or more domains of social detachment). The prevalence of overall social detachment remained fairly stable between 2002–03 and 2010–11 for men and women in each age group. The only exception is men aged 80 and over, for whom the

proportion detached declined sharply between waves 1 and 2 and remained stable thereafter. This could be a result of selective attrition that is not corrected by the weighting after wave 1.

3.4 Social detachment in 2010–11 by classificatory measures

3.4.1 Social detachment and marital status

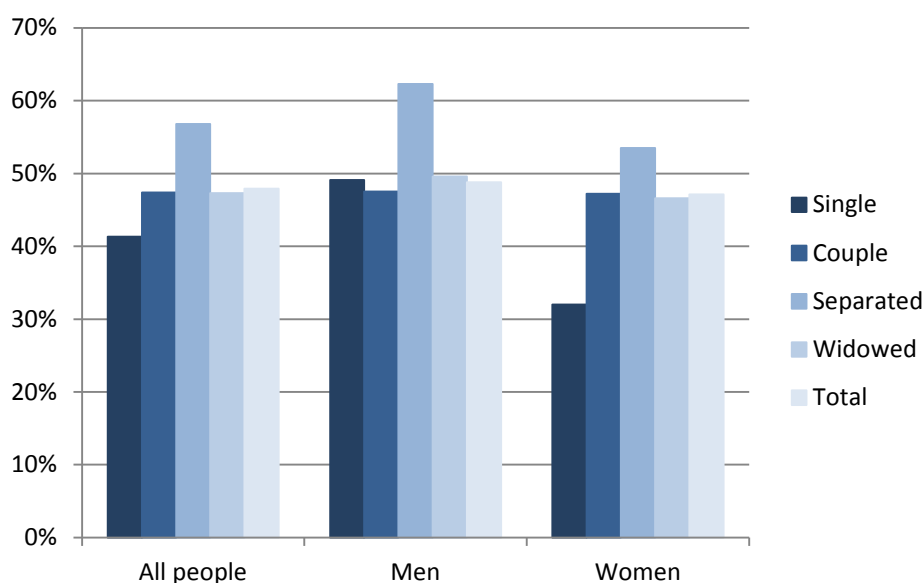
Figure 3.2 and Table 3A.6 show that individuals who are separated or divorced have the highest prevalence of civic participation detachment. Detachment among the separated or divorced group is greater for men (62%) than for women (54%). Single women have a much lower level of detachment from civic participation than those in a couple, separated or divorced, or widowed.

Separated and divorced men and women also have the highest prevalence of leisure activities detachment among the marital status groups, with 58% and 57% detached from leisure activities respectively. Men and women in a couple are the least likely to be detached on this domain. The level of detachment is slightly higher for women than men in a couple. Single men and women are equally likely to be detached from leisure activities.

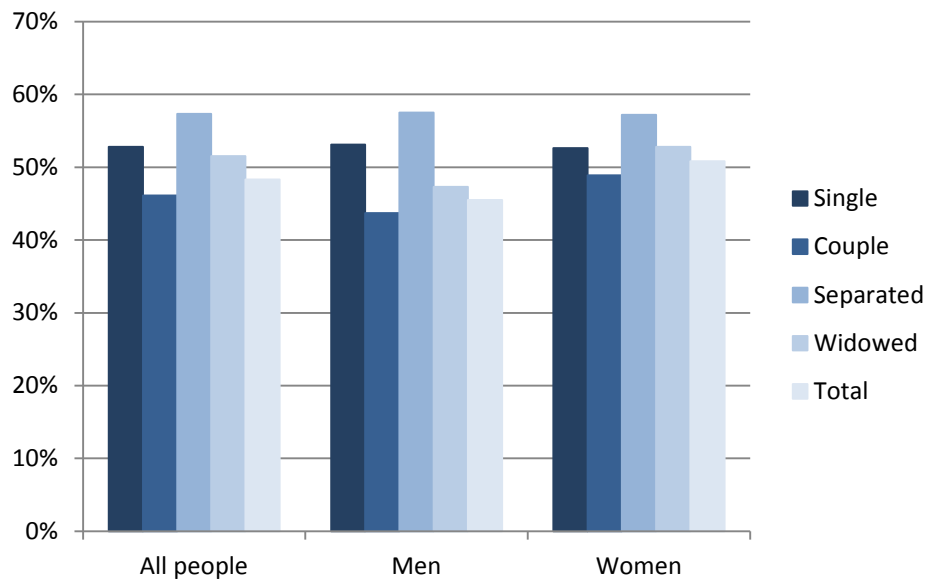
The largest absolute differences in detachment prevalence by marital status are for the cultural engagement domain. Men and women in a couple are much less likely to be detached from cultural engagement than other marital status groups. More than half of single, divorced or separated, or widowed men are detached from cultural engagement, compared with 37% of those in a couple. There are similar differences for women.

Figure 3.2. Prevalence of social detachment in each domain by marital status and sex, 2010–11

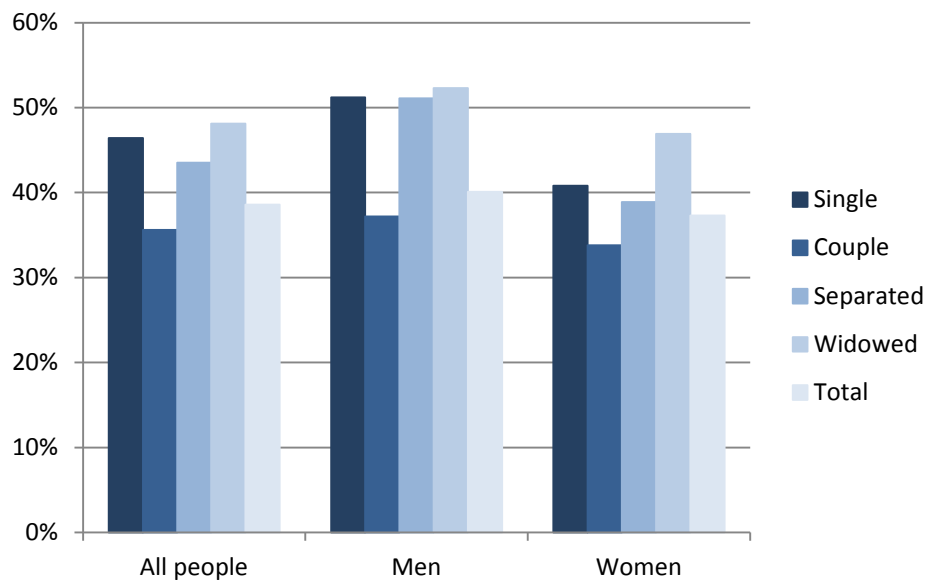
a) Civic participation



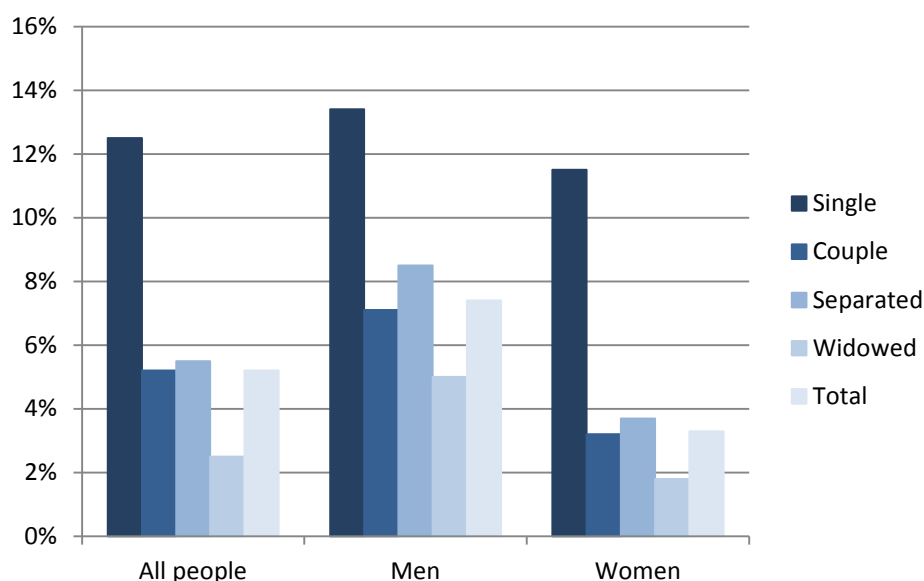
b) Leisure activities



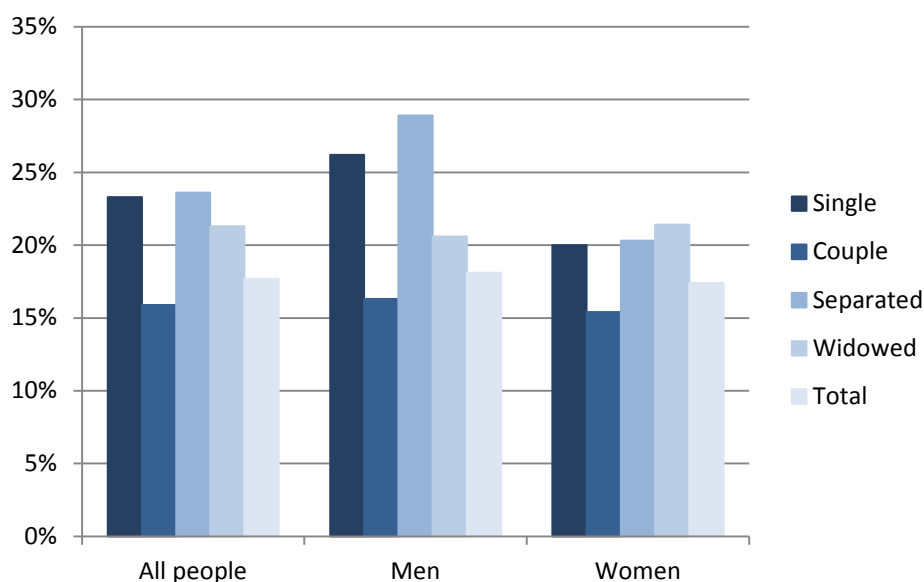
c) Cultural engagement



d) Social networks



e) Overall social detachment



There is a clear distinction of social networks detachment by marital status. Single individuals are more than twice as likely to be detached on this domain as any other marital status group. Among single people, 13% of the men and 12% of the women are detached from social networks. Widowed individuals are the least likely to be detached from social networks. The proportion for widowed men is 5% and that for women is less than 2%.

The results above indicate that participation in leisure and cultural activities might be easier for those in a couple. Civic participation, on the other hand, does not appear to be as dependent on the availability of a partner. Engagement with social networks is more likely for those with a partner or who previously had a partner. These individuals are more likely to have had children with whom they can make social contact, as well as friends and other family. The social detachment composite measure shows that couples are much less likely to be withdrawn from multiple domains of social detachment

than any other marital status group. Social detachment from three or more domains is more common for men than women when single, separated or divorced.

3.4.2 Social detachment and wealth

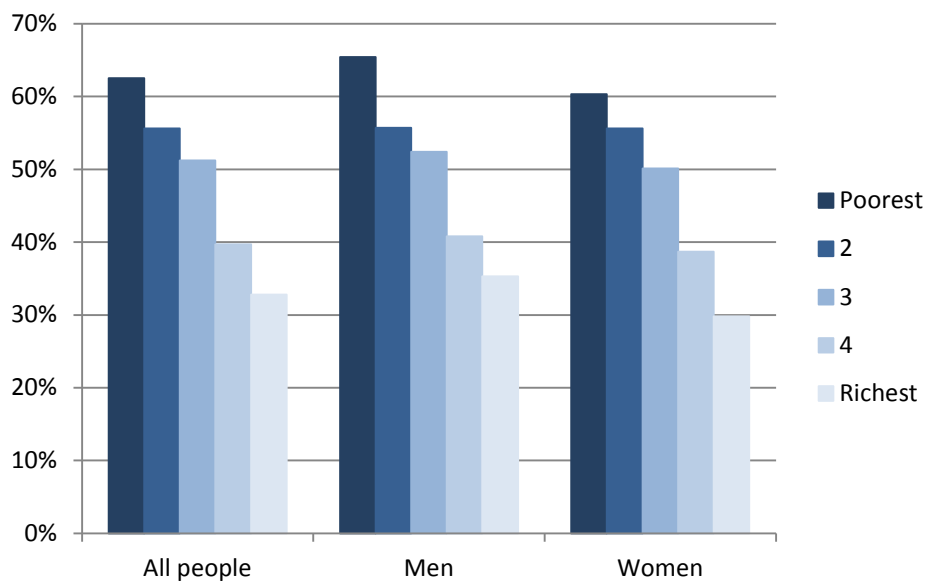
There is a distinct negative relationship between wealth and social detachment. Figure 3.3 and Table 3A.7 show that those in the poorer wealth quintiles have a higher prevalence of social detachment than those in richer wealth quintiles across each domain, except social networks. More than three-fifths of men and women in the poorest wealth quintile are detached from civic participation, compared with less than two-fifths in the richest wealth quintile. The difference is even greater across wealth quintiles for both the leisure activities and cultural engagement domains. This may partly reflect the monetary cost of participation in these types of activities and illustrate that wealth acts as an indicator of social class differences in tastes.

In contrast, there is little variation in the prevalence of social networks detachment by wealth. Less than one-in-ten men and less than one-in-twenty women are detached from social networks. Still, men in the poorest wealth quintile have slightly higher detachment on this domain. This suggests that maintaining social contacts with children, family and friends is not, or is only weakly, related to household wealth.

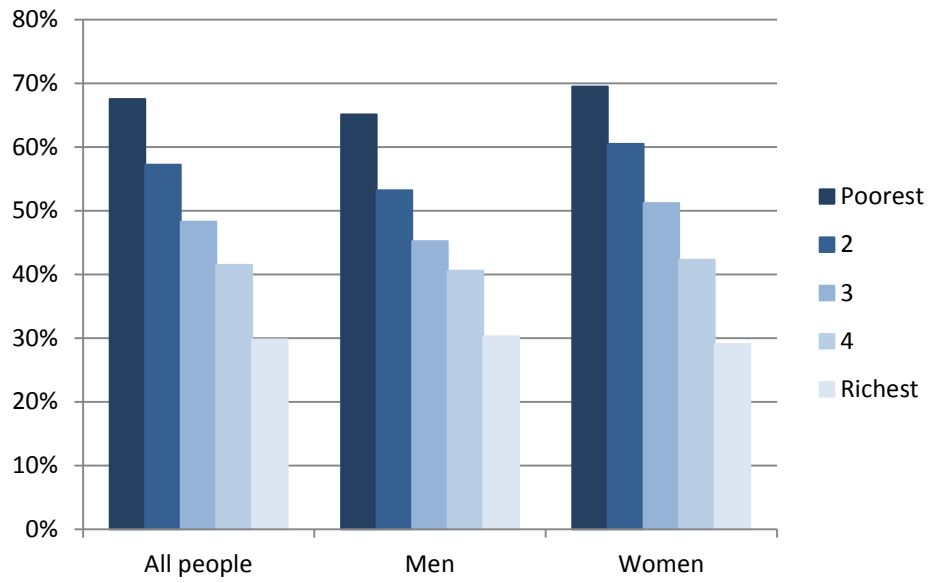
The overall social detachment measure has a wealth gradient reflecting the relationship between social detachment and wealth in the civic participation, leisure activities and cultural engagement domains. More than one-in-three men and women in the poorest wealth quintile are detached from three or more domains, compared with around one-in-twenty in the richest wealth quintile.

Figure 3.3. Prevalence of social detachment in each domain by wealth quintile and sex, 2010–11

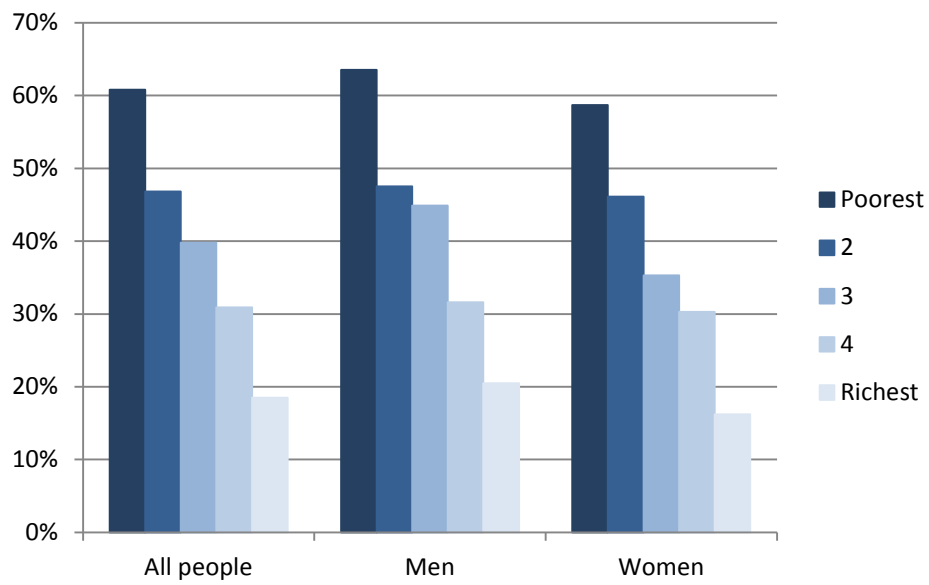
a) Civic participation



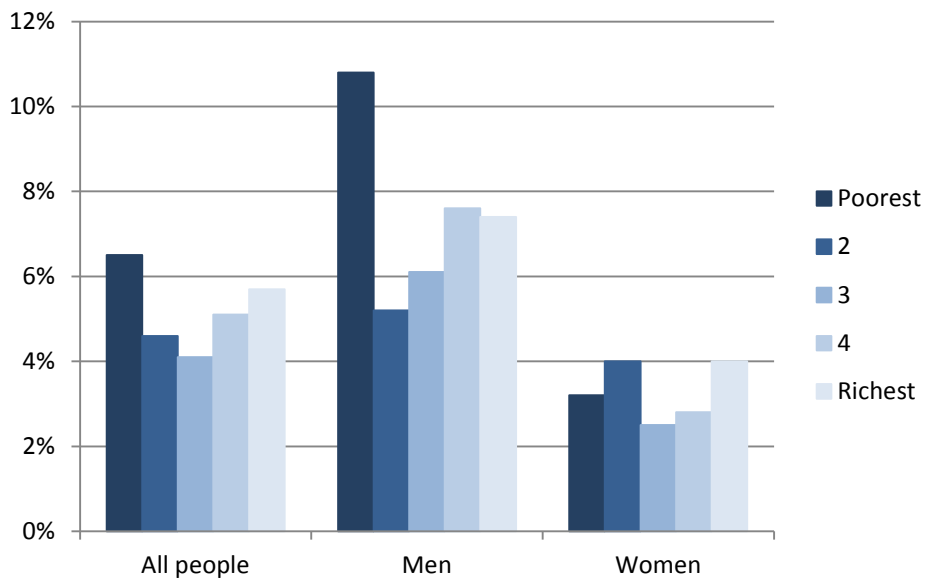
b) Leisure activities



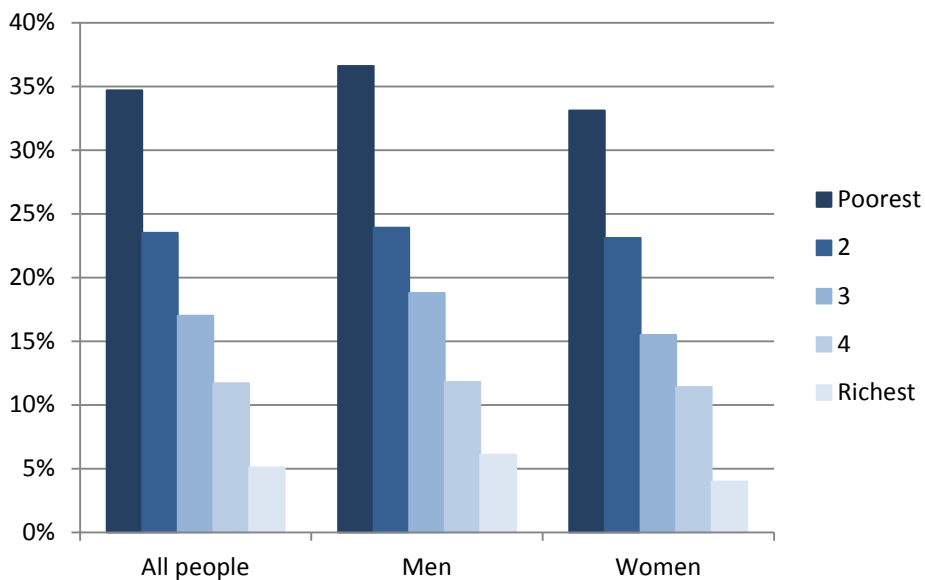
c) Cultural engagement



d) Social networks



e) Overall social detachment



Tables 3A.8 and 3A.9 show the proportion of men and women detached in each domain by education and economic activity, respectively. The association between education and social detachment is very similar to the relationship with wealth. There are nuances in the relationship between economic activity and social detachment. For men and women, those employed, particularly in full-time work, are much less likely to be detached from cultural engagement than those economically inactive. Men and women who are not retired but inactive (i.e. unemployed, sick or looking after family) are much more likely to be detached from each domain of social activity, except social networks, than those employed or retired.

3.4.3 Social detachment and health status

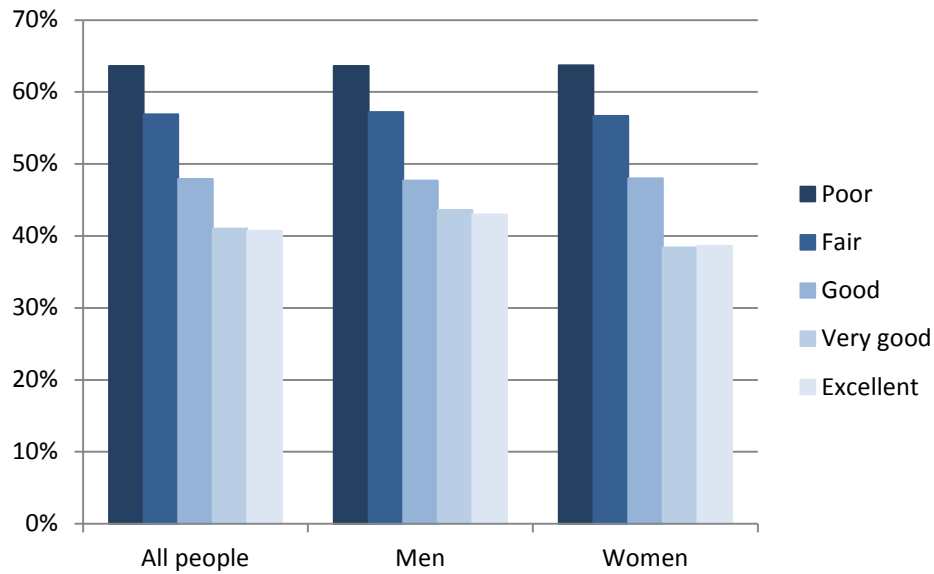
Figure 3.4 and Table 3A.10 show that there is a health gradient to the prevalence of social detachment in each domain, with the exception of social

Social detachment

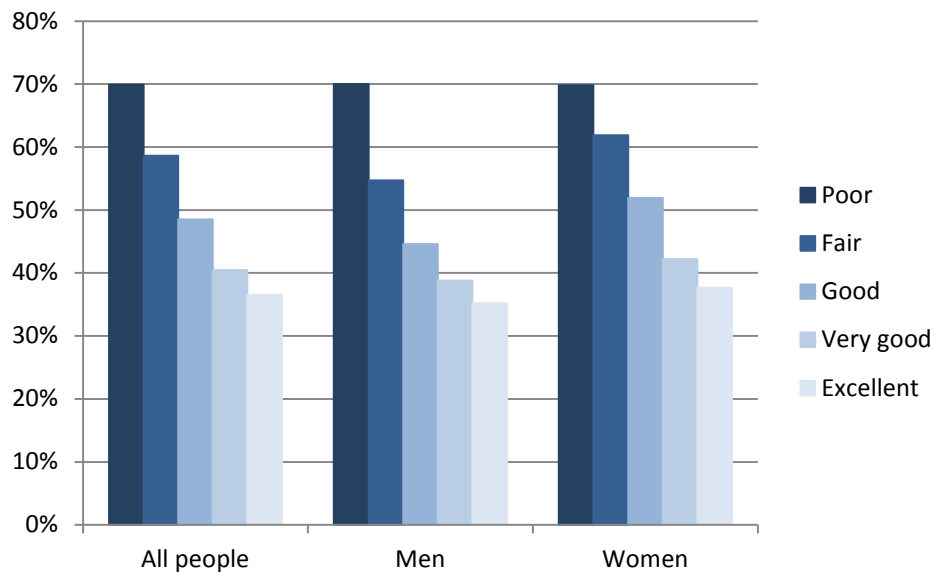
networks. Individuals who report poorer health are more likely to be socially detached. The relationship is strongest for the cultural engagement and leisure activities domains. Those with excellent health are almost three times less likely to be detached on the cultural engagement domain than those with poor health in 2010–11. The differences by health are greater for women than for men.

Figure 3.4. Prevalence of social detachment in each domain by health and sex, 2010–11

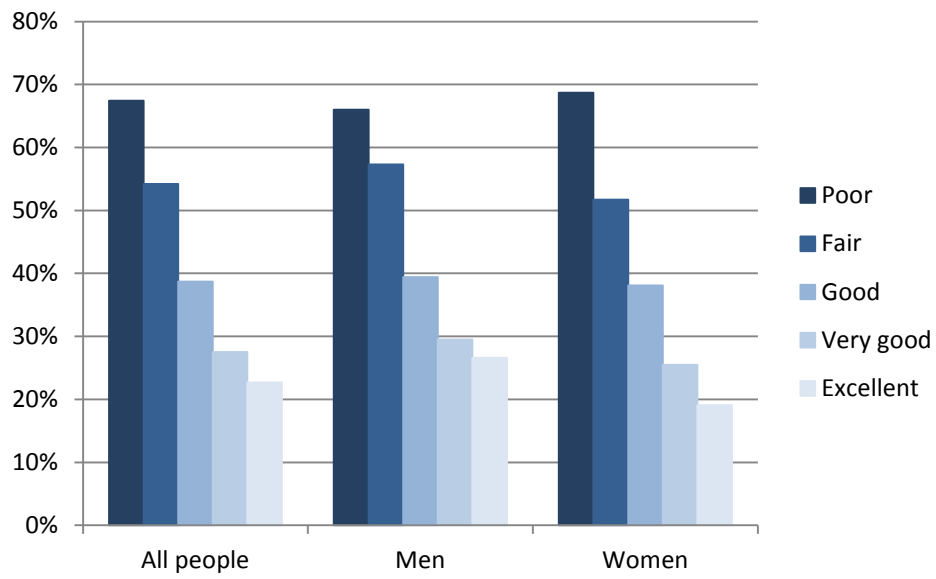
a) Civic participation



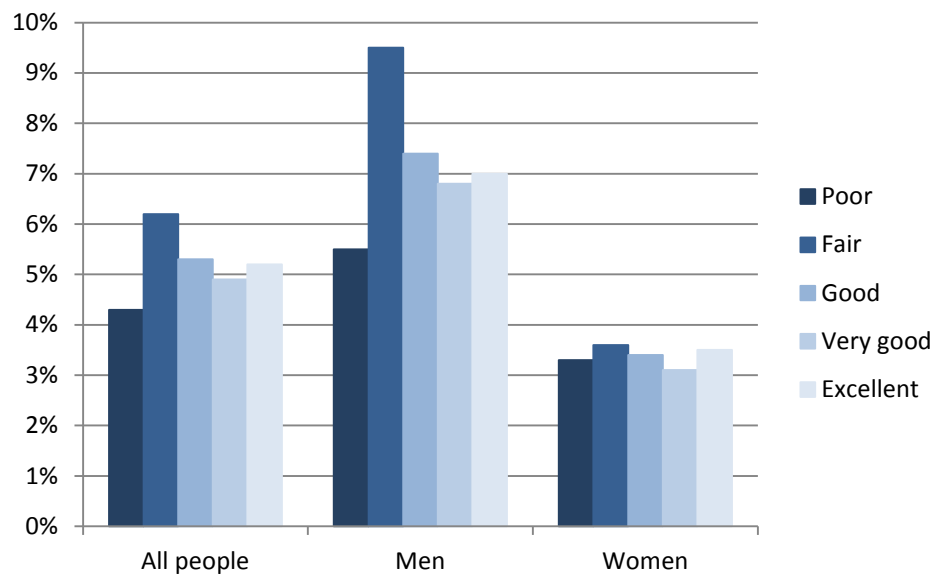
b) Leisure activities



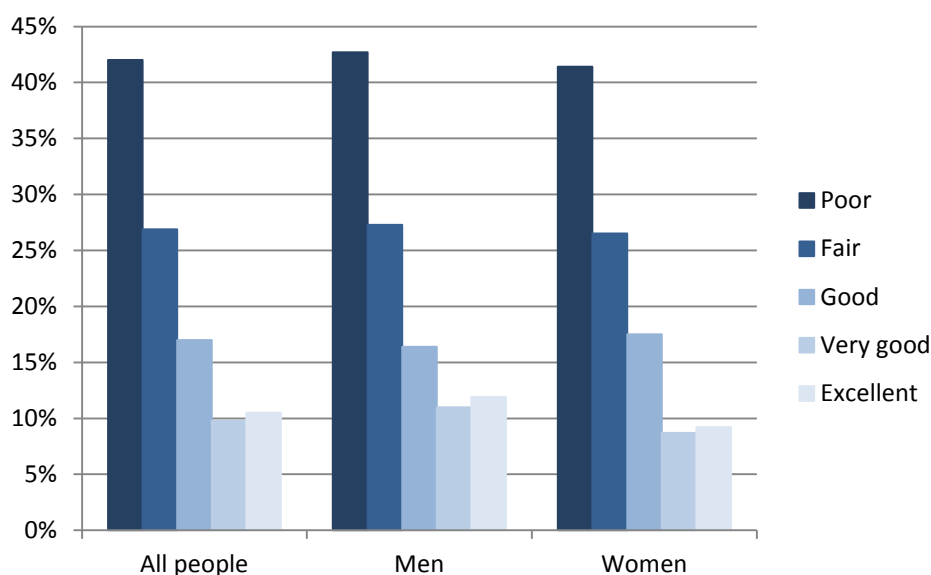
c) Cultural engagement



d) Social networks



e) Overall social detachment



For the social networks domain, there is very little difference in the level of detachment between self-rated health groups for men and, in particular, women. The difference by health status on the overall social detachment measure reflects the other social detachment domains. Those in excellent or very good health are four times less likely to be socially detached than those in poor health. This suggests that those in a better state of health are more likely to engage with at least two domains of societal activity.

Tables 3A.11 and 3A.12 show the prevalence of social detachment in each domain by sex and limiting long-standing illness and by sex and limitations in ADLs respectively. The relationship between having a limiting long-standing illness or limitations in ADLs and social detachment is very similar to the relationship with self-rated health. Men and women with a limiting long-standing illness or more limitations in ADLs are more likely to be detached from each domain, particularly cultural engagement.

3.4.4 Social detachment and rurality

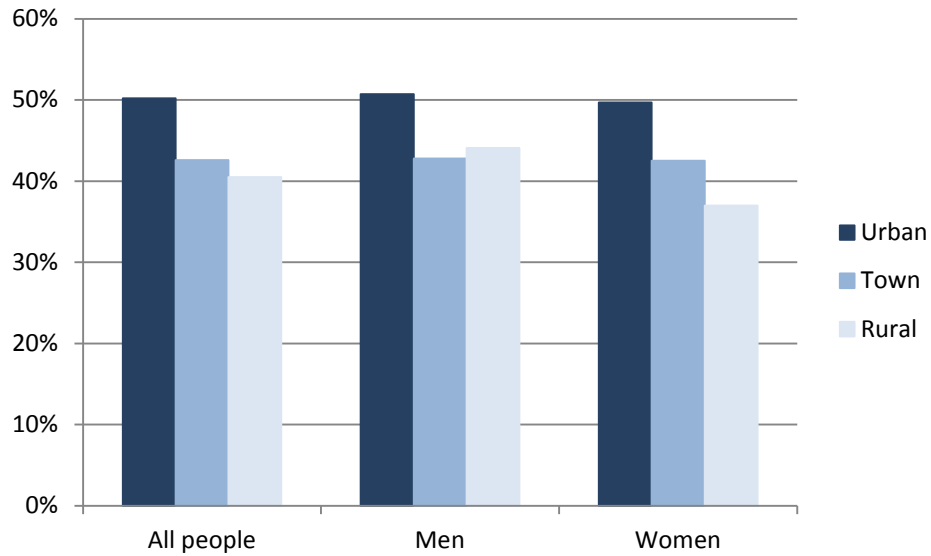
Figure 3.5 and Table 3A.13 show there is a marginal difference in civic participation detachment for individuals who live in urban, town and rural areas. Half of those in urban areas are detached from civic participation compared with 43% in towns and 41% in rural areas. The prevalence of detachment from civic participation is similar for men and women in urban and town areas. However, more men (44%) than women (37%) are detached in rural areas. The relationships between leisure activities and cultural engagement detachment and rurality are similar to that for civic participation detachment.

For the social networks domain, men in rural areas are slightly more likely (at 9%) to be detached than those in urban and town areas (7% and 6% respectively). Women are equally likely to be detached across urban, town and rural areas, with 3% detached from social networks. Multiple social detachments of three or more domains are greatest in urban areas for men and women, with almost one-in-five detached. Moreover, men in rural areas are

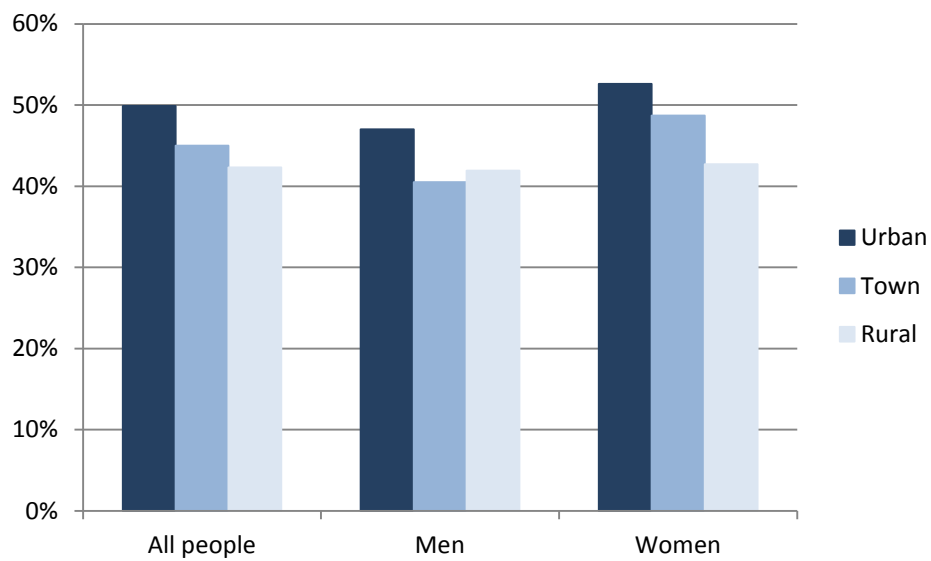
slightly more likely to be detached on the composite measure than those in town areas. The reverse is true for women.

Figure 3.5. Prevalence of social detachment in each domain by rurality and sex, 2010–11

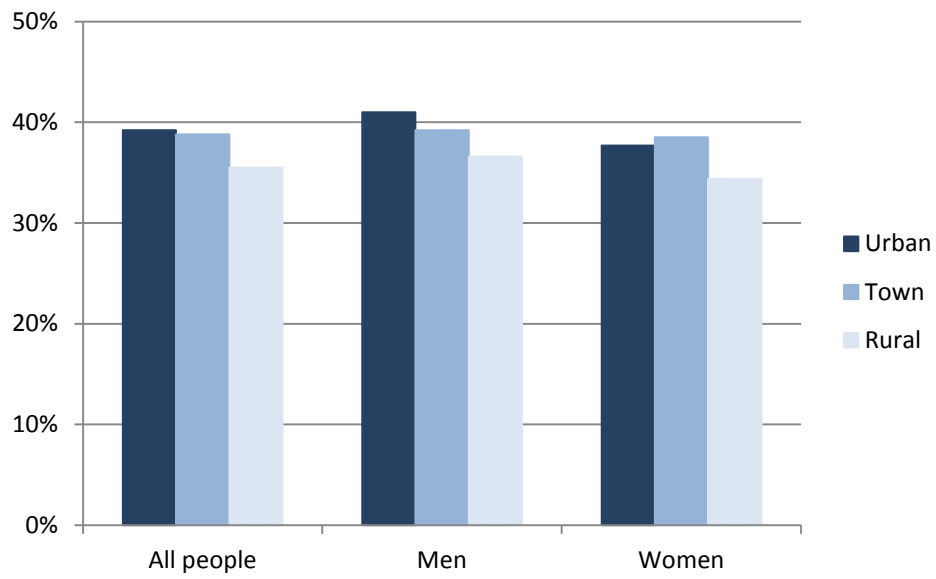
a) Civic participation



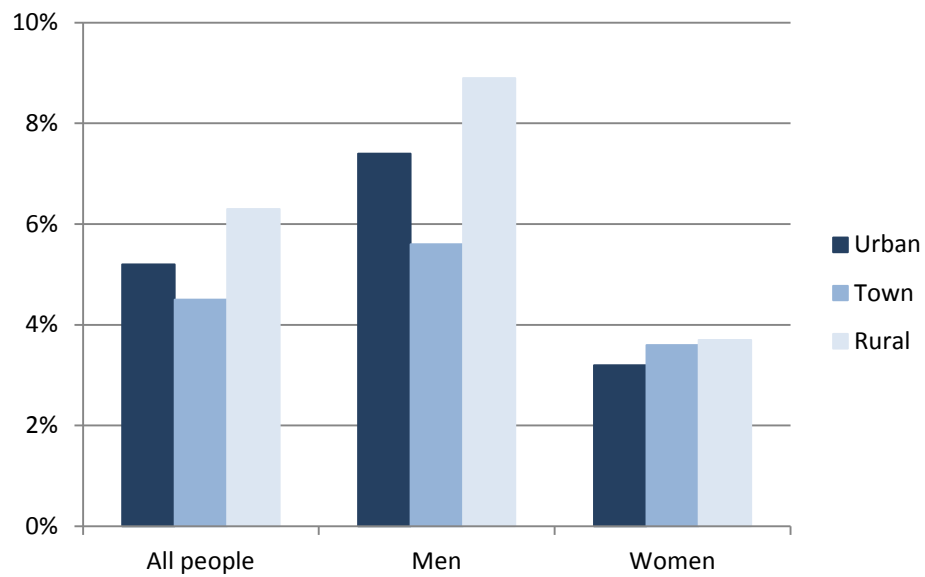
b) Leisure activities



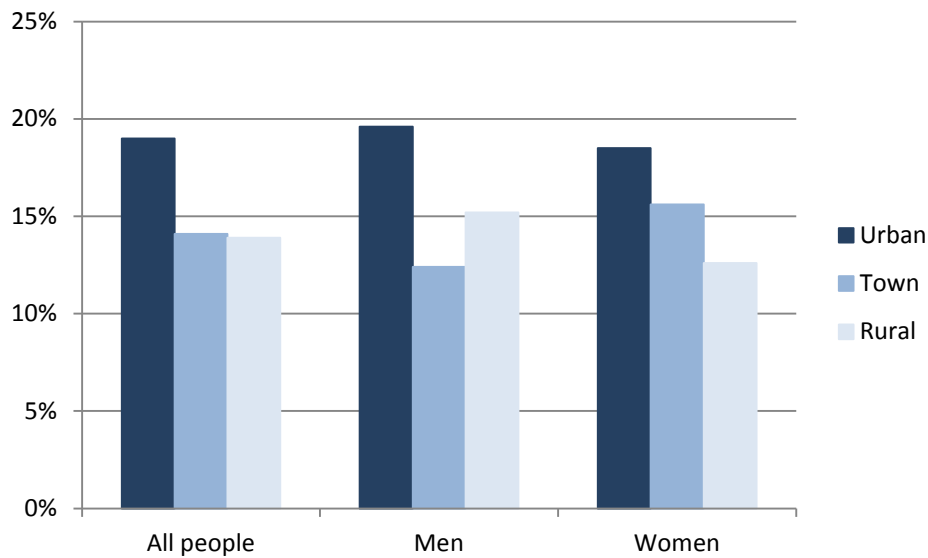
c) Cultural engagement



d) Social networks



e) Overall social detachment

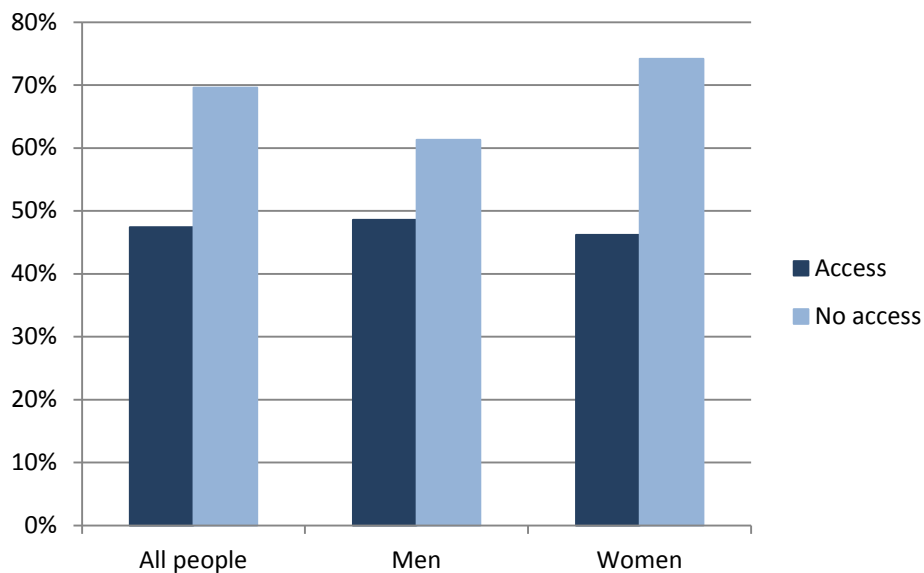


3.4.5 Social detachment and access to transport

There are differences in the proportion of individuals socially detached across each domain by access to transport. Figure 3.6 and Table 3A.14 show that the greatest difference by access to transport is in the cultural engagement domain. Two-fifths of men and women with access to transport are detached from cultural engagement compared with more than four-fifths of those without access to transport. The differences are almost as large in the civic participation and leisure activities domains.

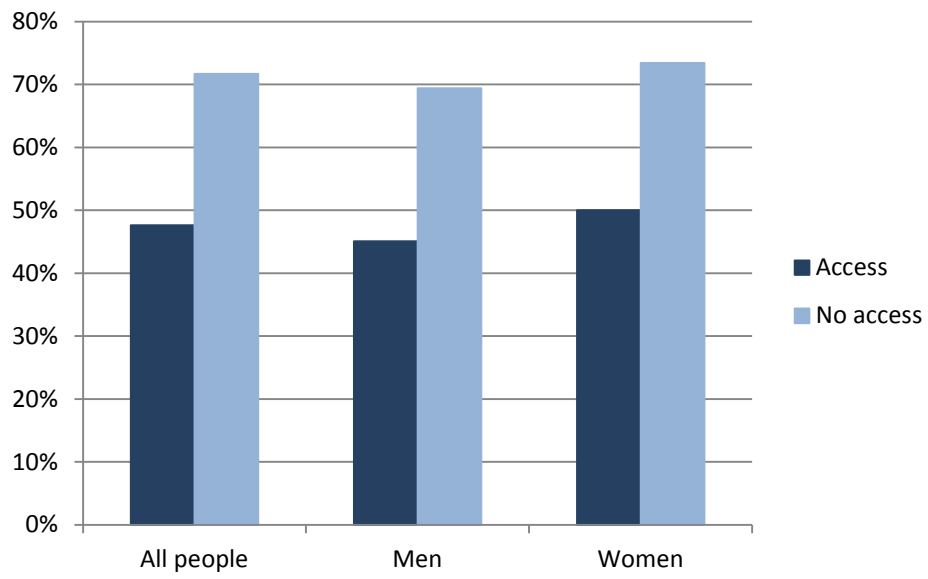
Figure 3.6. Prevalence of social detachment in each domain by access to transport and sex, 2010–11

a) Civic participation

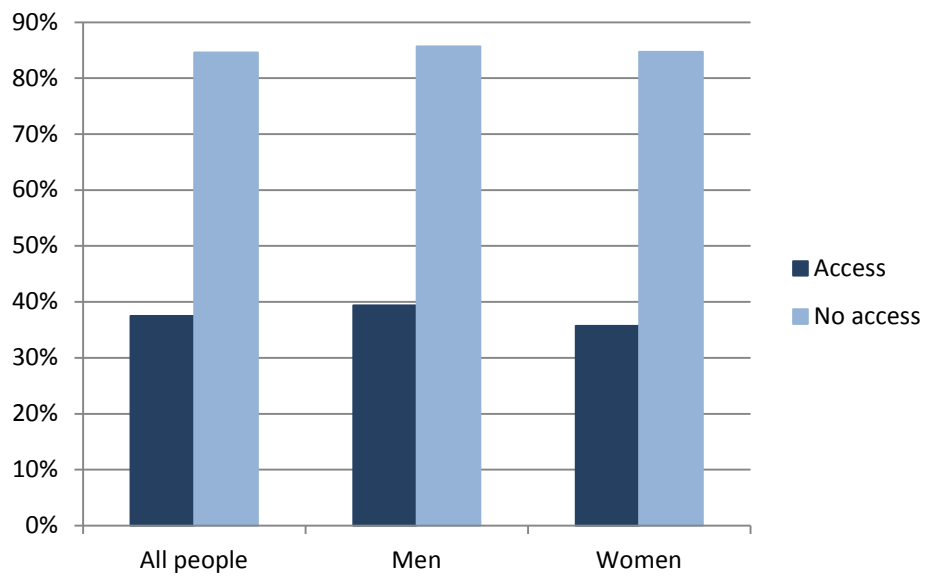


Social detachment

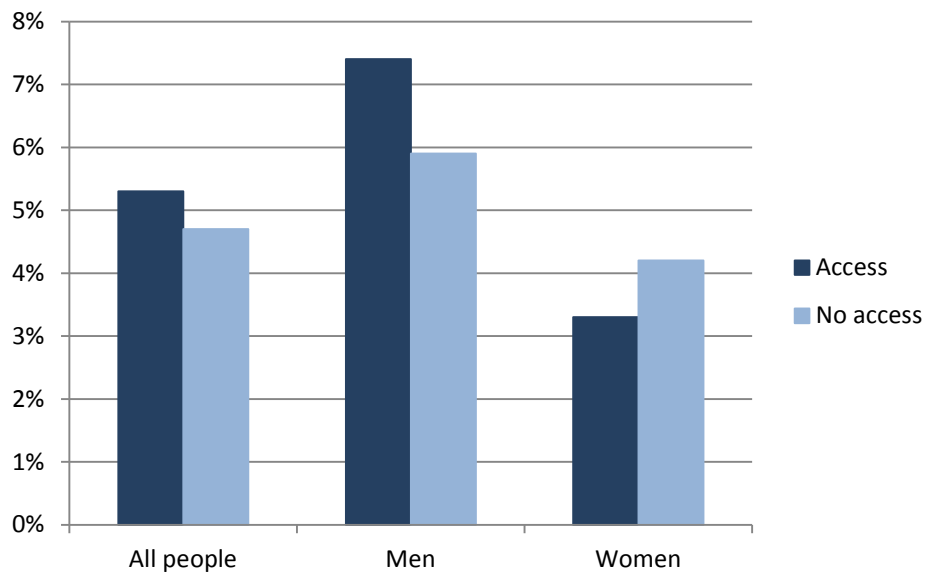
b) Leisure activities



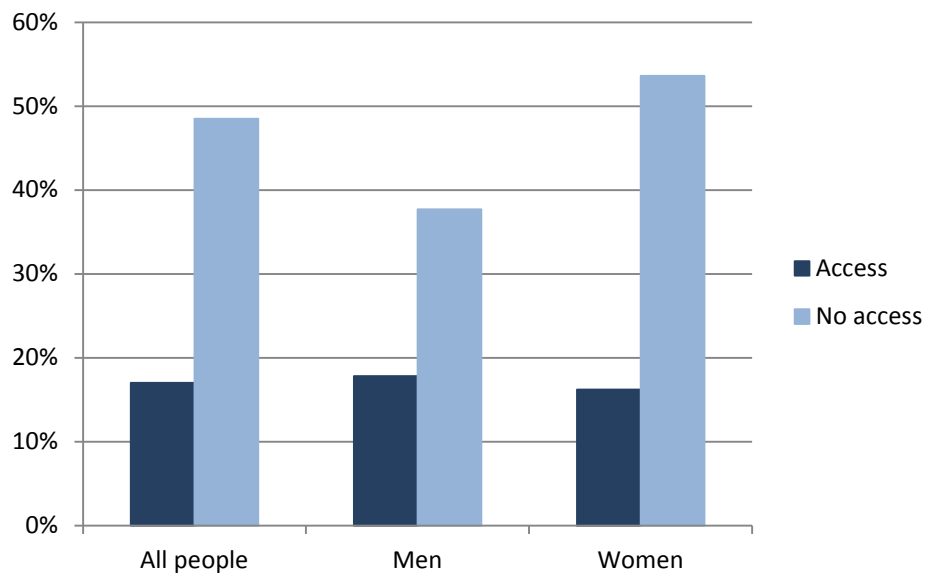
c) Cultural engagement



d) Social networks



e) Overall social detachment



The differences by access to transport are smallest for the social networks domain. Men with (7%) and without (6%) access to transport are more likely to be detached from social networks than women with (3%) and without (4%) access to transport. On the overall social detachment measure, those without access to transport are almost three times more likely to be detached from three or more domains of social detachment than those with access to transport.

3.5 Individual change in social detachment during 2002–03 to 2010–11

Social detachment trajectories

This section explores the individual-level longitudinal dynamics of social detachment for the core sample members of ELSA who have responded to every wave. Table 3.1 shows the trajectories of social detachment for each domain during the four ‘transition points’ between waves 1 and 5 (i.e. 2002–03 to 2004–05; 2004–05 to 2006–07; 2006–07 to 2008–09; and 2008–09 to 2010–11). During each transition point, a respondent could have moved into or out of detachment, remained detached, or never been detached. The measure does not take into account the history of movement into detachment for individuals (i.e. whether it is the first time a person has moved into detachment during a transition point) or the duration of detachment across multiple transition points. Rather, the measure aggregates all the movements into detachment (‘decline’) or out of detachment (‘improve’).

Table 3.1. Social detachment trajectories across transition points by domain (%), 2002–03 to 2010–11

	Civic participation	Leisure activities	Cultural engagement	Social networks	Overall social detachment
Never detached	39.8	37.9	49.5	89.9	78.3
Always detached	18.3	18.1	11.7	0.5	2.4
Improve	10.2	7.4	5.8	2.0	3.1
Decline	9.7	12.7	13.6	2.2	5.7
Improve then decline	7.9	7.4	5.3	0.6	2.0
Decline then improve	7.1	10.3	8.3	3.5	5.6
More than 2 transitions	7.1	6.2	5.8	1.2	2.8
<i>Unweighted N</i>	<i>3614</i>	<i>3311</i>	<i>3336</i>	<i>3758</i>	<i>2750</i>

Notes: Includes ELSA core respondents to waves 1–5. ‘Improve’ refers to those who move out of a social detachment domain during a transition point and ‘decline’ refers to those who move into a social detachment domain during a transition point. A transition point is the time between two consecutive waves. There are four transition points between the five consecutive waves of ELSA.

More than half of individuals did not change their detachment status in each domain during 2002–03 to 2010–11. However, there is a wide variation in the extent of stability across domains. The social networks domain is the most stable, with nine-in-ten individuals remaining either detached or not detached throughout all waves of ELSA. In contrast, around two-in-five individuals moved into or out of detachment on the civic participation, leisure activities and cultural engagement domains during one of the transition points. The composite social detachment measure is fairly stable, with four-fifths of individuals remaining never detached or always detached.

Around 20% of individuals either moved into detachment or moved out of detachment once during the five waves of ELSA on the civic participation, leisure activities and cultural engagement domains. A further 20% moved into

or out of detachment on these domains more than once during 2002–03 to 2010–11. For the social networks domain, 4% of individuals changed their detachment status once and a further 5% changed their detachment status more than once. Individuals who moved into or out of detachment more than once are likely to be at the margins of social detachment each time their detachment status changes. Therefore, multiple transitions may represent measurement issues with our social detachment measures as well as meaningful change.

Tables 3A.15–3A.19 show the trajectories of social detachment for each domain and the composite social detachment measure by age and sex. Men and women aged 60 and over are more likely to remain never detached from civic participation than those aged 50–59. The proportion never detached is greater for women than for men at ages 60 and over. In contrast, men are more likely to remain never detached from leisure activities than women, particularly those aged 50–59. Men aged 60–69 are more likely to remain always detached from cultural engagement than women aged 60–69. The vast majority of men and women were never detached from social networks. However, the proportion is higher for women than for men.

There is very little difference by sex in the trajectory pattern of detachment on the overall composite measure in those aged 50–59. Men aged 60–69 are less likely to remain never detached from three or more domains than women of similar age. Conversely, women aged 70 and over are less likely to remain never detached from three or more domains than men aged 70 and over.

3.6 Drivers of change in social detachment

3.6.1 Model specification

This section provides multivariate analysis of the drivers of movement into social detachment for those not detached at the start of a transition point, using logistic regression. The same model is fitted for each social detachment domain and the overall social detachment composite measure. A model that predicts movement out of social detachment for those detached at the start of a transition point was also fitted but is not reported here because the effects, although inversed, are very similar. The data included in the model predicting movement into detachment are pooled for each transition point between each wave of ELSA (i.e. 2002–03 to 2004–05; 2004–05 to 2006–07; 2006–07 to 2008–09; and 2008–09 to 2010–11), with individuals allowed to make more than one movement into detachment over the four transition points, as described in Section 3.5.

The model is fitted using two separate specifications following an approach taken by Crawford and Tetlow (2010) to predict movement out of full-time employment using ELSA waves 1–4. The first specification includes only those characteristics measured before a transition point, while the second includes selected characteristics that might have changed during a transition point. The first specification shows the baseline effects on movement into detachment, whereas the second shows what characteristics also change when an individual moves into social detachment. The second specification provides no indication of cause and effect, because it is not possible to identify which

Social detachment

change occurs first (e.g. moving into social detachment or moving into widowhood).

Table 3.2 shows the frequency across each transition point in the change characteristics: marital, employment, limiting long-standing illness and access to transport status. More than two-thirds of individuals are in a couple across each transition point. However, the proportion in a couple declined over time as the proportion of individuals who are widowed increased. A smaller percentage (2%) of individuals became widowed during each transition point, which led to an increase in the proportion of individuals widowed from 13% to 18%.

Table 3.2. Change in marital, employment, limiting long-standing illness and access to transport status across transition points (%), 2002–03 to 2010–11

	Waves 1–2	Waves 2–3	Waves 3–4	Waves 4–5
Coupled both waves	70.5	69.3	68.1	66.2
Single both waves	4.4	4.5	4.3	4.5
Separated/Divorced both waves	7.6	7.8	7.7	7.7
Widowed both waves	13.3	15.0	16.5	17.9
Become widowed	2.2	2.0	1.9	2.6
Become separated/divorced	1.1	0.7	0.9	0.8
Become coupled	0.8	0.8	0.6	0.3
Retired both waves	38.6	44.5	51.8	59.9
Full-time employed both waves	19.0	16.0	12.2	8.2
Part-time employed both waves	8.4	8.5	7.4	6.6
Other both waves	10.3	9.4	7.1	5.6
Retired from FT employed	2.9	2.1	2.1	2.6
Retired from PT employed	2.5	2.4	3.2	3.0
Retired from other	5.3	7.0	6.7	5.7
Become FT employed	1.8	1.4	1.1	0.9
PT employed from FT employed	2.5	2.1	2.4	1.9
PT employed from other or retired	1.6	1.6	1.1	1.1
Become other	7.1	5.0	4.8	4.4
No LLSI both waves	58.5	57.1	55.6	52.5
LLSI both waves	21.7	24.2	25.9	28.1
No longer have LLSI	8.5	8.8	8.2	8.1
Now have LLSI	11.3	10.0	10.3	11.3
Transport both waves	97.1	95.7	94.6	93.1
No transport both waves	0.8	1.0	1.7	2.6
Now have transport	0.7	1.3	1.2	1.7
No longer have transport	1.5	1.9	2.4	2.6

Unweighted N

5315

Notes: Includes ELSA core respondents in waves 1–5. A transition point is the time between consecutive waves. There are four transition points between the five consecutive waves of ELSA.

The proportion of individuals retired increased from two-fifths during the first transition point (2002–03 to 2004–05) to three-fifths by the fourth transition point (2008–09 to 2010–11). This is a result of almost half of those employed or ‘other inactive’ moving into retirement. During each transition point, 11–12% of all individuals became retired, around half from employment and the other half from the ‘other inactive’ category.

More than half of individuals did not have a limiting long-standing illness across each of the five waves of ELSA. However, the proportion with an LLSI increased over time. One-in-ten individuals reported a new or reoccurring LLSI during each transition point. Between 8 and 9% of individuals who reported having an LLSI at the start of each transition point reported not having an LLSI at the end of that transition point.

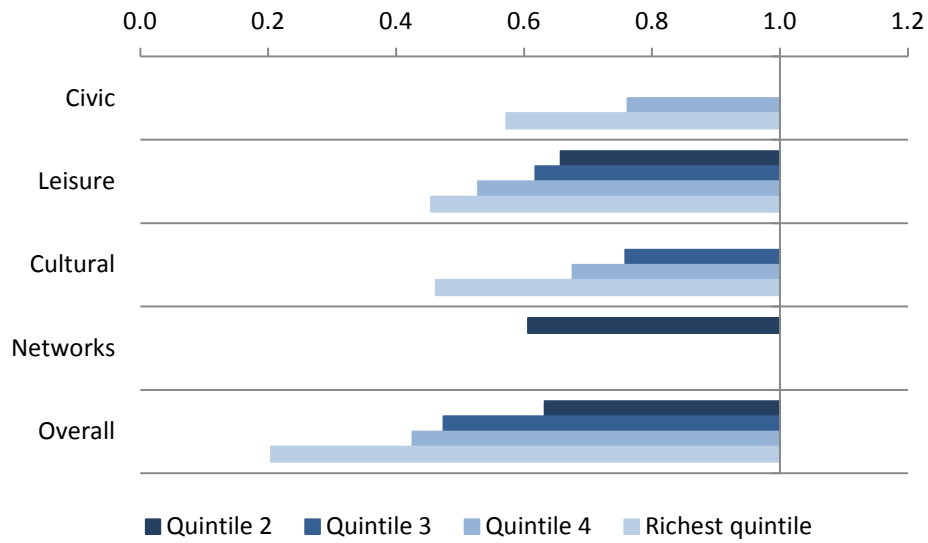
The vast majority of individuals had access to either a car or public transport across each transition point. Nonetheless, the proportion with access to transport at the start and end of a transition point decreased from 97% at the first transition point to 93% at the fourth transition point. Between 1.5 and 2.6% of individuals reported no longer having access to transport during each transition point.

3.6.2 Movement into social detachment on baseline characteristics

Table 3A.20 shows the model estimates for movement into detachment conditional on baseline characteristics at each transition point. Significant odds ratios are highlighted in bold. The strongest drivers of movement into social detachment across each domain appear to be the socio-economic measures. Figure 3.7 shows the statistically significant odds ratios of movement into detachment by domain and wealth quintile after a range of other factors have been controlled for. Those in the richer wealth quintiles are less likely to move into detachment across each transition point in each domain, except for social networks. Individuals in the richest wealth quintile are 50% less likely to move into detachment in the civic participation, leisure activities and cultural engagement domains than those in the poorest wealth quintile. For the composite social detachment measure, individuals in the richest quintile are almost 80% less likely to move into multiple social detachment than those in the poorest wealth quintile.

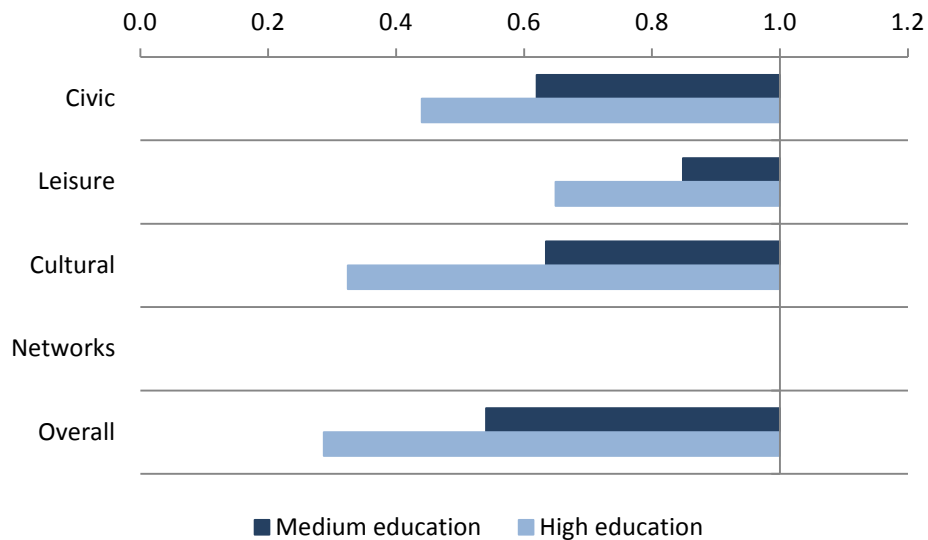
Education is another important socio-economic driver of movement into detachment across domains. Table 3A.20 and Figure 3.8 show that those in higher education groups are much less likely to move into detachment in each domain (except social networks) and, in particular, the composite social detachment measure when controlling for all other effects in the model. Retirement status is also significantly associated with movement into detachment on selected domains. Individuals who are retired are at least 20% less likely to move into civic participation and leisure activities detachment than those in full-time employment.

Figure 3.7. Significant odds ratios of movement into detachment by domain and wealth quintile (ref: poorest quintile) from logistic regression model



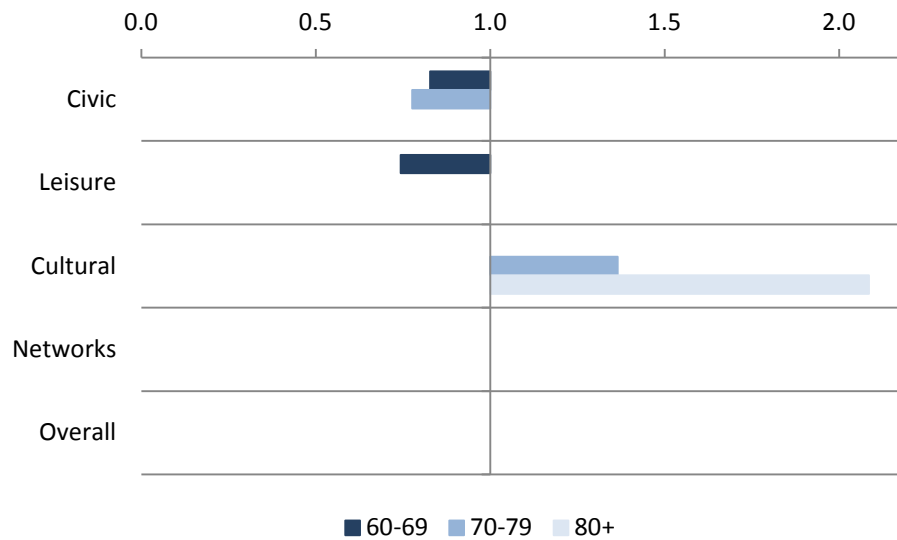
Notes: An odds ratio greater than 1 indicates that individuals are more likely to enter detachment and an odds ratio less than 1 indicates that individuals are less likely to enter detachment relative to the poorest wealth quintile reference category. See Table 3A.20 for full model estimates.

Figure 3.8. Significant odds ratios of movement into detachment by domain and education level (ref: low education) from logistic regression model



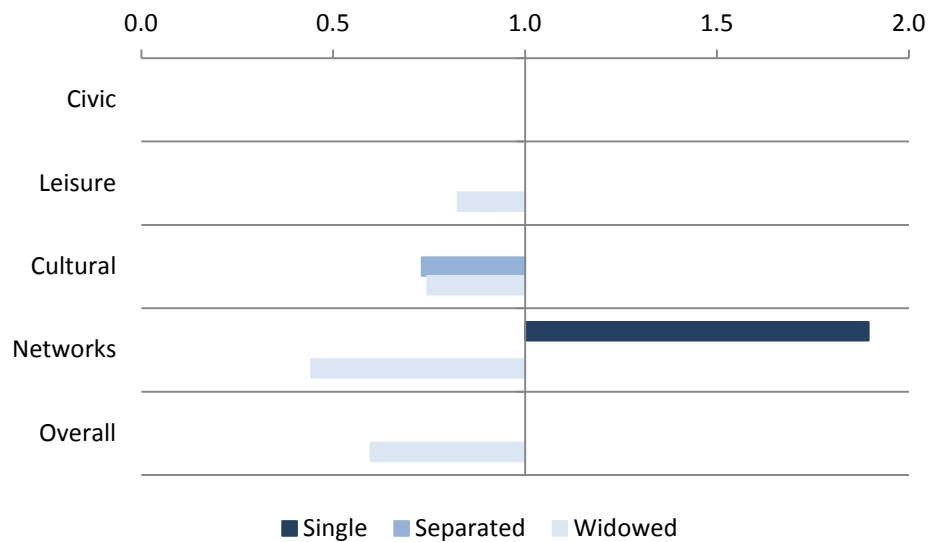
Notes: An odds ratio greater than 1 indicates that individuals are more likely to enter detachment and an odds ratio less than 1 indicates that individuals are less likely to enter detachment relative to the low education reference category. See Table 3A.20 for full model estimates.

Figure 3.9. Significant odds ratios of movement into detachment by domain and age group (ref: aged 50–59) from logistic regression model



Notes: An odds ratio greater than 1 indicates that individuals are more likely to enter detachment and an odds ratio less than 1 indicates that individuals are less likely to enter detachment relative to the aged 50–59 reference category. See Table 3A.20 for full model estimates.

Figure 3.10. Significant odds ratios of movement into detachment by domain and marital status (ref: in a couple) from logistic regression model



Notes: An odds ratio greater than 1 indicates that individuals are more likely to enter detachment and an odds ratio less than 1 indicates that individuals are less likely to enter detachment relative to the 'in a couple' reference category. See Table 3A.20 for full model estimates.

Social detachment

Age, sex and marital status have significant effects on movement into detachment in selected domains. Table 3A.20 and Figure 3.9 show that the effect of age is most important on the cultural engagement domain, where those aged 70 and over are much more likely to move into detachment than those aged 50–59. Individuals aged 80 and over are twice as likely to move into cultural engagement detachment as those aged 50–59. There is a reverse effect of age on movement into the civic participation and leisure activities domains. Those aged 60–79 are less likely to move into civic participation detachment than those aged 50–59. The effect is only significant for those aged 60–69 in the leisure activities domain.

Table 3A.20 shows that for the social networks domain, women are almost half as likely to move into detachment as men. The reverse is true for the leisure activities domain, where women are almost 30% more likely to move into detachment than men.

Table 3A.20 and Figure 3.10 show that widowed respondents are significantly less likely to move into detachment than those in a couple in each domain except for civic participation. The effect of widowhood is strongest on the social networks domain. Widowed individuals are more than half as likely to move into detachment on this domain as those in a couple. Single status predicts a greater chance of movement into detachment on the social networks domain than that for those in a couple. Single individuals are almost twice as likely to move into detachment on this domain as those in a couple.

Table 3A.20 shows that the effect of having a limitation in ADLs increases the likelihood of moving into leisure activities and cultural engagement detachment. Those with no limitations in ADLs are more than 30% less likely to move into leisure activities and cultural engagement detachment than those with more than two limitations in ADLs. Having an LLSI is associated with a higher likelihood of moving into leisure activities and cultural engagement detachment. Those without an LLSI are 25% less likely to move into cultural engagement detachment.

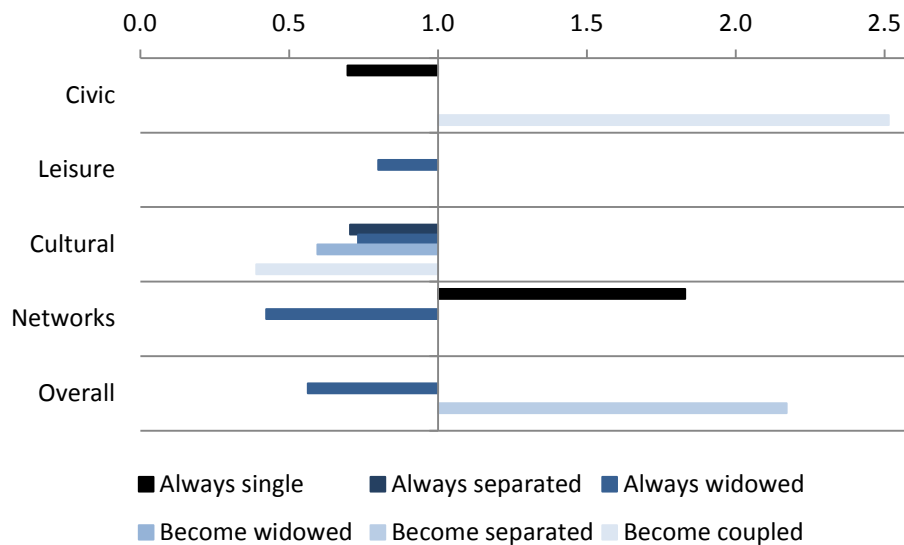
The rurality of a place of residence has a significant effect on the likelihood of moving into detachment across each domain, except leisure activities, and on the overall composite measure. Table 3A.20 shows that individuals living in rural areas are more likely to move into social networks and cultural engagement detachment than those living in urban areas. The relationship with civic participation is somewhat different. Those in town areas are almost 20% less likely to move into detachment on this domain than those in urban areas. Access to transport only has a significant effect on the cultural engagement domain. Those with no access to transport are more than 75% more likely to move into cultural engagement detachment than those with access to transport.

3.6.3 Movement into social detachment on change characteristics

The baseline effects largely remain consistent when changes in characteristics for marital, employment, health and access to transport status are included in Table 3A.21. The effects of change characteristics on movement into social detachment domains during a transition point are described as follows. Figure 3.11 shows that those individuals who become part of a couple during

transition points are two-and-a-half times more likely to move into civic participation detachment than those who remain in a couple before and after a transition point. Those who become part of a couple and those who become widowed are less likely than those who remained in a couple during a transition point to move into cultural engagement detachment. Individuals who become separated or divorced are more likely to become detached from more than two domains than those who remain in a couple.

Figure 3.11. Significant odds ratios of movement into detachment by domain and change in marital status (ref: always in a couple) from logistic regression model



Notes: An odds ratio greater than 1 indicates that individuals are more likely to enter detachment and an odds ratio less than 1 indicates that individuals are less likely to enter detachment relative to the ‘always in a couple’ reference category. See Table 3A.21 for full model estimates.

Changes in employment status are not important predictors of movement into social detachment. The only significant effect in Table 3A.21 is for individuals who become retired or become other inactive during transition points. Those who become retired from full-time employment are more likely to move into civic participation detachment than those who remain in full-time employment. However, those who retire from full-time and part-time employment are less likely to move into leisure activities detachment than those who are in full-time employment in both waves. Individuals who become part of the ‘other inactive’ employment category are 37% more likely to move into cultural engagement detachment than those who remain full-time employed.

Change in health status has very little effect on the probability of moving into detachment on the individual domains. The only significant effect is for those who now have an LLSI, who are 70% more likely to move into multiple social detachment on the composite measure than those who do not have an LLSI during a transition point (see Table 3A.21). The effect of change in access to transport is also limited to selective domains. For example, those who no longer have access to transport are more than three times as likely to move

into cultural engagement detachment as those who have access to transport before and after a transition point.

3.7 Conclusions

Social engagement has been described as an important element contributing to successful ageing. The negative effects of detachment from societal activity have been widely documented in the academic literature and realised by policymakers. In England, the government is committed to tackling what it describes as social isolation and loneliness of the ageing population. The analysis in this chapter has shown that detachment from domain types of societal activities and an overall composite measure has remained fairly stable in the older-age population during 2002–03 to 2010–11. However, at the individual level, almost half of older adults crossed a threshold of activity in civic, leisure, social networks or cultural detachment during this period. As such, it can be stated that changes in social detachment in later life are a substantial part of the ageing process. It is equally important to stress that ageing is not only about an increase of social detachment, but also encompasses an increase of social activity.

Getting older appears to be tied to increased chance of detachment from leisure activities and cultural engagement, but not civic participation and social networks. The relationship does not remain significant for leisure activities when controlling for other effects that are age-related – for example, widowhood, retirement, and activity limitations. This suggests that simply getting older does not lead to withdrawal from most societal activities.

The relationship between marital status and domain of social detachment is equally complicated. Being in a couple seems to protect against most forms of detachment. However, those in a couple are just as likely to be detached from civic participation and leisure activities as widows and widowers, and more likely to be detached from social networks. When controlling for other individual characteristics, those who are widowed are less likely to become detached from leisure activities, social networks and cultural engagement than those who remain in a couple. Being single and never married is strongly associated with detachment from social networks, even when controlling for other individual characteristics. These findings suggest that those single and never married are not as able to draw on supportive networks, which can help maintain involvement in societal activities, as those who are widowed. This may reflect the fact that those who are single are much less likely to have children who can provide social support.

Retirement is not strongly associated with social detachment across all domains. Those in retirement are less likely to be detached and to move into detachment from civic participation. However, those moving into retirement from full-time employment are more likely to move into civic participation detachment than those still in employment. This is most probably a result of giving up trade union membership once retired. Being retired and moving into retirement are associated with a lower likelihood of movement into leisure activities detachment. It is likely to be the case that leisure activities, including attendance at evening classes and social clubs, are easier to take part in after

retirement, when more free time is available. Not being retired or working (i.e. unemployed, permanently sick, or looking after family) does appear to make an older person more likely to be detached and move into detachment from cultural engagement. This is supported by the findings of Scherger, Nazroo and Higgs (2010), who suggest this effect operates over and above the direct effect of health.

Health and social detachment appear to be strongly related. Those with better self-rated health are much less likely to be detached from each domain of social detachment, apart from social networks. Having a limiting long-standing illness or a limitation with an activity of daily living is associated with movement into detachment in the leisure activities and cultural engagement domains. Nonetheless, there appears to be only a weak effect of declining health when measured by the onset of a limiting long-standing illness. This suggests that the effect of declining health may take time to cause a withdrawal from individual domains of societal involvement.

The most consistent effect across each social detachment domain is the association with wealth. Wealthier individuals are much less likely to be detached and move into detachment in each domain, except social networks. This may simply reflect the cost of participating in most types of societal activities and the exclusion of activities more commonly associated with working-class groups (e.g. bingo) in our measurement of social detachment. The effect is also likely to be associated with knowledge and confidence, which individuals in poorer wealth groups may not have, to take part in societal activity such as neighbourhood groups. Social networks, on the other hand, will not require wealth, and to some extent confidence or knowledge, particularly if they are confined within a short distance of where an individual lives and to children and other immediate family.

If engagement across multiple domains of social detachment is important for successful ageing as it increases the risk of decline in health and well-being outcomes, then policymakers should tackle the drivers of movement into social detachment. This should involve targeting the poorest individuals, who are much more likely to move into detachment on three or more of the domains, as well as those living in rural areas and those without access to private or public transport. Individuals who become separated or divorced from their partner and those who develop a limiting long-standing illness are also more likely to move into multiple social detachment. Greater assistance to enable social participation and/or provision of transport to and from communal facilities could decrease the likelihood of these most-at-risk groups becoming socially detached.

Acknowledgements

The authors would like to thank reviewers from the UK government funding departments for their useful comments. We are also grateful to Alan Marshall, Wojtek Tomaszewski and Bram Vanhoutte for their useful suggestions and to Judith Payne for her careful copy-editing.

References

- Adams, K.B., Leibbrandt, S. and Moon, H. (2010), 'A critical review of the literature on social and leisure activity and wellbeing in later life', *Ageing and Society*, vol. 31, pp. 683–712.
- Agahi, N., Ahacic, K. and Parker, M.G. (2006), 'Continuity of leisure participation from middle age to old age', *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, vol. 61, pp. S340–6.
- Agahi, N. and Parker, M.G. (2008), 'Leisure activities and mortality: does gender matter?', *Journal of Aging and Health*, vol. 20, pp. 855–71.
- Bibby, P. and Shepherd, J. (2004), 'Developing a new classification of urban and rural areas for policy purposes – the methodology' (<http://www.defra.gov.uk/statistics/files/rural-urban-definition-methodology-technical.pdf>).
- Chiao, C., Weng, L. and Botticello, A.L. (2011), 'Social participation reduces depressive symptoms among older adults: an 18-year longitudinal analysis in Taiwan', *BMC Public Health*, vol. 11, no. 292, doi: 10.1186/1471-2458-11-292.
- Crawford, R. and Tetlow, G. (2010), 'Employment, retirement and pensions', in J. Banks, C. Lessof, J. Nazroo, N. Rogers, M. Stafford and A. Steptoe (eds), *Financial Circumstances, Health and Well-Being of the Older Population in England: The 2008 English Longitudinal Study of Ageing (Wave 4)*, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/ELSA/publicationDetails/id/5315>).
- Donnelly, E. and Hinterlong, J.E. (2010), 'Changes in social participation and volunteer activity among recently widowed older adults', *The Gerontologist*, vol. 50, pp. 158–69.
- Hawkins, B., Foose, A. and Binkley, A. (2004), 'Contribution of leisure to the life satisfaction of older adults in Australia and the United States', *World Leisure*, no. 2, pp. 37–41.
- HM Government (2010), *Healthy Lives, Healthy People: Our Strategy for Public Health in England* (http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_127424.pdf).
- Jang, Y. and Chiriboga, D. (2011), 'Social activity and depressive symptoms in Korean American older adults: the conditioning role of acculturation', *Journal of Aging and Health*, vol. 23, pp. 767–81.
- Jenkins, A. (2011), 'Participation in learning and wellbeing among older adults', *International Journal of Lifelong Education*, vol. 30, pp. 403–20.
- Nazroo, J. and Matthews, K. (2012), *The Impact of Volunteering on Well-Being in Later Life: A Report to the WRVS* (http://www.wrvs.org.uk/Uploads/Documents/Reports%20and%20Reviews/the_impact_of_volunteering_on_wellbeing_in_later_life.pdf).

- Niti, M., Yap, K-B., Kua, E-H., Tan, C-H. and Ng, T-P. (2008), 'Physical, social and productive leisure activities, cognitive decline and interaction with APOE-epsilon 4 genotype in Chinese older adults', *International Psychogeriatrics*, vol. 20, pp. 237–51.
- Scherger, S., Nazroo, J. and Higgs, P. (2010), 'Leisure activities and retirement: do structures of inequality change in old age?', *Ageing and Society*, vol. 31, pp. 146–72.
- Thomas, P. (2011a), 'Gender, social engagement, and limitations in late life', *Social Science & Medicine*, vol. 73, pp. 1428–35.
- Thomas, P. (2011b), 'Trajectories of social engagement and limitations in late life', *Journal of Health and Social Behavior*, vol. 52, pp. 430–43.
- Thomas, P. (2012), 'Trajectories of social engagement and mortality in late life', *Journal of Aging and Health*, vol. 24, pp. 547–68.
- Tomaszewski, W. and Barnes, M. (2008), 'Investigating the dynamics of social detachment in older age', in J. Banks, E. Breeze, C. Lessof and J. Nazroo (eds), *Living in the 21st Century – Older People in England: The 2006 English Longitudinal Study of Ageing (Wave 3)*, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/ELSA/publicationDetails/id/4296>).
- Utz, R.L., Carr, D., Nesse, R. and Wortman, C.B. (2002), 'The effect of widowhood on older adults' social participation: an evaluation of activity, disengagement, and continuity theories', *The Gerontologist*, vol. 42, pp. 522–33.
- Wang, H-X., Xu, W. and Pei, J-J. (2012), 'Leisure activities, cognition and dementia', *Biochimica et Biophysica Acta*, vol. 1822, pp. 482–91.

Appendix 3A

Tables on social detachment

Table 3A.1. Prevalence of civic participation detachment by age, sex and wave, 2002–03 to 2010–11

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N
Men	51.7	4340	48.9	3352	50.3	3126	49.6	3676	48.8	3472
52–59	51.5	1492	50.3	1059	51.4	978	48.9	1058	49.1	780
60–69	52.6	1452	48.5	1167	48.9	1043	49.1	1408	47.4	1408
70–79	50.2	1013	48.4	826	50.1	780	49.6	907	50.4	981
80+	53.5	383	46.7	300	51.8	325	54.0	303	49.9	303
Women	49.9	5115	45.5	4055	47.8	3778	48.3	4534	47.1	4257
52–59	52.5	1741	50.8	1243	51.7	1177	51.6	1322	49.5	954
60–69	47.8	1616	42.7	1382	47.3	1224	46.5	1673	46.4	1729
70–79	49.6	1183	44.7	954	44.7	934	46.0	1074	45.3	1128
80+	48.5	575	42.1	476	45.5	443	47.7	465	47.2	446
All	50.7	9455	47.1	7407	49.0	6904	48.9	8210	47.9	7729
52–59	52.0	3233	50.5	2302	51.5	2155	50.3	2380	49.3	1734
60–69	50.1	3068	45.5	2549	48.1	2267	47.8	3081	46.9	3137
70–79	49.9	2196	46.4	1780	47.2	1714	47.7	1981	47.7	2109
80+	50.3	958	43.7	776	47.9	768	50.1	768	48.3	749

Table 3A.2. Prevalence of leisure activities detachment by age, sex and wave, 2002–03 to 2010–11

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N
Men	45.0	4283	42.2	3281	44.9	3023	45.7	3556	45.5	3411
52–59	41.4	1471	39.9	1036	43.5	943	45.3	1020	46.1	765
60–69	43.5	1435	41.0	1143	42.5	1010	45.4	1362	42.6	1385
70–79	48.6	999	42.4	812	45.7	756	43.6	880	45.0	963
80+	56.0	378	54.2	290	56.3	314	53.3	294	55.9	298
Women	51.0	5025	48.1	3951	49.9	3662	51.6	4394	50.8	4179
52–59	46.9	1720	47.9	1219	51.5	1141	56.0	1278	54.2	931
60–69	47.4	1587	45.6	1345	47.0	1187	46.0	1622	48.2	1706
70–79	54.7	1154	46.9	924	48.7	899	49.3	1039	46.4	1106
80+	61.8	564	55.7	463	54.9	435	56.9	455	59.2	436
All	48.2	9308	45.4	7232	47.6	6685	48.9	7950	48.3	7590
52–59	44.2	3191	43.9	2255	47.5	2084	50.8	2298	50.1	1696
60–69	45.5	3022	43.4	2488	44.8	2197	45.7	2984	45.5	3091
70–79	51.9	2153	44.8	1736	47.3	1655	46.7	1919	45.7	2069
80+	59.7	942	55.2	753	55.4	749	55.5	749	57.8	734

Table 3A.3. Prevalence of cultural engagement detachment by age, sex and wave, 2002–03 to 2010–11

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	42.6	4834	43.2	3274	38.0	2863	39.7	3533	40.1	3382
52–59	32.8	1623	36.5	1042	31.7	923	32.7	1022	33.1	769
60–69	40.3	1585	41.4	1147	36.2	968	38.4	1359	36.9	1384
70–79	50.2	1156	48.3	797	42.9	692	46.6	869	46.5	940
80+	68.9	470	61.7	288	57.6	280	58.2	283	58.6	289
Women	38.8	5768	39.4	3915	33.9	3499	36.6	4401	37.3	4186
52–59	27.6	1891	30.8	1233	28.6	1122	27.9	1299	31.3	952
60–69	32.1	1767	33.5	1347	28.5	1164	32.8	1637	31.8	1723
70–79	47.0	1374	45.7	899	38.3	830	42.5	1025	40.3	1090
80+	62.9	736	60.0	436	52.1	383	59.7	440	61.2	421
All	40.5	10,602	41.1	7189	35.8	6362	38.0	7934	38.6	7568
52–59	30.2	3514	33.6	2275	30.1	2045	30.2	2321	32.2	1721
60–69	36.1	3352	37.3	2494	32.2	2132	35.5	2996	34.2	3107
70–79	48.4	2530	47.0	1696	40.4	1522	44.4	1894	43.2	2030
80+	65.1	1206	60.6	724	54.2	663	59.1	723	60.1	710

Table 3A.4. Prevalence of social networks detachment by age, sex and wave, 2002–03 to 2010–11

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	5.9	4246	7.3	3395	6.9	3096	6.8	3630	7.4	3486
52–59	5.8	1431	7.9	1037	7.8	946	6.8	1016	7.7	768
60–69	5.7	1429	8.1	1185	7.9	1031	7.4	1388	7.4	1416
70–79	4.9	1013	5.1	860	4.6	788	6.6	917	8.1	985
80+	9.4	373	8.2	313	6.4	331	5.6	309	5.2	317
Women	2.5	5180	3.0	4215	3.0	3862	2.8	4586	3.3	4371
52–59	2.3	1750	3.8	1264	3.4	1165	3.5	1306	4.3	961
60–69	2.1	1641	2.8	1429	3.3	1263	2.9	1695	3.1	1778
70–79	2.7	1208	2.5	1017	2.5	968	1.9	1109	2.5	1169
80+	3.3	581	2.9	505	2.5	466	2.1	476	3.2	463
All	4.0	9426	5.0	7610	4.8	6958	4.7	8216	5.2	7857
52–59	4.0	3181	5.8	2301	5.5	2111	5.1	2322	6.0	1729
60–69	3.8	3070	5.3	2614	5.5	2294	5.1	3083	5.2	3194
70–79	3.7	2221	3.7	1877	3.5	1756	4.0	2026	5.1	2154
80+	5.4	954	4.7	818	4.0	797	3.4	785	4.1	780

Table 3A.5. Prevalence of overall social detachment by age, sex and wave, 2002–03 to 2010–11

	Wave 1		Wave 2		Wave 3		Wave 4		Wave 5	
	<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	19.8	4097	17.4	3056	16.6	2722	18.2	3355	18.1	3223
52–59	15.9	1403	14.0	981	13.8	882	15.7	976	16.9	737
60–69	18.6	1383	18.3	1088	15.5	931	17.7	1298	15.2	1319
70–79	22.0	961	18.8	730	18.4	659	19.7	816	21.1	898
80+	34.7	350	24.4	257	27.8	250	27.1	265	26.4	269
Women	18.6	4927	16.9	3649	16.1	3311	17.5	4172	17.3	3960
52–59	13.9	1696	15.1	1160	14.9	1084	15.3	1232	15.5	902
60–69	16.3	1571	14.7	1274	14.2	1100	15.7	1563	16.4	1645
70–79	23.2	1119	18.5	828	16.6	778	18.7	969	15.9	1030
80+	26.7	541	23.6	387	22.4	349	26.3	408	27.3	383
All	19.1	9024	17.2	6705	16.3	6033	17.8	7527	17.7	7183
52–59	14.9	3099	14.6	2141	14.4	1966	15.5	2208	16.2	1639
60–69	17.4	2954	16.4	2362	14.8	2031	16.7	2861	15.8	2964
70–79	22.7	2080	18.7	1558	17.4	1437	19.2	1785	18.4	1928
80+	29.5	891	23.9	644	24.4	599	26.6	673	26.9	652

Table 3A.6. Prevalence of social detachment by domain, sex and marital status, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>		<i>Unwtd</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	48.8	3472	45.5	3411	40.1	3382	7.4	3486	18.1	3223
Single	49.1	204	53.1	198	51.2	192	13.4	197	26.2	184
Couple	47.5	2776	43.7	2733	37.2	2713	7.1	2783	16.3	2587
Separated	62.3	244	57.5	239	51.1	240	8.5	251	28.9	226
Widowed	49.6	248	47.3	241	52.3	237	5.0	255	20.6	226
Women	47.1	4257	50.8	4179	37.3	4186	3.3	4371	17.4	3960
Single	32.0	199	52.6	197	40.8	195	11.5	202	20.0	187
Couple	47.2	2699	48.9	2645	33.8	2669	3.2	2761	15.4	2539
Separated	53.5	493	57.2	486	38.9	483	3.7	505	20.3	456
Widowed	46.6	866	52.8	851	46.9	839	1.8	903	21.4	778
All	47.9	7729	48.3	7590	38.6	7568	5.2	7857	17.7	7183
Single	41.3	403	52.8	395	46.3	387	12.5	399	23.4	371
Couple	47.3	5475	46.1	5378	35.6	5382	5.2	5544	15.9	5126
Separated	56.7	737	57.3	725	43.5	723	5.5	756	23.6	682
Widowed	47.3	1114	51.6	1092	48.1	1076	2.5	1158	21.3	1004

Table 3A.7. Prevalence of social detachment by domain, sex and wealth quintile, 2010–11

Wealth quintile	Civic		Leisure		Cultural		Networks		Overall	
	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>
Men	48.9	3402	45.7	3343	40.1	3313	7.3	3416	18.2	3157
Poorest	65.4	484	65.1	471	63.5	469	10.8	499	36.6	428
2	55.7	625	53.2	620	47.5	608	5.2	639	23.9	579
3	52.4	671	45.2	663	44.9	656	6.1	677	18.8	619
4	40.8	763	40.6	749	31.6	740	7.6	755	11.8	713
Richest	35.3	859	30.3	840	20.5	840	7.4	846	6.1	818
Women	47.2	4177	50.8	4102	37.6	4105	3.3	4288	17.3	3885
Poorest	60.3	703	69.5	692	58.7	702	3.2	767	33.1	630
2	55.6	871	60.5	860	46.1	847	4.0	899	23.1	806
3	50.1	864	51.2	844	35.3	853	2.5	885	15.5	803
4	38.7	880	42.3	864	30.3	862	2.8	883	11.4	827
Richest	29.8	859	29.1	842	16.2	841	4.0	854	4.0	819
All	48.0	7579	48.4	7445	38.8	7418	5.2	7704	17.8	7042
Poorest	62.5	1187	67.5	1163	60.8	1171	6.5	1266	34.7	1058
2	55.6	1496	57.2	1480	46.8	1455	4.6	1538	23.5	1385
3	51.2	1535	48.3	1507	39.8	1509	4.1	1562	17.0	1422
4	39.7	1643	41.5	1613	30.9	1602	5.1	1638	11.7	1540
Richest	32.8	1718	29.8	1682	18.5	1681	5.7	1700	5.1	1637

Table 3A.8. Prevalence of social detachment by domain, sex and education, 2010–11

Education level	Civic		Leisure		Cultural		Networks		Overall	
	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>	%	<i>Unwted</i> <i>N</i>
Men	48.4	2434	45.9	2390	42.4	2365	7.1	2460	18.8	2257
Low	60.1	1149	53.4	1132	56.8	1099	6.3	1179	27.1	1036
Mid	38.1	806	39.3	791	32.2	793	8.1	804	11.4	763
High	32.1	479	35.8	467	19.9	473	7.5	477	8.7	458
Women	46.2	3033	50.3	2983	40.3	2978	2.8	3125	18.0	2805
Low	57.4	1431	58.4	1407	52.3	1409	2.7	1522	26.4	1282
Mid	39.0	1168	46.8	1155	32.8	1151	2.5	1180	12.0	1109
High	19.6	434	25.2	421	10.7	418	4.2	423	2.0	414
All	47.2	5467	48.2	5373	41.3	5343	4.8	5585	18.4	5062
Low	58.6	2580	56.1	2539	54.4	2508	4.4	2701	26.8	2318
Mid	38.6	1974	43.6	1946	32.5	1944	4.9	1984	11.8	1872
High	26.8	913	31.3	888	16.1	891	6.1	900	5.8	872

Table 3A.9. Prevalence of social detachment by domain, sex and economic activity, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	48.9	3460	45.5	3399	40.2	3370	7.4	3473	18.1	3212
Retired	48.1	2031	43.8	2001	43.7	1973	7.0	2057	18.7	1881
PT employed	42.3	856	42.8	841	30.4	840	6.5	847	13.7	811
FT employed	46.8	333	44.0	326	30.5	326	8.2	329	12.9	311
Other	68.4	240	64.6	231	62.8	231	7.7	240	39.3	209
Women	47.2	4247	50.8	4169	37.3	4176	3.3	4362	17.4	3951
Retired	45.7	2584	47.3	2540	39.9	2523	2.7	2665	17.5	2388
PT employed	45.5	390	50.7	380	28.3	391	3.3	395	11.9	369
FT employed	47.2	685	50.3	671	22.4	682	4.4	693	13.3	648
Other	54.5	588	64.1	578	48.7	580	4.6	609	25.8	546
All	48.0	7707	48.3	7568	38.7	7546	5.2	7835	17.7	7163
Retired	46.7	4615	45.7	4541	41.6	4496	4.7	4722	18.0	4269
PT employed	44.6	1246	48.2	1221	29.0	1231	4.3	1242	12.5	1180
FT employed	46.9	1018	45.9	997	28.0	1008	7.0	1022	13.0	959
Other	59.1	828	64.3	809	53.3	811	5.6	849	30.2	755

Table 3A.10. Prevalence of social detachment by domain, sex and self-rated health, 2010–11

Self-rated health	Civic		Leisure		Cultural		Networks		Overall	
	<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	48.9	3471	45.5	3410	40.1	3381	7.4	3485	18.1	3222
Excellent	43.0	425	35.2	421	26.6	424	7.0	431	11.9	411
Very good	43.6	1095	38.8	1079	29.5	1065	6.8	1086	11.0	1025
Good	47.7	1122	44.6	1099	39.4	1095	7.4	1127	16.4	1041
Fair	57.2	581	54.7	566	57.3	552	9.5	585	27.3	519
Poor	63.6	248	70.0	245	66.0	245	5.5	256	42.7	226
Women	47.1	4254	50.8	4176	37.2	4182	3.3	4367	17.4	3957
Excellent	38.6	525	37.7	517	19.1	513	3.5	523	9.2	495
Very good	38.4	1266	42.2	1245	25.5	1257	3.1	1282	8.7	1208
Good	48.0	1397	51.9	1366	38.1	1374	3.4	1430	17.5	1300
Fair	56.7	778	61.9	763	51.7	751	3.6	817	26.5	694
Poor	63.7	288	69.8	285	68.7	287	3.3	315	41.4	260
All	47.9	7725	48.3	7586	38.6	7563	5.3	7852	17.7	7179
Excellent	40.7	950	36.5	938	22.7	937	5.2	954	10.5	906
Very good	41.0	2361	40.5	2324	27.5	2322	4.9	2368	9.8	2233
Good	47.9	2519	48.4	2465	38.7	2469	5.2	2557	16.9	2341
Fair	56.9	1359	58.6	1329	54.2	1303	6.2	1402	26.9	1213
Poor	63.6	536	69.9	530	67.4	532	4.3	571	42.0	486

Table 3A.11. Prevalence of social detachment by domain, sex and limiting long-standing illness, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N
Men	48.8	3471	45.5	3410	40.1	3381	7.4	3485	18.1	3222
LLSI	55.8	1080	54.8	1059	54.6	1039	7.6	1093	27.5	980
No LLSI	45.4	2391	41.0	2351	33.2	2342	7.3	2392	13.7	2242
Women	47.1	4253	50.8	4175	37.3	4182	3.3	4367	17.3	3956
LLSI	51.6	1500	58.9	1478	50.8	1489	3.2	1588	25.2	1381
No LLSI	44.5	2753	46.1	2697	29.6	2693	3.4	2779	13.0	2575
All	47.9	7724	48.3	7585	38.6	7563	5.2	7852	17.7	7178
LLSI	53.5	2580	57.1	2537	52.5	2528	5.1	2681	26.3	2361
No LLSI	45.0	5144	43.6	5048	31.4	5035	5.3	5171	13.3	4817

Table 3A.12. Prevalence of social detachment by domain, sex and limitations in ADLs, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N	%	<i>Unwted</i> N
Men	48.8	3472	45.5	3411	40.1	3382	7.4	3486	18.1	3223
No ADLs	47.1	2846	42.4	2798	35.6	2768	7.2	2843	14.7	2647
1–2 ADLs	52.8	448	54.1	438	55.4	446	7.6	460	28.9	415
3 or more ADLs	63.2	178	69.1	175	67.5	168	9.7	183	41.3	161
Women	47.1	4257	50.8	4179	37.3	4186	3.3	4371	17.3	3960
No ADLs	44.7	3363	46.8	3304	30.8	3306	3.2	3434	13.5	3148
1–2 ADLs	51.3	591	60.2	573	52.4	579	2.9	616	25.9	535
3 or more ADLs	61.7	303	71.3	302	71.2	301	4.8	321	39.7	277
All	47.9	7729	48.3	7590	38.6	7568	5.2	7857	17.7	7183
No ADLs	45.9	6209	44.6	6102	33.1	6074	5.1	6277	14.1	5795
1–2 ADLs	52.0	1039	57.4	1011	53.8	1025	5.1	1076	27.3	950
3 or more ADLs	62.3	481	70.5	477	69.8	469	6.7	504	40.3	438

Table 3A.13. Prevalence of social detachment by domain, sex and rurality of area of residence, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	48.9	3465	45.5	3404	40.1	3374	7.4	3478	18.1	3216
Urban	50.7	2480	47.0	2444	41.0	2420	7.4	2495	19.6	2303
Town	42.8	432	40.5	419	39.2	416	5.6	423	12.4	398
Rural	44.1	553	41.9	541	36.6	538	8.9	560	15.2	515
Women	47.1	4251	50.8	4173	37.3	4178	3.3	4363	17.3	3954
Urban	49.7	3072	52.6	3025	37.7	3028	3.2	3165	18.5	2865
Town	42.5	561	48.7	548	38.5	542	3.6	568	15.6	517
Rural	37.0	618	42.7	600	34.4	608	3.7	630	12.6	572
All	47.9	7716	48.3	7577	38.7	7552	5.3	7841	17.7	7170
Urban	50.2	5552	49.9	5469	39.2	5448	5.2	5660	19.0	5168
Town	42.6	993	45.0	967	38.8	958	4.5	991	14.1	915
Rural	40.5	1171	42.3	1141	35.5	1146	6.3	1190	13.9	1087

Table 3A.14. Prevalence of social detachment by domain, sex and access to transport, 2010–11

	Civic		Leisure		Cultural		Networks		Overall	
	<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>		<i>Unwted</i>	
	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%	<i>N</i>
Men	48.8	3472	45.5	3411	40.1	3382	7.4	3486	18.1	3223
Access	48.6	3426	45.1	3366	39.4	3340	7.4	3435	17.8	3184
No access	[61.3]	46	[69.4]	45	[85.7]	42	5.9	51	[37.7]	39
Women	47.1	4257	50.8	4179	37.3	4186	3.3	4371	17.3	3960
Access	46.2	4139	50.0	4063	35.7	4069	3.3	4246	16.2	3859
No access	74.2	118	73.4	116	84.7	117	4.2	125	53.6	101
All	47.9	7729	48.3	7590	38.6	7568	5.2	7857	17.7	7183
Access	47.4	7565	47.6	7429	37.5	7409	5.3	7681	17.0	7043
No access	69.6	164	71.7	161	84.6	159	4.7	176	48.5	140

Table 3A.15. Trajectories of civic participation detachment by age and sex (%), 2002–03 to 2010–11

	Men	Women	Total
Aged 50–59			
Never detached	35.1	34.6	34.8
Always detached	18.9	19.9	19.4
Improve	11.5	10.5	11.0
Decline	9.6	10.0	9.8
Improve then decline	7.5	9.3	8.5
Decline then improve	8.4	7.5	8.0
More than 2 transitions	9.0	8.2	8.6
<i>Unweighted N</i>	742	898	1640
Aged 60–69			
Never detached	39.3	47.5	43.6
Always detached	20.2	16.2	18.1
Improve	10.4	10.1	10.2
Decline	8.7	6.9	7.8
Improve then decline	7.7	6.6	7.1
Decline then improve	6.6	8.1	7.4
More than 2 transitions	7.1	4.6	5.8
<i>Unweighted N</i>	573	708	1281
Aged 70+			
Never detached	43.0	46.1	44.9
Always detached	17.6	15.0	16.0
Improve	6.6	9.5	8.4
Decline	12.5	12.4	12.4
Improve then decline	9.2	7.1	7.9
Decline then improve	5.5	4.0	4.6
More than 2 transitions	5.5	5.9	5.8
<i>Unweighted N</i>	292	401	693
All			
Never detached	37.9	41.4	39.8
Always detached	19.1	17.6	18.3
Improve	10.3	10.1	10.2
Decline	9.8	9.5	9.7
Improve then decline	7.9	7.9	7.9
Decline then improve	7.3	6.9	7.1
More than 2 transitions	7.7	6.5	7.1
<i>Unweighted N</i>	1607	2007	3614

Table 3A.16. Trajectories of leisure activities detachment by age and sex (%), 2002–03 to 2010–11

	Men	Women	Total
Aged 50–59			
Never detached	40.3	30.0	34.9
Always detached	15.2	19.0	17.2
Improve	7.4	9.4	8.4
Decline	13.0	13.1	13.0
Improve then decline	6.8	8.1	7.5
Decline then improve	11.5	12.7	12.2
More than 2 transitions	5.7	7.7	6.8
<i>Unweighted N</i>	685	835	1520
Aged 60–69			
Never detached	43.9	43.5	43.7
Always detached	16.6	18.8	17.8
Improve	8.4	8.7	8.5
Decline	11.0	9.0	10.0
Improve then decline	5.2	6.3	5.8
Decline then improve	8.6	7.7	8.2
More than 2 transitions	6.2	6.1	6.1
<i>Unweighted N</i>	525	635	1160
Aged 70+			
Never detached	39.6	32.1	35.1
Always detached	19.6	21.7	20.9
Improve	3.2	3.4	3.3
Decline	13.2	18.8	16.6
Improve then decline	9.2	9.9	9.6
Decline then improve	10.8	8.4	9.3
More than 2 transitions	4.4	5.7	5.2
<i>Unweighted N</i>	267	364	631
All			
Never detached	41.4	34.8	37.9
Always detached	16.5	19.5	18.1
Improve	7.0	7.8	7.4
Decline	12.3	13.1	12.7
Improve then decline	6.7	7.9	7.4
Decline then improve	10.4	10.1	10.3
More than 2 transitions	5.7	6.7	6.2
<i>Unweighted N</i>	1477	1834	3311

Table 3A.17. Trajectories of cultural engagement detachment by age and sex (%), 2002–03 to 2010–11

	Men	Women	Total
Aged 50–59			
Never detached	51.8	54.9	53.4
Always detached	12.2	8.8	10.4
Improve	6.6	5.8	6.2
Decline	11.4	11.8	11.6
Improve then decline	5.1	4.3	4.7
Decline then improve	8.1	8.2	8.2
More than 2 transitions	4.9	6.2	5.6
<i>Unweighted N</i>	719	899	1618
Aged 60–69			
Never detached	46.1	53.8	50.1
Always detached	13.4	7.0	10.1
Improve	5.5	6.0	5.8
Decline	11.8	14.0	12.9
Improve then decline	6.5	4.7	5.6
Decline then improve	8.1	10.2	9.2
More than 2 transitions	8.5	4.3	6.4
<i>Unweighted N</i>	521	621	1142
Aged 70+			
Never detached	38.9	36.9	37.7
Always detached	18.8	17.9	18.2
Improve	5.6	3.9	4.6
Decline	18.4	21.7	20.4
Improve then decline	6.0	6.8	6.5
Decline then improve	6.0	7.7	7.0
More than 2 transitions	6.4	5.1	5.6
<i>Unweighted N</i>	249	327	576
All			
Never detached	47.8	51.0	49.5
Always detached	13.6	10.0	11.7
Improve	6.1	5.5	5.8
Decline	12.6	14.4	13.6
Improve then decline	5.7	4.9	5.3
Decline then improve	7.8	8.7	8.3
More than 2 transitions	6.3	5.4	5.8
<i>Unweighted N</i>	1489	1847	3336

Table 3A.18. Trajectories of social networks detachment by age and sex (%), 2002–03 to 2010–11

	Men	Women	Total
Aged 50–59			
Never detached	83.6	93.7	89.1
Always detached	1.8	0.1	0.9
Improve	3.3	1.1	2.1
Decline	3.1	1.1	2.0
Improve then decline	0.5	0.6	0.5
Decline then improve	4.5	3.2	3.8
More than 2 transitions	3.3	0.2	1.6
<i>Unweighted N</i>	<i>713</i>	<i>958</i>	<i>1671</i>
Aged 60–69			
Never detached	84.9	94.5	90.1
Always detached	0.7	0.2	0.4
Improve	2.6	1.1	1.8
Decline	4.7	1.2	2.8
Improve then decline	0.9	0.3	0.6
Decline then improve	4.6	2.0	3.2
More than 2 transitions	1.6	0.8	1.2
<i>Unweighted N</i>	<i>570</i>	<i>746</i>	<i>1316</i>
Aged 70+			
Never detached	89.4	92.9	91.5
Always detached	0.0	0.2	0.1
Improve	1.6	2.3	2.0
Decline	1.9	1.2	1.5
Improve then decline	1.0	0.4	0.6
Decline then improve	4.8	2.3	3.3
More than 2 transitions	1.3	0.6	0.9
<i>Unweighted N</i>	<i>321</i>	<i>450</i>	<i>771</i>
All			
Never detached	85.1	93.8	89.9
Always detached	1.1	0.1	0.5
Improve	2.7	1.4	2.0
Decline	3.4	1.2	2.2
Improve then decline	0.8	0.4	0.6
Decline then improve	4.6	2.6	3.5
More than 2 transitions	2.3	0.5	1.2
<i>Unweighted N</i>	<i>1604</i>	<i>2154</i>	<i>3758</i>

Table 3A.19. Trajectories of overall social detachment by age and sex (%), 2002–03 to 2010–11

	Men	Women	Total
Aged 50–59			
Never detached	78.2	78.4	78.3
Always detached	2.2	2.3	2.3
Improve	4.2	2.8	3.4
Decline	4.6	4.8	4.7
Improve then decline	1.7	2.8	2.3
Decline then improve	5.9	6.3	6.1
More than 2 transitions	3.2	2.6	2.9
<i>Unweighted N</i>	588	745	1333
Aged 60–69			
Never detached	75.2	82.6	79.0
Always detached	2.4	1.6	2.0
Improve	3.4	3.6	3.5
Decline	6.3	5.0	5.6
Improve then decline	1.7	1.4	1.5
Decline then improve	5.8	5.0	5.4
More than 2 transitions	5.1	0.9	2.9
<i>Unweighted N</i>	444	525	969
Aged 70+			
Never detached	80.5	74.0	76.6
Always detached	1.1	5.0	3.5
Improve	1.1	1.6	1.4
Decline	6.9	10.5	9.0
Improve then decline	1.7	2.7	2.3
Decline then improve	5.2	4.7	4.9
More than 2 transitions	3.4	1.6	2.3
<i>Unweighted N</i>	191	257	448
All			
Never detached	77.5	78.9	78.3
Always detached	2.1	2.6	2.4
Improve	3.5	2.8	3.1
Decline	5.5	5.9	5.6
Improve then decline	1.7	2.3	2.0
Decline then improve	5.8	5.6	5.7
More than 2 transitions	3.9	1.9	2.8
<i>Unweighted N</i>	1223	1527	2750

Table 3A.20. Odds ratio of moving into detachment by baseline characteristics at transition point from logistic regression model

	Civic	Leisure	Cultural	Networks	Overall
Age					
50–59 (ref)					
60–69	0.828	0.743	1.073	1.116	0.982
70–79	0.777	0.849	1.366	1.007	0.944
80+	0.939	1.092	2.085	1.302	1.445
Sex					
Male (ref)					
Female	0.886	1.289	0.908	0.527	0.971
Marital status					
Coupled (ref)					
Single	0.768	0.788	0.931	1.895	0.906
Separated/Divorced	1.089	1.206	0.731	0.897	0.951
Widowed	0.980	0.824	0.745	0.442	0.598
Wealth quintile					
Poorest (ref)					
2	0.982	0.657	0.982	0.606	0.632
3	0.819	0.618	0.758	0.766	0.474
4	0.762	0.528	0.676	0.814	0.426
Richest	0.572	0.454	0.462	0.819	0.205
Economic activity					
FT employed (ref)					
PT employed	0.888	0.838	1.038	0.873	1.034
Retired	0.764	0.714	1.130	0.822	1.031
Other	0.984	0.955	1.249	0.751	1.251
Education					
Low (ref)					
Mid	0.620	0.849	0.634	1.118	0.540
High	0.440	0.649	0.324	1.236	0.287
Limitation in ADLs					
3 or more ADLs (ref)					
1–2 ADLs	0.829	0.772	0.737	0.857	0.951
No ADLs	0.827	0.691	0.676	0.935	0.783
Limiting long-standing illness					
LLSI (ref)					
No LLSI	1.080	0.867	0.738	0.832	0.879
Rurality					
Urban (ref)					
Town	0.825	1.035	1.145	0.867	0.927
Rural	1.105	1.076	1.202	1.378	1.421
Access to transport					
Transport (ref)					
No transport	1.302	1.187	1.760	0.555	1.598
Constant	0.527	0.770	0.690	0.063	0.287

Note: Significant estimates (p<0.05) shown in bold.

Table 3A.21. Odds ratio of moving into detachment by change in characteristics across transition points from logistic regression model

	Civic	Leisure	Cultural	Networks	Overall
Marital status					
Coupled both waves (ref)					
Single both waves	0.696	0.767	0.905	1.830	0.832
Separated/Divorced both waves	1.050	1.226	0.705	0.715	0.930
Widowed both waves	0.924	0.799	0.731	0.423	0.563
Become widowed	0.981	1.031	0.595	0.913	0.754
Become separated/divorced	1.443	1.406	0.584	1.049	2.171
Become coupled	2.514	1.608	0.390	1.143	1.017
Economic activity					
FT employed both waves (ref)					
PT employed both waves	0.962	0.850	1.083	0.781	0.993
Retired both waves	0.956	0.663	1.232	0.822	0.987
Other both waves	1.049	0.830	1.338	0.910	1.332
Retired from FT employed	1.957	0.622	1.167	0.745	0.852
Retired from PT employed	1.385	0.599	1.047	0.764	1.100
Retired from other	1.346	0.911	1.334	0.541	1.134
Become FT employed	0.923	0.658	1.033	1.206	0.857
PT employed from FT employed	1.315	0.872	1.001	1.023	1.134
PT employed from other or retired	0.956	1.197	0.767	0.245	0.707
Become other	0.974	0.757	1.368	0.791	1.021
Limiting long-standing illness					
No LLSI both waves (ref)					
LLSI both waves	0.945	1.218	1.508	1.188	1.325
No longer have LLSI	0.896	1.130	1.140	1.151	1.109
Now have LLSI	1.113	1.136	1.204	0.882	1.696
Access to transport					
Transport both waves (ref)					
No transport both waves	1.327	0.789	2.371	0.286	2.245
Now have transport	1.423	1.587	1.497	0.942	1.081
No longer have transport	1.894	1.075	3.453	1.465	2.025
Constant	0.467	0.680	0.435	0.053	0.206

Notes: Includes baseline control variables shown in Table 3A.20. Significant estimates (p<0.05) shown in bold.

4. The Psychological Well-Being, Health and Functioning of Older People in England

Andrew Steptoe *University College London*

Panayotes Demakakos *University College London*

Cesar de Oliveira *University College London*

Psychological or subjective well-being is a topic of major national and international policy interest. The analyses summarised in this chapter focus on the relationship of psychological well-being with demographic factors, health, and physical and cognitive functioning in ELSA. Cross-sectional analyses of the rich set of well-being measures obtained in 2010–11 are presented, together with longitudinal analyses testing whether well-being in 2002–03 and 2004–05 predicted health and disability in 2010–11 and mortality. Several different aspects of psychological well-being are examined, including evaluative well-being (general satisfaction with life), affective or hedonic well-being (enjoyment, positive affect and depressive symptoms) and eudemonic well-being (purpose in life, self-acceptance and control). Among the findings of the chapter are:

- Psychological well-being had a curvilinear relationship with age in 2010–11, being higher in respondents aged 60–69 and 70–79 than it was in older or younger participants. A similar pattern has been reported before in high-income countries.
- There is a pronounced socio-economic gradient in psychological well-being, with greater well-being in more affluent sectors of the population. The effects are stronger for evaluative and eudemonic aspects of well-being than for measures of positive affect and enjoyment of life.
- Both paid employment and volunteering were associated with greater psychological well-being in 2010–11. Higher psychological well-being was also associated with being married (as opposed to never married, divorced/separated or widowed), being physically active, not smoking and better cognitive function.
- There were strong cross-sectional associations between psychological well-being and health, particularly in relation to chronic illness and disability, albeit with variations across different aspects of well-being.
- There has been a small but consistent deterioration in affective well-being between 2002–03 and 2010–11 in ELSA, with similar patterns in different age groups. Life satisfaction has not shown comparable trends over this period.

- Psychological well-being in 2004–05 predicted the onset of disability, slower walking speed, impaired self-rated health and the incidence of coronary heart disease in 2010–11. Associations were stronger for affective and eudemonic well-being than for life satisfaction. Psychological well-being was not a reliable predictor of the development of memory impairment over this period.
- Survival over an average of more than nine years was associated with greater enjoyment of life in 2002–03. Effects were large, with the risk of dying being around three times greater among individuals in the lowest compared with the highest third of enjoyment of life, and were independent of age, sex, ethnicity, wealth, education, baseline health and other factors. These findings concerning the development of poor health and mortality suggest that measuring psychological well-being may help identify individuals at risk of future health problems and functional impairment.

4.1 Introduction

There is growing interest in psychological or subjective well-being as an indicator of societal progress among policymakers both nationally and internationally (Dolan, Layard and Metcalfe, 2011). The debate has been stimulated by the Commission on the Measurement of Economic Performance and Social Progress set up by the French government and chaired by Joseph Stiglitz, which argued that measures of economic performance such as gross domestic product were insufficient as indicators of the progress of society and that self-reported well-being should also be taken into account (<http://www.stiglitz-sen-fitoussi.fr/en/index.htm>). The Organisation for Economic Cooperation and Development (OECD) has developed a compendium of well-being indicators to provide information about the condition of people's lives in developed market economies (<http://www.oecd.org/dataoecd/4/31/47917288.pdf>), while the World Economic Forum (2012) and the United Nations General Assembly have also proposed that psychological well-being should be considered along with the economy, work, community and family as a key issue in sustainable development.

Psychological well-being is particularly relevant to older people for several reasons. The oldest-old are the fastest-growing sector in society, and it is estimated that in 20 years' time, nearly a quarter of the population in the UK will be aged 65 and over (Medical Research Council, 2010). As life expectancy increases and treatments for life-threatening disease become more effective, the issue of maintaining psychological well-being and morale at older ages is becoming more important. Additionally, a high proportion of the budget for health and social care is devoted to the care of older people, making it imperative to understand the determinants of psychological well-being and its relationship with health outcomes.

The UK has been at the forefront internationally in the measurement of the psychological well-being of the population, and the Office for National Statistics has used the Annual Population Survey to pilot measures that will be

used in the Measuring National Well-Being Programme (Tinkler and Hicks, 2011). To date, however, these assessments have been cross-sectional (Office for National Statistics, 2012). Psychological well-being has been measured in every wave of ELSA, with more extensive measures in 2010–11 than previously. This provides the opportunity to explore the profile of psychological well-being among older men and women in England and to assess the relationship between psychological well-being and economic circumstances, health, family situation, social relationships, disability, health behaviour and cognitive function. The longitudinal data have allowed us to track the different aspects of psychological well-being over eight years and five waves of data collection, as well as to examine whether psychological well-being early in the study (in 2002–03 and 2004–05) predicted health and disability outcomes in 2010–11.

The nature of psychological well-being

Psychological or subjective well-being is a multifaceted concept; it is generally agreed that three aspects can be distinguished (Dolan, Layard and Metcalfe, 2011; Kahneman and Deaton, 2010):

- Evaluative well-being, involving global assessments of how people evaluate their lives, or their satisfaction with life.
- Affective or hedonic well-being, involving measures of feelings such as happiness, sadness and enjoyment. There is compelling evidence that positive indicators are not simply the opposite of negative indicators, but that both carry valuable information (Kahneman and Krueger, 2006).
- Eudemonic well-being, which focuses on judgements about the meaning or purpose of one's life and appraisals of constructs such as fulfilment, autonomy and control.

Although there is a broad association between the three domains, they do represent distinct aspects of psychological function, and correlations between them are frequently modest. The domains also relate differently to other experiences. For example, there is evidence that ratings of life satisfaction and affective well-being react differently to events such as marriage, bereavement, unemployment and retirement, and also vary in the extent to which there is long-term adaptation following such experiences (Luhmann et al., 2012).

All three aspects have been assessed in ELSA, so are included in this chapter.

- Evaluative well-being has been measured with the Satisfaction with Life Scale (Diener et al., 1985) in 2004–05 to 2010–11.
- Both the positive and negative aspects of affective well-being have been assessed in every wave. We derived a scale of 'enjoyment of life' from the CASP-19 quality of life questionnaire, while the CES-D scale has been used to assess depressive mood. Additionally, the ELSA interview in 2010–11 included a more extensive positive affect measure adapted from the Health and Retirement Study (HRS).
- Eudemonic well-being is a complex notion, and several different scales have been used in its measurement (Ryff and Keyes, 1995). In ELSA, we

assessed it using items from the CASP-19 in all five ELSA interviews up to 2010–11.

4.2 Methods

4.2.1 Sample

Different samples were used for the needs of the different parts of the analysis.

The cross-sectional analyses described in Section 4.3 used exclusively data from wave 5 (2010–11) and aimed at exploring the different aspects of the psychological well-being of people aged 52 and older and their associations with wealth, health, health behaviours, cognitive function and social variables such as volunteering and labour market participation. The sample in 2010–11 includes three different cohorts: (a) the original ELSA cohort that has participated at baseline in 2002–03 (wave 1) and consisted of people then aged 50 or older; (b) the refreshment sample that was added to ELSA in 2006–07 (wave 3) and consisted of people then aged 50–54; and (c) a new cohort that was added to ELSA in 2008–09 (wave 4) and comprised people then aged 50–74.

The longitudinal analyses in Section 4.4 highlight changes in psychological well-being measures over time, while those in Sections 4.5 and 4.6 describe prospective associations between psychological well-being measures and subsequent health, disability and mortality. In Section 4.4, we present analyses of different dimensions of psychological well-being across five waves of ELSA (from 2002–03 to 2010–11) according to age, sex and wealth at baseline, presenting trends in affective and eudemonic well-being over this period. The analysis of evaluative well-being (life satisfaction) did not involve 2002–03 because data on life satisfaction were only collected from 2004–05 onwards. The sample in these analyses consisted of people who were members of the original ELSA cohort and participated in all five waves of data collection (except for the analyses involving life satisfaction, which were based on people who participated in waves 2 to 5).

In Section 4.5, affective, eudemonic and evaluative well-being in 2004–05 were used to analyse change in cognitive function (memory), physical function (gait speed) and self-rated health, and the onset of physical disability and coronary heart disease, over six years of follow-up (from 2004–05 to 2010–11). The sample comprised members of the original ELSA cohort who had participated in the study in both 2004–05 and 2010–11.

Finally, the analyses of the association between psychological well-being in 2002–03 and survival until early 2012 involved all members of the wave 1 core sample who consented to have their mortality tracked through official records. It should be noted that people who had dropped out of ELSA after wave 1 were included in these analyses. (See Section 4.6.)

All analyses included only core members of the study for whom a weighting factor to correct for non-response has been estimated. Information from partners of core members of the study, who were not themselves core members, was not used.

4.2.2 Psychological well-being measures

As noted in the introduction, we measured three components of psychological well-being:

- (1) Evaluative well-being was assessed in terms of life satisfaction, reflecting the cognitive-judgemental aspect of well-being. We measured life satisfaction with the Satisfaction with Life Scale (SWLS) (Diener et al., 1985). This consists of five statements about overall satisfaction with life. Possible responses to these statements ranged from 6 (strongly agree) to 0 (strongly disagree) (the mid-point was 3: neither agree nor disagree). The life satisfaction summary score ranged from 0 to 30, with higher values reflecting greater satisfaction with life. For the purposes of the longitudinal analyses, we also derived tertiles of life satisfaction score (lowest tertile: 0–20; intermediate tertile: 21–25; and highest tertile: 26–30).
- (2) The affective aspects of psychological well-being were assessed with three different measures:
 - a. Enjoyment of life was measured using four questions from the CASP-19 questionnaire. CASP-19 is an important measure of quality of life in ELSA and, according to its developers, addresses four main domains: control, autonomy, self-realisation and pleasure (Hyde et al., 2003). For the purposes of this chapter, we derived an Enjoyment of Life scale, which is conceptually close but not identical to the original Pleasure scale. It has previously been used to study the relationship between affective well-being and mortality (Steptoe and Wardle, 2011 and 2012) and the biological correlates of psychological well-being (Steptoe et al., 2012). The Enjoyment of Life scale was the summary score of the following questions: (i) ‘I enjoy the things that I do’; (ii) ‘I enjoy being in the company of others’; (iii) ‘On balance, I look back on my life with a sense of happiness’; and (iv) ‘I feel full of energy these days’, with responses ranging from 3 (often) to 0 (never). The range of the scale was 0 (lowest possible score) to 12 (highest possible score). Scores were generally high, with a skewed distribution, so the tertiles that were used in the longitudinal analysis were created as follows: lowest tertile: 0–10; intermediate tertile: a score of 11; highest tertile: a score of 12.
 - b. Negative affective well-being was measured as elevated depressive symptoms on the Center for Epidemiological Studies Depression (CES-D) scale (Radloff, 1977; Steffick, 2000). ELSA, along with the HRS, uses a shortened eight-item version of the CES-D, which includes eight questions about depressive symptoms experienced during the week before the ELSA interview. Each item was answered with a yes/no response, and responses were summed to create a scale ranging from 0 to 8. A dichotomous variable distinguishing between those with elevated depressive symptoms and those without elevated depressive symptoms was derived. The criterion used to distinguish between the two groups was the presence of four or more depressive symptoms. This is a well-

known and validated cut point (Steffick, 2000). Thus, participants who reported four or more depressive symptoms were classified as having elevated depressive symptoms and therefore as possible cases of depression, while participants who reported fewer than four depressive symptoms were classified as free of elevated depressive symptoms.

- c. The third measure of affective well-being was a 13-item positive affect scale developed for the HRS. This was derived from the Positive and Negative Affect scale (PANAS-X) devised by Watson and Clark (1994). Participants were asked the extent over the past 30 days to which they felt each of 13 items (e.g. enthusiastic, interested, happy and inspired), with responses ranging from 0 for 'not at all' to 3 for 'very much'. Responses were summed to generate a total ranging from 0 to 39, with higher scores indicating greater positive affect. This measure was administered in ELSA for the first time in 2010–11, so it is included in the cross-sectional but not the longitudinal analyses.
- (3) The eudemonic dimension of well-being was measured using the remaining 15 questions of CASP-19 not included in the Enjoyment of Life scale. These items address several aspects of the concept of eudemonia described by Ryff and Keyes (1995), measuring control (e.g. 'I feel that what happens to me is out of my control', reverse scored), autonomy (e.g. 'I feel that I can please myself what I do'), purpose in life (e.g. 'I feel that my life has meaning'), personal growth (e.g. 'I choose to do things that I have never done before') and self-acceptance (e.g. 'I feel satisfied with the way my life has turned out'). The summary score of the eudemonia scale ranged from 0 (lowest possible score) to 45 (highest possible score). As with the other well-being measures, we derived tertiles of eudemonic well-being for the longitudinal analyses. The distribution of tertiles was as follows: lowest tertile: 0–30; intermediate tertile: 31–37; and highest tertile: 38–45.

4.2.3 Classificatory variables, social covariates and outcome measures

Three main classificatory variables were employed to analyse the psychological well-being measures: age, sex and wealth. Marital status, labour market participation, volunteering, self-rated health, limiting long-standing illness, disability, health behaviours, cognitive and physical functioning, and coronary heart disease were also measured as correlates of well-being.

Main classificatory variables

Age was coded into four groups: 50 to 59 years, 60 to 69 years, 70 to 79 years, and 80 years or older. In the wave 5 (2010–11) cross-sectional analyses (Section 4.3) and longitudinal analyses described in Section 4.5, the youngest age group contained people aged 52 to 59 years. This is because there was no refreshment sample either in 2004–05 or in 2010–11, so the youngest participants had already been involved in the study for two years.

The socio-economic stratification variable used in our analysis was wealth. Wealth reflects command over material resources much better than other

Psychological well-being

measures of socio-economic status in this age group (Oliver and Shapiro, 1997) and has been found to be the strongest socio-economic predictor of health in the ELSA sample (Demakakos et al., 2008). Wealth was categorised into five equal groups of net total non-pension wealth measured at benefit unit level (a benefit unit is a couple or single person along with any dependent children they might have). The variable of net total non-pension wealth in ELSA reflects the value of all assets (i.e. houses or other property, businesses, and any form of savings and investment) except pension wealth, minus debt. The longitudinal analyses employed wealth data from 2002–03 or 2004–05, while the cross-sectional cross-wave analyses used wealth data from 2010–11.

Social covariates

- i. Marital status was classified as married, never married, divorced/separated and widowed. In some analyses, a dichotomous variable (married / not married) was used.
- ii. Given the importance of retirement for older people, we also examined the association between psychological well-being and labour market participation. The latter was measured using a dichotomous variable that distinguished between those who were economically active and those who were not.
- iii. Because volunteering is an important productive activity for older people and an important determinant of mortality (Musick, Herzog and House, 1999) and psychological well-being (Greenfield and Marks, 2004; Borgonovi, 2008), we also assessed whether our respondents were doing any voluntary work or not.

Health outcomes

- i. Disability is used in this chapter as one of the main correlates of psychological well-being because of its key role for older people's independence and quality of life. It was measured as self-reported limitations in activities of daily living (ADLs) that were caused by physical, mental, emotional or memory problems and lasted for more than three months. The ELSA questionnaire included six ADL questions (e.g. difficulties with walking across a room or bathing/showering). We derived a dichotomous variable of ADL limitations – reporting none or one ADL limitation versus reporting two or more limitations in ADLs – which was used in both cross-sectional and longitudinal analyses. We used two or more ADL limitations since this may be more relevant to accessing social care than a single limitation. A dichotomous measure of self-reported limiting long-standing illness (yes versus no) was also used in the cross-sectional analyses.
- ii. We used gait speed (m/sec) as an objective measure of physical function. Gait speed is known to be a strong predictor of incident disability (Guralnik et al., 2000) and mortality (Cooper, Kuh and Hardy, 2010). A lower gait speed is a sign of impaired physical functioning. The gait speed test involved walking twice a distance of eight feet at usual pace from a standing start. Gait speed was calculated by dividing distance by the mean time of the two walks (or a single time measurement in the case of there being no second valid time measurement) and was

computed only for participants who performed the test without the use of walking aids or other help.

- iii. Cognitive ability is an important dimension of healthy ageing and a major determinant of independence at older ages. Analysis of the 2002–03 ELSA data showed associations between well-being and better cognitive function (Llewellyn et al., 2008). We measured cognitive function with a memory test that consisted of 10 randomly selected words that the respondents were asked to recall immediately and five minutes later (immediate and delayed word recall). We used the total number of recalled words (possible range: 0 to 20 words) as a marker of memory.
- iv. Self-rated health is a robust predictor of mortality (Idler and Benyamini, 1997) and a valuable tool for evaluating health (Jylha, 2009). It was used in our analyses both as a correlate and as an outcome of psychological well-being. Self-rated health was measured by asking people whether they rated their health as excellent, very good, good, fair or poor. The aim was to assess the extent to which psychological well-being is associated with self-perceptions of health and influences future judgements about it.
- v. Cardiovascular disease is a major health problem in middle and older ages. It was selected as one of the main health variables in our analysis because: (a) it is highly prevalent among older people; (b) it is a common cause of many health-related problems in older age; (c) it is known to impact on psychological well-being; and (d) positive affect and high levels of well-being may be protective against its development (Davidson, Mostofsky and Whang, 2010). We computed whether or not ELSA respondents reported having a cardiovascular disease in 2010–11, including the following conditions: diabetes, heart attack (including myocardial infarction and coronary thrombosis), congestive heart failure, heart murmur, abnormal heart rhythm and stroke. We also analysed the association between psychological well-being measures and the onset of coronary heart disease (CHD) (reporting angina pectoris or myocardial infarction versus not).
- vi. We assessed four health behaviours – i.e. physical activity (physical inactivity, low-, moderate- or vigorous-intensity physical activity at least once a week), smoking (current smoker, ex-smoker, never a smoker), frequency of alcohol consumption (daily or almost daily, 1–2 times a week, 1–2 times a month, never or almost never) and frequency of fruits and vegetables (consuming five portions a day versus not) – as correlates of psychological well-being. These variables are known correlates of health and could also be mediators of the association between psychological well-being and health (Ness and Powles, 1997; Leistikow et al., 1998; Rimm et al., 1999; Dauchet et al., 2006; Di Castelnuovo et al., 2006; He, Nowson and MacGregor, 2006; Gandini et al., 2008; Nocon et al., 2008; Woodcock et al., 2011).

4.2.4 Analysis

The cross-sectional analysis examined the associations between different dimensions of psychological well-being and health outcomes, health behaviours and social variables, and whether these associations varied with age, sex and wealth. We also examined the trends in well-being between 2002–03 (2004–05 in the case of life satisfaction) and 2010–11 in relation to age and wealth. The aim was to examine the extent of change and stability of psychological well-being in middle-aged and older people over eight (or six) years of follow-up. Individuals were categorised according to their age and wealth in 2002–03 for these analyses. Our second set of longitudinal analyses explored whether the different dimensions of psychological well-being predict change in a series of important health and disability outcomes. The aim in Section 4.5 was to examine psychological well-being as a determinant of health at older ages rather than as a product of health and disability.

Chi-square and ANOVA tests were used to assess the statistical significance of the observed differences in cross-sectional and longitudinal analyses. Logistic and ordinary least squares (OLS) regression models were estimated in Section 4.5. These regression models were adjusted for age, sex, wealth and a measurement of the outcome variable at baseline. The models relating psychological well-being with incident CHD did not include prevalent cases of CHD in 2004–05. Similarly, the logistic regression models of the association between psychological well-being measures and ADL disability were estimated only for respondents without ADL limitations in 2004–05. Finally, the associations between psychological well-being and mortality were modelled using Cox proportional hazards regressions, as described in Section 4.6.

The analytic samples varied slightly in size because of missing values. All analyses in Sections 4.3–4.5 were weighted for non-response.

4.3 Psychological well-being in 2010–11

4.3.1 Psychological well-being, age and sex

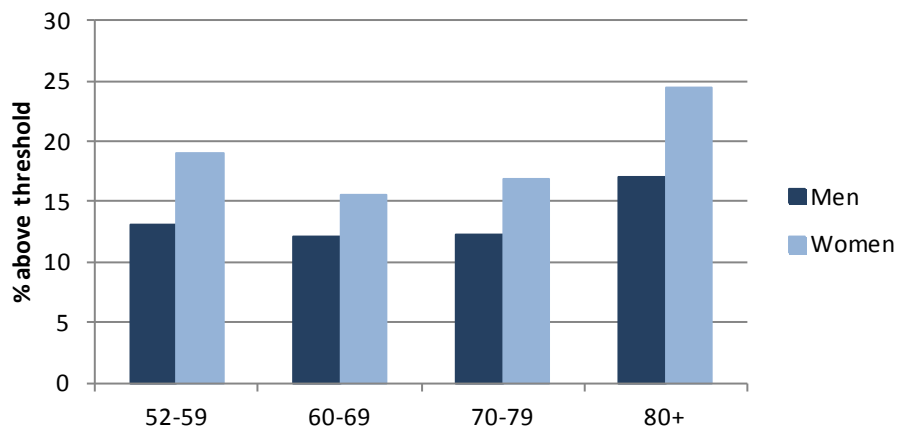
The findings for the five measures of psychological well-being assessed in 2010–11 and their distribution by age and sex are shown in Figure 4.1 and Tables 4A.1–4A.5. Over the complete cohort, 18% of women and 13% of men had depressive symptoms above the threshold in 2010–11 (≥ 4 CES-D symptoms). Women reported more depressive symptoms than men across the age spectrum. Depression scores were lower in the two middle (60–69 and 70–79 years) age categories and increased substantially at the oldest age group (80 and older). We found the reverse pattern for enjoyment of life, with higher levels in the 60–79 age groups than for younger and older participants. There were mixed differences between men and women in positive well-being measures, though women in the 60–69 age group showed the highest values. The CASP-derived measure of eudemonic well-being showed a similar curvilinear pattern with age, peaking at age 60–69 and decreasing sharply in the oldest age group. Regarding life satisfaction, there were differences related to age and sex. In men, the youngest age group (52–59) showed the lowest life satisfaction, while lower levels of life satisfaction were also observed among

participants aged 80 and older. Overall, women in ELSA were less satisfied with their lives than men and had the lowest levels in the oldest age group. The varying patterns of findings for the five psychological well-being measures used in this chapter indicate that they are not equivalent but tap slightly different aspects of well-being. Overall, the most vulnerable group across the whole spectrum of well-being measures was women aged 80 and older. This group showed lower levels of life satisfaction and well-being and greater levels of depressive symptoms in 2010–11.

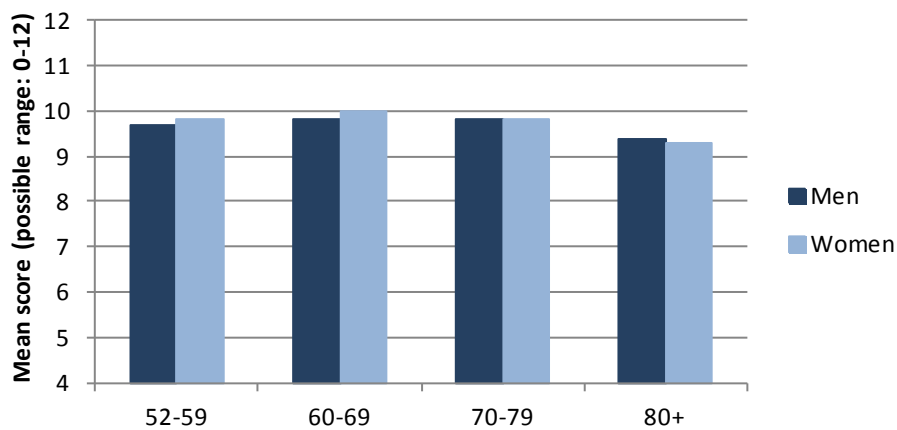
The U-shaped relationship between psychological well-being and age has been described in other studies in England and other western industrialised countries (Blanchflower and Oswald, 2008). For example, Stone et al. (2010) reported that, in a telephone survey of more than 340,000 people in the US, both affective and evaluative well-being were lower in respondents in their 40s and 50s than in younger people, rising in older participants. A similar profile has also been found in the first ONS Annual Experimental Subjective Well-Being Survey (Office for National Statistics, 2012). The pattern is unlikely to be related to the specific economic circumstances prevailing in 2010–11, but appears to be related to life stages and to changes in emotional self-regulation with age (Carstensen, Isaacowitz and Charles, 1999).

Figure 4.1. Well-being measures, age and sex in 2010–11

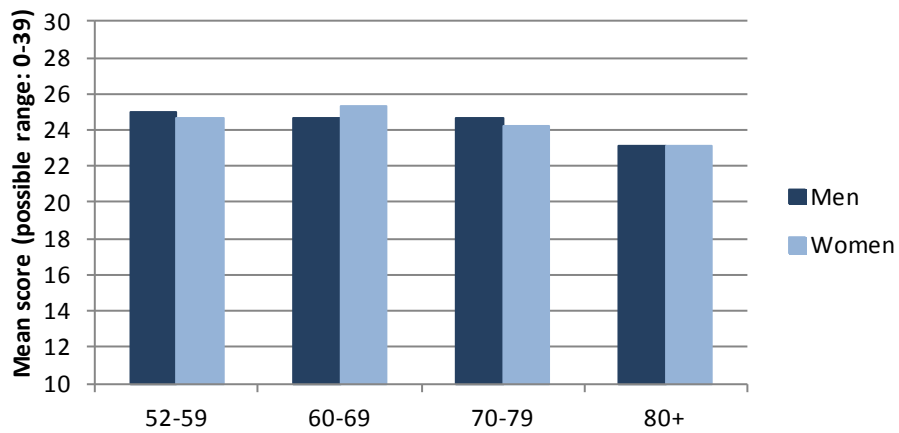
a) Elevated depressive symptoms by age and sex in wave 5



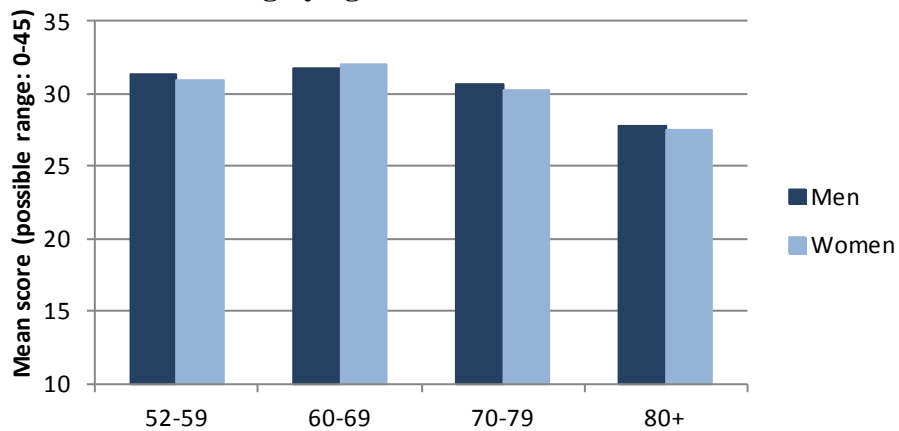
b) Enjoyment of life by age and sex in wave 5



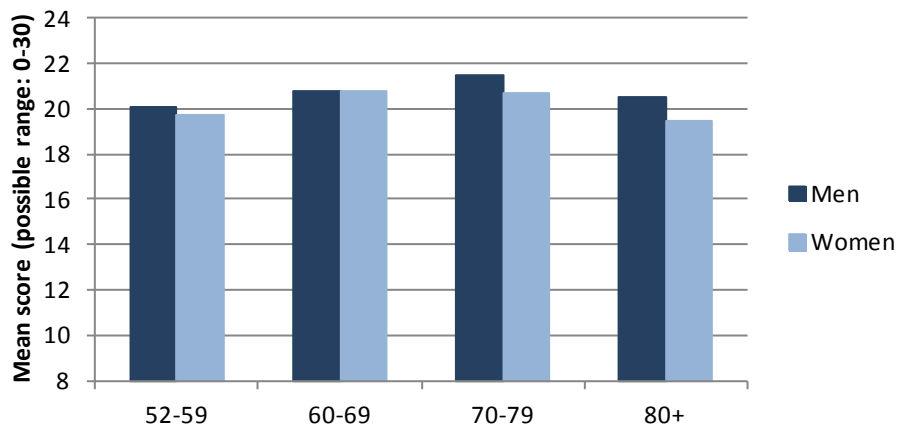
c) Positive affect by age and sex in wave 5



d) Eudemonic well-being by age and sex in wave 5



e) Life satisfaction by age and sex in wave 5

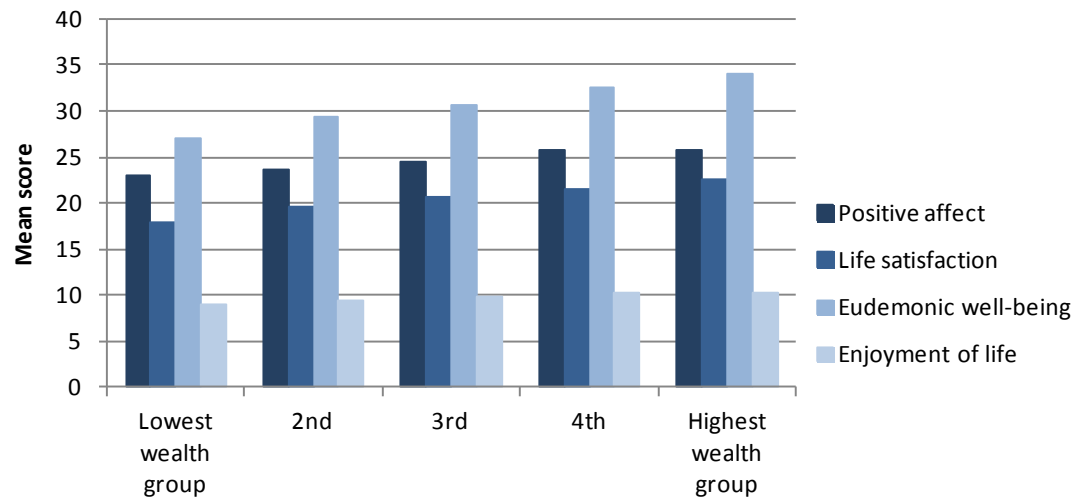


4.3.2 Psychological well-being and wealth

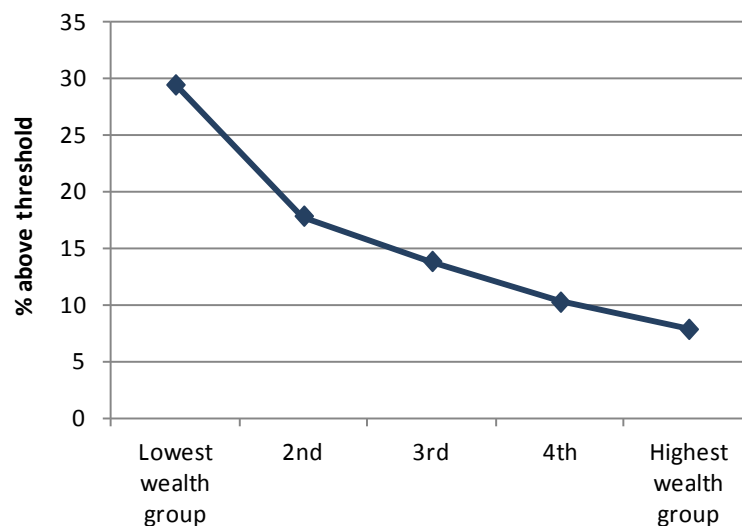
There is a negative association between socio-economic markers such as wealth or occupational status and depression, with greater depression in less affluent groups (Lorant et al., 2003). Affective well-being and life satisfaction are positively related to income, though some authorities argue that relative rather than absolute income is more important (Dolan, Peasgood and White,

Figure 4.2. Well-being measures and total net non-pension household wealth (wealth groups) in 2010–11

a) Well-being measures and wealth in wave 5



b) Elevated depressive symptoms and wealth in wave 5



2008). We found wealth to be associated with greater psychological well-being assessed by all five measures in 2010–11 (Tables 4A.6–4A.10). Figure 4.2 shows that participants from the higher wealth groups had a lower prevalence of depressive symptoms, greater life satisfaction, greater affective well-being and greater eudemonic well-being than those in the lowest wealth group. The differences are substantial; for example, 29% of people in the lowest wealth group in 2010–11 had depression scores above the threshold, compared with only 8% of the highest wealth group. There was a clear gradient in all measures, rather than a dichotomy between the poor and the remainder. So participants in the intermediate wealth groups had levels of psychological well-being that fell on average between the most and least wealthy groups. However, the strength of the socio-economic gradient was variable. Both life satisfaction and eudemonic well-being showed differences

between the lowest and highest wealth groups of more than 25%; by contrast, the differences for affective well-being (enjoyment of life and positive affect) were less marked. These results are consistent with Kahneman and Deaton's (2010) findings that socio-economic circumstances are more closely associated with evaluations of life than they are with happiness.

4.3.3 Psychological well-being and social circumstances in 2010–11

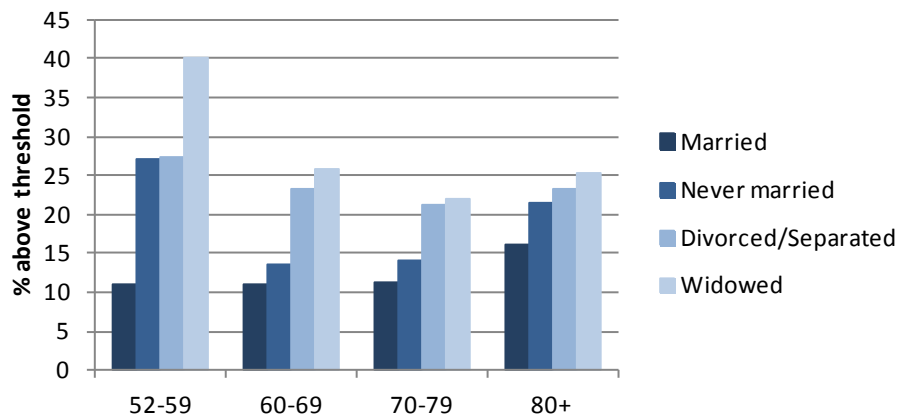
Marital status

Many studies have shown that married couples are more satisfied with their lives (Myers, 1999; Diener and Diener-McGavran, 2008) and less likely to become depressed (Cochrane, 1996) than people who never married or who are divorced, separated or widowed.

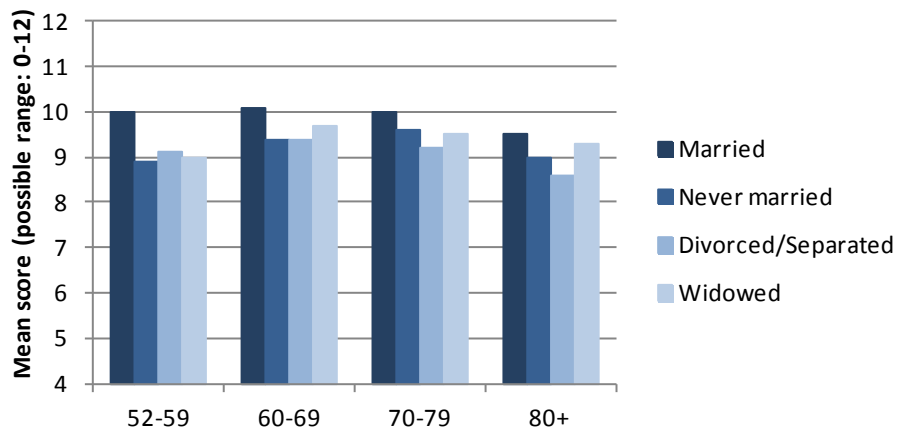
In 2010–11, those who were married were the least likely to report four or more depressive symptoms, averaging 11% compared with 20% for never married single people, 24% for separated or divorced people and 25% for widowed people (Table 4A.11). Overall, married ELSA participants had higher mean life satisfaction, eudemonic well-being, enjoyment of life and positive affect scores than those who were divorced/separated, widowed or never married (Tables 4A.12–4A.15). Figure 4.3 shows that the prevalence of elevated depressive symptoms was particularly high among widows who were aged 52–59 and that it decreased with age for separated and divorced people. These age patterns may reflect people's adjustment to these life events over time. The higher levels of life satisfaction, quality of life and positive affect among those who were married were fairly consistent across age groups. Interestingly, however, eudemonic well-being was particularly high among people aged 70–79 years who had never been married.

Figure 4.3. Well-being measures, marital status and age in 2010–11

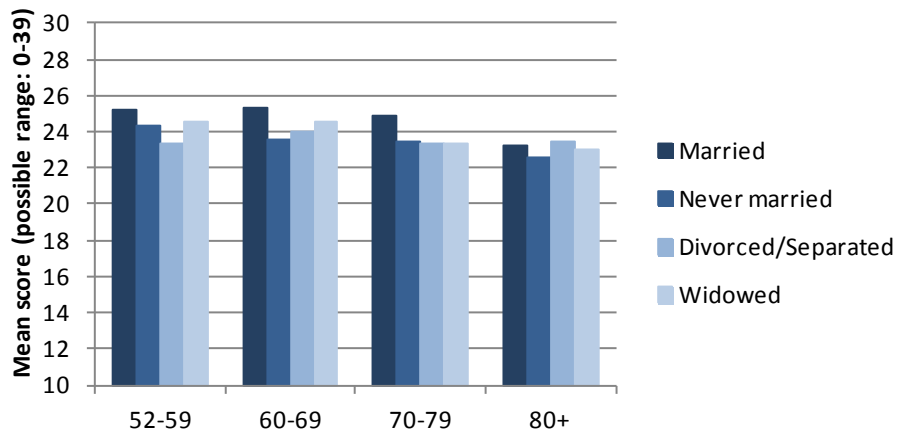
a) Elevated depressive symptoms by age and marital status in wave 5



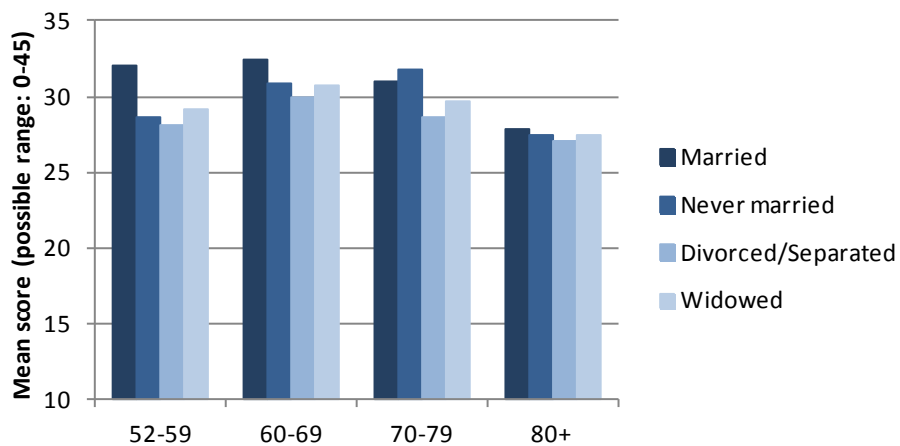
b) Enjoyment of life by age and marital status in wave 5



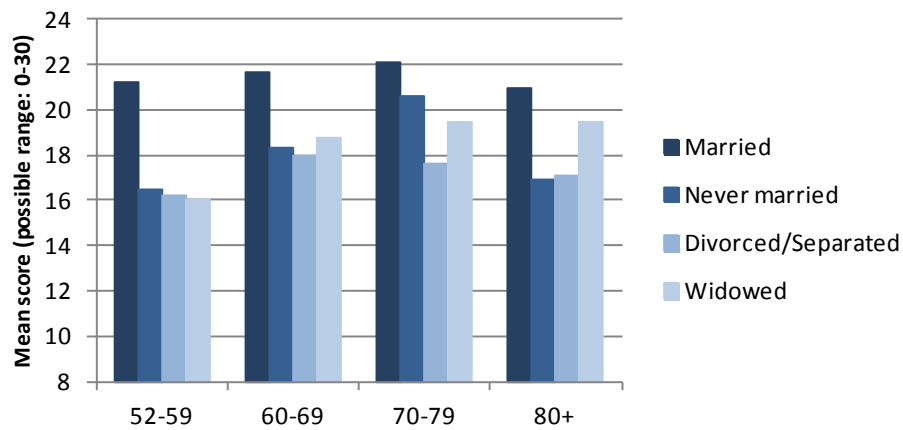
c) Positive affect by age and marital status in wave 5



d) Eudemonic well-being by age and marital status in wave 5



e) Life satisfaction by age and marital status in wave 5



Employment status

The prevalence of elevated depressive symptoms for participants who were not in the labour market was 18% compared with the 10% in those still at work (Table 4A.16). The younger participants (aged 52–59) not in work showed particularly high levels of depressive symptoms. Respondents who were in work also reported higher levels of affective and eudemonic well-being than those not in the labour market (Tables 4A.17–4A.20). It should be noted that the number of individuals in work in the 80+ age category was very low.

Volunteering

The percentage of participants reporting four or more depressive symptoms in 2010–11 was smaller among those who were doing some volunteering (10%) than among those who were not involved in volunteering (18%) (Table 4A.21). Similarly, levels of life satisfaction and affective and eudemonic well-being were higher among participants involved in voluntary work (Tables 4A.22–4A.25). These findings are consistent with previous literature linking volunteering with positive well-being (Morrow-Howell et al., 2003).

4.3.4 Psychological well-being and physical health in 2010–11

Self-rated health

Higher levels of depressive symptoms were reported by those participants who rated their health as fair/poor (35%) than by those who said that their health was excellent / very good / good (8%) (Table 4A.26). Not surprisingly, lower levels of life satisfaction, quality of life and positive affect were more prevalent among those who rated their health fair/poor (Tables 4A.27–4A.30).

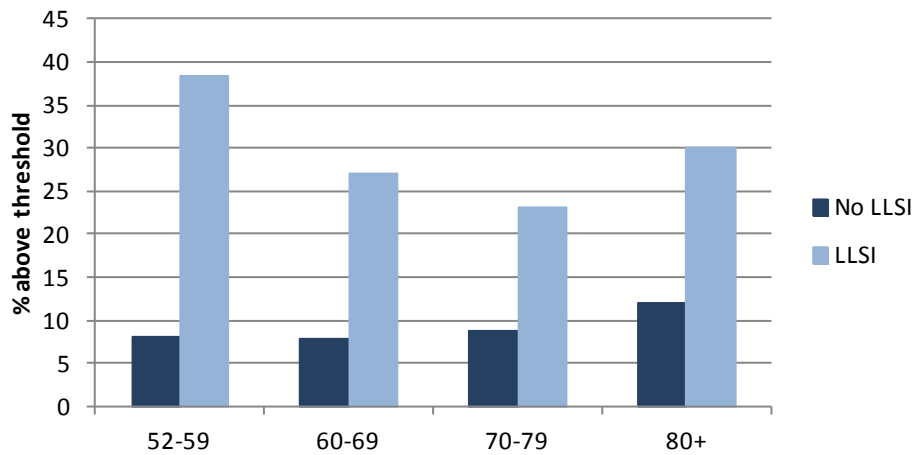
Limiting long-standing illness

ELSA participants who have a limiting long-standing illness were more depressed (≥ 4 CES-D symptoms) (Table 4A.31) and had lower levels of life satisfaction and affective and eudemonic well-being (Tables 4A.32–4A.35) than participants with no limiting long-standing illness. Figure 4.4 displays the associations between limiting long-standing illness and the five psychological well-being measures across the age spectrum. The associations were strong

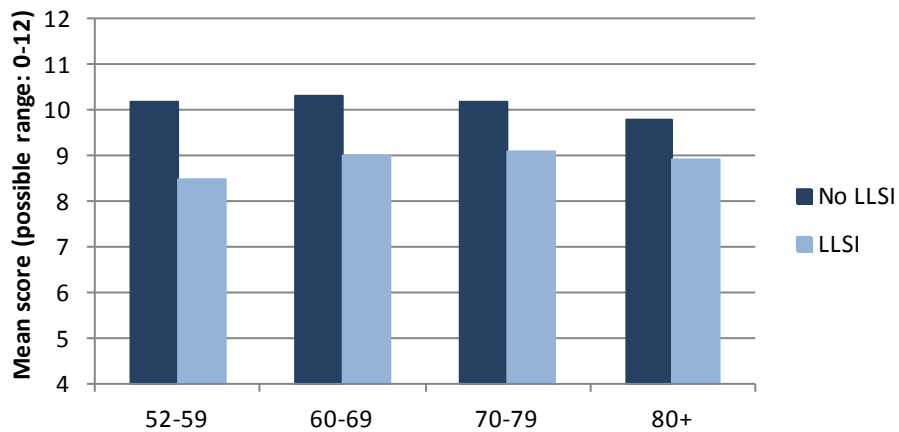
and varied with age. For example, the proportion of respondents with elevated depressive symptoms was almost five times greater in those with than in those without a limiting long-standing illness at age 52–59 years, with this difference reducing in older age categories up to the age of 80. Similar age differences were observed in all other well-being measures.

Figure 4.4. Well-being measures, limiting long-standing illness and age in 2010–11

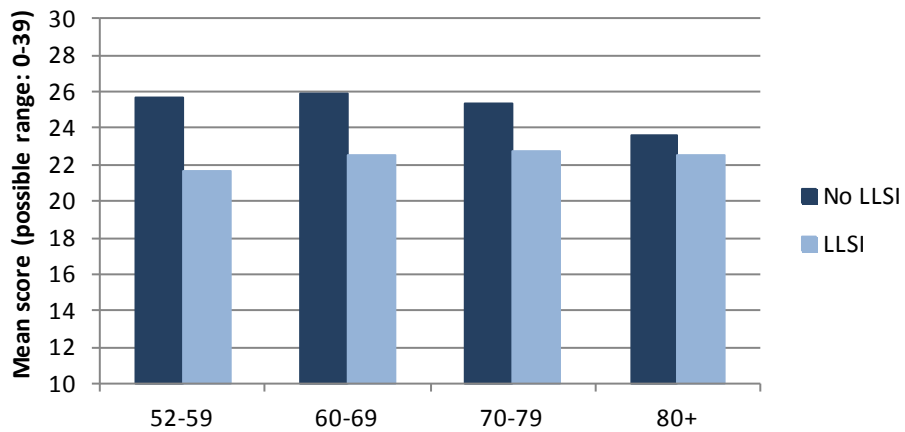
a) Elevated depressive symptoms by age and presence of limiting long-standing illness in wave 5



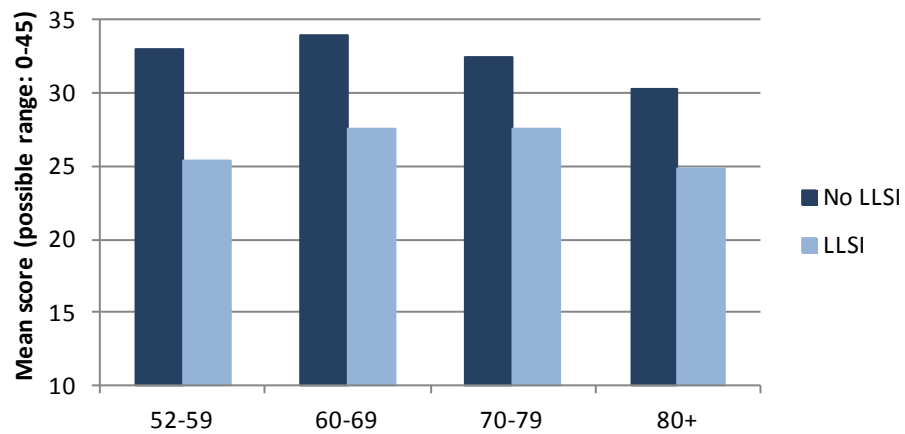
b) Enjoyment of life by age and presence of limiting long-standing illness in wave 5



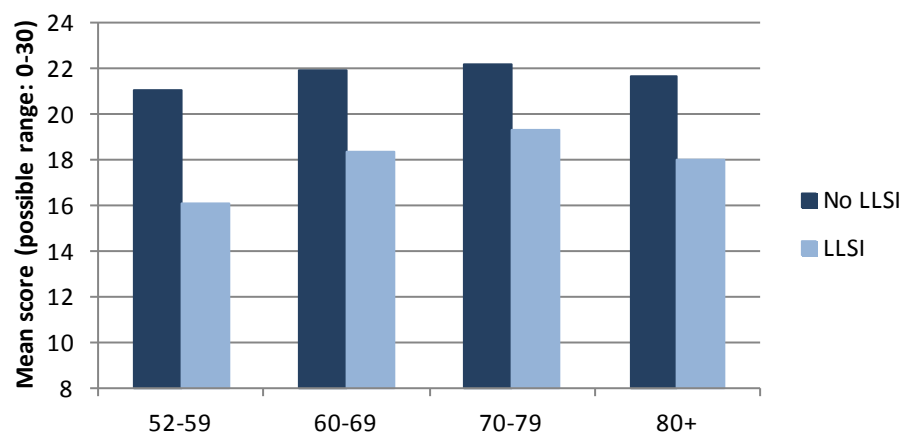
c) Positive affect by age and presence of limiting long-standing illness in wave 5



d) Eudemonic well-being by age and presence of limiting long-standing illness in wave 5



e) Life satisfaction by age and presence of limiting long-standing illness in wave 5



Cardiovascular morbidity

Table 4A.36 summarises the associations between elevated depressive symptoms and the presence of cardiovascular morbidity by age. Differences in depressive symptoms by cardiovascular disease (CVD) status were large irrespective of age. The associations between life satisfaction, affective and eudemonic well-being and cardiovascular morbidity are presented in Tables 4A.37–4A.40. Interestingly, the association with cardiovascular disease was much stronger for negative affective well-being (depression) than it was for the positive components (enjoyment of life and positive affect), suggesting a rather specific connection between heart disease and depressive symptoms (Meijer et al., 2011). In addition, differences in life satisfaction by presence/absence of cardiovascular disease almost disappeared in the two older age groups.

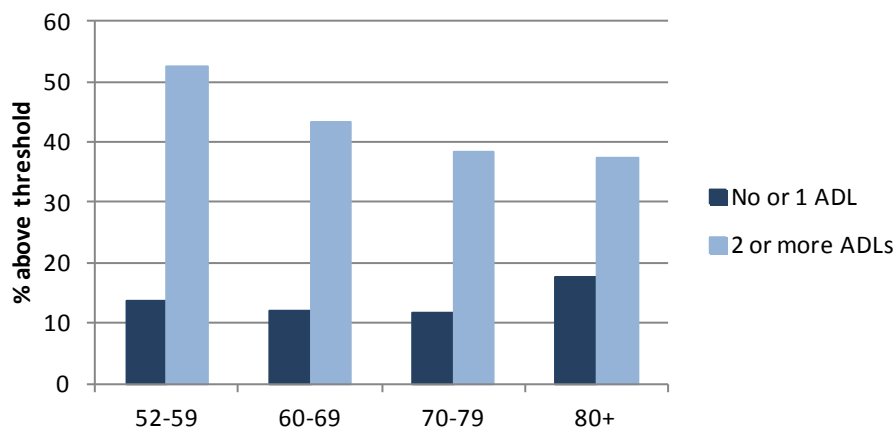
4.3.5 Psychological well-being and disability in 2010–11

Activities of daily living (ADLs)

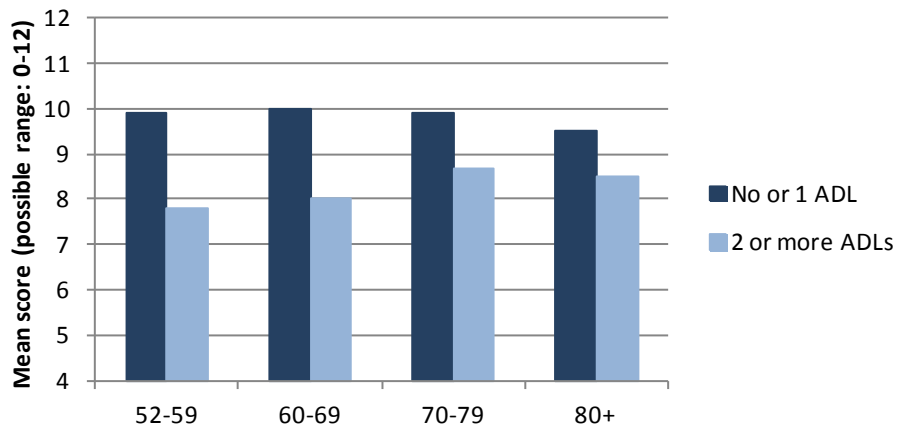
Table 4A.41 presents the distribution of depressive symptoms in relation to having two or more limitations in ADLs. It shows that 42% of people with two or more limitations in ADLs reported elevated depressive symptoms, while the rate for those with one or no ADL limitations was much lower at 13%. Differences were particularly large in younger age groups, diminishing in older people (Figure 4.5). Impaired ADLs were also associated with reduced positive affective well-being, reduced eudemonic well-being and lower life satisfaction (Tables 4A.42–4A.45). In all these cases, effects were greater at younger ages, suggesting that an impairment in ability to carry out daily activities before the age of 70 is associated with markedly reduced psychological well-being.

Figure 4.5. Well-being measures, ADL limitations and age in 2010–11

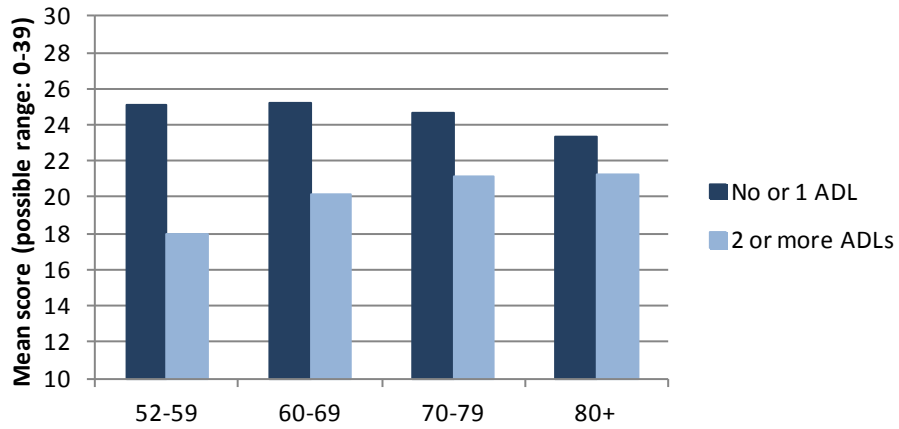
a) Elevated depressive symptoms by age and ADL limitations in wave 5



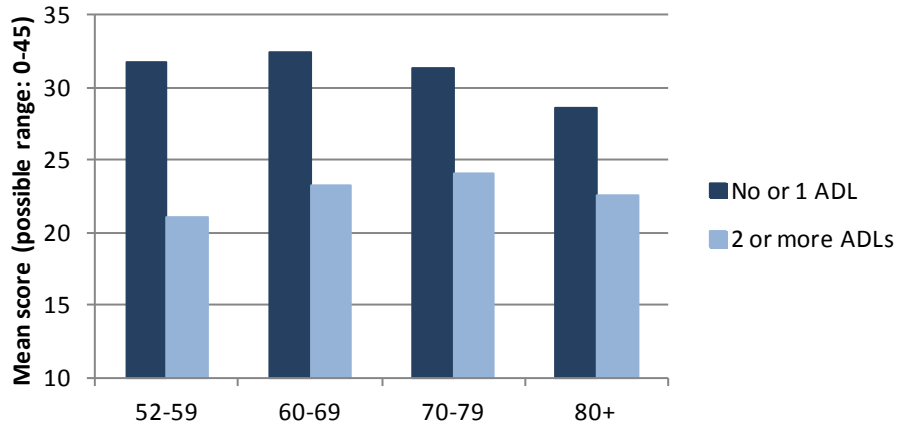
b) Enjoyment of life by age and ADL limitations in wave 5



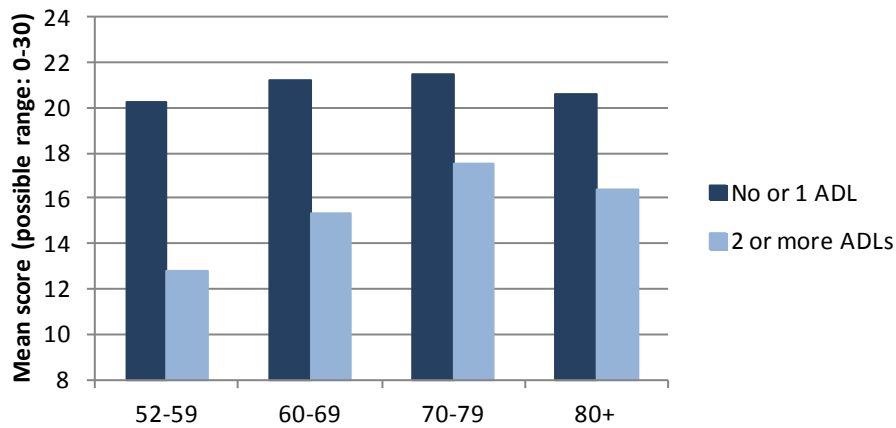
c) Positive affect by age and ADL limitations in wave 5



d) Eudemonic well-being by age and ADL limitations in wave 5



e) Life satisfaction by age and ADL limitations in wave 5



Mobility

ELSA participants who have mobility impairment were more depressed (23%) than those without it (7%) (Table 4A.46). The youngest group (52–59) with mobility problems reported particularly high levels of depressive symptoms. Differences in positive affective well-being were smaller, possibly reflecting adaptation or rescaling (Sprangers and Schwartz, 1999). Differences in eudemonic well-being were greater, perhaps because mobility impairment reduces a person’s sense of autonomy and control. (Tables 4A.47–4A.50.)

4.3.6 Well-being and health behaviours in 2010–11

Health behaviours are important for older adults. A longitudinal study of more than 20,000 men and women followed for 11 years showed that all-cause mortality and deaths from cardiovascular disease and cancer were inversely associated with four behaviours: not smoking, being physically active, drinking moderately, and eating five or more servings of fruit and vegetables per day (Khaw et al., 2008). The association between these four behaviours and psychological well-being in ELSA is described here.

Physical activity

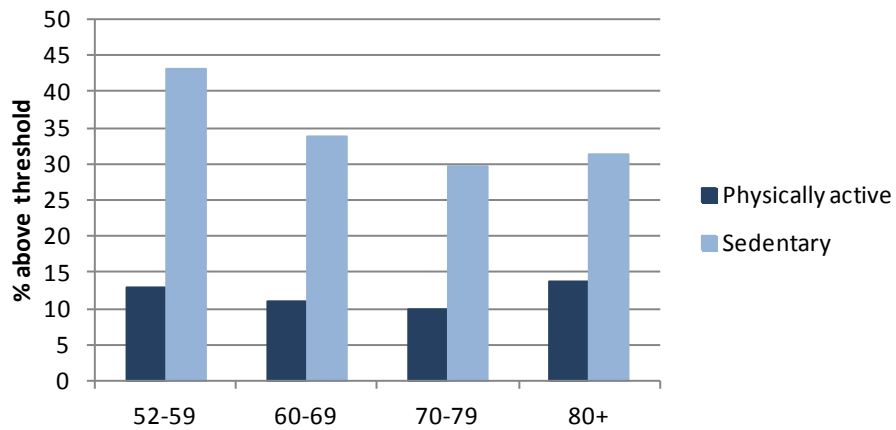
Although some declines with age are inevitable, there is considerable evidence that physically active older individuals maintain healthy functioning longer than do sedentary peers (Landi et al., 2007). It is also likely, although not yet fully established, that physical activity is critical to mental well-being in older people, as mobility is inexorably tied to maintenance of independent living (Frank and Patla, 2003). International differences in physical activity may contribute to cross-national variations in longevity (Steptoe and Wikman, 2010). In spite of the potential of regular physical activity to improve physical functioning and the feeling of well-being in the elderly, rates of physical activity remain low: in the 2008 Health Survey for England, fewer than 10% of men and 5% of women aged over 75 met current physical activity recommendations (Roth, 2009).

Differences in the five well-being measures between sedentary and physically active participants are presented in Figure 4.6 and Tables 4A.51–4A.55. Physical activity had a marked association with all three measures of affective

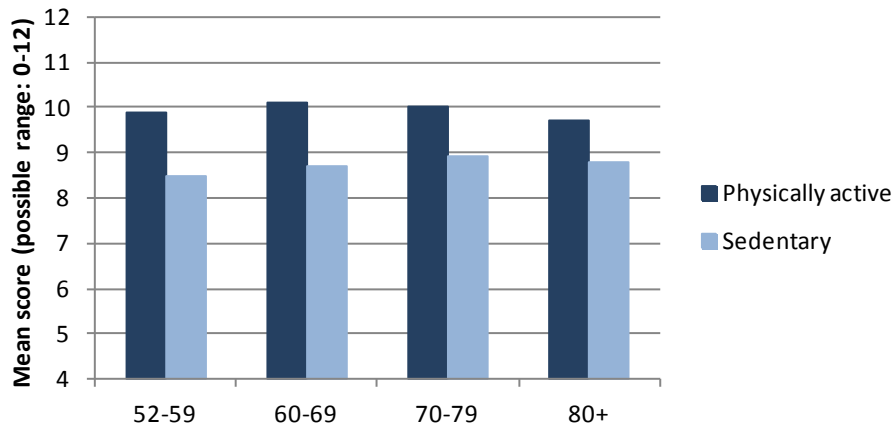
well-being, with far more sedentary individuals being depressed (33%) compared with the physically active (12%) and large differences in enjoyment of life and positive affect as well. Differences were generally preserved across the age spectrum.

Figure 4.6. Well-being measures, level of physical activity and age in 2010–11

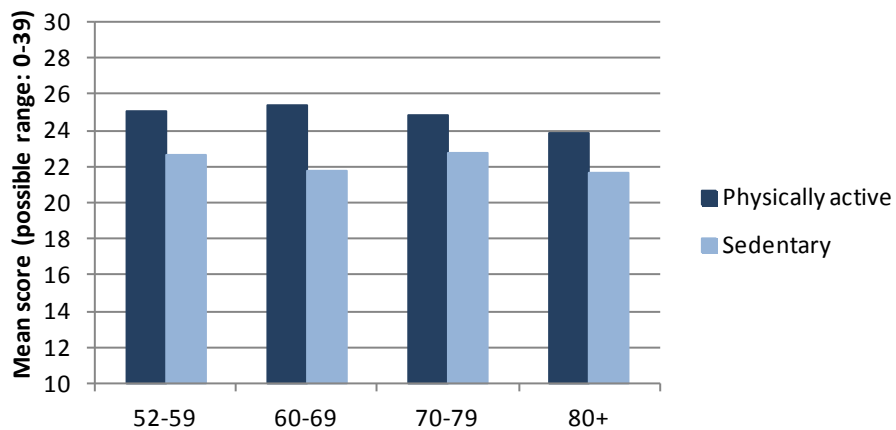
a) Elevated depressive symptoms by age and level of physical activity in wave 5



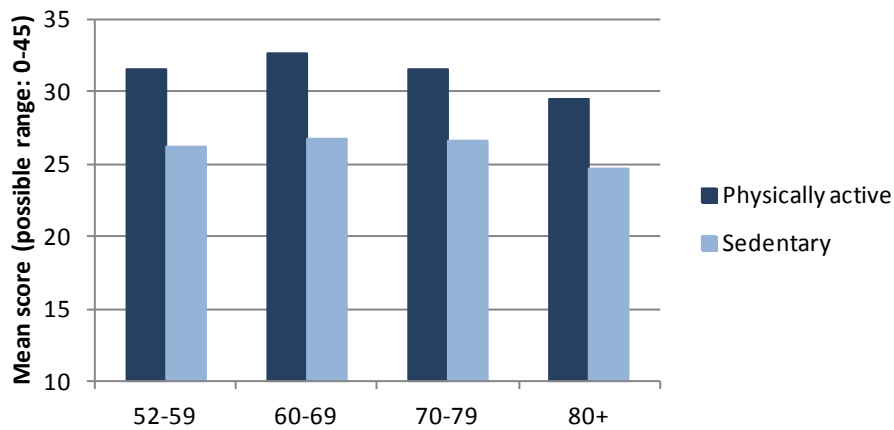
b) Enjoyment of life by age and level of physical activity in wave 5



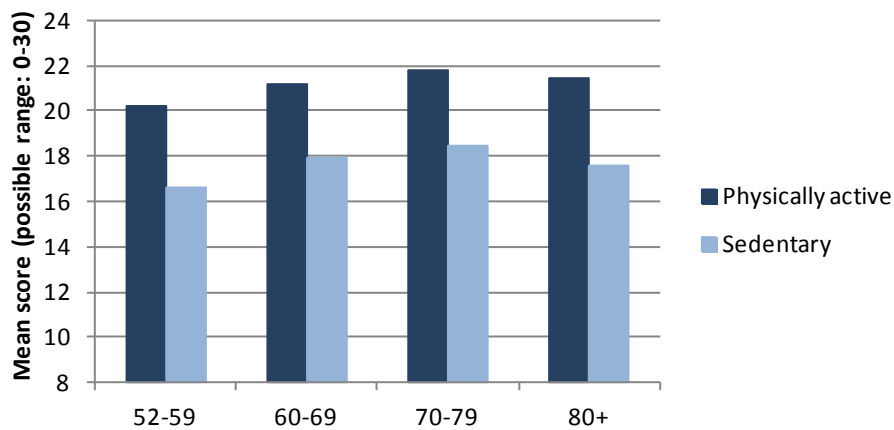
c) Positive affect by age and level of physical activity in wave 5



d) Eudemonic well-being by age and level of physical activity in wave 5



e) Life satisfaction by age and level of physical activity in wave 5



Smoking

Older smokers are at greater risk than non-smokers of developing cardiovascular disease, cognitive decline and premature mortality (Lam et al., 2007). The various indicators of psychological well-being in ELSA showed different associations with smoking in 2010–11 (Tables 4A.56–4A.60). There were large effects for depression, since substantially more current smokers reported elevated depressive symptoms (26%) than ex-smokers (13%) and those who never smoked (15%). Differences were much smaller for enjoyment of life, eudemonic well-being and life satisfaction and were not statistically significant for positive affect. These findings suggest a particularly strong association of smoking with poor mental health rather than other aspects of psychological well-being (Kassel and Hankin, 2006).

Alcohol consumption

Heavy alcohol consumption is less common among older than among middle-aged and younger adults. However, it remains a sizeable problem in the UK. Heavy alcohol consumption is associated with mortality in older adults (Ashton, Bajekal and Raine, 2010). It is well established that moderate alcohol consumption is associated with less cognitive decline and better quality of life in older adults than abstinence (Lang et al., 2007).

Psychological well-being

ELSA provides limited information about heavy drinking. But when we compared those who drank alcohol five to seven days a week with those who drank less or none at all, there were small differences in all well-being measures in favour of the regular drinkers (Tables 4A.61–4A.65). Thus fewer daily drinkers were depressed (12% versus 15%), and they reported higher levels of enjoyment of life, positive affect, eudemonic well-being and life satisfaction than those who drank less frequently. However, differences were small.

Diet

Adequate fruit and vegetable consumption is an important part of a healthy diet and current recommendations in the UK stress the importance of eating at least five portions a day. There is considerable evidence regarding the role of fruit and vegetable consumption in protecting against coronary heart disease, other cardiovascular diseases and some cancers (Ness and Powles, 1997; He, Nowson and MacGregor, 2006; World Cancer Research Fund / American Institute for Cancer Research, 2007).

As far as psychological well-being is concerned, there were few striking differences between ELSA participants who did and did not meet national recommendations for fruit and vegetable intake (i.e. at least five portions a day) (Tables 4A.66–4A.70). The strongest differences were for depressive symptoms, with less depression among those who ate five or more a day. Other measures of psychological well-being also favoured eating fruit and vegetables, but differences were small.

Conclusions

Our analyses of the associations between psychological well-being and health behaviours present a mixed picture. There were strong relationships with physical activity, with markedly greater well-being among physically active than among sedentary participants. There was also a strong association between smoking and depressive symptoms. But relationships with alcohol consumption and with fruit and vegetable intake were weak. The findings do not suggest that positive well-being is associated with a generally healthier lifestyle among older men and women.

4.3.7 Psychological well-being and cognitive function in 2010–11

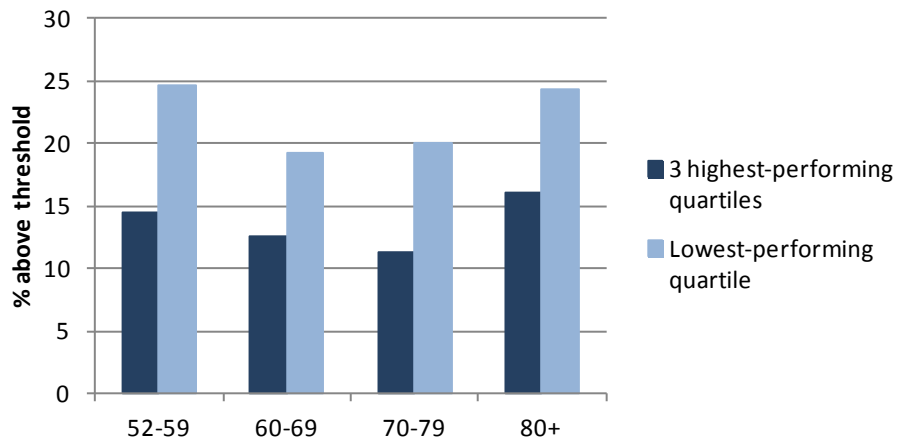
Progressive age-associated decline in memory, name-finding, complex decision-making and speed of information-processing is a common, though not inevitable, feature of late middle age and later life. Impairments in memory and aspects of executive processing may reduce the capacity to make important decisions about retirement, health, housing and finances in later life. Increasing difficulties with doing complex planning and organisational processing, as well as reduced mental flexibility, could lead to depression and social withdrawal. Basic abilities such as literacy and numeracy are also very important in dealing with complexities of daily life (Huppert, Gardener and McWilliams, 2006).

We compared respondents in the three highest-performing quartiles on measures of memory with those in the lowest quartile (Tables 4A.71–4A.75

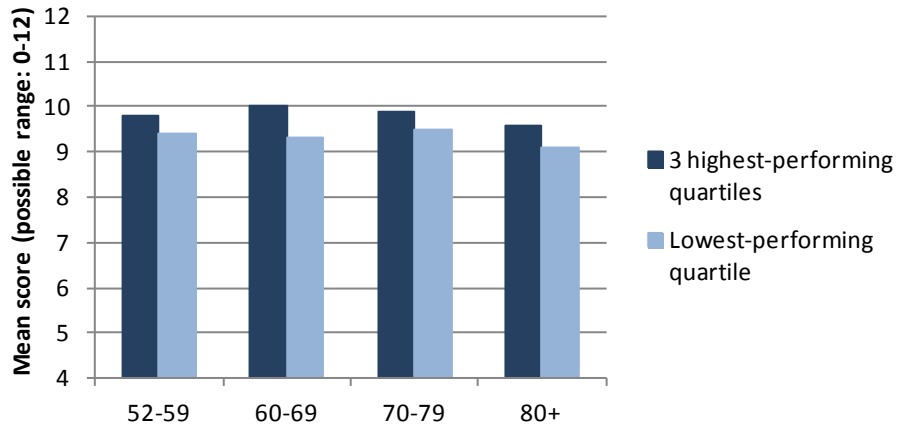
and Figure 4.7). Participants with poorer cognitive function were more likely to report depressive symptoms and had higher ratings on the two measures of positive affective well-being. Associations with life satisfaction differed by age, but it is striking that individuals in the oldest age group with poor memory had low levels of positive affect and eudemonic well-being.

Figure 4.7. Well-being measures, cognitive function (immediate and delayed recall) and age in 2010–11

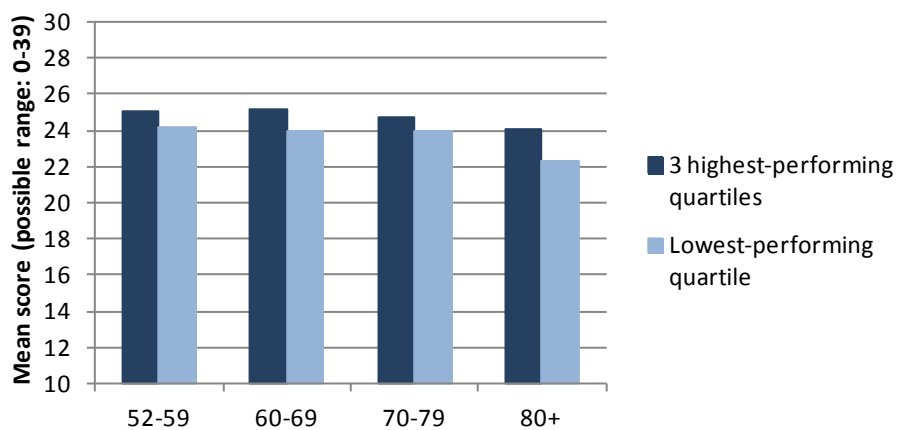
a) Elevated depressive symptoms by age and cognitive function in wave 5



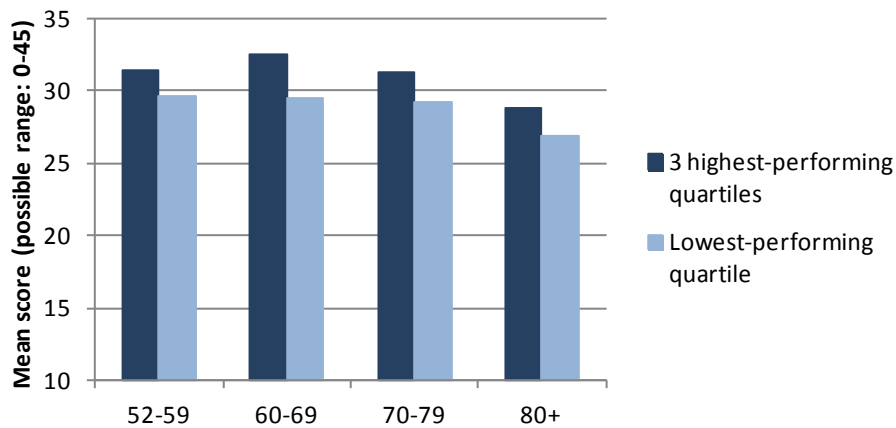
b) Enjoyment of life by age and cognitive function in wave 5



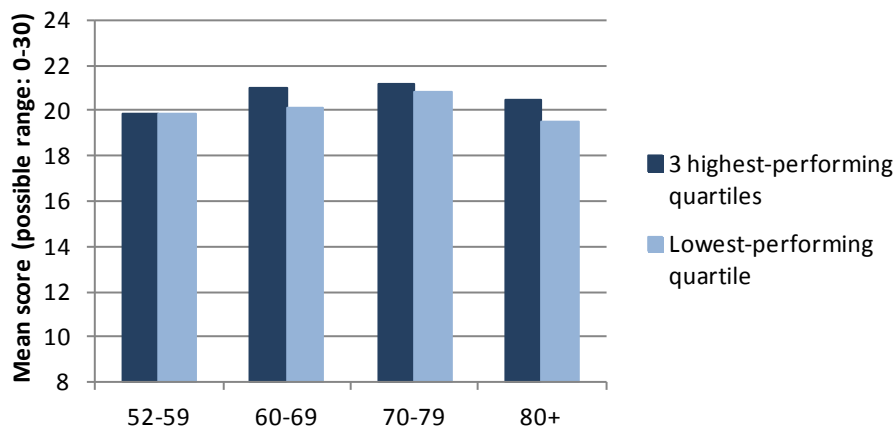
c) Positive affect by age and cognitive function in wave 5



d) Eudemonic well-being by age and cognitive function in wave 5



e) Life satisfaction by age and cognitive function in wave 5



4.3.8 Psychological well-being and use of public transport in 2010–11

Accessibility to transport is crucial if older people are to be able to keep in touch with friends and family and access the goods and services that enable them to live independently. Access is also important in enabling older people to contribute to society through volunteering, caring or working. Research shows how important it is for older people to be able to get out of the house through the use of local public transport and that people with poor social networks have poorer health outcomes (Age UK, 2012). In addition, the introduction of free bus travel for older residents of England appears to have increased public transport use and may have conferred a protective effect against obesity (Webb, Netuveli and Millett, 2012).

When we compared those who did and did not use public transport, we found small but consistent differences in the various measures of psychological well-being, particularly among participants aged 60 and older (Tables 4A.76–4A.80). Effects for depressive symptoms were particularly notable, with 27% of respondents in the 80-and-older group who did not use public transport having elevated depression ratings, compared with 17% of public transport users of that age. Older public transport users reported greater eudemonic well-being than non-users, indicating that they experienced greater purpose

and meaning in life. No causal conclusion can be drawn, but it would be interesting to discover whether increasing access to public transport for older sectors of the population led to improvements in well-being.

4.3.9 Psychological well-being and attendance at religious services in 2010–11

Recent research has provided some evidence that religiosity and spirituality appear to have a positive impact on the health and well-being of older adults (Chida, Steptoe and Powell, 2009; Inglehart, 2010).

In 2010–11, attendance at religious services was associated with several aspects of psychological well-being (Tables 4A.81–4A.85), including less depression, greater affective well-being, higher eudemonic well-being and greater life satisfaction. ‘Dose-response’ effects were not consistent, in that participants who reported attending religious services a few times a year had similar levels of psychological well-being on several measures to those who were regular attenders.

4.4 Longitudinal analysis: the trends in psychological well-being from 2002–03 to 2010–11

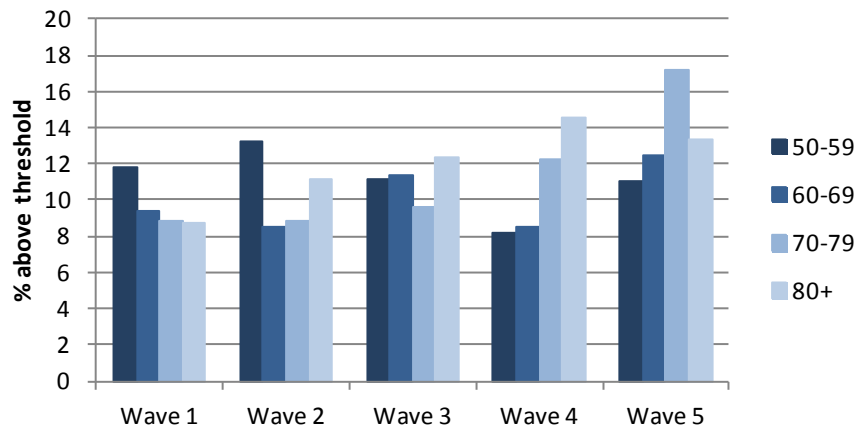
4.4.1 Age and sex

The longitudinal analyses of trends in well-being measures were conducted on individuals in the core sample who participated in every wave of the study. Among women, there was a clear increase in the prevalence of depressive symptoms and reduction in enjoyment of life over successive waves, particularly in older age groups (Figure 4.8). There were also consistent age differences, with greater depression and lower enjoyment at older ages. Men did not show comparable trends in depressive symptoms over time, but did report deterioration in enjoyment of life. Reductions in eudemonic well-being were reported over time both by men and by women, and the differences between age categories were also maintained over time. (See also Tables 4A.86–4A.88.)

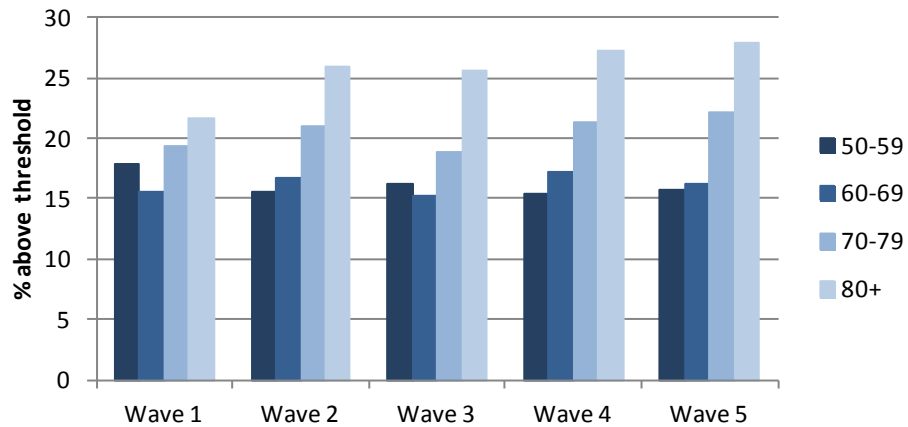
The results for life satisfaction (first recorded in 2004–05) were more complex. As was apparent in the cross-sectional results for 2010–11 (Figure 4.1), life satisfaction showed a curvilinear pattern with age, being highest in the two middle categories compared with the youngest and oldest age groups. Levels of life satisfaction declined between baseline assessment in 2004–05 (wave 2) and later assessments, but remained relatively stable across waves 3 to 5. Interestingly, there was a progressive increase in the life satisfaction of men and women originally in the 52–59 age group between 2006–07 and 2010–11 (waves 3 and 5), probably because a number of these individuals moved into the 60–69 age range. (See also Table 4A.89.)

Figure 4.8. Well-being measures, sex and age between 2002–03 and 2010–11, based on age in 2002–03

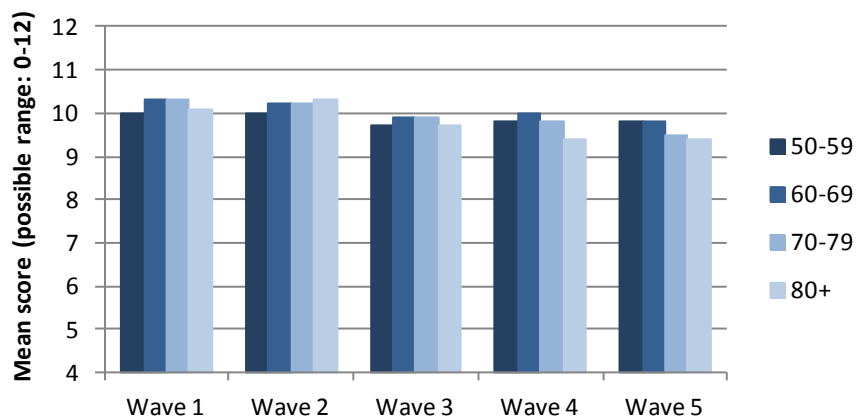
a) Elevated depressive symptoms by age among men: waves 1 to 5



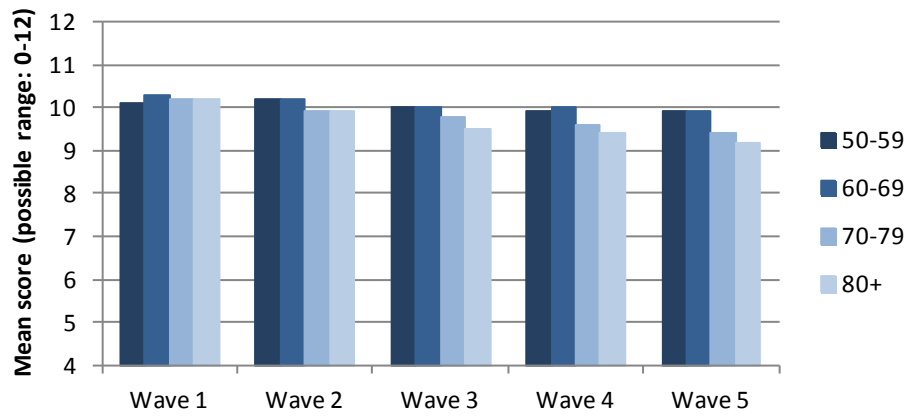
b) Elevated depressive symptoms by age among women: waves 1 to 5



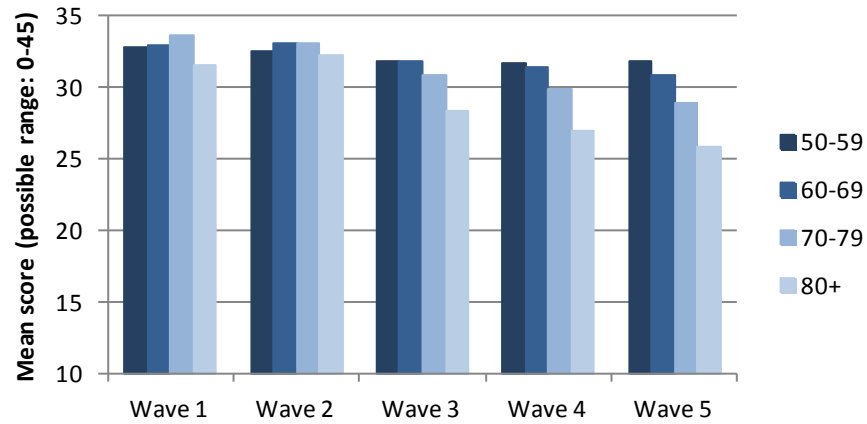
c) Enjoyment of life by age among men: waves 1 to 5



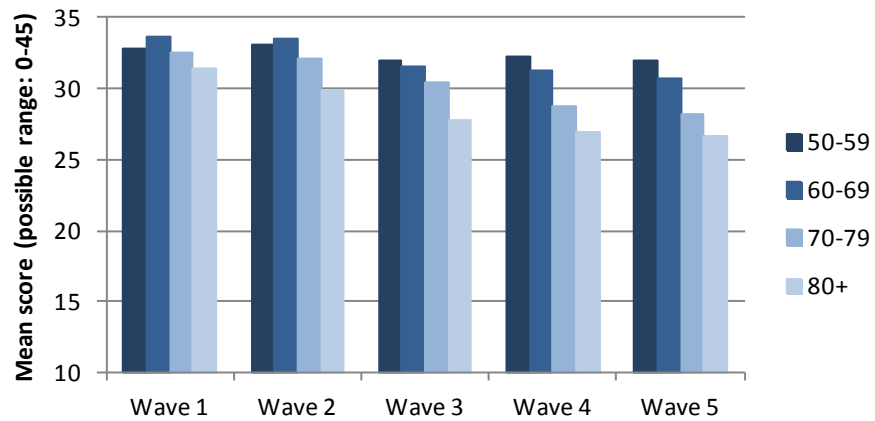
d) Enjoyment of life by age among women: waves 1 to 5



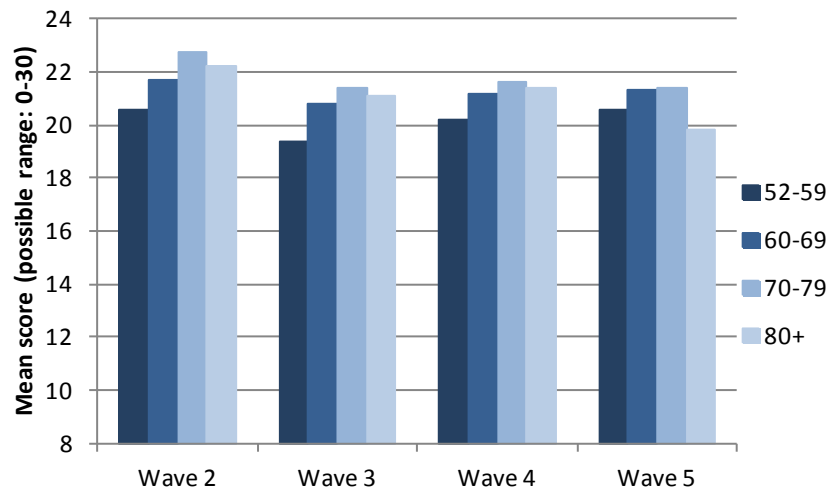
e) Eudemonic well-being by age among men: waves 1 to 5



f) Eudemonic well-being by age among women: waves 1 to 5

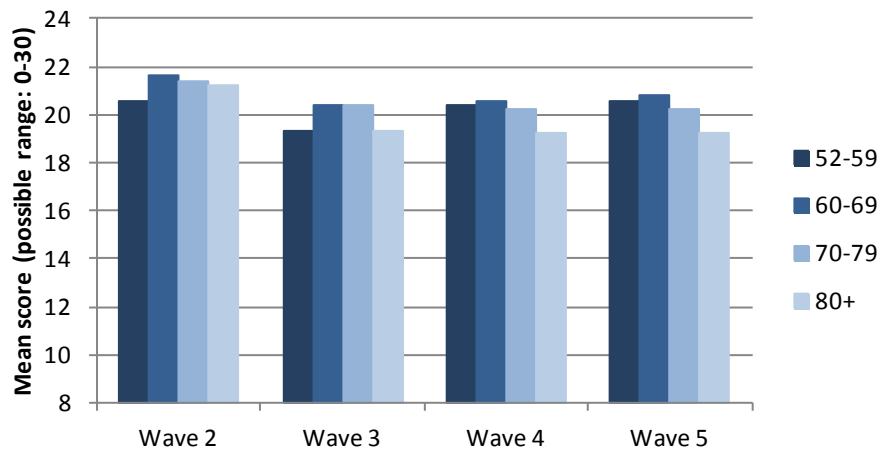


g) Life satisfaction by age among men: waves 2 to 5



Note: Age in 2004–05.

h) Life satisfaction by age among women: waves 2 to 5



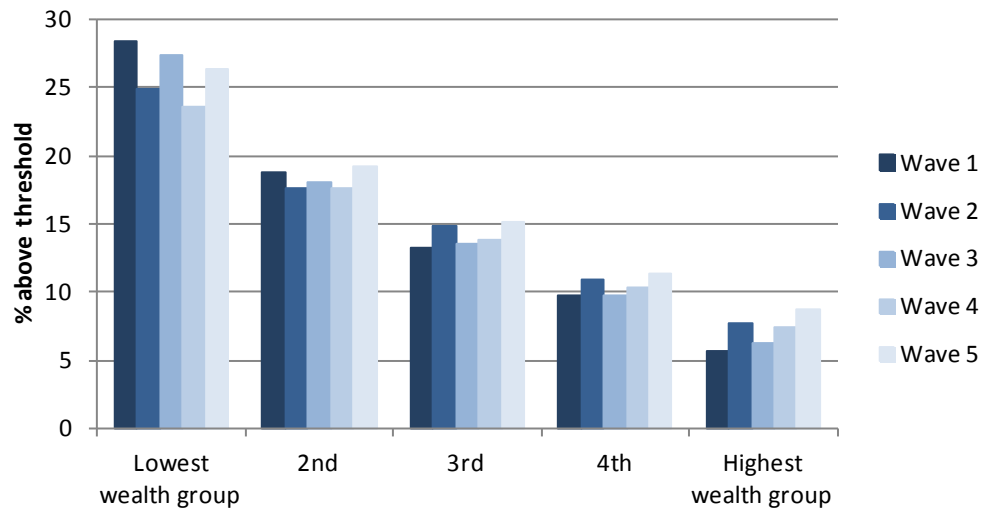
Note: Age in 2004–05.

4.4.2 Age and wealth

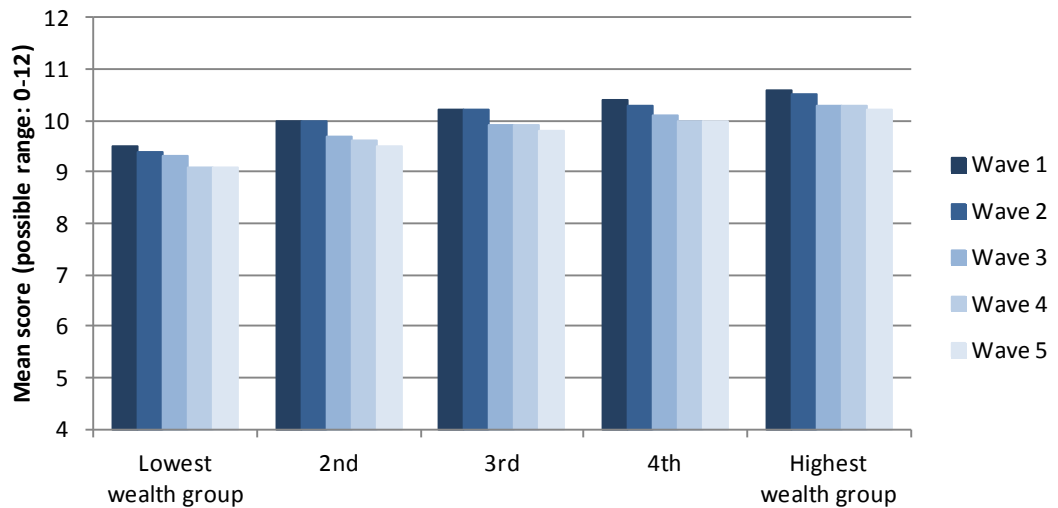
Overall, the wealth gradients in psychological well-being measures were maintained across waves (Figure 4.9 and Tables 4A.90–4A.93) and there were few signs that the gradient changed in magnitude over time. For example, the difference in enjoyment of life between the highest and lowest wealth groups was 1.1 units in both 2002–03 and 2010–11. The same difference in eudemonic well-being was 6.0 units in 2002–03 and 5.8 units in 2010–11. We therefore found no evidence that lower wealth at baseline led to greater deterioration in psychological well-being over this eight-year period.

Figure 4.9. Well-being measures and wealth between 2002–03 and 2010–11, based on wealth in 2010–11

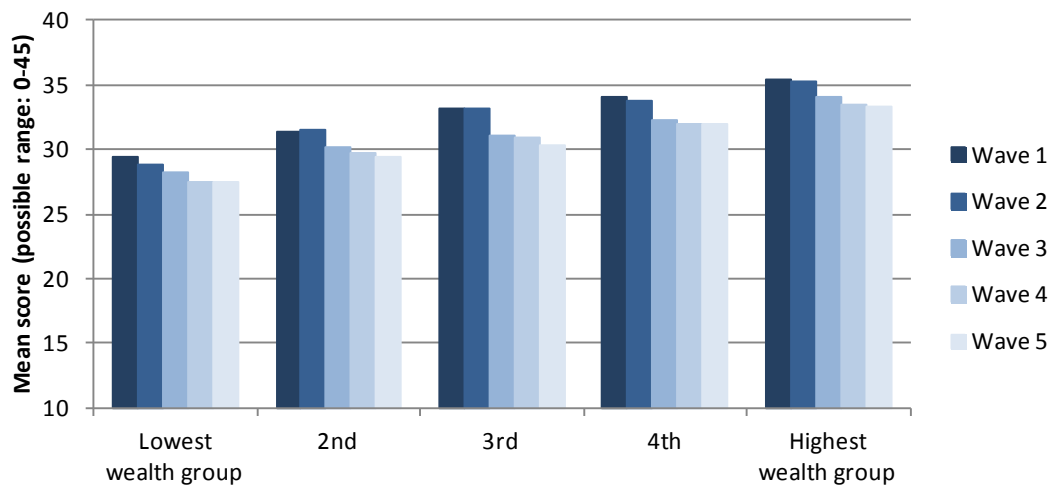
a) Elevated depressive symptoms by wealth: waves 1 to 5



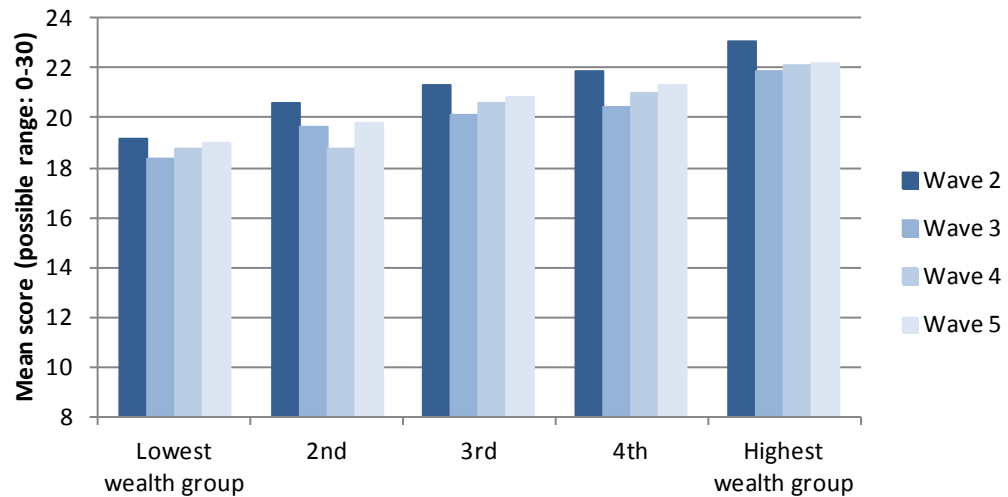
b) Enjoyment of life by wealth: waves 1 to 5



c) Eudemonic well-being by wealth: waves 1 to 5



d) Life satisfaction by wealth: waves 2 to 5



4.5 Longitudinal analysis: psychological well-being measures as predictors of health, functioning and disability over six years of follow-up

A summary of the key results from these longitudinal analyses, which use regressions of psychological well-being on health outcomes, is provided in Table 4.1.

4.5.1 Psychological well-being as a predictor of future ADL limitations

Our results highlight psychological well-being measures as potentially important predictors of future ADL disability between 2004–05 and 2010–11 among people who were not disabled in ADLs at baseline. Enjoyment of life was inversely associated with subsequent development of two or more ADL limitations. This association was graded, with people in the lowest tertile of enjoyment having more than four times higher risk of experiencing new limitations in ADLs (odds ratio: 4.10; 95% confidence interval: 2.17, 7.74) and people in the intermediate tertile having three times higher risk (OR: 3.04; 95% CI: 1.58, 5.84) in comparison with those in the highest enjoyment tertile, after adjustment for age, sex and wealth. These results indicate that a graded association exists between enjoyment of life and future disability and that even small differences in enjoyment may have profound consequences for older people's disability. Additionally, despite the strong associations between affective well-being, age, sex and wealth described in Section 4.3, the relationship with future disability was not accounted for by these factors. Eudemonic well-being also had a graded association with subsequent ADL disability, with people in the lowest tertile having almost four times higher risk of reporting two ADL limitations six years later (OR: 3.87; 95% CI: 2.34,

Table 4.1. Summary of regressions of psychological well-being on health outcomes

Predictor measures	Outcome measures									
	ADL disability		Physical function (gait speed)		Cognitive function (memory)		Self-rated health		Incident CHD	
	OR ^a	95% CI	B ^b	95% CI	B ^c	95% CI	OR ^d	95% CI	OR ^e	95% CI
Affective well-being (enjoyment of life)										
Highest tertile	Reference		Reference		Reference		Reference		Reference	
Intermediate tertile	3.04	(1.58, 5.84)	-0.05	(-0.07, -0.02)	-0.02	(-0.26, 0.23)	1.63	(1.25, 2.13)	1.40	(0.99, 1.98)
Lowest tertile	4.10	(2.17, 7.74)	-0.05	(-0.07, -0.03)	-0.21	(-0.44, 0.03)	2.10	(1.63, 2.71)	1.70	(1.23, 2.36)
Eudemonic well-being										
Highest tertile	Reference		Reference		Reference		Reference		Reference	
Intermediate tertile	2.17	(1.31, 3.59)	-0.04	(-0.06, -0.01)	-0.19	(-0.44, 0.03)	1.63	(1.28, 2.06)	1.31	(0.97, 1.77)
Lowest tertile	3.87	(2.34, 6.38)	-0.05	(-0.08, -0.03)	-0.52	(-0.75, -0.28)	2.87	(2.26, 3.63)	1.69	(1.24, 2.30)
Life satisfaction										
Highest tertile	Reference		Reference		Reference		Reference		Reference	
Intermediate tertile	0.92	(0.58, 1.47)	-0.01	(-0.03, 0.02)	0.02	(-0.21, 0.26)	1.23	(0.98, 1.55)	1.19	(0.88, 1.63)
Lowest tertile	1.68	(1.05, 2.69)	-0.01	(-0.04, 0.02)	-0.21	(-0.27, 0.23)	1.62	(1.28, 2.06)	1.30	(0.94, 1.79)

^a Odds ratio adjusted for age, sex and wealth among individuals with no limitations in ADLs at baseline.

^b Regression coefficient adjusted for age, sex, wealth and baseline gait speed.

^c Regression coefficient adjusted for age, sex, wealth and baseline memory.

^d Odds ratio adjusted for age, sex, wealth and baseline self-rated health.

^e Odds ratio adjusted for age, sex and wealth among individuals without CHD at baseline.

6.38) and people in the intermediate tertile having more than two times higher risk (OR: 2.17; 95% CI: 1.31, 3.59) compared with those in the highest tertile. By contrast, the association of life satisfaction with ADL disability was weaker; it was only people in the lowest tertile of life satisfaction who had a raised risk of new ADL disability compared with those in the highest tertile, and there was no statistically significant difference in the risk between the intermediate and highest tertiles.

These findings show that both affective and eudemonic well-being were associated with older people's future risk of becoming disabled. But they also indicate important differences in the way the psychological well-being measures are associated with future disability, since these two aspects were more closely related to subsequent disability than was life satisfaction.

4.5.2 Psychological well-being as a predictor of physical function

We complemented our analysis of the association between psychological well-being and ADL disability with a series of regression models on the associations between well-being measures and gait speed, an objective measure of physical performance. Enjoyment of life measured in 2004–05 predicted gait speed in 2010–11 after adjustment for age, sex, wealth and baseline gait speed. People in the intermediate tertile of enjoyment of life walked more slowly than those in the highest tertile (0.83 and 0.93 metres per second, respectively), but faster than those in the lowest tertile of enjoyment (0.78m/s). Effects were similar for eudemonic well-being, since people in the highest tertile walked faster (0.92m/s) than those in the intermediate tertile (0.84m/s), who in turn walked faster than those in the lowest tertile (0.76m/s). The association between life satisfaction and subsequent gait speed was weak and not significant. Findings from this series of models are consistent with our results about the importance of both affective and eudemonic well-being for ADL disability. They also indicate that life satisfaction, as a measure of evaluative well-being, did not capture subtle changes in physical performance over time.

4.5.3 Psychological well-being as a predictor of cognitive function

Given the importance of cognitive function for older people, we also explored the associations between different dimensions of well-being and memory (total number of recalled words) in our sample. Earlier analyses have shown cross-sectional associations (Llewellyn et al., 2008), but the regression models estimated here evaluated prospective relationships. The results show very little association between the different dimensions of psychological well-being measured in 2004–05 and the change in memory between 2004–05 and 2010–11. Enjoyment of life was not strongly related to subsequent memory, with the difference between the two extreme tertiles being rather small and statistically non-significant ($p=0.084$) and with no difference between the highest and intermediate tertiles. The measure of eudemonic well-being was somewhat more strongly related to memory, but a significant difference was only observed between the highest and lowest tertiles of eudemonic well-being, with people in the highest tertile remembering on average half a word more

than those in the lowest tertile. Life satisfaction was not related to changes in memory. A tentative conclusion that can be drawn from this series of regression models is that the effect of well-being on cognitive function seems to be weak compared with its relationship with physical function. The complete lack of association between life satisfaction and cognitive function supports the conclusion that this aspect of well-being has little relevance to older people's future functioning. These findings contrast with those described in Section 4.3 (Figure 4.7) showing cross-sectional associations between poor memory and reduced psychological well-being. They suggest that impaired psychological well-being may develop as a result of poor cognitive function, rather than being a predictor of future cognitive problems.

4.5.4 Psychological well-being as a predictor of self-rated health

The odds of rating their health in the future as fair or poor were greater for older people with poorer psychological well-being at baseline. Affective well-being had a graded association with self-rated health, with people in the lowest tertile of the enjoyment scale having more than two times higher risk of reporting fair or poor self-rated health six years later (OR: 2.10; 95% CI: 1.63, 2.71) than those in the highest tertile, after adjustment for age, sex, wealth and baseline self-rated health. People in the intermediate tertile had approximately 60% higher odds of fair or poor self-rated health than those in the highest tertile (OR: 1.63; 95% CI: 1.25, 2.13). Eudemonic well-being was associated with self-rated health in a similar way, with lower scores being associated with greater chances of reporting fair or poor self-rated health six years later (OR: 2.87; 95% CI: 2.26, 3.63 and OR: 1.63; 95% CI: 1.28, 2.06, respectively, for the lowest and intermediate tertiles compared with the highest tertile). A graded association with life satisfaction was also observed, though effects were weaker than those of affective and eudemonic well-being. Respondents in the lowest tertile had a roughly 60% higher risk of assessing their health as fair or poor six years later (OR: 1.62; 95% CI: 1.28, 2.06) compared with those in the highest tertile, while the difference between the highest and intermediate tertiles was much smaller and non-significant (OR: 1.23; 95% CI: 0.98, 1.55).

These findings indicate that affective, eudemonic and evaluative well-being predict future subjective appraisals of health, even after taking age, sex, wealth and baseline health assessments into account. Such effects suggest that impaired well-being is not simply a product of poor health, but is systematically associated with the development of poor health.

4.5.5 Psychological well-being as a predictor of incident coronary heart disease

We also examined whether well-being is associated with the onset of CHD (i.e. angina pectoris and myocardial infarction) among people who were free of CHD at baseline. Associations have been described in a number of previous longitudinal studies (Boehm and Kubzansky, 2012), but relationships with different aspects of well-being have not been tested in the same study before. Both affective and eudemonic well-being were inversely related to the risk of subsequent CHD, with graded relationships depending on the level of well-being. Being in the lowest tertile of life enjoyment was associated with 70%

higher odds of reporting CHD six years later (OR: 1.70; 95% CI: 1.23, 2.36) compared with those who were in the highest tertile and enjoying their lives more. People in the intermediate tertile also had higher risk of developing CHD but the difference from their counterparts in the highest tertile was marginally non-significant (OR: 1.40; 95% CI: 0.99, 1.98). The association between eudemonic well-being and incident CHD followed the same linear pattern. People in the lowest well-being tertile had approximately 70% higher risk of becoming cardiac patients (OR: 1.69; 95% CI: 1.24, 2.30) compared with those in the top tertile, and those in the middle tertile were intermediate in terms of their risk of developing CHD (OR: 1.31; 95% CI: 0.97, 1.77) although the difference from the top tertile was not significant. Life satisfaction was also inversely associated with incident CHD, but this association was weak and not significant (OR: 1.30; 95% CI: 0.94, 1.79 and OR: 1.19; 95% CI: 0.88, 1.63, respectively, for the lowest and intermediate tertiles compared with the highest life satisfaction tertile).

This series of regression models indicates that psychological well-being is associated with incident CHD and with the development of clinical disease. Future work needs to explore the pathways and mechanisms through which both affective and eudemonic well-being are associated with the risk of CHD. Our analysis suggests that the life satisfaction scale was not strongly related to CHD.

4.6 Measures of psychological well-being as predictors of future survival

The final section of this chapter addresses the question of whether psychological well-being is associated with longer life in older people. It is well established both from personal experience and from systematic investigations that people's well-being is impaired when they are physically ill and that a wide range of medical conditions are associated with greater depression and reduced happiness (Lyubomirsky, King and Diener, 2005; Wikman, Wardle and Steptoe, 2011). The notion that positive well-being may contribute to the maintenance of health and longer survival is more controversial. The strongest evidence in the epidemiological field comes from prospective observational studies, in which a large sample of people are recruited and well-being is assessed along with risk factors for mortality and other covariates. Over time, some of the participants die, and the association between well-being and future mortality can be determined. Many of the early studies of this topic were poorly controlled, leaving open the possibility that associations between well-being and mortality were due to other factors such as lower socio-economic status (which is linked both with well-being and with survival) or initial levels of illness (Chida and Steptoe, 2008). But more recent research has used stronger methodology and confirms that associations do exist (Boehm and Kubzansky, 2012).

Two longitudinal analyses have been published relating well-being with survival among ELSA participants, both of which showed that greater affective well-being apparently had a protective effect even when age, sex, wealth, other demographic indicators and baseline health status were taken

into account (Steptoe and Wardle, 2011 and 2012). These analyses were based on five- and seven-year follow-up periods and were limited to affective well-being. Here, we have extended these observations in two ways. First, we studied the association between affective well-being (enjoyment of life) measured in 2002–03 and survival until March 2012, an average follow-up period of nine years and seven months. Second, we studied whether satisfaction with life (the measure of evaluative well-being) predicted survival. In Section 4.5, it was apparent that satisfaction with life is a less robust predictor of future disability and illness than is enjoyment of life, so we were interested to discover whether the same relationships were present for survival.

4.6.1 Enjoyment of life and survival

We analysed the association between enjoyment of life in 2002–03 and survival until March 2012 using Cox proportional hazards regression, with enjoyment of life being divided into tertiles as in earlier sections of the chapter. A total of 9025 participants were included in the analysis, comprising all core ELSA members who agreed to data linkage with mortality records and who had data on the covariates included in the models. Over the follow-up period, 1785 (19.8%) participants died. The proportion of deaths was 9.9% of

Figure 4.10. Enjoyment of life and survival

Survival curves showing the proportion of ELSA participants alive who were in the highest (darkest), middle (medium) and lowest (lightest) tertile of enjoyment of life in 2002–03 adjusted for age and sex

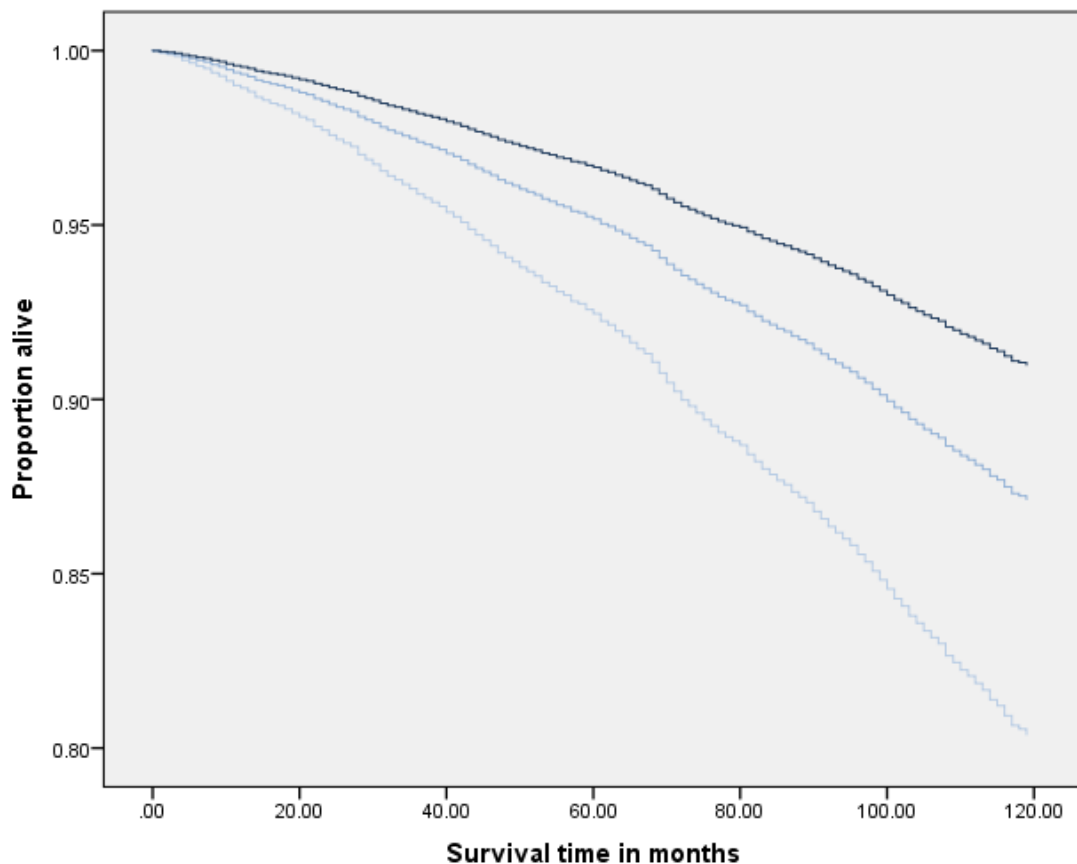


Table 4.2. Enjoyment of life and mortality

Model	Covariates	Enjoyment-of-life tertile	Adjusted hazard ratio (95% CI)	<i>p</i>
1	Age, sex	Lowest	1	
		Middle	0.63 (0.57 to 0.70)	0.001
		Highest	0.43 (0.37 to 0.51)	0.001
2	Age, sex + demographic factors ^a	Lowest	1	
		Middle	0.68 (0.62 to 0.76)	0.001
		Highest	0.50 (0.42 to 0.59)	0.001
3	Age, sex + demographic factors ^a + health indicators ^b	Lowest	1	
		Middle	0.76 (0.69 to 0.85)	0.001
		Highest	0.63 (0.53 to 0.75)	0.001
4	Age, sex + demographic factors ^a + health indicators ^b + negative affect indicators ^c	Lowest	1	
		Middle	0.78 (0.71 to 0.87)	0.001
		Highest	0.65 (0.55 to 0.78)	0.001
5	Age, sex + demographic factors ^a + health indicators ^b + negative affect indicators ^c + health behaviours ^d	Lowest	1	
		Middle	0.82 (0.73 to 0.91)	0.001
		Highest	0.70 (0.58 to 0.84)	0.001

Reference group is the lowest enjoyment-of-life tertile: 728/2525 deaths in the lowest, 881/4715 in the middle and 176/1785 in the highest enjoyment-of-life tertile.

^a Demographic factors: education, wealth, marital status and employment status.

^b Health indicators: limiting long-standing illness, cancer, CHD, stroke, diabetes, heart failure and chronic lung disease at baseline.

^c Negative affect indicators: depressive illness in the past two years and elevated CES-D score.

^d Health behaviours: smoking, physical activity and alcohol intake.

those in the highest enjoyment-of-life tertile, 18.7% of those in the middle one and 28.8% of individuals in the lowest enjoyment tertile. Thus around three times more people in the lowest than in the highest enjoyment-of-life tertile died. The pattern is illustrated in Figure 4.10, which shows the Kaplan–Meier survival curves adjusted for age and sex.

It is possible, of course, that the greater risk of dying among people reporting low enjoyment of life occurred because they tended to be of lower socio-economic status or had more illness in 2002–03. We therefore carried out a series of regression analyses in which we successively added different factors into the models (Table 4.2). In the basic model adjusted for age and sex, people in the middle enjoyment-of-life group had a 37% reduced risk of dying, while those in the highest enjoyment-of-life group had a 57% reduced risk, compared with the lowest enjoyment group (Table 4.2, model 1). These effects fell to 32% and 50% respectively when demographic factors (education, wealth, marital status and employment) were entered into the model (Table 4.2, model 2) and to 24% and 37% when baseline health was included (Table 4.2, model 3). Interestingly, adding indicators of negative emotional states such as depressive illness and symptoms of depression had a limited effect

(the protective associations fell to 22% and 35%), indicating that positive well-being had a pronounced protective effect even when negative states had been taken into account (Table 4.2, model 4). In the final model, we added health behaviours to the analysis, comprising smoking, physical activity and alcohol consumption (Table 4.2, model 5). The impact of these variables in combination was to decrease the association with enjoyment of life to 19% for the middle and 30% for the highest enjoyment-of-life categories.

These results show that around half the apparently beneficial effect of enjoyment of life was due to demographic, health and behavioural factors. But even when these had been taken into account, there remained a substantial

Table 4.3. Mortality in the complete sample: proportional hazards model including all covariates

Factor	Adjusted hazard ratio (95% CI)	<i>p</i>
Enjoyment of life		
Lowest	1 (reference)	
Middle	0.82 (0.73 to 0.91)	0.001
Highest	0.70 (0.58 to 0.84)	0.001
Age category		
50–59	1 (reference)	
60–69	1.95 (1.58 to 2.41)	0.001
70–79	5.27 (4.26 to 6.53)	0.001
80+	12.80 (10.25 to 15.99)	0.001
Sex (female)	0.60 (0.54 to 0.66)	0.001
Ethnicity (non-white)	0.61 (0.36 to 1.04)	0.067
Wealth		
1 (lowest)	1 (reference)	
2	0.94 (0.82 to 1.08)	0.38
3	0.80 (0.69 to 0.93)	0.004
4	0.82 (0.71 to 0.96)	0.012
5 (highest)	0.72 (0.60 to 0.85)	0.001
Education		
Lowest	1 (reference)	
Intermediate	1.06 (0.91 to 1.23)	0.45
Highest	0.99 (0.85 to 1.15)	0.90
Marital status (unmarried)	1.12 (1.01 to 1.25)	0.030
Employment (not in paid employment)	1.82 (1.46 to 2.27)	0.001
Depressive illness (past two years)	0.93 (0.72 to 1.20)	0.58
Depression (elevated CES-D)	1.09 (0.97 to 1.21)	0.15
Limiting long-standing illness	1.24 (1.11 to 1.38)	0.001
Cancer at baseline	1.79 (1.54 to 2.07)	0.001
CHD at baseline	1.15 (1.02 to 1.29)	0.026
Diabetes at baseline	1.25 (1.07 to 1.45)	0.005
Heart failure at baseline	1.86 (1.34 to 2.59)	0.001
Stroke at baseline	1.18 (1.00 to 1.39)	0.055
Chronic lung disease at baseline	1.38 (1.19 to 1.60)	0.001
Smoking	1.63 (1.43 to 1.84)	0.001
No vigorous or moderate physical activity	1.24 (1.11 to 1.38)	0.001
Alcohol at least daily	1.09 (0.98 to 1.22)	0.12

protective effect of greater enjoyment of life. The complete model in the final regression that took all other factors into account is summarised in Table 4.3. This shows that in addition to enjoyment of life, survival was associated with younger age at baseline, being female, greater wealth, being married, being in paid employment and being physically active, and was reduced in people having a limiting long-standing illness, those having a diagnosis of heart disease, diabetes, cancer, heart failure or chronic lung disease, and individuals who smoked at baseline.

4.6.2 Satisfaction with life and survival

A parallel set of analyses were carried out comparing the survival of ELSA participants in the lowest, middle and highest tertiles on the Satisfaction with Life Scale. Since the question using this scale was first administered in 2004–05, the follow-up period was shorter than that for enjoyment of life, averaging seven years and three months. There were 999 deaths over that period among the 6909 people with complete covariates, comprising 17.3% of the lowest, 13.3% of the middle and 12.8% of the highest satisfaction-with-life tertile. This indicates that there was a gradient of survival, though rather less strong than that observed for enjoyment of life. The Cox proportional hazards

Table 4.4. Satisfaction with life and mortality

Model	Covariates	Satisfaction-with-life tertile	Adjusted hazard ratio (95% CI)	<i>p</i>
1	Age, sex	Lowest	1	
		Middle	0.73 (0.63 to 0.85)	0.001
		Highest	0.69 (0.60 to 0.80)	0.001
2	Age, sex + demographic factors ^a	Lowest	1	
		Middle	0.78 (0.67 to 0.92)	0.002
		Highest	0.75 (0.65 to 0.87)	0.001
3	Age, sex + demographic factors ^a + health indicators ^b	Lowest	1	
		Middle	0.85 (0.72 to 0.99)	0.041
		Highest	0.86 (0.74 to 1.00)	0.050
4	Age, sex + demographic factors ^a + health indicators ^b + negative affect indicators ^c	Lowest	1	
		Middle	0.86 (0.73 to 1.01)	0.063
		Highest	0.88 (0.75 to 1.03)	0.11
5	Age, sex + demographic factors ^a + health indicators ^b + negative affect indicators ^c + health behaviours ^d	Lowest	1	
		Middle	0.87 (0.74 to 1.02)	0.087
		Highest	0.91 (0.77 to 1.06)	0.21

Reference group is the lowest satisfaction-with-life tertile: 401/2314 deaths in the lowest, 264/1984 in the middle and 334/2611 in the highest satisfaction-with-life tertile.

^a Demographic factors: education, wealth, marital status and employment status.

^b Health indicators: limiting long-standing illness, cancer, CHD, stroke, diabetes, heart failure and chronic lung disease at baseline.

^c Negative affect indicators: depressive illness in the past two years and elevated CES-D score.

^d Health behaviours: smoking, physical activity and alcohol intake.

regression analyses indicated that the association was independent of age, sex and demographic factors (Table 4.4, model 2). But once health, indicators of negative mood and health behaviours had been taken into account, effects were no longer significant (Table 4.4, model 5). From this, we can conclude that the associations between life satisfaction and mortality are much more tightly related to health and other baseline variables than are effects for enjoyment of life. The reason why satisfaction with life predicts survival is probably that people with greater satisfaction are healthier and less depressed and engage in healthier lifestyles. The same is not the case for enjoyment of life, where these factors explain only a small part of the association with survival.

4.6.3 Conclusions

These analyses do not show that psychological well-being is causally related to survival. Although we controlled statistically for many other factors, enjoyment of life may be a marker of underlying health-related biological, behavioural or dispositional factors that were not included in the analyses. Understanding these associations is a challenge for the future. Nevertheless, the findings demonstrate that the link between enjoyment of life and survival at older ages is not fully accounted for by demographic factors and major pre-existing illnesses. They further highlight the importance of positive well-being in older adults and suggest that efforts to improve enjoyment of life, as well as to manage and prevent disease, could have beneficial effects on life expectancy. The longitudinal design of ELSA makes it a powerful tool for investigating the relationships between well-being, health and functioning.

References

- Age UK (2012), 'Local public transport (England)', Policy Position Paper (<http://www.ageuk.org.uk/PageFiles/21016/Local%20public%20transport%20with%20AgeUK%20banner.pdf>).
- Ashton, C., Bajekal, M. and Raine, R. (2010), 'Quantifying the contribution of leading causes of death to mortality decline among older people in England, 1991-2005', *Health Statistics Quarterly*, vol. 45, pp. 100–27.
- Blanchflower, D.G. and Oswald, A.J. (2008), 'Is well-being U-shaped over the life cycle?', *Social Science and Medicine*, vol. 66, pp. 1733–49.
- Boehm, J.K. and Kubzansky, L.D. (2012), 'The heart's content: the association between positive psychological well-being and cardiovascular health', *Psychological Bulletin*, vol. 138, pp. 655–91.
- Borgonovi, F. (2008), 'Doing well by doing good: the relationship between formal volunteering and self-reported health and happiness', *Social Science and Medicine*, vol. 66, pp. 2321–34.
- Carstensen, L.L., Isaacowitz, D.M. and Charles, S.T. (1999), 'Taking time seriously: a theory of socioemotional selectivity', *American Psychologist*, vol. 54, pp. 165–81.

- Chida, Y. and Steptoe, A. (2008), 'Positive psychological well-being and mortality: a quantitative review of prospective observational studies', *Psychosomatic Medicine*, vol. 70, pp. 741–56.
- Chida, Y., Steptoe, A. and Powell, L.H. (2009), 'Religiosity/spirituality and mortality: a systematic quantitative review', *Psychotherapy and Psychosomatics*, vol. 78, pp. 81–90.
- Cochrane, R. (1996), 'Marriage and madness', *Psychology Review*, vol. 3, pp. 2–5.
- Cooper, R., Kuh, D. and Hardy, R. (2010), 'Objectively measured physical capability levels and mortality: systematic review and meta-analysis', *British Medical Journal*, vol. 341, c4467.
- Dauchet, L., Amouyel, P., Hercberg, S. and Dallongeville, J. (2006), 'Fruit and vegetable consumption and risk of coronary heart disease: a meta-analysis of cohort studies', *Journal of Nutrition*, vol. 136, pp. 2588–93.
- Davidson, K.W., Mostofsky, E. and Whang, W. (2010), 'Don't worry, be happy: positive affect and reduced 10-year incident coronary heart disease: the Canadian Nova Scotia Health Survey', *European Heart Journal*, vol. 31, pp. 1065–70.
- Demakakos, P., Nazroo, J., Breeze, E. and Marmot, M. (2008), 'Socioeconomic status and health: the role of subjective social status', *Social Science and Medicine*, vol. 67, pp. 330–40.
- Di Castelnuovo, A., Costanzo, S., Bagnardi, V., Donati, M.B., Iacoviello, L. and de Gaetano, G. (2006), 'Alcohol dosing and total mortality in men and women: an updated meta-analysis of 34 prospective studies', *Archives of Internal Medicine*, vol. 166, pp. 2437–45.
- Diener, E., Emmons, R.A., Larsen, R.J. and Griffin, S. (1985), 'The Satisfaction with Life Scale', *Journal of Personality Assessment*, vol. 49, pp. 71–5.
- Diener, M.L. and Diener-McGavran, M.B. (2008), 'What makes people happy?', in M. Eid and R.J. Larsen (eds), *The Science of Subjective Well-Being*, New York: Guilford Press.
- Dolan, P., Layard, R. and Metcalfe, R. (2011), *Measuring Subjective Well-Being for Public Policy*, London: Office for National Statistics.
- Dolan, P., Peasgood, T. and White, M. (2008), 'Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being', *Journal of Economic Psychology*, vol. 29, pp. 94–122.
- Frank, J.S. and Patla, A.E. (2003), 'Balance and mobility challenges in older adults: implications for preserving community mobility', *American Journal of Preventive Medicine*, vol. 25, pp. 157–63.
- Gandini, S., Botteri, E., Iodice, S., Boniol, M., Lowenfels, A.B., Maisonneuve, P. and Boyle, P. (2008), 'Tobacco smoking and cancer: a meta-analysis', *International Journal of Cancer*, vol. 122, pp. 155–64.

- Greenfield, E.A. and Marks, N.F. (2004), 'Formal volunteering as a protective factor for older adults' psychological well-being', *Journals of Gerontology Series B – Psychological Sciences and Social Sciences*, vol. 59, pp. S258–64.
- Guralnik, J.M., Ferrucci, L., Pieper, C.F., Leveille, S.G., Markides, K.S., Ostir, G.V., Studenski, S., Berkman, L.F. and Wallace, R.B. (2000), 'Lower extremity function and subsequent disability: consistency across studies, predictive models, and value of gait speed alone compared with the short physical performance battery', *Journals of Gerontology Series A – Biological Sciences and Medical Sciences*, vol. 55, pp. M221–31.
- He, F.J., Nowson, C.A. and MacGregor, G.A. (2006), 'Fruit and vegetable consumption and stroke: meta-analysis of cohort studies', *Lancet*, vol. 367, pp. 320–6.
- Huppert, F., Gardener, E. and McWilliams, B. (2006), 'Cognitive function', in J. Banks, E. Breeze, C. Lessof and J. Nazroo (eds), *Retirement, Health and Relationships of the Older Population in England: The 2004 English Longitudinal Study of Ageing (Wave 2)*, London: Institute for Fiscal Studies (<http://www.ifs.org.uk/ELSA/publicationDetails/id/3658>).
- Hyde, M., Wiggins, R.D., Higgs, P. and Blane, D.B. (2003), 'A measure of quality of life in early old age: the theory, development and properties of a needs satisfaction model (CASP-19)', *Aging and Mental Health*, vol. 7, pp. 186–94.
- Idler, E.L. and Benyamini, Y. (1997), 'Self-rated health and mortality: a review of twenty-seven community studies', *Journal of Health and Social Behavior*, vol. 38, pp. 21–37.
- Inglehart, R.F. (2010), 'Faith and freedom: traditional and modern ways to happiness', in E. Diener, J.F. Helliwell and D.N. Kahneman (eds), *International Differences in Well-Being*, Oxford: Oxford University Press.
- Jylha, M. (2009), 'What is self-rated health and why does it predict mortality? Towards a unified conceptual model', *Social Science and Medicine*, vol. 69, pp. 307–16.
- Kahneman, D. and Deaton, A. (2010), 'High income improves evaluation of life but not emotional well-being', *Proceedings of the National Academy of Sciences of the United States of America*, vol. 107, pp. 16489–93.
- Kahneman, D. and Krueger, A.B. (2006), 'Developments in the measurement of subjective well-being', *Journal of Economic Perspectives*, vol. 20, pp. 3–24.
- Kassel, J.D. and Hankin, B.L. (2006), 'Smoking and depression', in A. Steptoe (ed.), *Depression and Physical Illness*, Cambridge: Cambridge University Press.

- Khaw, K.T., Wareham, N., Bingham, S., Welch, A., Luben, R. and Day, N. (2008), 'Combined impact of health behaviours and mortality in men and women: the EPIC-Norfolk Prospective Population Study', *PLoS Medicine*, vol. 5, e12.
- Lam, T.H., Li, Z.B., Ho, S.Y., Chan, W.M., Ho, K.S., Tham, M.K., Cowling, B.J., Schooling, C.M. and Leung, G.M. (2007), 'Smoking, quitting and mortality in an elderly cohort of 56,000 Hong Kong Chinese', *Tobacco Control*, vol. 16, pp. 182–9.
- Landi, F., Onder, G., Carpenter, I., Cesari, M., Soldato, M. and Bernabei, R. (2007), 'Physical activity prevented functional decline among frail community-living elderly subjects in an international observational study', *Journal of Clinical Epidemiology*, vol. 60, pp. 518–24.
- Lang, I., Wallace, R.B., Huppert, F.A. and Melzer, D. (2007), 'Moderate alcohol consumption in older adults is associated with better cognition and well-being than abstinence', *Age and Ageing*, vol. 36, pp. 256–61.
- Leistikow, B.N., Martin, D.C., Jacobs, J. and Rocke, D.M. (1998), 'Smoking as a risk factor for injury death: a meta-analysis of cohort studies', *Preventive Medicine*, vol. 27, pp. 871–8.
- Llewellyn, D.J., Lang, I.A., Langa, K.M. and Huppert, F.A. (2008), 'Cognitive function and psychological well-being: findings from a population-based cohort', *Age and Ageing*, vol. 37, pp. 685–9.
- Lorant, V., Deliege, D., Eaton, W., Robert, A., Philippot, P. and Anseau, M. (2003), 'Socioeconomic inequalities in depression: a meta-analysis', *American Journal of Epidemiology*, vol. 157, pp. 98–112.
- Luhmann, M., Hofmann, W., Eid, M. and Lucas, R.E. (2012), 'Subjective well-being and adaptation to life events: a meta-analysis', *Journal of Personality and Social Psychology*, vol. 102, pp. 592–615.
- Lyubomirsky, S., King, L. and Diener, E. (2005), 'The benefits of frequent positive affect: does happiness lead to success?', *Psychological Bulletin*, vol. 131, pp. 803–55.
- Medical Research Council – Lifelong Health and Well-Being Programme (2010), *A Strategy for Collaborative Ageing Research in the UK*, London: Medical Research Council.
- Meijer, A., Conradi, H.J., Bos, E.H., Thombs, B.D., van Melle, J.P. and de Jonge, P. (2011), 'Prognostic association of depression following myocardial infarction with mortality and cardiovascular events: a meta-analysis of 25 years of research', *General Hospital Psychiatry*, vol. 33, pp. 203–16.
- Morrow-Howell, N., Hinterlong, J., Rozario, P.A. and Tang, F. (2003), 'Effects of volunteering on the well-being of older adults', *Journals of Gerontology Series B – Psychological Sciences and Social Sciences*, vol. 58, pp. S137–45.
- Musick, M.A., Herzog, A.R. and House, J.S. (1999), 'Volunteering and mortality among older adults: findings from a national sample',

Journals of Gerontology Series B – Psychological Sciences and Social Sciences, vol. 54, pp. S173–80.

- Myers, D.G. (1999), 'Close relationships and quality of life', in D. Kahneman, E. Diener and N. Schwarz (eds), *Well-Being: The Foundations of Hedonic Psychology*, New York: Russell Sage Foundation.
- Ness, A.R. and Powles, J.W. (1997), 'Fruit and vegetables, and cardiovascular disease: a review', *International Journal of Epidemiology*, vol. 26, pp. 1–13.
- Nocon, M., Hiemann, T., Mueller-Riemenschneider, F., Thalau, F., Roll, S. and Willich, S.N. (2008), 'Association of physical activity with all-cause and cardiovascular mortality: a systematic review and meta-analysis', *European Journal of Cardiovascular Prevention and Rehabilitation*, vol. 15, pp. 239–46.
- Office for National Statistics (2012), *First ONS Annual Experimental Subjective Well-Being Results* (http://www.ons.gov.uk/ons/dcp171766_272294.pdf).
- Oliver, M.L. and Shapiro, T.M. (1997), *Black Wealth / White Wealth: A New Perspective on Racial Inequality*, New York: Routledge.
- Radloff, L.S. (1977), 'The CES-D scale: a self-report depression scale for research in the general population', *Applied Psychological Measurement*, vol. 1, pp. 385–401.
- Rimm, E.B., Williams, P., Fosher, K., Criqui, M. and Stampfer, M.J. (1999), 'Moderate alcohol intake and lower risk of coronary heart disease: meta-analysis of effects on lipids and haemostatic factors', *British Medical Journal*, vol. 319, pp. 1523–8D.
- Roth, M. (2009), 'Self-reported physical activity in adults', in R. Craig, J. Mindell and V. Hiraani (eds), *Health Survey for England 2008*, Leeds: NHS Information Centre.
- Ryff, C.D. and Keyes, C.L.M. (1995), 'The structure of psychological well-being revisited', *Journal of Personality and Social Psychology*, vol. 69, pp. 719–27.
- Sprangers, M.A.G. and Schwartz, C.E. (1999), 'Integrating response shift into health-related quality of life research: a theoretical model', *Social Science and Medicine*, vol. 48, pp. 1507–15.
- Steffick, D.E. (2000), *Documentation of Affective Functioning Measures in the Health and Retirement Study*, Ann Arbor, MI: HRS Health Working Group.
- Steptoe, A., Demakakos, P., de Oliveira, C. and Wardle, J. (2012), 'Distinctive biological correlates of positive psychological well-being in older men and women', *Psychosomatic Medicine*, vol. 74, pp. 501–8.
- Steptoe, A. and Wardle, J. (2011), 'Positive affect measured using ecological momentary assessment and survival in older men and women', *Proceedings of the National Academy of Sciences of the United States of America*, vol. 108, pp. 18244–8.

- Step toe, A. and Wardle, J. (2012), 'Enjoying life and living longer', *Archives of Internal Medicine*, vol. 172, pp. 273–5.
- Step toe, A. and Wikman, A. (2010), 'The contribution of physical activity to divergent trends in longevity', in E.M. Crimmins, S.H. Preston and B. Cohen (eds), *International Differences in Mortality at Older Ages: Dimensions and Sources*, New York: National Academies Press.
- Stone, A.A., Schwartz, J.E., Broderick, J.E. and Deaton, A. (2010), 'A snapshot of the age distribution of psychological well-being in the United States', *Proceedings of the National Academy of Sciences of the United States of America*, vol. 107, pp. 9985–90.
- Tinkler, L. and Hicks, S. (2011), *Measuring Subjective Well-Being*, London: Office for National Statistics.
- Watson, D. and Clark, L.A. (1994), *Manual for the Positive and Negative Affect Schedule – Expanded Form*, Iowa: University of Iowa.
- Webb, E., Netuveli, G. and Millett, C. (2012), 'Free bus passes, use of public transport and obesity among older people in England', *Journal of Epidemiology and Community Health*, vol. 66, pp. 176–80.
- Wikman, A., Wardle, J. and Step toe, A. (2011), 'Quality of life and affective well-being in middle-aged and older people with chronic medical illnesses: a cross-sectional population based study', *PloS One*, vol. 6, e18952.
- Woodcock, J., Franco, O.H., Orsini, N. and Roberts, I. (2011), 'Non-vigorous physical activity and all-cause mortality: systematic review and meta-analysis of cohort studies', *International Journal of Epidemiology*, vol. 40, pp. 121–38.
- World Cancer Research Fund / American Institute for Cancer Research (2007), *Food, Nutrition, Physical Activity, and the Prevention of Cancer: A Global Perspective*, Washington, DC: AICR.
- World Economic Forum (2012), *Well-Being and Global Success*, Geneva: World Economic Forum.

Appendix 4A

Tables on psychological well-being, health and functioning

Table 4A.1. Elevated depressive symptoms by age and sex in wave 5

	52–59	60–69	70–79	80+	All
Men					
<4 CES-D symptoms	86.9%	87.9%	87.8%	83.0%	87.0%
≥4 CES-D symptoms	13.1%	12.1%	12.2%	17.0%	13.0%
<i>Weighted N</i>	1127	1485	940	441	3993
<i>Unweighted N</i>	844	1503	1062	407	3816
Women					
<4 CES-D symptoms	81.0%	84.5%	83.1%	75.6%	81.9%
≥4 CES-D symptoms	19.0%	15.5%	16.9%	24.4%	18.1%
<i>Weighted N</i>	1188	1595	1086	678	4546
<i>Unweighted N</i>	1039	1842	1243	626	4750

Note: Differences by age group and sex were statistically significant ($p \leq 0.001$).

Table 4A.2. Enjoyment of life by age and sex in wave 5

	52–59	60–69	70–79	80+	All
Men					
Mean	9.7	9.8	9.8	9.4	9.7
Standard deviation	2.1	1.9	1.8	1.8	1.9
<i>Weighted N</i>	1140	1513	947	451	4051
<i>Unweighted N</i>	853	1527	1071	416	3867
Women					
Mean	9.8	10.0	9.8	9.3	9.8
Standard deviation	1.9	1.8	1.7	1.8	1.8
<i>Weighted N</i>	1199	1618	1103	704	4624
<i>Unweighted N</i>	1049	1867	1264	650	4830

Note: Differences were statistically significant by age group ($p \leq 0.001$) but not by sex ($p = 0.281$).

Table 4A.3. Positive affect by age and sex in wave 5

	52–59	60–69	70–79	80+	All
Men					
Mean	25.0	24.7	24.7	23.1	24.6
Standard deviation	8.1	8.0	7.9	7.7	8.0
<i>Weighted N</i>	1140	1513	947	451	4051
<i>Unweighted N</i>	853	1527	1071	416	3867
Women					
Mean	24.7	25.3	24.2	23.1	24.7
Standard deviation	8.6	8.0	7.9	8.3	8.2
<i>Weighted N</i>	1199	1618	1103	704	4624
<i>Unweighted N</i>	1049	1867	1264	650	4830

Note: Differences were statistically significant by age group ($p \leq 0.001$) but not by sex ($p = 0.776$).

Table 4A.4. Eudemonic well-being by age and sex in wave 5

	52–59	60–69	70–79	80+	All
Men					
Mean	31.4	31.8	30.7	27.8	31.0
Standard deviation	7.7	7.4	7.0	7.3	7.4
<i>Weighted N</i>	<i>1140</i>	<i>1513</i>	<i>947</i>	<i>451</i>	<i>4051</i>
<i>Unweighted N</i>	<i>853</i>	<i>1527</i>	<i>1071</i>	<i>416</i>	<i>3867</i>
Women					
Mean	30.9	32.1	30.3	27.5	30.8
Standard deviation	7.8	7.4	7.1	7.3	7.6
<i>Weighted N</i>	<i>1199</i>	<i>1618</i>	<i>1103</i>	<i>704</i>	<i>4624</i>
<i>Unweighted N</i>	<i>1049</i>	<i>1867</i>	<i>1264</i>	<i>650</i>	<i>4830</i>

Note: Differences were statistically significant by age group ($p \leq 0.001$) but not by sex ($p = 0.136$).

Table 4A.5. Life satisfaction by age and sex in wave 5

	52–59	60–69	70–79	80+	All
Men					
Mean	20.1	20.8	21.5	20.5	20.7
Standard deviation	6.6	6.2	6.0	6.9	6.4
<i>Weighted N</i>	<i>1140</i>	<i>1513</i>	<i>947</i>	<i>451</i>	<i>4051</i>
<i>Unweighted N</i>	<i>853</i>	<i>1527</i>	<i>1071</i>	<i>416</i>	<i>3867</i>
Women					
Mean	19.7	20.8	20.7	19.5	20.3
Standard deviation	7.0	6.3	6.1	6.5	6.5
<i>Weighted N</i>	<i>1199</i>	<i>1618</i>	<i>1103</i>	<i>704</i>	<i>4624</i>
<i>Unweighted N</i>	<i>1049</i>	<i>1867</i>	<i>1264</i>	<i>650</i>	<i>4830</i>

Note: Differences by age group ($p \leq 0.001$) and sex ($p = 0.007$) were statistically significant.

Table 4A.6. Elevated depressive symptoms by age and wealth in wave 5

	52–59	60–69	70–79	80+	All
Lowest wealth group					
<4 CES-D symptoms	63.5%	70.7%	74.7%	75.0%	70.6%
≥4 CES-D symptoms	36.5%	29.3%	25.3%	25.0%	29.4%
<i>Weighted N</i>	447	490	409	309	1656
<i>Unweighted N</i>	338	473	411	258	1480
2nd wealth group					
<4 CES-D symptoms	81.0%	82.8%	85.1%	76.4%	82.0%
≥4 CES-D symptoms	19.0%	17.2%	14.9%	23.6%	18.0%
<i>Weighted N</i>	490	561	402	231	1684
<i>Unweighted N</i>	396	609	464	217	1686
3rd wealth group					
<4 CES-D symptoms	90.3%	87.4%	86.2%	78.2%	86.4%
≥4 CES-D symptoms	9.7%	12.6%	13.8%	21.8%	13.6%
<i>Weighted N</i>	384	594	469	245	1693
<i>Unweighted N</i>	308	638	537	237	1720
4th wealth group					
<4 CES-D symptoms	92.7%	89.8%	89.1%	82.6%	89.6%
≥4 CES-D symptoms	7.3%	10.2%	10.9%	17.4%	10.4%
<i>Weighted N</i>	466	645	376	199	1685
<i>Unweighted N</i>	390	729	444	190	1753
Highest wealth group					
<4 CES-D symptoms	92.2%	94.3%	91.7%	84.2%	92.4%
≥4 CES-D symptoms	7.8%	5.7%	8.3%	15.8%	7.6%
<i>Weighted N</i>	470	733	351	130	1684
<i>Unweighted N</i>	405	834	427	126	1792

Note: Differences by wealth group were statistically significant ($p \leq 0.001$).

Table 4A.7. Enjoyment of life by age and wealth in wave 5

	52–59	60–69	70–79	80+	All
Lowest wealth group					
Mean	8.7	8.9	9.2	9.3	9.0
Standard deviation	2.3	2.2	1.8	1.8	2.1
<i>Weighted N</i>	456	510	417	323	1706
<i>Unweighted N</i>	345	489	419	268	1521
2nd wealth group					
Mean	9.5	9.6	9.8	9.0	9.5
Standard deviation	1.9	1.9	1.7	1.9	1.9
<i>Weighted N</i>	494	570	405	237	1707
<i>Unweighted N</i>	400	618	468	223	1709
3rd wealth group					
Mean	9.8	9.9	9.8	9.2	9.8
Standard deviation	2.0	1.9	1.7	1.8	1.8
<i>Weighted N</i>	384	600	474	247	1706
<i>Unweighted N</i>	308	644	543	239	1734
4th wealth group					
Mean	10.2	10.2	10.0	9.6	10.1
Standard deviation	1.7	1.6	1.7	1.7	1.7
<i>Weighted N</i>	471	652	381	207	1711
<i>Unweighted N</i>	393	737	450	199	1779
Highest wealth group					
Mean	10.3	10.5	10.1	9.6	10.3
Standard deviation	1.7	1.5	1.7	1.6	1.6
<i>Weighted N</i>	472	741	355	132	1700
<i>Unweighted N</i>	408	843	432	128	1811

Note: Differences by wealth group were statistically significant ($p \leq 0.001$).

Table 4A.8. Positive affect by age and wealth in wave 5

	52–59	60–69	70–79	80+	All
Lowest wealth group					
Mean	22.7	22.6	23.6	23.6	23.0
Standard deviation	9.1	9.2	8.2	7.9	8.7
<i>Weighted N</i>	456	510	417	323	1706
<i>Unweighted N</i>	345	489	419	268	1521
2nd wealth group					
Mean	23.4	24.0	24.8	22.5	23.9
Standard deviation	8.6	8.1	7.7	8.2	8.2
<i>Weighted N</i>	494	570	405	237	1707
<i>Unweighted N</i>	400	618	468	223	1709
3rd wealth group					
Mean	24.8	25.3	23.8	22.6	24.5
Standard deviation	7.9	7.9	7.9	8.7	8.0
<i>Weighted N</i>	384	600	474	247	1706
<i>Unweighted N</i>	308	644	543	239	1734
4th wealth group					
Mean	26.0	25.6	24.9	24.7	25.5
Standard deviation	8.2	7.8	7.9	7.5	7.9
<i>Weighted N</i>	471	652	381	207	1711
<i>Unweighted N</i>	393	737	450	199	1779
Highest wealth group					
Mean	26.1	26.2	25.1	21.7	25.7
Standard deviation	7.7	7.4	7.7	7.3	7.6
<i>Weighted N</i>	472	741	355	132	1700
<i>Unweighted N</i>	408	843	432	128	1811

Note: Differences by wealth group were statistically significant ($p \leq 0.001$).

Table 4A.9. Eudemonic well-being by age and wealth in wave 5

	52–59	60–69	70–79	80+	All
Lowest wealth group					
Mean	25.8	27.3	28.1	27.0	27.1
Standard deviation	8.6	8.4	7.2	7.3	8.0
<i>Weighted N</i>	456	510	417	323	1706
<i>Unweighted N</i>	345	489	419	268	1521
2nd wealth group					
Mean	29.7	30.0	29.9	26.2	29.4
Standard deviation	7.5	7.4	7.1	7.3	7.4
<i>Weighted N</i>	494	570	405	237	1707
<i>Unweighted N</i>	400	618	468	223	1709
3rd wealth group					
Mean	31.5	32.0	29.9	27.6	30.8
Standard deviation	6.9	7.2	7.1	7.5	7.3
<i>Weighted N</i>	384	600	474	247	1706
<i>Unweighted N</i>	308	644	543	239	1734
4th wealth group					
Mean	32.8	33.2	31.6	29.0	32.3
Standard deviation	6.7	6.5	6.7	7.6	6.8
<i>Weighted N</i>	471	652	381	207	1711
<i>Unweighted N</i>	393	737	450	199	1779
Highest wealth group					
Mean	34.7	35.0	33.1	28.8	34.1
Standard deviation	6.1	5.6	6.3	5.8	6.1
<i>Weighted N</i>	472	741	355	132	1700
<i>Unweighted N</i>	408	843	432	128	1811

Note: Differences by wealth group were statistically significant ($p \leq 0.001$).

Table 4A.10. Life satisfaction by age and wealth in wave 5

	52–59	60–69	70–79	80+	All
Lowest wealth group					
Mean	15.4	17.6	19.4	20.2	17.9
Standard deviation	7.7	7.3	6.8	6.8	7.4
<i>Weighted N</i>	456	510	417	323	1706
<i>Unweighted N</i>	345	489	419	268	1521
2nd wealth group					
Mean	18.7	20.0	20.7	19.0	19.6
Standard deviation	6.9	6.3	6.3	6.6	6.6
<i>Weighted N</i>	494	570	405	237	1707
<i>Unweighted N</i>	400	618	468	223	1709
3rd wealth group					
Mean	20.8	20.8	21.1	19.2	20.7
Standard deviation	6.2	6.1	5.6	6.8	6.1
<i>Weighted N</i>	384	600	474	247	1706
<i>Unweighted N</i>	308	644	543	239	1734
4th wealth group					
Mean	21.3	21.4	21.9	20.6	21.4
Standard deviation	5.9	6.1	5.6	6.6	6.0
<i>Weighted N</i>	471	652	381	207	1711
<i>Unweighted N</i>	393	737	450	199	1779
Highest wealth group					
Mean	22.6	23.0	22.3	20.6	22.6
Standard deviation	5.1	4.9	5.7	6.2	5.3
<i>Weighted N</i>	472	741	355	132	1700
<i>Unweighted N</i>	408	843	432	128	1811

Note: Differences by wealth group were statistically significant ($p \leq 0.001$).

Table 4A.11. Elevated depressive symptoms by age and marital status in wave 5

	52–59	60–69	70–79	80+	All
Married					
<4 CES-D symptoms	89.0%	88.9%	88.8%	84.0%	88.6%
≥4 CES-D symptoms	11.0%	11.1%	11.2%	16.0%	11.4%
<i>Weighted N</i>	<i>1635</i>	<i>2293</i>	<i>1289</i>	<i>418</i>	<i>5635</i>
<i>Unweighted N</i>	<i>1314</i>	<i>2448</i>	<i>1441</i>	<i>381</i>	<i>5584</i>
Never married					
<4 CES-D symptoms	72.9%	86.5%	85.9%	78.6%	79.7%
≥4 CES-D symptoms	27.1%	13.5%	14.1%	21.4%	20.3%
<i>Weighted N</i>	<i>229</i>	<i>150</i>	<i>92</i>	<i>53</i>	<i>524</i>
<i>Unweighted N</i>	<i>193</i>	<i>169</i>	<i>107</i>	<i>50</i>	<i>519</i>
Divorced/Separated					
<4 CES-D symptoms	72.7%	76.8%	78.7%	[76.8%]	75.6%
≥4 CES-D symptoms	27.3%	23.2%	21.3%	[23.2%]	24.4%
<i>Weighted N</i>	<i>387</i>	<i>398</i>	<i>199</i>	<i>48</i>	<i>1033</i>
<i>Unweighted N</i>	<i>321</i>	<i>447</i>	<i>220</i>	<i>49</i>	<i>1037</i>
Widowed					
<4 CES-D symptoms	59.9%	74.2%	77.9%	74.8%	75.0%
≥4 CES-D symptoms	40.1%	25.8%	22.1%	25.2%	25.0%
<i>Weighted N</i>	<i>63</i>	<i>238</i>	<i>444</i>	<i>600</i>	<i>1345</i>
<i>Unweighted N</i>	<i>55</i>	<i>280</i>	<i>536</i>	<i>553</i>	<i>1424</i>

Note: Differences by marital status were statistically significant ($p \leq 0.001$).

Table 4A.12. Enjoyment of life by age and marital status in wave 5

	52–59	60–69	70–79	80+	All
Married					
Mean	10.0	10.1	10.0	9.5	10.0
Standard deviation	1.9	1.8	1.7	1.7	1.8
<i>Weighted N</i>	1647	2321	1299	432	5699
<i>Unweighted N</i>	1322	2477	1454	394	5647
Never married					
Mean	8.9	9.4	9.6	9.0	9.2
Standard deviation	2.3	2.1	1.6	1.6	2.1
<i>Weighted N</i>	231	156	96	55	537
<i>Unweighted N</i>	195	175	110	52	532
Divorced/Separated					
Mean	9.1	9.4	9.2	[8.6]	9.2
Standard deviation	2.1	2.0	1.9	[2.0]	2.0
<i>Weighted N</i>	395	410	202	48	1055
<i>Unweighted N</i>	327	456	223	49	1055
Widowed					
Mean	9.0	9.7	9.5	9.3	9.4
Standard deviation	2.4	1.9	1.7	1.8	1.8
<i>Weighted N</i>	66	242	453	620	1381
<i>Unweighted N</i>	58	284	547	571	1460

Note: Differences by marital status were statistically significant ($p \leq 0.001$).

Table 4A.13. Positive affect by age and marital status in wave 5

	52–59	60–69	70–79	80+	All
Married					
Mean	25.2	25.3	24.9	23.2	25.1
Standard deviation	8.2	7.7	7.6	7.7	7.9
<i>Weighted N</i>	1647	2321	1299	432	5699
<i>Unweighted N</i>	1322	2477	1454	394	5647
Never married					
Mean	24.3	23.6	23.5	22.6	23.8
Standard deviation	8.6	8.1	8.0	7.2	8.2
<i>Weighted N</i>	231	156	96	55	537
<i>Unweighted N</i>	195	175	110	52	532
Divorced/Separated					
Mean	23.4	24.0	23.4	[23.5]	23.7
Standard deviation	8.9	8.8	8.2	[8.2]	8.7
<i>Weighted N</i>	395	410	202	48	1055
<i>Unweighted N</i>	327	456	223	49	1055
Widowed					
Mean	24.6	24.6	23.4	23.0	23.6
Standard deviation	8.1	9.2	8.4	8.4	8.6
<i>Weighted N</i>	66	242	453	620	1381
<i>Unweighted N</i>	58	284	547	571	1460

Note: Differences by marital status were statistically significant ($p \leq 0.001$).

Table 4A.14. Eudemonic well-being by age and marital status in wave 5

	52–59	60–69	70–79	80+	All
Married					
Mean	32.1	32.4	31.0	27.8	31.7
Standard deviation	7.2	7.1	7.0	7.4	7.2
Weighted N	1647	2321	1299	432	5699
Unweighted N	1322	2477	1454	394	5647
Never married					
Mean	28.6	30.9	31.8	27.4	29.7
Standard deviation	8.5	7.5	6.1	7.5	7.9
Weighted N	231	156	96	55	537
Unweighted N	195	175	110	52	532
Divorced/Separated					
Mean	28.1	29.9	28.6	[27.0]	28.9
Standard deviation	8.2	8.2	7.4	[8.3]	8.1
Weighted N	395	410	202	48	1055
Unweighted N	327	456	223	49	1055
Widowed					
Mean	29.1	30.7	29.7	27.5	29.0
Standard deviation	8.8	8.1	7.1	7.2	7.5
Weighted N	66	242	453	620	1381
Unweighted N	58	284	547	571	1460

Note: Differences by marital status were statistically significant ($p \leq 0.001$).

Table 4A.15. Life satisfaction by age and marital status in wave 5

	52–59	60–69	70–79	80+	All
Married					
Mean	21.2	21.7	22.1	21.0	21.6
Standard deviation	6.0	5.8	5.5	6.8	5.9
Weighted N	1647	2321	1299	432	5699
Unweighted N	1322	2477	1454	394	5647
Never married					
Mean	16.5	18.3	20.6	16.9	17.8
Standard deviation	7.8	7.0	5.9	7.1	7.3
Weighted N	231	156	96	55	537
Unweighted N	195	175	110	52	532
Divorced/Separated					
Mean	16.2	18.0	17.6	[17.1]	17.2
Standard deviation	7.1	7.1	7.0	[7.1]	7.1
Weighted N	395	410	202	48	1055
Unweighted N	327	456	223	49	1055
Widowed					
Mean	16.0	18.8	19.5	19.5	19.2
Standard deviation	7.3	6.9	6.4	6.3	6.5
Weighted N	66	242	453	620	1381
Unweighted N	58	284	547	571	1460

Note: Differences by marital status were statistically significant ($p \leq 0.001$).

Table 4A.16. Elevated depressive symptoms by age and paid employment in wave 5

	52–59	60–69	70–79	80+	All
Not in labour market					
<4 CES-D symptoms	68.6%	83.6%	85.0%	78.5%	81.6%
≥4 CES-D symptoms	31.4%	16.4%	15.0%	21.5%	18.4%
<i>Weighted N</i>	565	2069	1938	1109	5680
<i>Unweighted N</i>	473	2278	2201	1023	5975
Still at work					
<4 CES-D symptoms	89.7%	91.4%	91.8%	-	90.3%
≥4 CES-D symptoms	10.3%	8.6%	8.2%	-	9.7%
<i>Weighted N</i>	1679	960	85	9	2734
<i>Unweighted N</i>	1353	1017	101	9	2480

Note: Differences by paid employment were statistically significant ($p \leq 0.001$).

Table 4A.17. Enjoyment of life by age and paid employment in wave 5

	52–59	60–69	70–79	80+	All
Not in labour market					
Mean	9.1	9.8	9.8	9.3	9.6
Standard deviation	2.3	1.9	1.7	1.8	1.9
<i>Weighted N</i>	576	2104	1958	1145	5784
<i>Unweighted N</i>	482	2311	2225	1056	6074
Still at work					
Mean	10.0	10.2	10.4	-	10.1
Standard deviation	1.8	1.7	1.7	-	1.8
<i>Weighted N</i>	1693	972	90	9	2763
<i>Unweighted N</i>	1363	1029	107	9	2508

Note: Differences by paid employment were statistically significant ($p \leq 0.001$).

Table 4A.18. Positive affect by age and paid employment in wave 5

	52–59	60–69	70–79	80+	All
Not in labour market					
Mean	23.2	24.8	24.3	23.1	24.2
Standard deviation	9.3	8.2	7.8	8.0	8.2
<i>Weighted N</i>	576	2104	1958	1145	5784
<i>Unweighted N</i>	482	2311	2225	1056	6074
Still at work					
Mean	25.3	25.6	27.0	-	25.5
Standard deviation	8.1	7.6	8.4	-	7.9
<i>Weighted N</i>	1693	972	90	9	2763
<i>Unweighted N</i>	1363	1029	107	9	2508

Note: Differences by paid employment were statistically significant ($p \leq 0.001$).

Table 4A.19. Eudemonic well-being by age and paid employment in wave 5

	52–59	60–69	70–79	80+	All
Not in labour market					
Mean	28.3	31.5	30.4	27.6	30.1
Standard deviation	9.3	7.7	7.0	7.3	7.7
<i>Weighted N</i>	576	2104	1958	1145	5784
<i>Unweighted N</i>	482	2311	2225	1056	6074
Still at work					
Mean	32.1	33.0	32.6	-	32.4
Standard deviation	6.8	6.5	6.9	-	6.8
<i>Weighted N</i>	1693	972	90	9	2763
<i>Unweighted N</i>	1363	1029	107	9	2508

Note: Differences by paid employment were statistically significant ($p \leq 0.001$).

Table 4A.20. Life satisfaction by age and paid employment in wave 5

	52–59	60–69	70–79	80+	All
Not in labour market					
Mean	18.0	20.8	21.0	19.9	20.4
Standard deviation	8.1	6.5	6.1	6.6	6.6
<i>Weighted N</i>	576	2104	1958	1145	5784
<i>Unweighted N</i>	482	2311	2225	1056	6074
Still at work					
Mean	20.6	21.1	22.0	-	20.8
Standard deviation	6.1	5.8	5.9	-	6.0
<i>Weighted N</i>	1693	972	90	9	2763
<i>Unweighted N</i>	1363	1029	107	9	2508

Note: Differences by paid employment were not statistically significant ($p = 0.108$).

Table 4A.21. Elevated depressive symptoms by age and volunteering in wave 5

	52–59	60–69	70–79	80+	All
Not doing any volunteering work					
<4 CES-D symptoms	83.2%	83.8%	83.1%	76.3%	82.3%
≥4 CES-D symptoms	16.8%	16.2%	16.9%	23.7%	17.7%
<i>Weighted N</i>	1724	2141	1457	955	6277
<i>Unweighted N</i>	1371	2277	1609	866	6123
Doing some volunteering work					
<4 CES-D symptoms	85.9%	91.3%	90.9%	91.2%	89.8%
≥4 CES-D symptoms	14.1%	8.7%	9.1%	8.8%	10.2%
<i>Weighted N</i>	591	939	568	164	2262
<i>Unweighted N</i>	512	1068	696	167	2443

Note: Differences by volunteering were statistically significant ($p \leq 0.001$).

Table 4A.22. Enjoyment of life by age and volunteering in wave 5

	52–59	60–69	70–79	80+	All
Not doing any volunteering work					
Mean	9.6	9.7	9.6	9.2	9.6
Standard deviation	2.0	2.0	1.8	1.8	1.9
Weighted N	1745	2174	1477	990	6387
Unweighted N	1387	2307	1633	898	6225
Doing some volunteering work					
Mean	10.0	10.4	10.3	10.1	10.2
Standard deviation	1.9	1.5	1.5	1.4	1.6
Weighted N	594	954	573	165	2286
Unweighted N	515	1084	702	168	2469

Note: Differences by volunteering were statistically significant ($p \leq 0.001$).

Table 4A.23. Positive affect by age and volunteering in wave 5

	52–59	60–69	70–79	80+	All
Not doing any volunteering work					
Mean	24.5	24.6	24.0	22.6	24.2
Standard deviation	8.4	8.2	7.9	8.1	8.2
Weighted N	1745	2174	1477	990	6387
Unweighted N	1387	2307	1633	898	6225
Doing some volunteering work					
Mean	25.8	25.9	25.3	24.9	25.7
Standard deviation	8.2	7.6	7.8	7.4	7.8
Weighted N	594	954	573	165	2286
Unweighted N	515	1084	702	168	2469

Note: Differences by volunteering were statistically significant ($p \leq 0.001$).

Table 4A.24. Eudemonic well-being by age and volunteering in wave 5

	52–59	60–69	70–79	80+	All
Not doing any volunteering work					
Mean	30.8	31.2	29.6	27.0	30.2
Standard deviation	7.9	7.7	7.2	7.4	7.7
Weighted N	1745	2174	1477	990	6387
Unweighted N	1387	2307	1633	898	6225
Doing some volunteering work					
Mean	32.1	33.6	32.7	30.6	32.8
Standard deviation	7.2	6.4	6.1	6.1	6.6
Weighted N	594	954	573	165	2286
Unweighted N	515	1084	702	168	2469

Note: Differences by volunteering were statistically significant ($p \leq 0.001$).

Table 4A.25. Life satisfaction by age and volunteering in wave 5

	52–59	60–69	70–79	80+	All
Not doing any volunteering work					
Mean	19.6	20.3	20.6	19.6	20.1
Standard deviation	6.9	6.5	6.3	6.8	6.6
Weighted N	1745	2174	1477	990	6387
Unweighted N	1387	2307	1633	898	6225
Doing some volunteering work					
Mean	20.5	22.1	22.1	21.4	21.6
Standard deviation	6.5	5.6	5.3	5.6	5.8
Weighted N	594	954	573	165	2286
Unweighted N	515	1084	702	168	2469

Note: Differences by volunteering were statistically significant ($p \leq 0.001$).

Table 4A.26. Elevated depressive symptoms by age and self-rated health in wave 5

	52–59	60–69	70–79	80+	All
Excellent/Very good/ Good self-rated health					
<4 CES-D symptoms	91.3%	91.8%	93.1%	89.1%	91.7%
≥ 4 CES-D symptoms	8.7%	8.2%	6.9%	10.9%	8.3%
Weighted N	1821	2372	1364	652	6209
Unweighted N	1480	2617	1595	613	6305
Fair/Poor self-rated health					
<4 CES-D symptoms	56.3%	66.8%	69.2%	63.7%	64.7%
≥ 4 CES-D symptoms	43.7%	33.2%	30.8%	36.3%	35.3%
Weighted N	489	706	660	467	2322
Unweighted N	400	726	709	420	2255

Note: Differences by self-rated health were statistically significant ($p \leq 0.001$).

Table 4A.27. Enjoyment of life by age and self-rated health in wave 5

	52–59	60–69	70–79	80+	All
Excellent/Very good/ Good self-rated health					
Mean	10.1	10.3	10.2	9.8	10.2
Standard deviation	1.8	1.6	1.5	1.5	1.6
Weighted N	1831	2396	1379	666	6272
Unweighted N	1489	2642	1612	626	6369
Fair/Poor self-rated health					
Mean	8.2	8.5	8.8	8.6	8.5
Standard deviation	2.0	2.1	1.8	1.9	2.0
Weighted N	503	730	671	489	2393
Unweighted N	410	747	722	440	2319

Note: Differences by self-rated health were statistically significant ($p \leq 0.001$).

Table 4A.28. Positive affect by age and self-rated health in wave 5

	52–59	60–69	70–79	80+	All
Excellent/Very good/ Good self-rated health					
Mean	25.8	25.8	25.5	23.9	25.6
Standard deviation	8.0	7.8	7.7	7.9	7.8
Weighted <i>N</i>	1831	2396	1379	666	6272
Unweighted <i>N</i>	1489	2642	1612	626	6369
Fair/Poor self-rated health					
Mean	19.8	21.2	21.4	21.5	21.0
Standard deviation	8.6	8.1	7.7	8.1	8.1
Weighted <i>N</i>	503	730	671	489	2393
Unweighted <i>N</i>	410	747	722	440	2319

Note: Differences by self-rated health were statistically significant ($p \leq 0.001$).

Table 4A.29. Eudemonic well-being by age and self-rated health in wave 5

	52–59	60–69	70–79	80+	All
Excellent/Very good/ Good self-rated health					
Mean	33.0	33.6	32.5	30.1	32.9
Standard deviation	6.7	6.3	6.2	6.2	6.5
Weighted <i>N</i>	1831	2396	1379	666	6272
Unweighted <i>N</i>	1489	2642	1612	626	6369
Fair/Poor self-rated health					
Mean	23.9	25.8	26.0	23.4	25.0
Standard deviation	7.2	7.7	6.7	7.0	7.3
Weighted <i>N</i>	503	730	671	489	2393
Unweighted <i>N</i>	410	747	722	440	2319

Note: Differences by self-rated health were statistically significant ($p \leq 0.001$).

Table 4A.30. Life satisfaction by age and self-rated health in wave 5

	52–59	60–69	70–79	80+	All
Excellent/Very good/ Good self-rated health					
Mean	21.2	21.9	22.2	21.3	21.7
Standard deviation	6.0	5.6	5.3	5.6	5.7
Weighted <i>N</i>	1831	2396	1379	666	6272
Unweighted <i>N</i>	1489	2642	1612	626	6369
Fair/Poor self-rated health					
Mean	14.8	17.2	18.4	17.6	17.0
Standard deviation	7.4	7.1	6.8	7.5	7.3
Weighted <i>N</i>	503	730	671	489	2393
Unweighted <i>N</i>	410	747	722	440	2319

Note: Differences by self-rated health were statistically significant ($p \leq 0.001$).

Table 4A.31. Elevated depressive symptoms by age and limiting long-standing illness in wave 5

	52–59	60–69	70–79	80+	All
No LLSI					
<4 CES-D symptoms	91.8%	92.2%	91.1%	88.0%	91.4%
≥4 CES-D symptoms	8.2%	7.8%	8.9%	12.0%	8.6%
<i>Weighted N</i>	<i>1709</i>	<i>2104</i>	<i>1197</i>	<i>533</i>	<i>5542</i>
<i>Unweighted N</i>	<i>1383</i>	<i>2298</i>	<i>1378</i>	<i>493</i>	<i>5552</i>
LLSI					
<4 CES-D symptoms	61.6%	73.0%	76.9%	69.9%	71.2%
≥4 CES-D symptoms	38.4%	27.0%	23.1%	30.1%	28.8%
<i>Weighted N</i>	<i>604</i>	<i>974</i>	<i>827</i>	<i>586</i>	<i>2990</i>
<i>Unweighted N</i>	<i>498</i>	<i>1045</i>	<i>925</i>	<i>540</i>	<i>3008</i>

Note: Differences by limiting long-standing illness were statistically significant ($p \leq 0.001$).

Table 4A.32. Enjoyment of life by age and limiting long-standing illness in wave 5

	52–59	60–69	70–79	80+	All
No LLSI					
Mean	10.2	10.3	10.2	9.8	10.2
Standard deviation	1.7	1.6	1.6	1.5	1.6
<i>Weighted N</i>	<i>1721</i>	<i>2126</i>	<i>1208</i>	<i>554</i>	<i>5609</i>
<i>Unweighted N</i>	<i>1393</i>	<i>2323</i>	<i>1391</i>	<i>512</i>	<i>5619</i>
LLSI					
Mean	8.5	9.0	9.1	8.9	8.9
Standard deviation	2.2	2.1	1.8	1.9	2.0
<i>Weighted N</i>	<i>616</i>	<i>1000</i>	<i>841</i>	<i>601</i>	<i>3058</i>
<i>Unweighted N</i>	<i>507</i>	<i>1066</i>	<i>942</i>	<i>554</i>	<i>3069</i>

Note: Differences by limiting long-standing illness were statistically significant ($p \leq 0.001$).

Table 4A.33. Positive affect by age and limiting long-standing illness in wave 5

	52–59	60–69	70–79	80+	All
No LLSI					
Mean	25.7	25.9	25.4	23.6	25.6
Standard deviation	8.0	7.7	7.7	8.1	7.8
<i>Weighted N</i>	<i>1721</i>	<i>2126</i>	<i>1208</i>	<i>554</i>	<i>5609</i>
<i>Unweighted N</i>	<i>1393</i>	<i>2323</i>	<i>1391</i>	<i>512</i>	<i>5619</i>
LLSI					
Mean	21.6	22.5	22.7	22.5	22.4
Standard deviation	8.9	8.3	7.9	7.9	8.3
<i>Weighted N</i>	<i>616</i>	<i>1000</i>	<i>841</i>	<i>601</i>	<i>3058</i>
<i>Unweighted N</i>	<i>507</i>	<i>1066</i>	<i>942</i>	<i>554</i>	<i>3069</i>

Note: Differences by limiting long-standing illness were statistically significant ($p \leq 0.001$).

Table 4A.34. Eudemonic well-being by age and limiting long-standing illness in wave 5

	52–59	60–69	70–79	80+	All
No LLSI					
Mean	33.0	33.9	32.5	30.3	33.0
Standard deviation	6.6	6.2	6.4	6.3	6.5
<i>Weighted N</i>	1721	2126	1208	554	5609
<i>Unweighted N</i>	1393	2323	1391	512	5619
LLSI					
Mean	25.4	27.5	27.5	24.8	26.6
Standard deviation	8.0	7.8	6.9	7.2	7.6
<i>Weighted N</i>	616	1000	841	601	3058
<i>Unweighted N</i>	507	1066	942	554	3069

Note: Differences by limiting long-standing illness were statistically significant ($p \leq 0.001$).

Table 4A.35. Life satisfaction by age and limiting long-standing illness in wave 5

	52–59	60–69	70–79	80+	All
No LLSI					
Mean	21.1	21.9	22.2	21.7	21.7
Standard deviation	5.9	5.5	5.3	5.5	5.6
<i>Weighted N</i>	1721	2126	1208	554	5609
<i>Unweighted N</i>	1393	2323	1391	512	5619
LLSI					
Mean	16.1	18.4	19.3	18.0	18.1
Standard deviation	7.8	7.2	6.6	7.2	7.3
<i>Weighted N</i>	616	1000	841	601	3058
<i>Unweighted N</i>	507	1066	942	554	3069

Note: Differences by limiting long-standing illness were statistically significant ($p \leq 0.001$).

Table 4A.36. Elevated depressive symptoms by age and cardiovascular morbidity in wave 5

	52–59	60–69	70–79	80+	All
No CVD					
<4 CES-D symptoms	86.4%	88.6%	87.7%	82.4%	87.2%
≥4 CES-D symptoms	13.6%	11.4%	12.3%	17.6%	12.8%
<i>Weighted N</i>	1928	2308	1224	550	6010
<i>Unweighted N</i>	1573	2523	1399	508	6003
One or more CVDs					
<4 CES-D symptoms	71.3%	78.6%	81.6%	74.7%	77.5%
≥4 CES-D symptoms	28.7%	21.4%	18.4%	25.3%	22.5%
<i>Weighted N</i>	387	771	802	568	2527
<i>Unweighted N</i>	310	821	906	524	2561

Note: Differences by cardiovascular morbidity were statistically significant ($p \leq 0.001$).

Table 4A.37. Enjoyment of life by age and cardiovascular morbidity in wave 5

	52–59	60–69	70–79	80+	All
No CVD					
Mean	9.8	10.1	10.0	9.5	9.9
Standard deviation	2.0	1.8	1.7	1.7	1.8
<i>Weighted N</i>	1945	2338	1237	564	6084
<i>Unweighted N</i>	1587	2553	1414	520	6074
One or more CVDs					
Mean	9.4	9.4	9.5	9.2	9.4
Standard deviation	2.1	2.0	1.7	1.8	1.9
<i>Weighted N</i>	394	789	814	589	2586
<i>Unweighted N</i>	315	837	921	544	2617

Note: Differences by cardiovascular morbidity were statistically significant ($p \leq 0.001$).

Table 4A.38. Positive affect by age and cardiovascular morbidity in wave 5

	52–59	60–69	70–79	80+	All
No CVD					
Mean	24.9	25.4	24.7	23.2	25.0
Standard deviation	8.3	8.0	7.9	8.2	8.1
<i>Weighted N</i>	1945	2338	1237	564	6084
<i>Unweighted N</i>	1587	2553	1414	520	6074
One or more CVDs					
Mean	24.3	23.8	24.0	23.0	23.8
Standard deviation	8.8	8.0	7.8	7.8	8.0
<i>Weighted N</i>	394	789	814	589	2586
<i>Unweighted N</i>	315	837	921	544	2617

Note: Differences by cardiovascular morbidity were statistically significant ($p \leq 0.001$).

Table 4A.39. Eudemonic well-being by age and cardiovascular morbidity in wave 5

	52–59	60–69	70–79	80+	All
No CVD					
Mean	31.5	32.7	31.3	28.2	31.7
Standard deviation	7.6	7.1	6.8	7.2	7.3
<i>Weighted N</i>	1945	2338	1237	564	6084
<i>Unweighted N</i>	1587	2553	1414	520	6074
One or more CVDs					
Mean	29.1	29.6	29.2	27.1	28.9
Standard deviation	8.1	7.9	7.2	7.4	7.7
<i>Weighted N</i>	394	789	814	589	2586
<i>Unweighted N</i>	315	837	921	544	2617

Note: Differences by cardiovascular morbidity were statistically significant ($p \leq 0.001$).

Table 4A.40. Life satisfaction by age and cardiovascular morbidity in wave 5

	52–59	60–69	70–79	80+	All
No CVD					
Mean	20.1	21.3	21.5	20.3	20.9
Standard deviation	6.6	6.0	5.9	6.5	6.3
<i>Weighted N</i>	1945	2338	1237	564	6084
<i>Unweighted N</i>	1587	2553	1414	520	6074
One or more CVDs					
Mean	18.6	19.4	20.5	19.5	19.7
Standard deviation	7.6	6.8	6.3	6.8	6.8
<i>Weighted N</i>	394	789	814	589	2586
<i>Unweighted N</i>	315	837	921	544	2617

Note: Differences by cardiovascular morbidity were statistically significant ($p \leq 0.001$).

Table 4A.41. Elevated depressive symptoms by age and limitation in ADLs in wave 5

	52–59	60–69	70–79	80+	All
No or one ADL					
<4 CES-D symptoms	86.4%	88.1%	88.2%	82.2%	87.0%
≥ 4 CES-D symptoms	13.6%	11.9%	11.8%	17.8%	13.0%
<i>Weighted N</i>	2164	2884	1803	911	7762
<i>Unweighted N</i>	1767	3142	2071	847	7827
Two or more ADLs					
<4 CES-D symptoms	47.5%	56.8%	61.6%	62.6%	57.9%
≥ 4 CES-D symptoms	52.5%	43.2%	38.4%	37.4%	42.1%
<i>Weighted N</i>	151	196	223	208	777
<i>Unweighted N</i>	116	203	234	186	739

Note: Differences by ADLs were statistically significant ($p \leq 0.001$).

Table 4A.42. Enjoyment of life by age and limitation in ADLs in wave 5

	52–59	60–69	70–79	80+	All
No or one ADL					
Mean	9.9	10.0	9.9	9.5	9.9
Standard deviation	1.9	1.8	1.7	1.7	1.8
<i>Weighted N</i>	2183	2931	1823	939	7876
<i>Unweighted N</i>	1782	3187	2095	873	7937
Two or more ADLs					
Mean	7.8	8.0	8.7	8.5	8.3
Standard deviation	2.0	2.2	1.8	1.9	2.0
<i>Weighted N</i>	156	200	228	216	799
<i>Unweighted N</i>	120	207	240	193	760

Note: Differences by ADLs were statistically significant ($p \leq 0.001$).

Table 4A.43. Positive affect by age and limitation in ADLs in wave 5

	52–59	60–69	70–79	80+	All
No or one ADL					
Mean	25.1	25.2	24.7	23.3	24.9
Standard deviation	8.3	7.9	7.8	8.1	8.0
<i>Weighted N</i>	2183	2931	1823	939	7876
<i>Unweighted N</i>	1782	3187	2095	873	7937
Two or more ADLs					
Mean	18.0	20.2	21.1	21.3	20.3
Standard deviation	8.0	8.8	7.8	7.7	8.2
<i>Weighted N</i>	156	200	228	216	799
<i>Unweighted N</i>	120	207	240	193	760

Note: Differences by ADLs were statistically significant ($p \leq 0.001$).

Table 4A.44. Eudemonic well-being by age and limitation in ADLs in wave 5

	52–59	60–69	70–79	80+	All
No or one ADL					
Mean	31.8	32.5	31.3	28.6	31.6
Standard deviation	7.4	7.0	6.7	7.0	7.1
<i>Weighted N</i>	2183	2931	1823	939	7876
<i>Unweighted N</i>	1782	3187	2095	873	7937
Two or more ADLs					
Mean	21.1	23.2	24.1	22.6	22.9
Standard deviation	6.3	8.3	7.1	7.0	7.3
<i>Weighted N</i>	156	200	228	216	799
<i>Unweighted N</i>	120	207	240	193	760

Note: Differences by ADLs were statistically significant ($p \leq 0.001$).

Table 4A.45. Life satisfaction by age and limitation in ADLs in wave 5

	52–59	60–69	70–79	80+	All
No or one ADL					
Mean	20.3	21.2	21.5	20.6	20.9
Standard deviation	6.5	6.0	5.8	6.3	6.2
<i>Weighted N</i>	2183	2931	1823	939	7876
<i>Unweighted N</i>	1782	3187	2095	873	7937
Two or more ADLs					
Mean	12.8	15.3	17.5	16.4	15.7
Standard deviation	6.8	7.7	7.3	7.5	7.5
<i>Weighted N</i>	156	200	228	216	799
<i>Unweighted N</i>	120	207	240	193	760

Note: Differences by ADLs were statistically significant ($p \leq 0.001$).

Table 4A.46. Elevated depressive symptoms by age and mobility impairment in wave 5

	52–59	60–69	70–79	80+	All
No mobility impairment					
<4 CES-D symptoms	94.0%	92.8%	93.8%	93.2%	93.5%
≥4 CES-D symptoms	6.0%	7.2%	6.2%	6.8%	6.5%
<i>Weighted N</i>	1344	1483	677	201	3705
<i>Unweighted N</i>	1097	1619	784	194	3694
Mobility impairment					
<4 CES-D symptoms	69.8%	79.9%	81.0%	75.3%	77.3%
≥4 CES-D symptoms	30.2%	20.1%	19.0%	24.7%	22.7%
<i>Weighted N</i>	970	1597	1348	918	4834
<i>Unweighted N</i>	786	1726	1521	839	4872

Note: Differences by mobility impairment were statistically significant ($p \leq 0.001$).

Table 4A.47. Enjoyment of life by age and mobility impairment in wave 5

	52–59	60–69	70–79	80+	All
No mobility impairment					
Mean	10.3	10.4	10.5	10.2	10.4
Standard deviation	1.7	1.6	1.5	1.7	1.6
<i>Weighted N</i>	1353	1504	684	208	3750
<i>Unweighted N</i>	1104	1643	792	201	3740
Mobility impairment					
Mean	9.0	9.4	9.4	9.1	9.3
Standard deviation	2.2	2.0	1.7	1.8	1.9
<i>Weighted N</i>	986	1626	1366	947	4925
<i>Unweighted N</i>	798	1751	1543	865	4957

Note: Differences by mobility impairment were statistically significant ($p \leq 0.001$).

Table 4A.48. Positive affect by age and mobility impairment in wave 5

	52–59	60–69	70–79	80+	All
No mobility impairment					
Mean	26.1	26.3	26.1	25.1	26.2
Standard deviation	7.9	7.7	7.9	8.1	7.8
<i>Weighted N</i>	1353	1504	684	208	3750
<i>Unweighted N</i>	1104	1643	792	201	3740
Mobility impairment					
Mean	22.7	23.6	23.4	22.5	23.2
Standard deviation	8.7	8.1	7.7	7.9	8.1
<i>Weighted N</i>	986	1626	1366	947	4925
<i>Unweighted N</i>	798	1751	1543	865	4957

Note: Differences by mobility impairment were statistically significant ($p \leq 0.001$).

Table 4A.49. Eudemonic well-being by age and mobility impairment in wave 5

	52–59	60–69	70–79	80+	All
No mobility impairment					
Mean	33.6	34.5	33.6	32.2	33.9
Standard deviation	6.4	6.2	6.3	6.5	6.3
<i>Weighted N</i>	1353	1504	684	208	3750
<i>Unweighted N</i>	1104	1643	792	201	3740
Mobility impairment					
Mean	27.5	29.5	28.9	26.6	28.4
Standard deviation	8.1	7.6	6.9	7.1	7.5
<i>Weighted N</i>	986	1626	1366	947	4925
<i>Unweighted N</i>	798	1751	1543	865	4957

Note: Differences by mobility impairment were statistically significant ($p \leq 0.001$).

Table 4A.50. Life satisfaction by age and mobility impairment in wave 5

	52–59	60–69	70–79	80+	All
No mobility impairment					
Mean	21.4	22.1	22.6	22.6	21.9
Standard deviation	5.8	5.6	5.4	5.5	5.6
<i>Weighted N</i>	1353	1504	684	208	3750
<i>Unweighted N</i>	1104	1643	792	201	3740
Mobility impairment					
Mean	17.7	19.7	20.3	19.2	19.4
Standard deviation	7.5	6.7	6.2	6.7	6.8
<i>Weighted N</i>	986	1626	1366	947	4925
<i>Unweighted N</i>	798	1751	1543	865	4957

Note: Differences by mobility impairment were statistically significant ($p \leq 0.001$).

Table 4A.51. Elevated depressive symptoms by age and lack of physical activity (sedentary behaviour) in wave 5

	52–59	60–69	70–79	80+	All
Physically active					
<4 CES-D symptoms	87.2%	89.0%	90.0%	86.3%	88.4%
≥4 CES-D symptoms	12.8%	11.0%	10.0%	13.7%	11.6%
<i>Weighted N</i>	2062	2692	1543	623	6919
<i>Unweighted N</i>	1684	2962	1807	594	7047
Sedentary					
<4 CES-D symptoms	56.9%	66.3%	70.3%	68.7%	66.8%
≥4 CES-D symptoms	43.1%	33.7%	29.7%	31.3%	33.2%
<i>Weighted N</i>	252	388	483	496	1620
<i>Unweighted N</i>	199	383	498	439	1519

Note: Differences by physical activity were statistically significant ($p \leq 0.001$).

Table 4A.52. Enjoyment of life by age and lack of physical activity (sedentary behaviour) in wave 5

	52–59	60–69	70–79	80+	All
Physically active					
Mean	9.9	10.1	10.0	9.7	10.0
Standard deviation	1.9	1.8	1.6	1.6	1.8
<i>Weighted N</i>	2080	2724	1560	632	6997
<i>Unweighted N</i>	1698	2996	1828	603	7125
Sedentary					
Mean	8.5	8.7	8.9	8.8	8.8
Standard deviation	2.2	2.2	1.8	1.9	2.0
<i>Weighted N</i>	259	404	490	523	1676
<i>Unweighted N</i>	204	395	507	463	1569

Note: Differences by physical activity were statistically significant ($p \leq 0.001$).

Table 4A.53. Positive affect by age and lack of physical activity (sedentary behaviour) in wave 5

	52–59	60–69	70–79	80+	All
Physically active					
Mean	25.0	25.4	24.8	23.8	25.0
Standard deviation	8.3	7.8	7.9	7.9	8.0
<i>Weighted N</i>	2080	2724	1560	632	6997
<i>Unweighted N</i>	1698	2996	1828	603	7125
Sedentary					
Mean	22.6	21.8	22.7	21.6	22.2
Standard deviation	8.8	8.9	7.4	8.1	8.3
<i>Weighted N</i>	259	404	490	523	1676
<i>Unweighted N</i>	204	395	507	463	1569

Note: Differences by level of physical activity were statistically significant ($p \leq 0.001$).

Table 4A.54. Eudemonic well-being by age and lack of physical activity (sedentary behaviour) in wave 5

	52–59	60–69	70–79	80+	All
Physically active					
Mean	31.6	32.6	31.5	29.5	31.8
Standard deviation	7.4	7.0	6.6	6.7	7.1
<i>Weighted N</i>	2080	2724	1560	632	6997
<i>Unweighted N</i>	1698	2996	1828	603	7125
Sedentary					
Mean	26.2	26.7	26.6	24.7	26.1
Standard deviation	8.5	8.2	7.3	7.1	7.8
<i>Weighted N</i>	259	404	490	523	1676
<i>Unweighted N</i>	204	395	507	463	1569

Note: Differences by physical activity were statistically significant ($p \leq 0.001$).

Table 4A.55. Life satisfaction by age and lack of physical activity (sedentary behaviour) in wave 5

	52–59	60–69	70–79	80+	All
Physically active					
Mean	20.2	21.2	21.8	21.4	21.1
Standard deviation	6.6	6.1	5.6	5.8	6.1
<i>Weighted N</i>	2080	2724	1560	632	6997
<i>Unweighted N</i>	1698	2996	1828	603	7125
Sedentary					
Mean	16.6	17.9	18.5	17.6	17.8
Standard deviation	7.9	7.1	7.1	7.2	7.3
<i>Weighted N</i>	259	404	490	523	1676
<i>Unweighted N</i>	204	395	507	463	1569

Note: Differences by physical activity were statistically significant ($p \leq 0.001$).

Table 4A.56. Elevated depressive symptoms by age and smoking status in wave 5

	52–59	60–69	70–79	80+	All
Never smoked					
<4 CES-D symptoms	85.6%	87.2%	85.2%	78.8%	85.0%
≥4 CES-D symptoms	14.4%	12.8%	14.8%	21.2%	15.0%
<i>Weighted N</i>	843	1473	1000	627	3944
<i>Unweighted N</i>	690	1597	1129	580	3996
Ex-smoker					
<4 CES-D symptoms	85.2%	90.5%	87.1%	[79.3%]	86.6%
≥4 CES-D symptoms	14.8%	9.5%	12.9%	[20.7%]	13.4%
<i>Weighted N</i>	62	91	75	41	270
<i>Unweighted N</i>	52	97	89	39	277
Current smoker					
<4 CES-D symptoms	71.4%	75.0%	79.6%	67.5%	74.0%
≥4 CES-D symptoms	28.6%	25.0%	20.4%	32.5%	26.0%
<i>Weighted N</i>	476	447	211	58	1193
<i>Unweighted N</i>	366	450	223	54	1093

Note: Differences by smoking status were statistically significant ($p \leq 0.001$).

Table 4A.57. Enjoyment of life by age and smoking status in wave 5

	52–59	60–69	70–79	80+	All
Never smoked					
Mean	9.7	10.0	9.7	9.4	9.8
Standard deviation	1.9	1.8	1.8	1.8	1.8
<i>Weighted N</i>	854	1488	1013	648	4002
<i>Unweighted N</i>	698	1611	1143	601	4053
Ex-smoker					
Mean	10.0	9.8	9.8	[9.8]	9.9
Standard deviation	1.8	1.8	1.8	[1.4]	1.8
<i>Weighted N</i>	62	98	77	42	279
<i>Unweighted N</i>	52	104	91	40	287
Current smoker					
Mean	9.1	9.2	9.2	8.8	9.1
Standard deviation	2.3	2.2	1.9	2.0	2.2
<i>Weighted N</i>	482	458	215	58	1213
<i>Unweighted N</i>	371	459	227	54	1111

Note: Differences by smoking status were statistically significant ($p \leq 0.001$).

Table 4A.58. Positive affect by age and smoking status in wave 5

	52–59	60–69	70–79	80+	All
Never smoked					
Mean	24.6	24.9	24.0	23.2	24.4
Standard deviation	8.2	8.0	7.9	8.0	8.1
<i>Weighted N</i>	854	1488	1013	648	4002
<i>Unweighted N</i>	698	1611	1143	601	4053
Ex-smoker					
Mean	24.3	25.7	23.6	[25.8]	24.8
Standard deviation	9.3	7.4	8.1	[8.7]	8.2
<i>Weighted N</i>	62	98	77	42	279
<i>Unweighted N</i>	52	104	91	40	287
Current smoker					
Mean	24.0	23.3	24.5	26.1	23.8
Standard deviation	8.7	8.3	7.4	7.2	8.3
<i>Weighted N</i>	482	458	215	58	1213
<i>Unweighted N</i>	371	459	227	54	1111

Note: Differences by smoking status were not statistically significant ($p = 0.153$).

Table 4A.59. Eudemonic well-being by age and smoking status in wave 5

	52–59	60–69	70–79	80+	All
Never smoked					
Mean	31.5	32.0	30.3	27.6	30.9
Standard deviation	7.5	7.2	7.1	7.0	7.4
<i>Weighted N</i>	854	1488	1013	648	4002
<i>Unweighted N</i>	698	1611	1143	601	4053
Ex-smoker					
Mean	31.6	31.6	29.5	[28.2]	30.6
Standard deviation	8.0	6.9	6.5	[8.9]	7.5
<i>Weighted N</i>	62	98	77	42	279
<i>Unweighted N</i>	52	104	91	40	287
Current smoker					
Mean	28.2	29.5	28.7	24.9	28.7
Standard deviation	8.6	8.3	6.9	9.0	8.3
<i>Weighted N</i>	482	458	215	58	1213
<i>Unweighted N</i>	371	459	227	54	1111

Note: Differences by smoking status were statistically significant ($p \leq 0.001$).

Table 4A.60. Life satisfaction by age and smoking status in wave 5

	52–59	60–69	70–79	80+	All
Never smoked					
Mean	19.9	20.8	21.0	19.9	20.5
Standard deviation	6.7	6.4	6.1	6.8	6.5
<i>Weighted N</i>	854	1488	1013	648	4002
<i>Unweighted N</i>	698	1611	1143	601	4053
Ex-smoker					
Mean	20.3	20.6	21.9	[19.5]	20.7
Standard deviation	6.3	5.9	6.4	[8.2]	6.5
<i>Weighted N</i>	62	98	77	42	279
<i>Unweighted N</i>	52	104	91	40	287
Current smoker					
Mean	18.3	19.6	19.2	18.6	19.0
Standard deviation	7.6	6.4	6.6	6.5	7.0
<i>Weighted N</i>	482	458	215	58	1213
<i>Unweighted N</i>	371	459	227	54	1111

Note: Differences by smoking status were statistically significant ($p \leq 0.001$).

Table 4A.61. Elevated depressive symptoms by age and alcohol consumption in wave 5

	52–59	60–69	70–79	80+	All
Less than daily alcohol					
<4 CES-D symptoms	84.3%	86.0%	85.8%	81.1%	84.9%
≥4 CES-D symptoms	15.7%	14.0%	14.2%	18.9%	15.1%
<i>Weighted N</i>	1694	2209	1464	712	6079
<i>Unweighted N</i>	1387	2387	1670	661	6105
Daily alcohol (5–7 days a week)					
<4 CES-D symptoms	87.6%	90.4%	88.4%	83.6%	88.5%
≥4 CES-D symptoms	12.4%	9.6%	11.6%	16.4%	11.5%
<i>Weighted N</i>	412	678	384	178	1652
<i>Unweighted N</i>	345	765	449	171	1730

Note: Differences by alcohol consumption were statistically significant ($p \leq 0.001$).

Table 4A.62. Enjoyment of life by age and alcohol consumption in wave 5

	52–59	60–69	70–79	80+	All
Less than daily alcohol					
Mean	9.7	9.9	9.8	9.3	9.7
Standard deviation	2.0	1.9	1.7	1.8	1.9
<i>Weighted N</i>	1707	2233	1478	731	6150
<i>Unweighted N</i>	1396	2412	1686	677	6171
Daily alcohol (5–7 days a week)					
Mean	9.9	10.2	9.9	9.5	10.0
Standard deviation	1.9	1.7	1.7	1.7	1.8
<i>Weighted N</i>	416	686	389	181	1672
<i>Unweighted N</i>	349	773	456	174	1752

Note: Differences by alcohol consumption were statistically significant ($p \leq 0.001$).

Table 4A.63. Positive affect by age and alcohol consumption in wave 5

	52–59	60–69	70–79	80+	All
Less than daily alcohol					
Mean	24.6	24.9	24.3	22.9	24.5
Standard deviation	8.4	8.1	7.8	7.9	8.1
<i>Weighted N</i>	1707	2233	1478	731	6150
<i>Unweighted N</i>	1396	2412	1686	677	6171
Daily alcohol (5–7 days a week)					
Mean	25.7	25.7	25.0	23.8	25.4
Standard deviation	8.3	7.7	8.1	8.4	8.0
<i>Weighted N</i>	416	686	389	181	1672
<i>Unweighted N</i>	349	773	456	174	1752

Note: Differences by alcohol consumption were statistically significant ($p \leq 0.001$).

Table 4A.64. Eudemonic well-being by age and alcohol consumption in wave 5

	52–59	60–69	70–79	80+	All
Less than daily alcohol					
Mean	30.8	31.5	30.3	27.5	30.6
Standard deviation	7.7	7.4	7.0	7.3	7.5
<i>Weighted N</i>	1707	2233	1478	731	6150
<i>Unweighted N</i>	1396	2412	1686	677	6171
Daily alcohol (5–7 days a week)					
Mean	32.4	33.3	31.5	28.5	32.2
Standard deviation	7.6	6.9	6.9	7.0	7.2
<i>Weighted N</i>	416	686	389	181	1672
<i>Unweighted N</i>	349	773	456	174	1752

Note: Differences by alcohol consumption were statistically significant ($p \leq 0.001$).

Table 4A.65. Life satisfaction by age and alcohol consumption in wave 5

	52–59	60–69	70–79	80+	All
Less than daily alcohol					
Mean	19.6	20.5	20.9	19.7	20.3
Standard deviation	6.9	6.4	6.1	6.7	6.5
<i>Weighted N</i>	1707	2233	1478	731	6150
<i>Unweighted N</i>	1396	2412	1686	677	6171
Daily alcohol (5–7 days a week)					
Mean	20.7	21.9	21.7	20.7	21.4
Standard deviation	6.5	5.9	5.8	6.2	6.1
<i>Weighted N</i>	416	686	389	181	1672
<i>Unweighted N</i>	349	773	456	174	1752

Note: Differences by alcohol consumption were statistically significant ($p \leq 0.001$).

Table 4A.66. Elevated depressive symptoms by age and fruit and vegetable consumption in wave 5

	52–59	60–69	70–79	80+	All
Fewer than 5 fruit and veg. daily					
<4 CES-D symptoms	82.6%	84.5%	83.5%	81.1%	83.3%
≥4 CES-D symptoms	17.4%	15.5%	16.5%	18.9%	16.7%
<i>Weighted N</i>	1038	1207	725	435	3406
<i>Unweighted N</i>	830	1278	814	394	3316
At least 5 fruit and veg. daily					
<4 CES-D symptoms	87.3%	88.8%	88.8%	82.1%	87.8%
≥4 CES-D symptoms	12.7%	11.2%	11.2%	17.9%	12.2%
<i>Weighted N</i>	1054	1651	1098	431	4233
<i>Unweighted N</i>	892	1845	1272	419	4428

Note: Differences by fruit and vegetable consumption were statistically significant ($p \leq 0.001$).

Table 4A.67. Enjoyment of life by age and fruit and vegetable consumption in wave 5

	52–59	60–69	70–79	80+	All
Fewer than 5 fruit and veg. daily					
Mean	9.4	9.6	9.6	9.2	9.5
Standard deviation	2.1	2.0	1.7	1.8	2.0
<i>Weighted N</i>	1050	1220	737	454	3461
<i>Unweighted N</i>	838	1292	828	409	3367
At least 5 fruit and veg. daily					
Mean	10.0	10.2	10.0	9.5	10.0
Standard deviation	1.9	1.7	1.6	1.7	1.7
<i>Weighted N</i>	1059	1672	1104	437	4272
<i>Unweighted N</i>	897	1865	1280	425	4467

Note: Differences by fruit and vegetable consumption were statistically significant ($p \leq 0.001$).

Table 4A.68. Positive affect by age and fruit and vegetable consumption in wave 5

	52–59	60–69	70–79	80+	All
Fewer than 5 fruit and veg. daily					
Mean	23.7	23.8	23.1	22.1	23.5
Standard deviation	8.2	8.0	7.8	7.9	8.0
<i>Weighted N</i>	1050	1220	737	454	3461
<i>Unweighted N</i>	838	1292	828	409	3367
At least 5 fruit and veg. daily					
Mean	25.9	25.8	25.2	24.0	25.6
Standard deviation	8.4	7.9	7.8	8.1	8.0
<i>Weighted N</i>	1059	1672	1104	437	4272
<i>Unweighted N</i>	897	1865	1280	425	4467

Note: Differences by fruit and vegetable consumption were statistically significant ($p \leq 0.001$).

Table 4A.69. Eudemonic well-being by age and fruit and vegetable consumption in wave 5

	52–59	60–69	70–79	80+	All
Fewer than 5 fruit and veg. daily					
Mean	30.0	30.8	29.5	27.0	29.8
Standard deviation	8.0	7.7	7.0	7.4	7.7
<i>Weighted N</i>	1050	1220	737	454	3461
<i>Unweighted N</i>	838	1292	828	409	3367
At least 5 fruit and veg. daily					
Mean	32.3	32.8	31.4	28.3	31.9
Standard deviation	7.3	6.9	6.9	7.2	7.2
<i>Weighted N</i>	1059	1672	1104	437	4272
<i>Unweighted N</i>	897	1865	1280	425	4467

Note: Differences by fruit and vegetable consumption were statistically significant ($p \leq 0.001$).

Table 4A.70. Life satisfaction by age and fruit and vegetable consumption in wave 5

	52–59	60–69	70–79	80+	All
Fewer than 5 fruit and veg. daily					
Mean	19.0	20.0	20.2	19.6	19.7
Standard deviation	7.1	6.6	6.3	6.7	6.7
<i>Weighted N</i>	1050	1220	737	454	3461
<i>Unweighted N</i>	838	1292	828	409	3367
At least 5 fruit and veg. daily					
Mean	20.8	21.4	21.7	20.1	21.2
Standard deviation	6.4	6.0	5.7	6.5	6.1
<i>Weighted N</i>	1059	1672	1104	437	4272
<i>Unweighted N</i>	897	1865	1280	425	4467

Note: Differences by fruit and vegetable consumption were statistically significant ($p \leq 0.001$).

Table 4A.71. Elevated depressive symptoms by age and cognitive function (immediate and delayed word recall) in wave 5

	52–59	60–69	70–79	80+	All
Three highest-performing quartiles					
<4 CES-D symptoms	85.5%	87.4%	88.7%	83.9%	86.8%
≥ 4 CES-D symptoms	14.5%	12.6%	11.3%	16.1%	13.2%
<i>Weighted N</i>	1958	2498	1223	386	6065
<i>Unweighted N</i>	1610	2757	1447	376	6190
Lowest-performing quartile					
<4 CES-D symptoms	75.3%	80.8%	80.0%	75.7%	78.2%
≥ 4 CES-D symptoms	24.7%	19.2%	20.0%	24.3%	21.8%
<i>Weighted N</i>	357	581	803	733	2474
<i>Unweighted N</i>	273	588	858	657	2376

Note: Differences by word recall were statistically significant ($p \leq 0.001$).

Table 4A.72. Enjoyment of life by age and cognitive function (immediate and delayed word recall) in wave 5

	52–59	60–69	70–79	80+	All
Three highest-performing quartiles					
Mean	9.8	10.0	9.9	9.6	9.9
Standard deviation	1.9	1.8	1.6	1.6	1.8
<i>Weighted N</i>	1972	2520	1231	390	6113
<i>Unweighted N</i>	1620	2779	1458	379	6236
Lowest-performing quartile					
Mean	9.4	9.3	9.5	9.1	9.4
Standard deviation	2.3	2.2	1.8	1.9	2.0
<i>Weighted N</i>	360	597	812	753	2523
<i>Unweighted N</i>	276	601	869	675	2421

Note: Differences by word recall were statistically significant ($p \leq 0.001$).

Table 4A.73. Positive affect by age and cognitive function (immediate and delayed word recall) in wave 5

	52–59	60–69	70–79	80+	All
Three highest-performing quartiles					
Mean	25.0	25.2	24.7	24.1	25.0
Standard deviation	8.3	7.8	7.7	8.0	8.0
<i>Weighted N</i>	1972	2520	1231	390	6113
<i>Unweighted N</i>	1620	2779	1458	379	6236
Lowest-performing quartile					
Mean	24.2	23.9	23.9	22.3	23.6
Standard deviation	8.8	8.9	8.1	8.0	8.4
<i>Weighted N</i>	360	597	812	753	2523
<i>Unweighted N</i>	276	601	869	675	2421

Note: Differences by word recall were statistically significant ($p \leq 0.001$).

Table 4A.74. Eudemonic well-being by age and cognitive function (immediate and delayed word recall) in wave 5

	52–59	60–69	70–79	80+	All
Three highest-performing quartiles					
Mean	31.4	32.5	31.3	28.8	31.6
Standard deviation	7.6	7.1	6.9	7.0	7.3
<i>Weighted N</i>	1972	2520	1231	390	6113
<i>Unweighted N</i>	1620	2779	1458	379	6236
Lowest-performing quartile					
Mean	29.6	29.5	29.2	26.9	28.7
Standard deviation	8.2	8.0	7.1	7.4	7.7
<i>Weighted N</i>	360	597	812	753	2523
<i>Unweighted N</i>	276	601	869	675	2421

Note: Differences by word recall were statistically significant ($p \leq 0.001$).

Table 4A.75. Life satisfaction by age and cognitive function (immediate and delayed word recall) in wave 5

	52–59	60–69	70–79	80+	All
Three highest-performing quartiles					
Mean	19.9	21.0	21.2	20.5	20.6
Standard deviation	6.7	6.2	6.0	6.1	6.4
<i>Weighted N</i>	1972	2520	1231	390	6113
<i>Unweighted N</i>	1620	2779	1458	379	6236
Lowest-performing quartile					
Mean	19.9	20.1	20.8	19.5	20.2
Standard deviation	7.3	6.6	6.2	6.9	6.7
<i>Weighted N</i>	360	597	812	753	2523
<i>Unweighted N</i>	276	601	869	675	2421

Note: Differences by word recall were statistically significant ($p = 0.004$).

Table 4A.76. Elevated depressive symptoms by age and use of public transport in wave 5

	52–59	60–69	70–79	80+	All
Public transport user					
<4 CES-D symptoms	83.9%	87.3%	87.1%	83.5%	86.0%
≥4 CES-D symptoms	16.1%	12.7%	12.9%	16.5%	14.0%
<i>Weighted N</i>	1485	2242	1491	601	5820
<i>Unweighted N</i>	1223	2463	1702	566	5954
Non-user					
<4 CES-D symptoms	83.9%	83.0%	80.1%	72.7%	80.7%
≥4 CES-D symptoms	16.1%	17.0%	19.9%	27.3%	19.3%
<i>Weighted N</i>	830	837	534	518	2719
<i>Unweighted N</i>	660	882	603	467	2612

Note: Differences by use of public transport were statistically significant ($p \leq 0.001$).

Table 4A.77. Enjoyment of life by age and use of public transport in wave 5

	52–59	60–69	70–79	80+	All
Public transport user					
Mean	9.8	10.1	9.9	9.5	9.9
Standard deviation	1.9	1.8	1.7	1.8	1.8
<i>Weighted N</i>	1497	2274	1506	617	5894
<i>Unweighted N</i>	1231	2493	1720	581	6025
Non-user					
Mean	9.6	9.6	9.5	9.1	9.5
Standard deviation	2.1	2.1	1.8	1.8	2.0
<i>Weighted N</i>	842	854	545	538	2778
<i>Unweighted N</i>	671	898	615	485	2669

Note: Differences by use of public transport were statistically significant ($p \leq 0.001$).

Table 4A.78. Positive affect by age and use of public transport in wave 5

	52–59	60–69	70–79	80+	All
Public transport user					
Mean	25.0	25.2	24.3	23.4	24.8
Standard deviation	8.2	7.8	7.9	7.9	8.0
<i>Weighted N</i>	1497	2274	1506	617	5894
<i>Unweighted N</i>	1231	2493	1720	581	6025
Non-user					
Mean	24.5	24.4	24.8	22.7	24.3
Standard deviation	8.6	8.5	7.7	8.3	8.4
<i>Weighted N</i>	842	854	545	538	2778
<i>Unweighted N</i>	671	898	615	485	2669

Note: Differences by use of public transport were statistically significant ($p = 0.002$).

Table 4A.79. Eudemonic well-being by age and use of public transport in wave 5

	52–59	60–69	70–79	80+	All
Public transport user					
Mean	31.5	32.5	31.2	28.9	31.6
Standard deviation	7.6	7.0	6.7	6.9	7.1
Weighted N	1497	2274	1506	617	5894
Unweighted N	1231	2493	1720	581	6025
Non-user					
Mean	30.4	30.4	28.6	26.0	29.4
Standard deviation	7.9	8.2	7.6	7.5	8.0
Weighted N	842	854	545	538	2778
Unweighted N	671	898	615	485	2669

Note: Differences by use of public transport were statistically significant ($p \leq 0.001$).

Table 4A.80. Life satisfaction by age and use of public transport in wave 5

	52–59	60–69	70–79	80+	All
Public transport user					
Mean	19.9	21.2	21.5	20.5	20.9
Standard deviation	6.7	6.0	5.6	6.2	6.2
Weighted N	1497	2274	1506	617	5894
Unweighted N	1231	2493	1720	581	6025
Non-user					
Mean	19.7	19.7	19.9	19.1	19.7
Standard deviation	7.0	6.9	7.0	7.1	7.0
Weighted N	842	854	545	538	2778
Unweighted N	671	898	615	485	2669

Note: Differences by use of public transport were statistically significant ($p \leq 0.001$).

Table 4A.81. Elevated depressive symptoms by age and attendance at religious services in wave 5

	52–59	60–69	70–79	80+	All
Never attend religious services					
<4 CES-D symptoms	84.1%	85.3%	82.6%	77.5%	83.5%
≥4 CES-D symptoms	15.9%	14.7%	17.4%	22.5%	16.5%
Weighted N	1034	1239	710	371	3354
Unweighted N	847	1327	784	331	3289
Few times a year					
<4 CES-D symptoms	86.1%	88.2%	88.5%	84.0%	87.3%
≥4 CES-D symptoms	13.9%	11.8%	11.5%	16.0%	12.7%
Weighted N	761	1094	637	257	2750
Unweighted N	631	1215	745	249	2840
Two or three times a month or more					
<4 CES-D symptoms	84.6%	88.7%	88.2%	87.2%	87.5%
≥4 CES-D symptoms	15.4%	11.3%	11.8%	12.8%	12.5%
Weighted N	273	494	441	234	1443
Unweighted N	224	546	527	227	1524

Note: Differences by attendance at religious services were statistically significant ($p \leq 0.001$).

Table 4A.82. Enjoyment of life by age and attendance at religious services in wave 5

	52–59	60–69	70–79	80+	All
Never attend religious services					
Mean	9.6	9.7	9.5	8.9	9.5
Standard deviation	2.1	2.0	1.9	1.9	2.0
<i>Weighted N</i>	1043	1250	719	382	3394
<i>Unweighted N</i>	855	1337	796	340	3328
Few times a year					
Mean	9.9	10.1	10.0	9.6	10.0
Standard deviation	1.8	1.8	1.6	1.5	1.7
<i>Weighted N</i>	767	1107	642	259	2775
<i>Unweighted N</i>	634	1229	751	251	2865
Two or three times a month or more					
Mean	9.9	10.3	10.1	9.7	10.0
Standard deviation	2.0	1.6	1.5	1.5	1.7
<i>Weighted N</i>	274	500	445	241	1459
<i>Unweighted N</i>	225	551	531	233	1540

Note: Differences by attendance at religious services were statistically significant ($p \leq 0.001$).

Table 4A.83. Positive affect by age and attendance at religious services in wave 5

	52–59	60–69	70–79	80+	All
Never attend religious services					
Mean	24.7	24.2	23.8	22.3	24.1
Standard deviation	8.3	8.5	7.9	8.8	8.3
<i>Weighted N</i>	1043	1250	719	382	3394
<i>Unweighted N</i>	855	1337	796	340	3328
Few times a year					
Mean	25.0	25.4	24.7	22.6	24.9
Standard deviation	8.3	7.7	7.9	7.7	7.9
<i>Weighted N</i>	767	1107	642	259	2775
<i>Unweighted N</i>	634	1229	751	251	2865
Two or three times a month or more					
Mean	25.2	26.2	25.1	24.8	25.5
Standard deviation	8.7	7.2	7.9	7.2	7.7
<i>Weighted N</i>	274	500	445	241	1459
<i>Unweighted N</i>	225	551	531	233	1540

Note: Differences by attendance at religious services were statistically significant ($p \leq 0.001$).

Table 4A.84. Eudemonic well-being by age and attendance at religious services in wave 5

	52–59	60–69	70–79	80+	All
Never attend religious services					
Mean	30.7	31.2	29.3	26.1	30.1
Standard deviation	8.0	7.7	7.3	7.7	7.9
Weighted N	1043	1250	719	382	3394
Unweighted N	855	1337	796	340	3328
Few times a year					
Mean	31.7	32.4	30.8	28.7	31.5
Standard deviation	7.4	7.1	7.1	6.9	7.2
Weighted N	767	1107	642	259	2775
Unweighted N	634	1229	751	251	2865
Two or three times a month or more					
Mean	31.2	32.9	31.9	29.0	31.7
Standard deviation	7.5	6.7	6.3	6.4	6.8
Weighted N	274	500	445	241	1459
Unweighted N	225	551	531	233	1540

Note: Differences by attendance at religious services were statistically significant ($p \leq 0.001$).

Table 4A.85. Life satisfaction by age and attendance at religious services in wave 5

	52–59	60–69	70–79	80+	All
Never attend religious services					
Mean	19.4	20.2	20.1	19.2	19.8
Standard deviation	7.1	6.7	6.6	7.0	6.8
Weighted N	1043	1250	719	382	3394
Unweighted N	855	1337	796	340	3328
Few times a year					
Mean	20.2	21.1	21.5	20.2	20.9
Standard deviation	6.5	5.9	5.8	6.3	6.1
Weighted N	767	1107	642	259	2775
Unweighted N	634	1229	751	251	2865
Two or three times a month or more					
Mean	20.2	21.8	21.9	20.9	21.4
Standard deviation	6.3	5.9	5.4	6.1	5.9
Weighted N	274	500	445	241	1459
Unweighted N	225	551	531	233	1540

Note: Differences by attendance at religious services were statistically significant ($p \leq 0.001$).

Table 4A.86. Elevated depressive symptoms by age and sex (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	<i>Unweighted N</i>
Men	10.4	10.8	11.0	9.2	12.7	2268
50–59	11.8	13.2	11.1	8.2	11.0	1027
60–69	9.4	8.5	11.4	8.5	12.5	749
70–79	8.8	8.8	9.6	12.2	17.2	421
80+	8.7	11.2	12.4	14.6	13.3	71
Women	17.7	17.7	17.0	17.9	17.9	2907
50–59	17.8	15.6	16.2	15.4	15.7	1246
60–69	15.6	16.7	15.2	17.3	16.3	959
70–79	19.3	21.0	18.9	21.3	22.1	565
80+	21.7	26.0	25.6	27.3	28.0	137

Table 4A.87. Enjoyment of life by age and sex (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	<i>Unweighted N</i>
Men	10.2	10.1	9.8	9.8	9.7	2304
50–59	10.0	10.0	9.7	9.8	9.8	1043
60–69	10.3	10.2	9.9	10.0	9.8	763
70–79	10.3	10.2	9.9	9.8	9.5	427
80+	10.1	10.3	9.7	9.4	9.4	71
Women	10.2	10.2	9.9	9.9	9.8	2958
50–59	10.1	10.2	10.0	9.9	9.9	1260
60–69	10.3	10.2	10.0	10.0	9.9	982
70–79	10.2	9.9	9.8	9.6	9.4	573
80+	10.2	9.9	9.5	9.4	9.2	143

Table 4A.88. Eudemonic well-being by age and sex (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	<i>Unweighted N</i>
Men	33.0	32.8	31.5	31.2	30.9	2304
50–59	32.8	32.6	31.8	31.7	31.9	1043
60–69	33.0	33.1	31.8	31.4	30.9	763
70–79	33.7	33.1	30.9	29.9	28.9	427
80+	31.6	32.3	28.4	27.0	25.9	71
Women	33.0	32.9	31.4	31.0	30.7	2958
50–59	32.8	33.1	32.0	32.2	32.0	1260
60–69	33.7	33.5	31.6	31.3	30.7	982
70–79	32.6	32.1	30.4	28.7	28.2	573
80+	31.4	29.9	27.8	27.0	26.6	143

Table 4A.89. Life satisfaction by age and sex (waves 2 to 5)

Age in 2004–05	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	21.5	20.4	20.9	21.0	2303
52–59	20.6	19.4	20.2	20.6	815
60–69	21.7	20.8	21.2	21.3	844
70–79	22.7	21.4	21.6	21.4	517
80+	22.2	21.1	21.4	19.8	127
Women	21.2	19.9	20.3	20.5	2959
52–59	20.6	19.3	20.4	20.6	992
60–69	21.6	20.4	20.6	20.8	1044
70–79	21.4	20.4	20.2	20.2	692
80+	21.2	19.3	19.2	19.2	231

Table 4A.90. Elevated depressive symptoms by age and wealth (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unwtd N
Lowest wealth group	28.4	24.9	27.4	23.6	26.3	692
50–59	31.7	27.1	29.4	25.4	28.7	283
60–69	28.1	22.6	27.2	23.0	26.4	193
70–79	25.4	23.4	23.3	21.4	21.8	166
80+	21.4	26.3	31.2	23.9	27.2	50
2nd	18.7	17.6	18.1	17.6	19.2	939
50–59	20.2	20.3	17.6	14.5	18.5	385
60–69	18.2	15.2	17.8	17.2	17.6	311
70–79	16.7	16.9	19.4	21.3	21.2	204
80+	[17.4]	[14.7]	[18.2]	[28.6]	[28.8]	39
3rd	13.2	14.8	13.5	13.8	15.1	1082
50–59	12.5	13.7	14.3	12.2	11.6	451
60–69	11.4	13.6	12.1	12.3	15.9	385
70–79	16.5	19.5	14.4	19.7	22.4	202
80+	[19.7]	[15.5]	[12.6]	[14.8]	[10.8]	44
4th	9.8	10.9	9.7	10.3	11.3	1174
50–59	10.1	10.2	8.6	7.4	8.9	562
60–69	7.5	8.5	8.9	11.1	11.0	362
70–79	11.8	11.5	11.7	13.2	16.3	211
80+	[14.5]	[33.8]	[19.4]	[25.6]	[21.6]	39
Highest wealth group	5.6	7.7	6.2	7.4	8.7	1236
50–59	6.6	6.6	5.1	5.3	5.2	556
60–69	4.8	8.5	6.5	6.9	7.0	451
70–79	3.1	8.3	5.6	11.0	18.6	193
80+	[12.1]	[12.5]	[21.9]	[23.7]	[28.1]	36

Table 4A.91. Enjoyment of life by age and wealth (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unwtd N
Lowest wealth group	9.5	9.4	9.3	9.1	9.1	710
50–59	9.2	9.0	8.9	8.8	8.8	288
60–69	9.6	9.4	9.2	9.3	9.1	198
70–79	9.9	9.6	9.8	9.3	9.3	171
80+	10.1	10.1	9.9	9.4	9.8	53
2nd	10.0	10.0	9.7	9.6	9.5	952
50–59	9.9	10.0	9.6	9.7	9.5	388
60–69	9.9	9.9	9.7	9.7	9.6	318
70–79	10.2	9.9	9.7	9.5	9.2	206
80+	[10.2]	[10.4]	[9.5]	[9.2]	[9.3]	40
3rd	10.2	10.2	9.9	9.9	9.8	1103
50–59	10.1	10.2	10.0	10.0	10.1	460
60–69	10.4	10.2	10.0	9.9	9.8	395
70–79	10.3	10.1	9.7	9.7	9.2	204
80+	[10.2]	[10.3]	[9.4]	[10.1]	[9.5]	44
4th	10.4	10.3	10.1	10.0	10.0	1190
50–59	10.3	10.3	10.1	10.0	10.1	569
60–69	10.5	10.5	10.2	10.3	10.1	365
70–79	10.4	10.3	9.9	9.9	9.6	216
80+	[10.0]	[9.6]	[9.1]	[9.0]	[8.3]	40
Highest wealth group	10.6	10.5	10.3	10.3	10.2	1255
50–59	10.6	10.6	10.4	10.4	10.4	562
60–69	10.7	10.6	10.4	10.4	10.2	463
70–79	10.6	10.3	9.9	9.9	9.8	193
80+	[10.4]	[9.8]	[9.8]	[9.3]	[9.3]	37

Table 4A.92. Eudemonic well-being by age and wealth (waves 1 to 5)

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unwtd N
Lowest wealth group	29.4	28.9	28.3	27.5	27.5	710
50–59	28.3	27.6	27.1	27.1	27.4	288
60–69	28.8	29.0	28.2	27.7	27.1	198
70–79	31.6	31.0	30.5	28.4	28.0	171
80+	30.7	29.6	27.4	26.6	27.6	53
2nd	31.4	31.5	30.2	29.8	29.4	952
50–59	31.3	31.5	30.6	30.9	30.2	388
60–69	31.3	31.6	30.1	30.0	29.6	318
70–79	31.9	31.5	29.6	28.0	27.5	206
80+	[31.4]	[31.3]	[28.7]	[25.6]	[25.8]	40
3rd	33.1	33.2	31.1	31.0	30.4	1103
50–59	33.0	33.4	31.9	32.2	32.1	460
60–69	33.6	33.1	31.1	30.7	30.2	395
70–79	32.9	32.9	29.8	28.8	27.4	204
80+	[32.6]	[32.8]	[29.2]	[29.4]	[27.3]	44
4th	34.1	33.8	32.3	31.9	32.0	1190
50–59	34.0	33.9	33.0	32.8	33.3	569
60–69	34.6	34.6	32.6	32.1	31.8	365
70–79	34.2	33.1	31.1	30.3	29.4	216
80+	[31.0]	[28.9]	[27.2]	[26.7]	[25.3]	40
Highest wealth group	35.4	35.3	34.0	33.5	33.3	1255
50–59	35.4	35.4	34.6	34.5	34.5	562
60–69	36.1	36.1	34.6	34.1	33.5	463
70–79	34.9	34.1	32.3	30.4	30.4	193
80+	[31.9]	[30.5]	[27.7]	[26.5]	[25.1]	37

Table 4A.93. Life satisfaction by age and wealth (waves 2 to 5)

Age in 2004–05	Wave 2	Wave 3	Wave 4	Wave 5	<i>Unwtd</i> <i>N</i>
Lowest wealth group	19.2	18.4	18.8	19.0	818
52–59	17.1	15.9	17.6	17.5	251
60–69	19.2	18.6	19.0	19.2	251
70–79	21.0	20.2	19.3	20.5	217
80+	21.1	20.4	20.4	20.1	99
2nd	20.6	19.6	18.8	19.8	960
52–59	20.2	18.9	17.6	19.8	317
60–69	20.5	19.7	19.0	20.0	341
70–79	21.5	20.4	19.3	19.8	237
80+	20.7	20.0	20.4	18.6	65
3rd	21.3	20.1	20.6	20.8	1035
52–59	20.6	19.2	20.1	20.6	332
60–69	21.5	20.5	20.9	21.2	377
70–79	21.9	20.5	20.7	20.5	262
80+	22.0	20.8	20.6	19.7	64
4th	21.9	20.4	21.0	21.3	1135
52–59	21.2	19.9	20.9	21.6	427
60–69	22.4	21.0	21.2	21.6	383
70–79	22.3	21.0	21.6	21.1	254
80+	22.1	18.1	18.8	18.1	71
Highest wealth group	23.1	21.9	22.1	22.2	1227
52–59	22.9	21.6	22.0	22.6	437
60–69	23.4	22.2	22.5	22.3	511
70–79	23.2	22.2	21.9	21.8	225
80+	21.9	20.5	20.3	20.4	54

5. Methodology

Hayley Cheshire *National Centre for Social Research*

David Hussey *National Centre for Social Research*

Andrew Phelps *National Centre for Social Research*

Natasha Wood *National Centre for Social Research*

This chapter presents a summary of the survey methodology for the fifth wave (2010–11) 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 about the weighting strategies used in this report. Further detail is provided in the ELSA Technical Reports,¹ which can be accessed via the ELSA website (<http://www.ifs.org.uk/elsa>).

A summary of the key points relating to wave 5 is given below:

- The wave 5 (2010–11) core questionnaire was similar to that used in the previous waves, although some new topics were introduced to answer additional research questions, including the use of cancer screening services.
- At wave 5, there was a new module of questions to measure financial risk-taking. These questions were asked of a subsample of pre-selected respondents and administered either as a Computer-Aided Self-Interview (CASI) or as a Computer-Aided Personal Interview (CAPI).
- 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 that in previous waves apart from some new questions relating to age discrimination and religion (taken from the Health and Retirement Study).
- There was no nurse visit included at wave 5. A nurse visit is planned to be included every other wave, with nurse data previously collected at waves 2 and 4.
- Three cohorts of people made up the ELSA sample issued at wave 5:
 - **Cohort 1**² 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. Represented 67.5% of all issued cases at wave 5.

¹ Please note that the wave 5 Technical Report is forthcoming (2012).

² All longitudinal analysis in this report is based on Cohort 1 core members interviewed at every wave of ELSA.

- **Cohort 3** born between 1 March 1952 and 29 February 1956 inclusive. Selected from four years of HSE (2001 to 2004). Represent the ‘refreshment’ cohort of people just entering their 50s. First interviewed at ELSA wave 3 (2006–07). Represented 13% of all issued cases at wave 5.
- **Cohort 4** born between 1 March 1933 and 28 February 1958 inclusive. Selected from HSE 2006. First interviewed at ELSA wave 4 (2008–09) aged 50–74. Represented 19.5% of all issued cases at wave 5.
- A total of 10,274 main interviews were completed at wave 5 across all three cohorts. Much of the analysis in this chapter focuses on core members. Core members are defined as age-eligible 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. At wave 5, 6242 interviews were with Cohort 1 core members from the original wave 1 sample, 936 were with core members from Cohort 3 and 1912 were with core members from Cohort 4. The remaining interviews were with partners of core members (defined as either core, younger, older or new partners – see Box 5.1 below).

5.1 Sample design

The ELSA sample is selected to be representative of people aged 50 years 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 had originally been 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 a specified number of adults and 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 Technical Reports (Erens and Primatesta, 1999; Erens, Primatesta and Prior, 2001; Prior et al., 2003; Sproston and Primatesta, 2003 and 2004; Sproston and Mindell, 2006; Craig and Mindell, 2008).

ELSA Cohort 1

The original cohort at wave 1 (persons born on or before 29 February 1952) were selected from households that 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 and wave 5 in 2010–11).

ELSA Cohort 3

At wave 3, a ‘refreshment’ cohort of people just entering their 50s (born between 1 March 1952 and 29 February 1956 inclusive) 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 1733 Cohort 3 interviews at wave 3 and, of these, 1275 became core members. The majority of Cohort 3 core members (87%) came from HSE households issued for the first time at ELSA wave 3, and the remainder were mainly younger partners in Cohort 1 households who were reclassified as Cohort 3 core members because they now met the age criterion. There are now three waves of interviews with Cohort 3 core members and their partners (wave 3 in 2006–07, wave 4 in 2008–09 and wave 5 in 2010–11).

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 cohort in 2008–09 (henceforth referred to as Cohort 4). The main wave 4 cohort was selected from HSE 2006. There were 2590 interviews at wave 4 and, of these, 2290 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 5 represents the second wave of interviews with Cohort 4 members and their partners (wave 4 in 2008–09 and wave 5 in 2010–11).

Types of eligible sample members

Box 5.1 summarises the different types of sample members eligible for the

Box 5.1. ELSA sample members

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

Core partners were 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 their being the partner of a core member.

Younger partners were 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 criterion to be classified as a core member.

Older partners (for Cohorts 3 and 4 only) were 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 were the cohabiting spouses or partners (of any age) of core members at the time of the ELSA interview who had joined the household *since* the original HSE interview.

ELSA study: namely core members, core partners, younger partners, older partners and new partners.

Eligibility criteria for wave 5 interview

The eligibility criteria for a wave 5 interview are given below:

- Sample members were not eligible for follow-up if they had since died, asked not to be revisited or moved out of Great Britain.³
- Individuals 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 70 productive institutional interviews were conducted at wave 5; however, these are excluded from the response rates presented in Section 5.4 because they no longer represent the population of interest.
- An interview would be attempted with all partners who had been living with a core member at the time of an ELSA interview and had been separated, divorced or widowed from them, so that we could understand their circumstances after this event had occurred.
- Partners who stopped living with their core partner were only eligible to be interviewed once following the split with their core member partner. Therefore, if ex-partners were interviewed at wave 4 (or before), they were not recontacted at wave 5.

5.2 Development of the wave 5 interview (2010–11)

Extensive discussion took place with ELSA collaborators about what changes were needed for the wave 5 interview and what new topics to include. There was a pilot in July 2009 to test an experiment to measure risk attitudes and behaviour. This financial ‘risk’ module was later adopted in the wave 5 main stage. There was also a dress rehearsal in February 2010 to collect feedback on the overall survey content and procedures to be implemented at wave 5, and to develop a plan for interviewer training.

Structure and content of the wave 5 interview (2010–11)

As at previous waves, the wave 5 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 waves 1, 2, 3 and 4. 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.

³ Note that sample members are followed if they move to Scotland or Wales but not if they move to Northern Ireland.

Box 5.2. Content of the ELSA interview at wave 5 (2010–11)

Household demographics: Collected or updated demographic information about everyone living in the household, including sex, 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 incontinence, falls and fractures, and quality of care. New health questions at wave 5 included those on bowel cancer screening, breast cancer screening and prostate cancer screening. Questions on sleep and balance were omitted at wave 5.

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. At wave 5, questions asking whether an employer provided accommodation or made arrangements for those with work disabilities were omitted.

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. Questions that recorded the type of health and disability benefits received in the last year were omitted at wave 5.

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, and consumption including food in and out of home, fuel, durables and clothing. New questions on pet ownership (taken from HSE 2001) were added at wave 5. The mortgage section was also revised and simplified at this wave.

Cognitive function: Measured different aspects of the respondent's cognitive function, including memory, speed and mental flexibility. Numeracy questions (involving solving mathematical problems) were omitted at wave 5 and literacy questions previously used at wave 2 were reintroduced.

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. Questions previously used to record the reasons for providing informal care and volunteering were omitted at wave 5.

Psychosocial health: Measured how the respondent viewed his or her life across a variety of dimensions. The questions used to record the age at which middle age ends and old age begins were omitted at wave 5.

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

Final questions: Collected any missing demographic information and updated contact details and consents as described in the body of the text.

Risk: New module for a pre-selected sample of respondents used to measure attitudes towards financial risk-taking and willingness to accept a delay in receiving a monetary reward.

Self-completion questionnaire: Covered quality of life, social participation, altruism, control at work, life satisfaction, consumption of fruit and vegetables (revised for wave 5), social networks and alcohol consumption. New topics added at wave 5 were age discrimination and religion.

Methodology

- 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 and demographics and consents for linkages to administrative data could be administered in private.
- The self-completion questionnaire was normally completed after the face-to-face interview was over and the interviewer had left the household (if the eligible individual was interviewed alone) or while the other person in the concurrent interview session completed the ‘private’ modules described above.
- 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 5 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 5 are included in Box 5.2, as well as key questions chosen to be omitted for this wave (e.g. due to wave rotation). More detail on the new financial risk module added at wave 5 is given at the end of this section.

The interview ended with a request to confirm or amend consent to obtain health and economic data from administrative sources, including the National Health Service (NHS) Central Register 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.

Financial ‘risk’ module

A new module on financial risk was introduced at wave 5. This was in response to interest amongst academics and UK government in learning more about people’s attitudes to money and their willingness to accept different levels of risk when making financial decisions. The module also assessed levels of deferred gratification (i.e. the willingness to wait in order to receive a greater financial reward than would otherwise have been the case), which could prove useful in guiding certain policies (e.g. around pension reform).

Experimental methods developed by economists and psychologists for measuring risk tolerance and deferred gratification were adapted for ELSA.⁴ A pre-selected subsample of 1501 ELSA respondents aged 50–74 were issued to

⁴ The wave 5 Technical Report (forthcoming) will include more information about the development of the risk module.

the field to do this module. Participants were asked to make financial decisions in ‘games’ involving small but real prize money.⁵ Table 5.1 shows that 96% of those who were asked by the interviewer to complete the risk module agreed to do it. Of all the risk modules completed, 79% were by CASI and 21% by CAPI.

Table 5.1. Risk module response rates

	Number of respondents	%
Total issued for risk module	1501	
Unproductive/ineligible at wave 5	346	23
Proxy interview	49	3
Full personal ELSA interview	1106	
Completed risk module	1063	96
Refused risk module	43	4
Mode of completion for risk module		
CASI	844	79
CAPI	219	21

The risk module took about 30 minutes per respondent and comprised of two types of game: (i) the rectangle game and (ii) the circle game (see Appendix 5A). The rectangle game consisted of 12 individual games and the circle game consisted of 10 individual games. At the beginning of the module, respondents were given an initial £10 with which to play the games. They could potentially win up to £70 in addition to the initial £10 or could lose £5 of the initial £10. In other words, the minimum amount respondents could win was £5 and the maximum was £80. The amount they won (or lost) depended on two things: the choices they made throughout the interview and which game out of the 22 the computer randomly selected for them to win money from. Respondents did not know which game they had won money from until the end of the module.

5.3 Fieldwork

Each eligible individual was sent an advance letter inviting them to take part at wave 5. 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 technical report (Taylor et al., 2007). Fieldwork for the fifth wave of ELSA began in July 2010 and spanned 12 months, finishing in June 2011.

5.4 Survey response

In this section, we present summary information about survey response in wave 5 (2010–11) for the main interview.

⁵ The use of real prize money is thought to be a better test of people’s attitudes and behaviours than presenting hypothetical choices or questions.

Response to main interview

Survey response and quality of fieldwork were carefully monitored throughout the study period. Ultimately, the ELSA wave 5 fieldwork produced 10,274 productive interviews (including both proxy and partial interviews). Seventy of these 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 5.2 shows the number of interviews conducted for Cohort 1 broken down by sample type. A total of 6773 interviews were achieved with Cohort 1 sample members at wave 5 and 6242 of these were with core members.

Table 5.3 presents the pattern of response over time for the 6242 Cohort 1 core members who were interviewed at wave 5 and gives a breakdown of the type of wave 5 interview conducted with them. Of those interviewed at wave 5, 85% had completed an interview at every wave since wave 1 and 96% were still interviewed at wave 5 in person.

Table 5.2. Respondents, by sample type: Cohort 1
Respondents in 2010–11, including proxies

	Number of respondents
Core member ^a	6242
Core partner ^b	124
Younger partner	281
New partner	126
<i>Unweighted N</i>	<i>6773</i>

^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 5 by virtue of their being the partner of a core member.

Table 5.3. Core member respondents, by situation in wave 5 (2010–11): Cohort 1
Core member respondents in 2010–11

	Number of respondents	%
Pattern of response		
All five waves	5316	85
Missed one or more waves	926	15
Type of interview		
Full interview in person	5896	94
Full interview by proxy	209	3
Partial interview in person	66	1
Partial interview by proxy	2	0
Institutional interview in person	12	0
Institutional interview by proxy	57	1
<i>Unweighted N</i>	<i>6242</i>	<i>100</i>

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

Table 5.4 gives a breakdown of the number of achieved interviews by each sample type for Cohort 3. A total of 1308 interviews were conducted overall and 936 of these were with core members.

Table 5.5 shows the pattern of response over time for the 936 Cohort 3 core members interviewed at wave 5 and a breakdown of the type of interview conducted at wave 5. Of Cohort 3 core members interviewed at wave 5, 91% also took part at the two preceding waves for which they were eligible (waves 3 and 4).

Table 5.4. Respondents, by sample type: Cohort 3
Respondents in 2010–11, including proxies

	Number of respondents
Core member ^a	936
Core partner	17
Younger partner	217
Older partner	102
New partner	36
<i>Unweighted N</i>	<i>1308</i>

^a Born between 1 March 1952 and 29 February 1956.

Table 5.5. Core member respondents, by situation in wave 5 (2010–11): Cohort 3
Core member respondents in 2010–11

	Number of respondents	%
Pattern of response		
All three waves (waves 3, 4 and 5)	851	91
Missed one or more waves	85	9
Type of interview		
Full interview in person	897	96
Full interview by proxy	28	3
Partial interview in person	9	1
Partial interview by proxy	1	0
Institutional interview in person	0	0
Institutional interview by proxy	1	0
<i>Unweighted N</i>	<i>936</i>	<i>100</i>

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

Table 5.6. Respondents, by sample type: Cohort 4
Respondents in 2010–11, including proxies

	Number of respondents
Core member ^a	1912
Core partner	27
Younger partner	101
Older partner	127
New partner	26
<i>Unweighted N</i>	<i>2193</i>

^a Born between 1 March 1933 and 28 February 1958.

Table 5.7. Core member respondents, by situation in wave 5 (2010–11): Cohort 4

Core member respondents in 2010–11

	Number of respondents	%
Type of interview		
Full interview in person	1851	97
Full interview by proxy	50	3
Partial interview in person	10	1
Partial interview by proxy	1	0
<i>Unweighted N</i>	<i>1912</i>	<i>100</i>

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

Table 5.6 presents the breakdown of achieved interviews by sample type for Cohort 4. A total of 2193 interviews were conducted and 1912 of these were with core members.

Table 5.7 shows the type of wave 5 interview conducted with the 1912 core members from Cohort 4. No response history is shown for this cohort as, by definition, all completed a wave 4 interview.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 and moves out of Great Britain. Fieldwork response rates are covered first in this section and then key study response rates are presented.⁷ Respondents are defined as those who gave a full or partial interview either in person or by proxy.

Fieldwork response rates

Three different types of fieldwork response rate are presented here. Household contact rates,⁸ individual cooperation⁹ and individual response rates¹⁰ are

⁶ To be deemed a Cohort 4 core member, all needed to have been interviewed at the baseline wave (wave 4).

⁷ Additional types of study response rate will also be included in the wave 5 Technical Report (forthcoming).

⁸ 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’.

⁹ The cooperation rate is defined as ‘total individual wave 5 respondents divided by total eligible individuals contacted by interviewers’. Non-contacts and those untraced are therefore also treated as ineligible in this response rate.

¹⁰ The response rate is defined as ‘total individual respondents to wave 5 divided by total individuals eligible for wave 5’. By eligible, we mean that core members were *not* known to have died, moved into an institution or moved outside Great Britain. Note that inclusion in either the numerator or denominator was *not* conditional upon response at wave 4. Hence the

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 (for non-contacts, movers etc.).

For all Cohort 1 households issued at wave 5, the household contact rate was 97.0%. Amongst Cohort 1 core members, an individual cooperation rate of 80.0% was achieved and the overall response rate for Cohort 1 core members was 77.5%. Table 5.8 shows the reasons for non-response for Cohort 1 core members in wave 5.¹¹

The equivalent household contact rate for Cohort 3 was 94.2%. The individual cooperation rate for Cohort 3 core members was 81.4% and their overall response rate was 77.3%. Table 5.9 shows the reasons for non-response for Cohort 3 core members in wave 5.

The equivalent household contact rate for Cohort 4 was 98.4%. The individual co-operation rate for Cohort 4 core members was 87.1% and their overall response rate was 85.6%. Table 5.10 shows the reasons for non-response for Cohort 4 core members in wave 5.

Table 5.8. Reasons for non-response: core members in Cohort 1
Eligible core members but non-respondents in 2010–11

	Frequency	%
Non-contact	98	5
Refusal	1415	79
Moved – unable to trace	131	7
Other	142	8
<i>Unweighted N</i>	<i>1786</i>	<i>100</i>

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

Table 5.9. Reasons for non-response: core members in Cohort 3
Non-respondents in 2010–11

	Frequency	%
Non-contact	27	10
Refusal	202	74
Moved – unable to trace	33	12
Other	12	4
<i>Unweighted N</i>	<i>274</i>	<i>100</i>

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

total respondents in wave 5 included those core members who returned to the study after missing wave 4.

¹¹ All core members had an interview at the first wave, but their pattern of response at subsequent waves varies.

Table 5.10. Reasons for non-response: core members in Cohort 4
Non-respondents in 2010–11

	Frequency	%
Non-contact	18	6
Refusal	267	83
Moved – unable to trace	21	7
Other	15	5
<i>Unweighted N</i>	<i>321</i>	<i>100</i>

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

As in waves 2, 3 and 4, the largest component (over three-quarters) of non-response within each of the cohorts was a result of refusals (see Tables 5.8–5.10). A judgement of the impact of any differential non-response is reserved for Section 5.5, 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 and moves out of Great Britain. Two key types of study response rates are presented here for each cohort: the (cross-sectional) wave 5 response rates conditional upon baseline wave and the (longitudinal) conditional wave 5 response rates.

The (cross-sectional) wave 5 response rates conditional upon baseline wave

Cohort 1

A total of 11,391 original core members were interviewed at wave 1. Table 5.11 shows the status of these core members at wave 5.¹²

Table 5.11. Status of original Cohort 1 core members (C1CMs) at wave 5

	Frequency	%
Died	2158	19
Moved out of Great Britain	142	1
In institution ^a	109	1
Respond at wave 5 ^b	6173	54
Non-respond at wave 5	2809	25
<i>Unweighted N</i>	<i>11,391</i>	<i>100</i>
<i>Total C1CMs eligible at wave 5</i>	<i>8982</i>	
<i>Total C1CMs ineligible at wave 5</i>	<i>2409</i>	
<i>Study response rate</i>	<i>6173/8982</i>	<i>68.7</i>

^a Of these, 69 had an institutional interview at wave 5 and 40 were unproductive at wave 5 but known to be in an institution.

^b Includes proxies, but excludes those in institutions.

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

In order to work out the proportion of eligible Cohort 1 core members interviewed at wave 5, the response rate was calculated as conditional upon

¹² Additional tables outlining the status of Cohort 1 core members at wave 5 by six key demographic variables are given in Appendix 5B.

response in wave 1 (of those who were still eligible). However, inclusion in either the numerator or denominator was *not* conditional upon response in wave 2, 3 or 4. Hence the total respondents in wave 5 included those who returned to the ELSA study at wave 5 after missing up to three prior waves. The (cross-sectional) wave 5 response rate conditional on response at wave 1 was 68.7%.

Cohort 3

Wave 3 represents the baseline wave of ELSA for core members belonging to Cohort 3. A total of 1275 Cohort 3 core members took part at wave 3. Table 5.12 shows the status of these core members at wave 5.

The wave 5 response rate conditional upon response at wave 3 reflects the proportion of core members from Cohort 3 with a wave 5 interview (of those who were still eligible). A response rate of 75.3% was achieved for Cohort 3 core members at wave 5.

Table 5.12. Status of original Cohort 3 core members (C3CMs) at wave 5

	Frequency	%
Died	22	2
Moved out of Great Britain	10	1
In institution ^a	1	0
Respond at wave 5 ^b	935	73
Non-respond at wave 5	307	24
<i>Unweighted N</i>	<i>1275</i>	<i>100</i>
<i>Total C3CMs eligible at wave 5</i>	<i>1242</i>	
<i>Total C3CMs ineligible at wave 5</i>	<i>33</i>	
<i>Study response rate</i>	<i>935/1242</i>	<i>75.3</i>

^a One institutional case had a proxy institutional interview at wave 5.

^b Includes proxies, but excludes those in institutions.

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

Cohort 4

Wave 4 represents the baseline wave for Cohort 4 core members. A total of 2290 Cohort 4 core members took part at wave 4. Table 5.13 shows the status of these core members at wave 5.

The wave 5 response rate conditional upon response at wave 4 reflects the proportion of core members from Cohort 4 with a wave 5 interview (of those who were still eligible). A response rate of 85.1% was achieved for Cohort 4 core members at wave 5.

Table 5.13. Status of original Cohort 4 core members (C4CMs) at wave 5

	Frequency	%
Died	36	2
Moved out of Great Britain	8	0
In institution	0	0
Respond at wave 5 ^a	1912	83
Non-respond at wave 5	334	15
<i>Unweighted N</i>	2290	100
<i>Total C4CMs eligible at wave 5</i>	2246	
<i>Total C4CMs ineligible at wave 5</i>	44	
<i>Study response rate</i>	1912/2246	85.1

^a Includes proxies, but excludes those in institutions.

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

The (longitudinal) conditional wave 5 response rates

The longitudinal response rate shows the proportion of core members who have been interviewed at each wave of the study from those who were eligible at each wave. This group is selected for longitudinal analysis. The longitudinal conditional response rate at wave 5 was 58.7% for Cohort 1 and 68.4% for Cohort 3.

Profile of main interview respondents at wave 5

Cohort 1

The profile of core member respondents belonging to Cohort 1 (born on or before 29 February 1952) is presented in Table 5.14; this includes respondents who took part in all five waves plus some who returned to wave 5 after missing waves 2, 3 or 4.¹³ The distribution shows that the sample contains more women than men, as expected, especially in the older age groups.

Table 5.14. Achieved sample of Cohort 1 core members, by age in 2010–11 and sex

Respondents in 2010–11, including proxies but excluding those in institutions

Age	Men	Women	Total	Men	Women	Total
56–59	146	182	328	5%	5%	5%
60–64	701	857	1558	26%	25%	25%
65–69	540	650	1190	20%	19%	19%
70–74	492	572	1064	18%	17%	17%
75–79	394	494	888	14%	14%	14%
80–84	254	382	636	9%	11%	10%
85 and over	194	315	509	7%	9%	8%
<i>Unweighted N</i>	<i>2721</i>	<i>3452</i>	<i>6173</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

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

¹³ 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 5.15. Wave 5 (2010–11) main interview response for Cohort 1 core members who took part in waves 1–4, by age in 2002–03 and sex
Eligible core members in 2010–11 who took part in waves 1–4

	50–59	60–74	75+	All
Men				
Respondents	95.3%	92.8%	87.5%	93.4%
Non-respondents	4.7%	7.2%	12.5%	6.6%
Women				
Respondents	94.0%	93.3%	89.3%	93.1%
Non-respondents	6.0%	6.7%	10.7%	6.9%
All				
Respondents	94.5%	93.1%	88.6%	93.2%
Non-respondents	5.5%	6.9%	11.4%	6.8%
<i>Unweighted N</i>	<i>2436</i>	<i>2546</i>	<i>666</i>	<i>5648</i>
<i>Men</i>	<i>1095</i>	<i>1117</i>	<i>256</i>	<i>2468</i>
<i>Women</i>	<i>1341</i>	<i>1429</i>	<i>410</i>	<i>3180</i>

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

Table 5.15 is based on Cohort 1 core members who took part in all of waves 1–4 and shows their main interview response at wave 5. Amongst those who were still eligible at wave 5 (i.e. had not died, moved into an institution or moved out of Great Britain), the propensity to participate at wave 5 decreased with age for both men and women.

Cohort 3

The profile of the core member respondents belonging to Cohort 3 is presented in Table 5.16. The age distribution was more or less the same for men and women. However, a slightly higher proportion of women (35%) than of men (31%) were aged 55 and a slightly higher proportion of men (34%) than of women (29%) were aged 56.

Table 5.16. Achieved sample of Cohort 3 core members, by age in 2010–11 and sex

Respondents in 2010–11, including proxies but excluding those in institutions

Age	Men	Women	Total	Men	Women	Total
54	26	34	60	6%	7%	6%
55	131	179	310	31%	35%	33%
56	144	147	291	34%	29%	31%
57	98	117	215	23%	23%	23%
58	25	34	59	6%	7%	6%
<i>Unweighted N</i>	<i>424</i>	<i>511</i>	<i>935</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

Cohort 4

The profile of the core member respondents belonging to Cohort 4 is presented in Table 5.17. A slightly higher proportion of men aged 65 and over participated at wave 5 than of women of the same age, while a slightly higher proportion of women under 65 participated at wave 5 than of men of the same age.

Table 5.17. Achieved sample of Cohort 4 core members, by age in 2010–11 and sex

Respondents in 2010–11, including proxies

Age	Men	Women	Total	Men	Women	Total
52–54	75	80	155	8%	8%	8%
55–59	245	304	549	28%	30%	29%
60–64	178	239	417	20%	23%	22%
65–69	170	170	340	19%	17%	18%
70–74	159	163	322	18%	16%	17%
75–76	62	67	129	7%	7%	7%
<i>Unweighted N</i>	<i>889</i>	<i>1023</i>	<i>1912</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

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

Profile of proxy respondents at wave 5

Proxy interviews were carried out if a sample member could not be interviewed in person because of a physical or cognitive impairment, or 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. Table 5.18 shows the proxy sample in 2010–11 for Cohort 1 core members, by age and sex. A total of 211 proxy interviews were carried out at wave 5. A higher proportion of women aged 80 and over had a proxy interview than of men (43% of women aged 80 and over compared with 29% of men).

Table 5.18. Proxy interview sample (Cohort 1), by age in 2010–11 and sex

Sample members requiring a proxy in 2010–11, excluding those in institutions

Age	Men	Women	Total	Men	Women	Total
58–59	4	3	7	4%	3%	3%
60–64	16	17	33	16%	16%	16%
65–69	24	18	42	23%	17%	20%
70–74	17	10	27	17%	9%	13%
75–79	12	14	26	12%	13%	12%
80–84	8	16	24	8%	15%	11%
85 and over	22	30	52	21%	28%	25%
<i>Unweighted N</i>	<i>103</i>	<i>108</i>	<i>211</i>	<i>100%</i>	<i>100%</i>	<i>100%</i>

5.5 Implications for analyses: weighting

This section describes the weighting strategies used to adjust for non-response and the process of combining Cohorts 1, 3 and 4. We describe the cross-

sectional and longitudinal weights constructed at wave 5 in turn, beginning with the longitudinal weights.

Longitudinal weights

For those core members from Cohort 1 eligible for the main interview in wave 5 *and* who responded at all previous waves, response to wave 5 was modelled using logistic regression analysis on a range of household- and individual-level information collected at wave 4 (supplemented by information taken from waves 1 to 3). The analysis was conducted using the longitudinal weight derived in wave 4 to ensure that the wave 5 weight did not replicate the adjustments made by the wave 4 weight.

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

- age (at wave 1) by sex;
- government office region (at wave 4);
- highest educational qualification (at wave 1);
- Index of Multiple Deprivation (IMD) quintile (at wave 4);
- housing tenure (at wave 4);
- number in household (at wave 4);
- urban/rural classification (at wave 4).

A longitudinal weight was calculated for the set of 5262 core members who responded to all five waves of ELSA and remained living in private households. The weighting strategy in wave 5 aimed to minimise any bias arising from sample loss after wave 4. 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 5. This was then multiplied by the wave 4 longitudinal weight (and scaled to an average of 1) to produce the wave 5 longitudinal weight. The sequential nature of the weighting¹⁴ means that we have adjusted for non-response to HSE and each of the four waves of ELSA.

Cross-sectional weights

A cross-sectional weight was derived that can be used to analyse all core members responding at wave 5. This allows for the inclusion of Cohort 3 and Cohort 4 core members plus ‘wave non-responders’ (those core members from Cohorts 1 and 3 who returned to the study at wave 5 after missing one or more previous waves). The cross-sectional sample at wave 5 aims to be

¹⁴ 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 5 builds on the wave 4 weight, which, in turn, built on the weight created in wave 3, etc.

Methodology

representative of those living in England only in 2010. As described below, we weight to population 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 5 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 59+ and those aged 53–58. The cross-sectional weight was calculated using the following steps:

1. A non-response weight was derived for Cohort 3 core members to adjust for non-response between waves 4 and 5.
2. A non-response weight was derived for Cohort 4 core members to adjust for non-response between waves 4 and 5.
3. Population estimates of key socio-demographics for core members aged 59+ at wave 5 were derived from the longitudinal group (those Cohort 1 core members responding to all five waves of ELSA) combined with Cohort 4 core members aged 59+.
4. The non-response weights for *all* core members aged 59+ at wave 5 (i.e. the two groups mentioned above in point 3 plus wave non-responders) were then calibrated to these population estimates plus estimates of age/sex and region from mid-2010 household population estimates.¹⁵
5. The non-response weights for all core members aged 53–58 at wave 5 were calibrated to mid-2010 household population estimates of sex and region.
6. Finally, the calibration weights from steps 4 and 5 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 5 Technical Report (forthcoming).

Non-response weights for Cohort 3

For the 888 Cohort 3 core members who took part in wave 4 and were eligible for the main interview in wave 5, response was modelled on a range of household- and individual-level information collected from wave 4. The analysis was conducted using the non-response weight derived in wave 4 to ensure that the wave 5 weight did not replicate any adjustment made by the wave 4 weight.

The results showed significant differences between respondents and non-respondents on three characteristics: sex, IMD quintile and tenure. Taking the inverse of the estimated probability of responding created a non-response weight to adjust for potential non-response bias between waves 4 and 5 for a total of 785 responders.

¹⁵ Age is defined here as age at 1 March 2010, immediately prior to the beginning of wave 5 fieldwork.

Non-response weights for Cohort 4

For the 2314 Cohort 4 core members eligible for the main interview in wave 5 (and remaining in private households in England), response to wave 4 was modelled on a range of household- and individual-level information collected at wave 4. The analysis was conducted using the non-response weight derived in wave 4 to ensure that the wave 5 weight did not replicate any adjustment made by the wave 4 weight.

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

- age by sex;
- government office region;
- highest educational qualification;
- IMD quintile;
- housing tenure;
- National Statistics Socio-Economic Classification (NS-SEC);
- whether had a long-term limiting illness;
- marital status.

Taking the inverse of the estimated probability of responding created a non-response weight to adjust for potential non-response bias between waves 4 and 5 for a total of 1974 respondents.

Cross-sectional weights for those aged 59+

Core members aged 59+ responding at wave 5 belonged to one of three groups:

- (i) Cohort 1 core members who had taken part in all five waves of ELSA;¹⁶
- (ii) Cohort 4 core members who took part in waves 4 and 5;
- (iii) wave non-responders: Cohort 1 core members who had returned to the study at wave 5 after missing one or more of waves 2, 3 and 4 and Cohort 3 core members who had returned to the study at wave 5 after missing wave 4.¹⁷

It is often speculated that wave non-responders are likely to have characteristics that differ from those who have taken part at all waves. 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;

¹⁶ Fifteen of these respondents had moved to either Wales or Scotland and were therefore given zero cross-sectional weights.

¹⁷ Twenty-six of these respondents had moved to either Wales or Scotland and were therefore given zero cross-sectional weights.

Methodology

- highest educational qualification;
- marital status.

In order to combine the three groups to create a representative sample of persons aged 59+, it was necessary to make sure, as far as possible, that the characteristics of the combined sample matched 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 5, previous waves of ELSA and HSE. Combining these groups provided a basis from which to estimate the population characteristics of those aged 59+. Before these estimates could be derived, two adjustments were necessary:

- (i) the non-response weights of those aged 59–76 were scaled down so that this group were in the correct proportion as compared with those aged 77 and over;
- (ii) these weights were then calibrated to mid-2010 household population estimates of age/sex and region (see Table 5.19).

Table 5.19. Household population estimates

Mid-2010 England household population (aged 53 and over)

Age	Men	Women	Total	Men	Women	Total
53–58	1,785,493	1,840,674	3,626,167	24.5%	22.3%	23.3%
59–64	1,810,557	1,894,766	3,705,323	24.8%	23.0%	23.8%
65–69	1,165,239	1,251,237	2,416,476	16.0%	15.2%	15.5%
70–74	955,899	1,068,705	2,024,604	13.1%	12.9%	13.0%
75–79	731,457	888,393	1,619,850	10.0%	10.8%	10.4%
80–84	475,296	627,456	1,102,752	6.5%	7.6%	7.1%
85+	364,046	682,627	1,046,673	5.0%	8.3%	6.7%
Total	7,287,987	8,253,858	15,541,845	100.0%	100.0%	100.0%

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

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 and 4, for consistency).

The non-response weights for all core members aged 59+ at wave 5 (i.e. the two groups already combined plus the wave non-responders) were then adjusted using calibration weighting so that the resulting weights, when applied to the three groups combined, provided survey estimates that matched the population estimates on the four socio-demographic characteristics plus estimates of age/sex and region of those aged 59+ (from mid-2010 household population estimates).

Cross-sectional weights for those aged 53–58

Responding core members aged 53–58 at wave 5 came from Cohorts 3 and 4. These groups were combined and their non-response weights were adjusted using calibration weighting so that the resulting weights provided survey estimates that matched population estimates of sex and region (from mid-2010

household population estimates) for those aged 53–58. Those aged 52 at interview were treated as 53 for this purpose.¹⁸

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 (aged 53–58 and aged 59+) combined and to scale them so that they were 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 5.20.

Table 5.20. Achieved (combined) sample of core members, by age in 2010–11 and sex

Respondents in 2010–11, including proxies but excluding those in institutions

Age at wave 5 interview	Men	Women	Total	Men	Women	Total
53–58	1031	1063	2094	24.5%	22.3%	23.3%
59–64	1049	1097	2146	24.8%	23.0%	23.8%
65–69	674	724	1398	16.0%	15.2%	15.5%
70–74	553	618	1171	13.1%	12.9%	13.0%
75–79	423	514	937	10.0%	10.8%	10.4%
80–84	275	363	638	6.5%	7.6%	7.1%
85+	211	395	605	5.0%	8.3%	6.7%
<i>Weighted N</i>	<i>4215</i>	<i>4774</i>	<i>8989</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>
<i>Unweighted N</i>	<i>4016</i>	<i>4973</i>	<i>8989</i>	<i>100.0%</i>	<i>100.0%</i>	<i>100.0%</i>

Note: Rows and columns may not add up because of rounding.

5.6 Conclusions

This chapter aimed to provide an overview of the survey methodology for ELSA wave 5. 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. At wave 5, a new module about financial risk was added, and take-up of this was high amongst those selected to do it. Over the waves, ELSA interviewers have consistently worked hard to maintain the panel of ELSA sample members. At wave 5, household contact rates of over 90% were achieved for all three ELSA cohorts.

The prior experiences of sample members within each cohort need to be considered when interpreting response rates at wave 5. For Cohort 1 members, this was the fifth ELSA interview they had been asked to do. Cohort 3 members joined ELSA at wave 3 (so wave 5 represented their third wave of ELSA interviewing) and Cohort 4 members had their first ELSA interview at

¹⁸ Only a dozen respondents were still aged 52 at interview; therefore the decision was made to treat them as aged 53 and to calibrate to population estimates for those aged 53 and above.

Methodology

the last wave (wave 4). Levels of non-response do tend to accumulate over time as further waves of interviewing are conducted and, as expected, higher response rates were found at wave 5 amongst those who joined ELSA most recently (Cohort 4). It was therefore important to present the response rates separately for each cohort rather than just producing combined rates.

Two-thirds of all wave 5 interviews were with those belonging to Cohort 1 (66%). Original core members from wave 1 were still found to be highly committed to the study. Their fieldwork response rate showed that 78% of those issued to the field (and still found to be eligible) had a wave 5 interview. There is a wealth of data accumulating for this group, with 59% of Cohort 1 core members having been interviewed at every wave (the longitudinal study response rate).

Cohort 3 represents the minority group, comprising those aged 54–58 at wave 5. They made up 13% of the total achieved sample at wave 5. Their introduction to ELSA at wave 3 was to ‘refresh’ the younger age group and help ensure the study remained representative of all those aged 50 and over. The fieldwork response rates for Cohort 3 core members were similar to those for Cohort 1 (77% and 78% respectively). However, analysis of reasons for non-response showed a higher proportion of non-contacts and movers amongst this group (22%) compared with those in Cohorts 1 and 4 (13% and 12% respectively). This may be due to Cohort 3 representing a younger and therefore more mobile group of sample members. During and after fieldwork, efforts were made to find movers at wave 5 using in-field interviewers and the NHS Central Register.¹⁹

Cohort 4 accounts for a fifth of achieved interviews at wave 5 (21%), covering sample members aged 52–76. Higher field and study response rates were found for core members in Cohort 4 than for the other two cohorts. Their cross-sectional study response rate (conditional upon baseline wave) of 85% was also slightly higher than that achieved for Cohort 1 core members at their comparative second wave (82%, wave 2). Like the other cohorts, refusals made up the biggest component of non-response for Cohort 4 core members at wave 5. To help combat longer-term dropout, most will be encouraged back to the study at wave 6.

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 highlighted how we attempt to minimise any bias arising from sample loss after each wave. Key characteristics of non-respondents and respondents were presented and a summary was given of how the longitudinal and cross-sectional weights at wave 5 were constructed. The process of combining Cohorts 1, 3 and 4 to facilitate cross-sectional analysis of all core members at wave 5 was also covered.

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.

¹⁹ See wave 5 Technical Report (forthcoming) for details of this process.

References

- Craig, R. and Mindell, J. (eds) (2008), *Health Survey for England 2006, Vol. 3: Methodology and Documentation*, London: The Information Centre.
- Erens, B. and Primatesta, P. (eds) (1999), *Health Survey for England 1998, Vol. 2: Methodology and Documentation*, London: The Stationery Office.
- Erens, B., Primatesta, P. and Prior, G. (eds) (2001), *Health Survey for England. The Health of Minority Ethnic Groups 1999, Vol. 2: Methodology and Documentation*, London: The Stationery Office.
- Prior, G., Deverill, C., Malbut, K. and Primatesta, P. (eds) (2003), *Health Survey for England. The Health of Minority Ethnic Groups 2001, Vol. 2: Methodology and Documentation*, London: The Stationery Office.
- Sproston, K. and Mindell, J. (eds) (2006), *Health Survey for England 2004, Vol. 2: Methodology and Documentation*, London: The Stationery Office.
- Sproston, K. and Primatesta, P. (eds) (2003), *Health Survey for England 2002, Vol. 3: Methodology and Documentation*, London: The Stationery Office.
- Sproston, K. and Primatesta, P. (eds) (2004), *Health Survey for England 2003, Vol. 3: Methodology and Documentation*, London: The Stationery Office.
- Taylor, R., Conway, L., Calderwood, L., Lessof, C., Cheshire, H., Cox, K. and Scholes, S. (2007), *Health, Wealth and Lifestyles of the Older Population in England: The 2002 English Longitudinal Study of Ageing, Technical Report*, London: National Centre for Social Research (http://www.ifs.org.uk/elsa/report03/w1_tech.pdf).

Appendix 5A

Games included in the risk module

Rectangle games

For the first six rectangle games, respondents were asked to make a choice between being paid a one-off payment of a relatively smaller amount in two weeks' time and being paid a relatively bigger amount in one month's time (deferred gratification). In the remaining six rectangle games, respondents were asked to make a similar choice, but this time they had to choose between a one-off payment in two weeks' time and a larger amount in two months' time.

Blaise 4.8 Data Entry - \\homerfp01\data\Workdocs\ELSA\Computing\Wave5\RiskMM changes v11\test

Forms Answer Navigate Options Help

In two weeks	In one month
£ 25	£ 30

GAME 5

TYPE IN THE NUMBER BELOW WHICH CORRESPONDS TO YOUR CHOICE AND THEN PRESS THE ENTER KEY.

Would you rather be paid a one-off payment of...

1. ...£25 in two weeks', or

2. £30 in one month's time?

RIA4 | 2 | a2 | RIA5 |

23/51 test RIA5 29/06/2009 17:42:47

Circle games


Respondents played 10 different circle games. For each game, respondents were asked to choose *one* circle (or coin) out of the six that were shown on the screen. Each individual coin was divided into two halves, yellow and blue, with a different amount written on each half. The two different colours on each coin represented a 50:50 chance (similar to a coin toss) of being randomly selected by the computer. The amount written within each colour represented either a winning amount or a losing amount if there was a minus sign in front of the £ sign (e.g. -£5). The diagram below shows an example of the six coins respondents were asked to choose from. If the respondent decided to select Coin D in the example below and the computer then randomly selected blue to win, the respondent could potentially win £30 on top of their initial £10 (if the computer then selected this game to win at the end of the module).


ELSA Wave 5


Forms Answer Navigate Show Watch Window


*** MAURICE ***


Once you choose a coin the computer will randomly select whether yellow or blue wins. Yellow and blue are **always** equally likely to be selected.


A:  A circular coin with a vertical split. The left half is lighter (yellow) and contains the text "£8". The right half is darker (blue) and contains the text "£20".

F:  A circular coin with a vertical split. The left half is lighter (yellow) and contains the text "£7". The right half is darker (blue) and contains the text "£24".

B:  A circular coin with a vertical split. Both the left (yellow) and right (blue) halves contain the text "£15".

E:  A circular coin with a vertical split. The left half is lighter (yellow) and contains the text "£5". The right half is darker (blue) and contains the text "£27".

C:  A circular coin with a vertical split. The left half is lighter (yellow) and contains the text "-£3". The right half is darker (blue) and contains the text "£35".

D:  A circular coin with a vertical split. The left half is lighter (yellow) and contains the text "-£1". The right half is darker (blue) and contains the text "£30".

1. Press <1> and <Enter> to continue.

RIExaB

972/5147 ELSAWS 6091 QInd[1].QRisk[1].RIExaB 28/01/2010 15:02:11

Note: On the circles, the lighter shading represents yellow and the darker shading blue.

Appendix 5B

Additional response tables

Table 5B.1. Status of Cohort 1 core members at wave 5, by age and non-housing wealth quintile in 2002–03

Cohort 1 core members, excluding those in institutions and out of Great Britain

	Died (%)	Attrited (%)	Productive (%)
50–59			
Poorest	38.1	27.4	19.8
2 nd	19.8	16.9	12.9
3 rd	10.2	18.8	19.0
4 th	14.7	19.4	22.3
Richest	17.3	17.4	26.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>197</i>	<i>1148</i>	<i>2665</i>
60–74			
Poorest	26.7	18.8	14.1
2 nd	22.3	20.7	18.2
3 rd	18.4	22.3	20.7
4 th	16.8	20.5	23.0
Richest	15.8	17.8	24.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>767</i>	<i>1242</i>	<i>2764</i>
75+			
Poorest	22.0	20.8	11.7
2 nd	30.9	31.5	25.2
3 rd	20.6	20.8	24.0
4 th	15.3	14.9	19.1
Richest	11.3	12.1	19.9
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1191</i>	<i>390</i>	<i>682</i>
All			
Poorest	25.2	22.6	16.3
2 nd	26.8	20.6	16.6
3 rd	18.8	20.6	20.3
4 th	15.8	19.2	22.3
Richest	13.4	16.8	24.4
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2155</i>	<i>2780</i>	<i>6111</i>

Table 5B.2. Status of Cohort 1 core members at wave 5, by age and equivalised income quintile in 2002–03*Cohort 1 core members, excluding those in institutions and out of Great Britain*

	Died (%)	Attrited (%)	Productive (%)
50–59			
Lowest	22.3	16.7	12.6
2 nd	14.2	13.5	9.6
3 rd	18.3	18.9	15.8
4 th	24.4	25.8	26.1
Highest	20.8	25.1	35.8
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>197</i>	<i>1148</i>	<i>2665</i>
60–74			
Lowest	19.2	21.6	16.6
2 nd	26.5	24.9	21.1
3 rd	26.3	22.7	22.2
4 th	17.9	17.5	20.8
Highest	10.2	13.4	19.3
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>767</i>	<i>1242</i>	<i>2764</i>
75+			
Lowest	32.7	32.1	30.5
2 nd	31.0	31.3	24.6
3 rd	19.8	23.1	20.4
4 th	9.8	8.7	13.8
Highest	6.7	4.9	10.7
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1191</i>	<i>390</i>	<i>682</i>
All			
Lowest	26.9	21.0	16.4
2 nd	27.8	21.1	16.5
3 rd	22.0	21.2	19.2
4 th	14.0	19.7	22.3
Highest	9.2	17.0	25.6
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2155</i>	<i>2780</i>	<i>6111</i>

Table 5B.3. Status of Cohort 1 core members at wave 5, by age and level of education in 2002–03

Cohort 1 core members, excluding those in institutions and out of Great Britain

	Died (%)	Attrited (%)	Productive (%)
50–59			
No qualifications	39.9	36.2	24.6
Low level	10.6	14.2	10.9
Middle level	25.3	29.5	31.3
High level	24.2	20.1	33.3
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>198</i>	<i>1160</i>	<i>2706</i>
60–74			
No qualifications	54.4	55.3	40.2
Low level	15.0	14.1	14.2
Middle level	13.6	16.4	21.7
High level	17.0	14.2	23.9
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>766</i>	<i>1245</i>	<i>2775</i>
75+			
No qualifications	65.1	66.0	51.2
Low level	14.9	13.2	15.8
Middle level	9.3	11.7	14.6
High level	10.7	9.1	18.4
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1190</i>	<i>385</i>	<i>685</i>
All			
No qualifications	59.0	48.8	34.6
Low level	14.5	14.1	12.9
Middle level	12.3	21.2	25.1
High level	14.2	15.9	27.4
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2154</i>	<i>2790</i>	<i>6166</i>

Table 5B.4. Status of Cohort 1 core members at wave 5, by age, sex and marital status in 2002–03*Cohort 1 core members, excluding those in institutions and out of Great Britain*

	Died (%)	Attrited (%)	Productive (%)
50–59			
Single man	23.2	10.6	9.8
Single woman	14.6	13.9	15.4
Married man	35.4	35.0	35.6
Married woman	26.8	40.5	39.3
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>198</i>	<i>1164</i>	<i>2706</i>
60–74			
Single man	16.4	9.4	8.2
Single woman	19.3	16.5	21.3
Married man	42.1	36.0	36.0
Married woman	22.2	38.1	34.5
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>767</i>	<i>1254</i>	<i>2780</i>
75+			
Single man	18.8	10.0	11.2
Single woman	39.8	39.7	41.4
Married man	27.5	27.4	27.4
Married woman	13.9	22.8	20.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1193</i>	<i>390</i>	<i>686</i>
All			
Single man	18.4	10.0	9.2
Single woman	30.2	18.7	20.9
Married man	33.4	34.4	34.9
Married woman	18.0	37.0	35.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2158</i>	<i>2808</i>	<i>6172</i>

Table 5B.5. Status of Cohort 1 core members at wave 5, by age and sex in 2002–03

Cohort 1 core members, excluding those in institutions and out of Great Britain

	Died (%)	Attrited (%)	Productive (%)
50–59			
Male	58.6	45.5	45.3
Female	41.4	54.5	54.7
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>198</i>	<i>1164</i>	<i>2707</i>
60–74			
Male	58.5	45.3	44.2
Female	41.5	54.7	55.8
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>767</i>	<i>1255</i>	<i>2780</i>
75+			
Male	46.3	37.4	38.6
Female	53.7	62.6	61.4
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1193</i>	<i>390</i>	<i>686</i>
All			
Male	51.8	44.3	44.1
Female	48.2	55.7	55.9
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2158</i>	<i>2809</i>	<i>6173</i>

Table 5B.6. Status of Cohort 1 core members at wave 5, by age and working status in 2002–03*Cohort 1 core members, excluding those in institutions and out of Great Britain*

	Died (%)	Attrited (%)	Productive (%)
50–59			
Non-working	51.5	30.5	26.0
Working	48.5	69.5	74.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>198</i>	<i>1164</i>	<i>2707</i>
60–74			
Non-working	89.6	79.4	77.4
Working	10.4	20.6	22.6
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>767</i>	<i>1255</i>	<i>2780</i>
75+			
Non-working	98.6	98.2	97.1
Working	1.4	1.8	2.9
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>1193</i>	<i>390</i>	<i>686</i>
All			
Non-working	91.1	61.7	57.0
Working	8.9	38.3	43.0
Total	100.0	100.0	100.0
<i>Unweighted bases</i>	<i>2158</i>	<i>2809</i>	<i>6173</i>

E. Economics domain tables

Zoë Oldfield *Institute for Fiscal Studies*

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 5 of ELSA, which took place from July 2010 to June 2011. 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. All longitudinal tables are based on individuals who have responded in all of waves 1 to 5 (the ‘balanced panel’) unless otherwise specified. All numbers are based on weighted data, which use either a cross-sectional (main questionnaire or self-completion questionnaire) or longitudinal weight. Both unweighted and weighted frequencies (N) are reported. For cross-sectional analyses, cross-sectional weights are used. For longitudinal analyses, longitudinal weights are used. All values are expressed in January 2011 prices using the retail prices index (RPI).

Cross-sectional tables

Income

E.5 Table E1a shows mean *unequalised* 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 dependent children they may have). Table E1b shows mean *equalised* net weekly family income by age and sex.

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 unequalised 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 sex.

E.8 Looking at all family types, Table E1a reveals that mean net unequivalised income is £485.74 per week. Converting all values to an equivalent adult basis, Table E1b reveals that mean net equivalised income is £347.44 per week. At younger ages employment income is the biggest component of total income, whereas at older ages private 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 sex. 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 section 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 55–59, for example, Table E4 reveals that 25% of this group have £100 or less of total wealth while 25% have £213,500 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 3.9.

E.12 Tables E5a and E5b look at private pension membership. 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 sex for all workers and non-workers under the State Pension Age and Table E5b reports similar numbers for workers only. The first column of numbers in Tables E5a and E5b report the percentage of individuals who are a member of a private pension scheme. The middle three columns 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, the middle three columns do not sum to the total percentage of individuals who

are a member of a private pension scheme. The numbers show, for example, that 84% of men aged 52–64 are currently a member of at least one private pension scheme. Breaking that down further, the numbers show that 41% of men aged 52–64 are currently contributing to at least one private pension scheme, 38% are receiving an income from at least one private pension scheme and 31% 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.

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, sex 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. For most age and income groups (the oldest age group being the notable exception), partnered women are more pessimistic, on average, than their male counterparts despite having access to the same resources. Single women are often more pessimistic than their male counterparts on average, 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 or either full- or part-time by age, sex and wealth group. We restrict our sample to those aged under 75 years.

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 52–59 are asked about the chances of working at age 60, while women aged 52–54 are asked about the chances of working at age 55. The second column of numbers reports the mean chances within each age and sex group. The five columns on the right-hand side report the mean chances within each age, sex 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 two columns of numbers show the percentages of individuals (by age, sex and wealth group) who do not and do report that their health limits the kind or amount of work that they 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, 21% of men aged 55–59 have a health problem that limits the kind or amount of work they can do. This 21% can be further broken down into 13% who are not working, 4% who are working but whose health problem does not limit them in their current job and 4% 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 52–64, the table shows that of the 54% of men in the lowest wealth group who have a limiting health problem, only 13% $((3\%+4\%)/54\%)$ are in work. This contrasts with the highest wealth group, where a much lower proportion have a limiting health problem (10%) and, of those who do, 60% $((3\%+3\%)/10\%)$ 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, sex 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 effects 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 (that is, 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 5 (the 'balanced panel') and tracks average total family income by age, sex 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. Earned income is 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 looked at private pension membership. But 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 reports the percentage of men and women who never contribute to a private pension in any of the waves in which they are under State Pension Age, the percentage who contribute in some waves in which they are under State Pension Age and the percentage who contribute in all waves in which they are under State Pension Age. For example, a man aged 62 at baseline would be under State Pension Age at wave 2 (he would be 64) but over State Pension Age in wave 3. If this individual were observed to be contributing to a private pension in waves 1 and 2 but not in wave 3 (when he is over State Pension Age), 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 under State Pension Age at baseline and who are employed at baseline; the proportions are reported by age, sex 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 under the State Pension Age. Amongst all men aged 50–64 at baseline, only 36.4% always contribute. Amongst women aged 50–59, that figure is slightly higher, at 45.9%. To reduce the effect that leaving the labour market has on pension contributions, we have not included years in which the individual is over State Pension Age when calculating how many waves 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 the State Pension Age. 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 that 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 employed in all waves that they are below State Pension Age are included. This means that if an

individual is observed not contributing, it is not simply due to the fact that they have left the labour market. Table EL4b shows that even conditioning on being in the labour market in all waves, the proportion who contribute to a private pension in every wave is rather low (50.0% for men and 54.4% for women).

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 (1–5). For example, 83.2% of single men did not report having financial difficulty in any of the five waves, 16.3% sometimes reported having financial difficulties and only 0.5% reported having financial difficulty in every wave.

E.28 The numbers in the next three columns 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 (1–5). For example, 9.4% of single men reported in every wave that they manage very well, 48.5% sometimes reported managing very well and 42.1% 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 respondents report 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 2–5), the percentage who report three or more items on the list in some waves

(at least one wave but not all of waves 2–5) and the percentage who report three or more items on the list in every wave (2–5). Table EL6a looks at the percentages by education for single men, single women, partnered men and partnered women aged 50 to State Pension Age. Table EL6b is similar but shows the percentages for those aged State Pension Age to 74 and Table EL6c shows the percentages for those aged 75 or over.

Labour market participation

E.32 Tables EL7a and EL7b look at labour market participation by wealth group and age for men and women respectively. The first column of numbers reports the percentage of the whole baseline (wave 1) sample who are employed (or self-employed) full- or part-time. The next five 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 5. By definition, 100% of the sample are employed in wave 1, but as we move further through time the percentage employed in each of the subsequent waves falls.

E.33 Table EL8 also looks at labour market participation but it considers transitions back into the labour market. The first column of figures reports the percentage of individuals who are not in employment (or self-employment) at baseline (2002–03). The next five 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 1–5, 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 five-wave period (a period spanning 10 years). For example, if an individual reported that they had a limiting health problem only in waves 1, 3 and 5, we would define that as transitory. We define a limiting health problem as 'onset' if an individual starts the five-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 only in waves 3, 4 and 5 would be classed as having an 'onset' limiting health problem.

E.35 For example, Table EL9a shows that 67.7% of men aged 50–74 never had a limiting health problem in waves 1–5 and only 2.3% had a limiting health problem in every wave (1–5). The third column of the table shows that 21.1% of men aged 50–74 sometimes had a limiting health problem and that it came and went over the five-wave period. Column 4 shows that 8.9% 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 five-wave period and it was not observed to go away.

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 2011 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 *Education*: Low education is defined as leaving full-time education at or before compulsory school-leaving age. Mid 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.5 *Employment income*: Net income from main and subsidiary jobs expressed in January 2011 prices.

AE.6 *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.7 *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.8 *Family*: A couple or a single person and any children aged under 18 they may have who are living at home.

AE.9 *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 2011 prices and rounded to the nearest £10:

	Income group definition wave 1 (2002–03)	Income group definition wave 5 (2010–11)
	<i>£ per week equivalised</i>	
Lowest	Less than £150	Less than £170
2 nd	Between £150 and £210	Between £170 and £240
3 rd	Between £210 and £290	Between £240 and £320
4 th	Between £290 and £420	Between £320 and £460
Highest	More than £420	More than £460

AE.10 *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 2011 prices.

AE.11 *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 2011 prices.

AE.12 *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 2011 prices.

AE.13 *Other income*: Net income coming from individuals outside the household such as maintenance payments, expressed in January 2011 prices.

AE.14 *Private pension income*: Net income from private pensions and annuities expressed in January 2011 prices.

AE.15 *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. Expressed in January 2011 prices.

AE.16 *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 2011 prices.

AE.17 *State Pension Age (SPA)*: A small number of respondents in wave 5 are beginning to be affected by the changes to State Pension Age. However, due to the nature of the changes, identifying these individuals could potentially be disclosive as it would allow their date of birth to be narrowed down to a single month. Therefore, for these wave 5 tables, State Pension Age is calculated as 65 for men and 60 for women. Going forwards, as more individuals are affected by the policy change, it will be possible to identify individuals' precise State Pension Age in a way that does not compromise anonymity.

AE.18 *State pension income*: Net income from state pensions (Basic State Pension, State Earnings-Related Pension Scheme / State Second Pension) expressed in January 2011 prices.

AE.19 *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 2011 prices.

AE.20 *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 2011 prices.

AE.21 *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 2011 prices and rounded to the nearest £1000:

	Wealth group definition wave 1 (2002–03)	Wealth group definition wave 5 (2010–11)
Lowest	Less than £18k	Less than £50k
2 nd	Between £18k and £118k	Between £50k and £175k
3 rd	Between £118k and £210k	Between £175k and £270k
4 th	Between £210k and £375k	Between £270k and £440k
Highest	More than £375k	More than £440k

AE.22 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 5 (the 'balanced panel') unless otherwise specified.

Economics domain tables

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.

All values are expressed in January 2011 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

Table E1a. Mean unequivalised net weekly family income (£), by age and family type: wave 5

	Employ- ment income	Self- emp. income	Private pension income	State pension income	State benefit income	Asset income	Other income	Total income	Wted N	Unwted N
Single men	75.47	23.29	76.81	76.51	33.28	19.24	0.26	304.86	972	922
52–54	[237.50]	[29.81]	[22.50]	[0.00]	[34.47]	[8.68]	[0.00]	[332.96]	39	32
55–59	193.52	46.58	36.49	0.22	54.63	17.33	0.79	349.57	207	154
60–64	110.27	51.35	68.05	6.72	46.26	15.05	0.31	298.01	165	161
65–69	30.91	11.89	95.00	115.39	26.51	21.73	0.00	301.43	138	139
70–74	1.32	10.87	94.05	127.65	19.80	17.32	0.03	271.03	136	154
75–79	9.64	0.00	120.84	146.78	11.46	18.33	0.35	307.39	92	98
80+	2.60	1.25	92.19	135.47	23.95	26.99	0.00	282.47	194	184
Single women	41.62	4.48	53.43	101.48	34.25	13.56	1.48	250.31	1846	1962
52–54	-	-	-	-	-	-	-	-	27	24
55–59	164.25	15.27	15.18	0.00	59.93	11.62	4.60	270.85	292	262
60–64	72.18	10.37	57.57	100.09	26.95	26.50	2.23	295.89	233	293
65–69	27.96	3.31	79.61	120.99	25.85	14.89	2.06	274.66	199	239
70–74	6.90	0.58	68.38	127.73	23.69	17.89	0.72	245.89	251	314
75–79	0.28	0.27	68.48	130.92	28.89	10.99	0.77	240.60	262	299
80+	0.03	0.92	51.28	126.39	31.41	8.72	0.14	218.90	583	531
Couples	201.66	50.39	144.40	111.02	28.18	50.73	0.66	587.04	6025	5960
52–54	466.66	102.80	57.49	9.72	49.89	48.16	0.72	735.44	207	154
55–59	444.36	99.08	71.84	10.69	31.34	46.50	1.00	704.80	1583	1288
60–64	226.86	54.99	159.20	79.29	29.33	43.59	0.38	593.64	1396	1475
65–69	72.48	32.91	198.78	175.61	19.71	68.03	0.71	568.22	1035	1118
70–74	22.96	14.94	190.23	195.10	22.25	70.04	0.54	516.07	774	903
75–79	8.23	3.67	171.56	202.33	25.70	35.66	0.58	447.73	574	605
80+	1.97	2.25	154.93	198.10	36.24	35.39	0.45	429.33	456	417
All family types	154.39	37.83	117.98	105.23	30.01	39.51	0.78	485.74	8843	8844
52–54	404.48	82.03	46.71	7.35	51.91	37.94	0.54	630.97	273	210
55–59	380.22	82.12	60.39	8.15	37.66	38.71	1.48	608.74	2081	1704
60–64	196.08	48.87	137.64	75.31	30.58	38.75	0.61	527.84	1794	1929
65–69	61.85	26.51	171.08	161.64	21.28	55.68	0.83	498.86	1371	1496
70–74	16.95	11.36	152.62	172.63	22.27	52.59	0.52	428.95	1161	1371
75–79	6.13	2.35	137.41	176.64	25.18	26.97	0.61	375.28	928	1002
80+	1.15	1.47	96.09	154.36	32.03	21.47	0.23	306.79	1233	1132

For variable definitions, see AE.1, AE.5, AE.8, AE.13, AE.14, AE.15, AE.16, AE.18, AE.19 and AE.22. For related text, see E.5–E.8.

Table E1b. Mean equivalised net weekly family income (£), by age and sex: wave 5

	Employ- ment income	Self- emp. income	Private pension income	State pension income	State benefit income	Asset income	Other income	Total income	<i>Wted N</i>	<i>Unwted N</i>
Men	124.09	33.57	89.73	70.90	21.86	29.69	0.43	370.27	4145	3949
52–54	292.04	84.22	38.48	2.80	26.48	30.93	0.22	475.18	136	99
55–59	279.55	61.69	38.95	4.50	24.80	28.22	0.88	438.60	1023	767
60–64	159.32	43.37	93.65	22.69	27.74	24.56	0.20	371.53	883	863
65–69	55.87	29.15	122.87	117.27	15.78	38.45	0.38	379.78	661	693
70–74	13.73	9.54	123.42	128.20	15.43	38.60	0.24	329.16	546	641
75–79	6.43	2.78	115.20	137.77	17.37	21.77	0.49	301.80	416	445
80+	2.22	1.47	99.11	133.25	23.05	26.54	0.18	285.81	480	441
Women	89.90	18.61	80.59	87.89	23.77	25.78	0.78	327.31	4698	4895
52–54	262.88	24.41	24.25	6.83	43.27	16.50	0.23	378.36	137	111
55–59	240.01	47.24	44.05	6.31	30.98	23.70	1.42	393.70	1059	937
60–64	111.74	25.49	97.87	85.47	17.12	29.78	0.82	368.29	910	1066
65–69	31.74	7.99	119.22	117.28	16.30	38.33	0.91	331.77	711	803
70–74	10.18	6.64	98.64	130.04	18.89	35.56	0.54	300.49	615	730
75–79	2.81	0.62	91.37	132.65	21.94	17.88	0.49	267.77	512	557
80+	0.07	1.01	62.85	127.70	30.38	11.09	0.17	233.27	753	691
All	105.93	25.62	84.87	79.92	22.87	27.61	0.61	347.44	8843	8844
52–54	277.36	54.11	31.32	4.83	34.93	23.67	0.23	426.44	273	210
55–59	259.43	54.34	41.55	5.42	27.95	25.92	1.15	415.76	2081	1704
60–64	135.17	34.30	95.79	54.56	22.34	27.21	0.52	369.88	1794	1929
65–69	43.36	18.19	120.98	117.27	16.05	38.39	0.66	354.90	1371	1496
70–74	11.85	8.00	110.30	129.18	17.26	36.99	0.40	313.98	1161	1371
75–79	4.43	1.59	102.05	134.95	19.89	19.62	0.49	283.02	928	1002
80+	0.91	1.19	76.97	129.86	27.53	17.10	0.17	253.73	1233	1132

For variable definitions, see AE.1, AE.5, AE.6, AE.8, AE.13, AE.14, AE.15, AE.16, AE.18, AE.19 and AE.22. For related text, see E.5–E.8.

Table E2a. Distribution of total net weekly unequivalised family income (£), by age and family type: wave 5

	Mean	10 th percentile	25 th percentile	Median	75 th percentile	90 th percentile	Wted N	Unwted N
Single men	304.86	96.04	163.28	240.00	360.78	527.73	972	922
52–54	[332.96]	[23.30]	[78.26]	[277.77]	[540.96]	[740.53]	39	32
55–59	349.57	46.81	97.52	226.57	379.94	706.17	207	154
60–64	298.01	98.51	137.56	239.36	386.59	509.42	165	161
65–69	301.43	144.59	190.64	246.60	348.86	540.73	138	139
70–74	271.03	136.27	176.60	227.52	330.69	494.76	136	154
75–79	307.39	136.21	181.35	265.18	350.71	479.28	92	98
80+	282.47	121.83	174.88	244.38	339.63	483.80	194	184
Single women	250.31	112.80	147.15	210.47	295.56	435.41	1846	1962
52–54	-	-	-	-	-	-	27	24
55–59	270.85	64.02	126.77	216.42	328.64	560.13	292	262
60–64	295.89	125.33	157.67	248.75	335.32	530.74	233	293
65–69	274.66	132.90	166.81	228.91	321.50	467.23	199	239
70–74	245.89	128.32	155.49	213.15	299.83	422.54	251	314
75–79	240.60	120.08	149.59	211.45	275.38	364.91	262	299
80+	218.90	112.87	139.52	193.03	254.58	346.50	583	531
Couples	587.04	235.13	324.14	475.22	699.17	986.05	6025	5960
52–54	735.44	266.21	423.98	583.57	832.97	1165.39	207	154
55–59	704.80	252.41	396.44	576.10	837.39	1189.93	1583	1288
60–64	593.64	223.10	337.28	501.82	734.31	1026.51	1396	1475
65–69	568.22	246.52	318.20	454.25	676.51	947.86	1035	1118
70–74	516.07	235.13	302.42	412.27	576.64	838.64	774	903
75–79	447.73	222.39	287.42	380.68	520.68	707.95	574	605
80+	429.33	222.38	284.58	380.75	498.00	694.87	456	417
All family types	485.74	152.80	238.06	379.63	596.62	888.36	8843	8844
52–54	630.97	170.04	349.40	540.66	773.84	1095.54	273	210
55–59	608.74	145.54	281.36	498.99	764.26	1095.67	2081	1704
60–64	527.84	169.28	270.57	435.58	660.47	960.03	1794	1929
65–69	498.86	185.63	268.86	388.93	603.01	868.82	1371	1496
70–74	428.95	159.58	232.50	332.70	504.00	728.27	1161	1371
75–79	375.28	152.67	222.51	311.49	453.59	617.06	928	1002
80+	306.79	125.92	174.76	253.28	380.36	538.94	1233	1132

For variable definitions, see AE.8, AE.19 and AE.22. For related text, see E.9.

Table E2b. Distribution of total net weekly equivalised family income (£), by age and sex: wave 5

	Mean	10 th percentile	25 th percentile	Median	75 th percentile	90 th percentile	Wted N	Unwted N
Men	370.27	137.38	203.62	296.80	441.74	643.01	4145	3949
52–54	475.18	94.53	246.02	378.04	540.96	851.66	136	99
55–59	438.60	117.31	232.30	366.94	538.40	749.72	1023	767
60–64	371.53	132.00	201.89	313.04	471.70	655.91	883	863
65–69	379.78	163.92	212.13	300.00	458.22	646.73	661	693
70–74	329.16	148.05	197.62	263.42	379.99	554.59	546	641
75–79	301.80	145.28	186.86	254.11	353.39	479.28	416	445
80+	285.81	137.32	187.22	246.61	333.15	466.57	480	441
Women	327.31	131.09	179.84	261.36	391.50	573.50	4698	4895
52–54	378.36	145.12	242.95	335.79	507.49	656.74	137	111
55–59	393.70	117.32	196.98	315.26	486.70	715.22	1059	937
60–64	368.29	135.52	204.34	304.21	456.34	640.02	910	1066
65–69	331.77	146.11	189.20	268.96	388.93	568.85	711	803
70–74	300.49	136.78	180.06	240.12	343.26	475.42	615	730
75–79	267.77	133.63	168.83	227.80	310.81	409.21	512	557
80+	233.27	117.71	146.82	205.14	278.83	378.70	753	691
All	347.44	133.87	189.72	277.51	413.98	605.76	8843	8844
52–54	426.44	114.02	243.73	360.83	516.92	746.96	273	210
55–59	415.76	117.31	212.02	339.23	512.38	727.33	2081	1704
60–64	369.88	134.33	203.52	307.76	463.50	649.73	1794	1929
65–69	354.90	153.14	201.25	280.89	418.87	606.87	1371	1496
70–74	313.98	141.58	186.17	247.72	366.77	512.60	1161	1371
75–79	283.02	137.85	178.56	240.91	321.50	445.34	928	1002
80+	253.73	123.21	160.25	223.25	297.54	426.95	1233	1132

For variable definitions, see AE.6, AE.8, AE.19 and AE.22. For related text, see E.9.

Table E3. Mean and median wealth (£'000), by age and family type: wave 5

	Net financial wealth		Net physical wealth		Net primary housing wealth		Net total (non-pension) wealth		<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
	Mean	Median	Mean	Median	Mean	Median	Mean	Median		
Single men	45.3	8.5	50.2	0.0	114.1	80.0	209.6	110.6	972	922
52–54	[40.5]	[3.0]	[28.8]	[0.0]	[83.7]	[65.0]	[153.0]	[85.7]	39	32
55–59	45.0	2.1	98.3	0.0	90.6	0.0	233.9	48.1	207	154
60–64	33.0	6.5	51.7	0.0	106.3	70.0	191.0	112.3	165	161
65–69	46.1	15.0	95.8	0.0	136.7	100.0	278.5	141.0	138	139
70–74	50.2	11.5	29.9	0.0	112.8	90.0	192.9	101.0	136	154
75–79	46.0	12.0	4.2	0.0	137.3	120.0	187.4	131.0	92	98
80+	52.6	11.5	6.1	0.0	125.7	120.0	184.5	150.0	194	184
Single women	33.4	6.0	13.3	0.0	127.4	105.0	174.2	127.0	1846	1962
52–54	-	-	-	-	-	-	-	-	27	24
55–59	32.3	0.4	14.9	0.0	110.3	77.5	157.5	86.1	292	262
60–64	48.1	3.1	29.4	0.0	124.9	110.0	202.5	126.7	233	293
65–69	44.7	10.3	22.8	0.0	163.2	150.0	230.8	172.6	199	239
70–74	32.5	8.0	12.9	0.0	135.8	130.0	181.2	150.4	251	314
75–79	29.4	7.8	4.9	0.0	129.3	120.0	163.6	130.0	262	299
80+	27.9	8.0	7.1	0.0	121.2	100.0	156.2	126.2	583	531
Couples	87.5	30.9	56.3	0.0	236.3	200.0	380.1	262.0	6025	5960
52–54	64.6	18.0	41.4	0.0	200.6	170.0	306.6	234.0	207	154
55–59	88.8	24.7	70.0	0.0	229.9	196.0	388.8	265.2	1583	1288
60–64	90.4	39.5	67.4	0.0	234.5	200.0	392.3	272.5	1396	1475
65–69	102.7	40.0	52.9	0.0	269.4	200.0	425.0	291.0	1035	1118
70–74	88.9	34.0	43.0	0.0	238.2	200.0	370.2	249.6	774	903
75–79	64.4	26.5	47.4	0.0	217.0	190.0	328.7	239.0	574	605
80+	76.2	28.5	23.2	0.0	225.3	200.0	324.7	245.0	456	417
All family types	71.5	20.5	46.7	0.0	200.1	170.0	318.3	216.0	8843	8844
52–54	55.1	11.0	35.9	0.0	174.9	135.0	265.9	176.5	273	210
55–59	76.5	16.0	65.1	0.0	199.3	175.0	341.0	224.0	2081	1704
60–64	79.6	28.1	61.0	0.0	208.5	180.0	349.2	237.3	1794	1929
65–69	88.6	32.0	52.9	0.0	240.7	184.0	382.2	250.0	1371	1496
70–74	72.2	21.5	35.0	0.0	201.4	170.0	308.6	212.0	1161	1371
75–79	52.7	18.0	31.1	0.0	184.3	170.0	268.1	202.0	928	1002
80+	49.7	14.2	12.9	0.0	160.4	150.0	223.0	177.7	1233	1132

For variable definitions, see AE.8, AE.10, AE.11, AE.12, AE.20 and AE.22. For related text, see E.11.

Table E4. Distribution of total net non-pension wealth (£'000), by age and family type: wave 5

	Mean	10 th percentile	25 th percentile	Median	75 th percentile	90 th percentile	Wted N	Unwted N
Single men	209.6	0.0	3.6	110.6	251.0	464.9	972	922
52–54	[153.0]	[0.0]	[1.7]	[85.7]	[184.0]	[537.0]	39	32
55–59	233.9	–1.5	0.0	48.1	232.0	465.5	207	154
60–64	191.0	0.0	2.5	112.3	246.0	451.5	165	161
65–69	278.5	0.0	3.0	141.0	307.0	464.9	138	139
70–74	192.9	0.0	4.5	101.0	235.1	467.3	136	154
75–79	187.4	1.6	7.0	131.0	230.0	522.0	92	98
80+	184.5	3.0	10.9	150.0	281.0	455.3	194	184
Single women	174.2	0.1	4.5	127.0	236.0	398.5	1846	1962
52–54	-	-	-	-	-	-	27	24
55–59	157.5	–1.0	0.1	86.1	213.5	369.0	292	262
60–64	202.5	–0.2	1.4	126.7	236.4	432.3	233	293
65–69	230.8	0.4	33.0	172.6	265.5	512.1	199	239
70–74	181.2	0.2	8.3	150.4	253.8	404.0	251	314
75–79	163.6	0.4	5.0	130.0	232.7	407.1	262	299
80+	156.2	1.0	6.1	126.2	230.1	370.0	583	531
Couples	380.1	25.8	152.0	262.0	442.0	766.6	6025	5960
52–54	306.6	16.4	91.0	234.0	369.9	589.1	207	154
55–59	388.8	30.0	144.0	265.2	449.5	792.5	1583	1288
60–64	392.3	24.1	157.5	272.5	472.0	799.0	1396	1475
65–69	425.0	44.0	167.3	291.0	472.7	829.3	1035	1118
70–74	370.2	30.8	152.4	249.6	421.0	776.5	774	903
75–79	328.7	12.3	152.2	239.0	374.0	648.0	574	605
80+	324.7	15.0	147.8	245.0	387.3	585.0	456	417
All	318.3	1.7	97.0	216.0	382.2	658.0	8843	8844
52–54	265.9	0.5	79.0	176.5	330.6	556.1	273	210
55–59	341.0	0.1	89.9	224.0	399.7	729.0	2081	1704
60–64	349.2	1.0	116.5	237.3	423.5	737.0	1794	1929
65–69	382.2	4.0	138.9	250.0	434.0	756.0	1371	1496
70–74	308.6	2.0	102.0	212.0	366.2	698.0	1161	1371
75–79	268.1	2.7	85.6	202.0	326.5	546.0	928	1002
80+	223.0	3.0	22.0	177.7	294.0	459.1	1233	1132

For variable definitions, see AE.8, AE.20 and AE.22. For related text, see E.11.

**Table E5a. Private pension membership, by age and sex:
workers and non-workers under State Pension Age (SPA): wave 5**

	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	<i>Wted N</i>	<i>Unwted N</i>
Men (52–64)	84%	41%	38%	31%	2078	1759
52–54	86%	52%	22%	38%	138	101
55–59	83%	51%	24%	36%	1047	786
60–64	84%	27%	56%	25%	892	872
Women (52–59)	68%	43%	14%	28%	1228	1075
52–54	61%	46%	7%	21%	142	114
55–59	69%	43%	15%	29%	1086	961
All under SPA	78%	42%	29%	30%	3306	2834
52–54	73%	49%	15%	30%	281	215
55–59	76%	47%	20%	32%	2133	1747
60–64	84%	27%	56%	25%	892	872

For variable definitions, see AE.17 and AE.22. For related text, see E.12.

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.

**Table E5b. Private pension membership, by age and sex:
workers under State Pension Age: wave 5**

	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	<i>Wted N</i>	<i>Unwted N</i>
Men (52–64)	88%	57%	29%	35%	1437	1183
52–54	91%	64%	18%	42%	111	78
55–59	86%	63%	19%	36%	815	610
60–64	89%	46%	46%	32%	511	495
Women (52–59)	78%	60%	11%	29%	864	756
52–54	71%	57%	4%	24%	109	86
55–59	79%	60%	12%	30%	754	670
All under SPA	84%	58%	22%	33%	2301	1939
52–54	81%	61%	11%	33%	221	164
55–59	83%	62%	16%	33%	1569	1280
60–64	89%	46%	46%	32%	511	495

For variable definitions, see AE.17 and AE.22. For related text, see E.12.

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.

Table E6. Mean equivalised weekly household spending (£), by age and family type: wave 5

	Food inside the home	Food outside the home	Clothing and footwear	Domestic fuel	Leisure	Transfers outside the home	<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
Single men	34.81	44.10	35.13	33.55	28.06	26.64	923	879
52–54	[50.90]	[64.55]	[38.93]	[28.93]	[57.19]	[43.46]	36	30
55–59	38.72	49.73	35.02	38.44	26.81	29.84	203	151
60–64	36.64	41.69	41.17	36.46	30.15	29.83	160	156
65–69	38.47	42.06	39.88	44.33	28.53	33.20	132	134
70–74	33.91	38.03	37.72	36.76	31.78	11.14	129	147
75–79	29.66	44.10	34.62	26.27	18.33	20.60	90	96
80+	25.60	35.14	24.42	25.94	22.20	16.19	172	165
Single women	37.90	41.21	38.08	35.46	34.15	33.85	1732	1858
52–54	-	-	-	-	-	-	27	24
55–59	50.95	58.26	51.38	47.35	49.69	35.61	280	253
60–64	42.14	48.45	41.41	41.66	39.49	32.80	229	289
65–69	42.01	46.01	45.14	40.61	38.46	30.41	195	234
70–74	35.81	41.35	35.52	38.75	21.99	29.79	244	306
75–79	36.23	40.54	36.82	29.60	33.85	39.44	250	286
80+	27.67	27.58	29.82	23.15	26.53	35.88	507	466
Couples	32.55	36.59	35.94	35.89	30.60	27.58	2977	2845
52–54	38.54	38.23	56.45	62.42	32.44	32.29	95	66
55–59	34.83	37.38	37.10	37.89	35.84	31.57	765	574
60–64	31.59	40.62	33.79	32.85	31.45	25.13	683	669
65–69	31.34	39.02	34.19	40.52	26.25	24.93	484	514
70–74	31.64	35.21	37.38	30.66	30.31	23.38	393	465
75–79	33.39	30.61	40.87	35.80	24.93	28.13	306	328
80+	28.72	29.52	30.76	34.42	21.15	19.20	252	229
All family types	35.32	38.59	40.12	35.01	33.95	31.32	2686	2767
52–54	38.49	40.95	40.37	38.60	37.83	37.84	98	78
55–59	36.57	38.94	39.78	38.47	39.16	31.47	736	646
60–64	34.87	42.16	35.90	33.38	32.41	34.11	650	743
65–69	35.00	36.52	43.04	36.03	28.24	31.35	480	529
70–74	35.50	39.11	40.55	34.43	33.87	25.27	344	393
75–79	37.67	41.34	46.73	32.92	37.44	18.64	234	243
80+	25.59	26.03	28.81	28.97	20.48	15.05	143	135

For variable definitions, see AE.6, AE.8 and AE.22. 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, sex and income group: wave 5

	Total equivalised income group						<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
	All	Lowest	2 nd	3 rd	4 th	Highest		
Single men	34.8	44.1	35.1	33.6	28.1	26.6	923	879
52–54	[50.9]	[64.5]	[38.9]	[28.9]	[57.2]	[43.5]	36	30
55–59	38.7	49.7	35.0	38.4	26.8	29.8	203	151
60–64	36.6	41.7	41.2	36.5	30.1	29.8	160	156
65–69	38.5	42.1	39.9	44.3	28.5	33.2	132	134
70–74	33.9	38.0	37.7	36.8	31.8	11.1	129	147
75–79	29.7	44.1	34.6	26.3	18.3	20.6	90	96
80+	25.6	35.1	24.4	25.9	22.2	16.2	172	165
Single women	37.9	41.2	38.1	35.5	34.2	33.9	1732	1858
52–54	-	-	-	-	-	-	27	24
55–59	50.9	58.3	51.4	47.3	49.7	35.6	280	253
60–64	42.1	48.5	41.4	41.7	39.5	32.8	229	289
65–69	42.0	46.0	45.1	40.6	38.5	30.4	195	234
70–74	35.8	41.3	35.5	38.8	22.0	29.8	244	306
75–79	36.2	40.5	36.8	29.6	33.9	39.4	250	286
80+	27.7	27.6	29.8	23.1	26.5	35.9	507	466
Partnered men	32.6	36.6	35.9	35.9	30.6	27.6	2977	2845
52–54	38.5	38.2	56.5	62.4	32.4	32.3	95	66
55–59	34.8	37.4	37.1	37.9	35.8	31.6	765	574
60–64	31.6	40.6	33.8	32.8	31.4	25.1	683	669
65–69	31.3	39.0	34.2	40.5	26.3	24.9	484	514
70–74	31.6	35.2	37.4	30.7	30.3	23.4	393	465
75–79	33.4	30.6	40.9	35.8	24.9	28.1	306	328
80+	28.7	29.5	30.8	34.4	21.1	19.2	252	229
Partnered women	35.3	38.6	40.1	35.0	34.0	31.3	2686	2767
52–54	38.5	40.9	40.4	38.6	37.8	37.8	98	78
55–59	36.6	38.9	39.8	38.5	39.2	31.5	736	646
60–64	34.9	42.2	35.9	33.4	32.4	34.1	650	743
65–69	35.0	36.5	43.0	36.0	28.2	31.3	480	529
70–74	35.5	39.1	40.6	34.4	33.9	25.3	344	393
75–79	37.7	41.3	46.7	32.9	37.4	18.6	234	243
80+	25.6	26.0	28.8	29.0	20.5	15.0	143	135

For variable definitions, see AE.6, AE.7, AE.8, AE.9 and AE.22. For related text, see E.14.

**Table E8. Labour market participation, by age, sex and wealth group:
individuals aged under 75 only: wave 5**

	% working part-time	% working full-time	% working full- or part-time	% working full- or part-time by wealth group				
				Lowest	2 nd	3 rd	4 th	Highest
Men (52–74)	12.7	35.4	48.1	31.3	50.5	52.0	52.2	52.8
52–54	7.3	71.9	79.2	-	-	-	-	-
55–59	12.6	63.1	75.7	45.8	82.3	83.2	84.6	79.5
60–64	15.2	40.3	55.5	32.6	58.0	64.7	59.6	59.5
65–69	14.4	8.5	22.9	14.9	18.2	25.6	23.2	29.6
70–74	8.4	2.0	10.4	8.2	8.4	5.3	12.6	17.0
Women (52–74)	22.6	13.7	36.4	26.4	41.8	34.5	38.3	39.7
52–54	37.6	35.2	72.7	-	[87.1]	-	-	-
55–59	36.6	31.3	67.9	48.3	75.6	72.6	74.3	70.3
60–64	25.4	9.7	35.1	23.1	36.8	38.9	34.9	40.3
65–69	12.1	1.4	13.5	7.0	12.8	13.4	11.4	19.9
70–74	4.7	0.5	5.2	5.3	3.3	5.5	5.2	7.0
All (52–74)	17.9	24.2	42.1	28.7	45.8	42.8	45.1	46.4
52–54	21.9	54.2	76.1	[56.8]	84.4	[78.5]	[80.1]	-
55–59	24.9	46.7	71.7	47.2	78.6	78.3	79.3	75.1
60–64	20.5	24.6	45.1	27.7	47.2	51.0	46.7	50.1
65–69	13.2	4.8	18.0	11.1	15.4	18.4	17.3	24.6
70–74	6.4	1.2	7.6	6.7	5.5	5.4	8.9	12.2

For variable definitions, see AE.8, AE.21 and AE.22. For related text, see E.15.

Table E8N. Sample sizes for Table E8

	Sample sizes by age and sex		Sample sizes by age, sex and wealth group									
	Wted N	Unwted N	Weighted N					Unweighted N				
			Lowest	2 nd	3 rd	4 th	Highest	Lowest	2 nd	3 rd	4 th	Highest
Men (52–74)	3104	2940	572	592	572	653	716	474	549	540	647	730
52–54	130	94	39	26	20	20	25	29	21	13	14	17
55–59	952	716	174	187	174	205	212	123	135	129	158	171
60–64	844	828	148	164	159	167	207	124	159	154	175	216
65–69	637	669	106	115	107	150	160	93	120	111	164	181
70–74	540	633	105	100	112	111	112	105	114	133	136	145
Women (52–74)	3329	3550	617	699	644	688	681	589	743	699	748	771
52–54	121	99	19	42	23	26	11	17	32	19	21	10
55–59	1008	892	219	230	149	214	198	173	204	133	194	188
60–64	889	1042	161	169	178	182	199	167	201	207	223	244
65–69	699	790	100	123	155	153	169	107	139	172	176	196
70–74	611	727	118	137	140	113	105	125	167	168	134	133
All (52–74)	6433	6490	1189	1291	1216	1340	1397	1063	1292	1239	1395	1501
52–54	251	193	59	67	43	46	36	46	53	32	35	27
55–59	1961	1608	393	417	323	419	410	296	339	262	352	359
60–64	1733	1870	309	332	337	350	406	291	360	361	398	460
65–69	1336	1459	206	237	262	302	328	200	259	283	340	377
70–74	1152	1360	222	237	252	224	217	230	281	301	270	278

Table E9. Mean self-reported chances (%) of working at future target ages, by age, sex and wealth: wave 5

	<i>Target age</i>	All	Wealth group				
			Lowest	2 nd	3 rd	4 th	Highest
Men (52–64)							
52–54	60	63.4	-	-	-	-	-
55–59	60	63.3	47.3	69.3	67.8	67.5	63.1
60–64	65	33.4	22.6	34.2	32.9	35.8	38.4
Women (52–59)							
52–54	55	67.5	-	[74.3]	-	-	-
55–59	60	53.3	43.5	62.3	58.5	53.8	48.7

For variable definitions, see AE.7, AE.8, AE.21 and AE22. For related text, see E.16.

Table E9N. Sample sizes for Table E9

	Sample sizes by age and sex		Sample sizes by age, sex and wealth group									
	Wted N	Unwted N	Weighted N					Unweighted N				
			Lowest	2 nd	3 rd	4 th	Highest	Lowest	2 nd	3 rd	4 th	Highest
Men (52–64)												
52–54	134	97	39	26	20	21	28	28	21	13	15	20
55–59	971	729	175	190	183	204	220	123	137	135	158	176
60–64	850	832	144	163	160	168	215	121	158	155	176	222
Women (52–59)												
52–54	128	104	19	45	23	26	14	17	34	19	21	13
55–59	1029	911	216	232	157	219	206	171	206	140	198	196

Table E10. Whether health limits kind or amount of work, by age, sex and wealth: wave 5

Age, sex 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 52–54	86%	14%	11%	1%	2%	133	97
Lowest	-	-	-	-	-	39	29
2 nd	-	-	-	-	-	26	21
3 rd	-	-	-	-	-	20	13
4 th	-	-	-	-	-	21	15
Highest	-	-	-	-	-	27	19
Men 55–59	79%	21%	13%	4%	4%	976	733
Lowest	48%	52%	45%	4%	4%	177	125
2 nd	79%	21%	13%	5%	3%	191	138
3 rd	84%	16%	8%	2%	6%	183	135
4 th	88%	12%	4%	2%	5%	204	158
Highest	91%	9%	1%	6%	3%	221	177
Men 60–64	73%	27%	20%	4%	3%	860	841
Lowest	38%	62%	54%	4%	4%	146	123
2 nd	69%	31%	22%	5%	4%	163	158
3 rd	73%	27%	16%	7%	4%	161	156
4 th	86%	14%	10%	2%	2%	171	179
Highest	88%	12%	8%	1%	3%	218	225
All men 52–64	77%	23%	16%	3%	4%	1968	1671
Lowest	46%	54%	47%	3%	4%	363	277
2 nd	75%	25%	16%	5%	4%	380	317
3 rd	80%	20%	11%	4%	5%	364	304
4 th	88%	12%	6%	2%	3%	396	352
Highest	90%	10%	4%	3%	3%	466	421
Women 52–54	77%	23%	17%	4%	2%	128	104
Lowest	-	-	-	-	-	19	17
2 nd	[77%]	[23%]	[9%]	[8%]	[6%]	45	34
3 rd	-	-	-	-	-	23	19
4 th	-	-	-	-	-	26	21
Highest	-	-	-	-	-	14	13
Women 55–59	77%	23%	16%	4%	4%	1039	918
Lowest	53%	47%	37%	6%	4%	221	174
2 nd	76%	24%	15%	3%	5%	233	207
3 rd	82%	18%	14%	2%	2%	157	140
4 th	84%	16%	9%	5%	3%	220	199
Highest	92%	8%	4%	1%	3%	208	198
All women 52–59	77%	23%	16%	4%	3%	1167	1022
Lowest	52%	48%	39%	5%	4%	240	191
2 nd	76%	24%	14%	4%	6%	278	241
3 rd	83%	17%	14%	2%	2%	180	159
4 th	84%	16%	9%	4%	2%	246	220
Highest	92%	8%	4%	2%	3%	223	211

For variable definitions, see AE.8, AE.21 and AE.22. 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, sex and wealth group: wave 5

	All	Wealth group				
		Lowest	2 nd	3 rd	4 th	Highest
Men (52–64)	34.6	39.1	36.9	38.5	32.5	29.3
52–54	39.4	-	-	-	-	-
55–59	37.6	42.9	41.7	41.3	34.8	31.0
60–64	29.1	[31.3]	30.0	34.4	27.7	24.4
Women (52–64)	34.2	43.5	40.1	32.6	32.9	24.0
52–54	46.0	-	[49.4]	-	-	-
55–59	36.6	45.6	42.3	36.6	34.9	25.3
60–64	25.6	[34.2]	28.9	22.6	27.6	19.6

For variable definitions, see AE.7, AE.8, AE.21 and AE.22. For related text, see E.19.

Table E11N. Sample sizes for Table E11

	Sample sizes by age and sex		Sample sizes by age, sex and wealth group									
	Wted N	Unwted N	Weighted N					Unweighted N				
			Lowest	2 nd	3 rd	4 th	Highest	Lowest	2 nd	3 rd	4 th	Highest
Men (52–64)	1330	1099	155	275	274	296	329	115	223	221	251	289
52–54	107	75	27	21	17	20	24	17	17	11	14	16
55–59	739	554	79	158	152	176	174	56	114	110	134	140
60–64	484	470	49	97	105	101	132	42	92	100	103	133
Women (52–59)	1128	1087	152	282	203	248	243	134	264	198	239	252
52–54	94	75	7	40	17	18	13	5	30	14	15	11
55–59	707	628	104	176	115	164	148	85	154	102	146	141
60–64	327	384	41	66	71	66	82	44	80	82	78	100

**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	Weighted N	Unweighted N
Single men	227.73	242.97	263.07	270.70	269.07	449	426
50–54	273.92	259.64	288.47	288.94	269.99	85	70
55–59	232.44	252.91	249.24	275.11	255.35	96	93
60–64	207.04	247.57	304.79	267.34	272.82	75	67
65–69	207.88	238.99	257.10	264.63	267.67	74	74
70–74	229.99	230.96	239.61	268.83	277.54	52	55
75–79	[182.54]	[199.94]	[211.22]	[224.08]	[269.56]	32	32
80+	[227.50]	[231.89]	[243.33]	[280.93]	[286.19]	35	35
Single women	174.22	186.56	209.03	238.96	243.46	995	1063
50–54	216.60	231.99	247.01	284.18	286.76	142	151
55–59	198.33	209.66	236.97	278.84	265.06	117	150
60–64	189.64	202.38	220.10	237.79	239.67	123	145
65–69	179.76	183.64	214.45	226.55	238.57	154	196
70–74	160.22	165.79	187.60	234.63	244.78	156	171
75–79	146.74	160.07	178.74	217.37	221.19	150	129
80+	139.69	165.01	190.53	205.98	216.30	153	121
Partnered men	303.27	313.41	323.27	339.13	351.11	1889	1844
50–54	345.07	372.86	384.90	409.03	406.91	486	416
55–59	345.32	347.96	344.81	352.18	381.72	425	446
60–64	317.57	316.19	332.33	332.05	347.16	320	315
65–69	262.22	257.29	269.88	298.44	288.81	279	298
70–74	222.19	241.35	262.00	274.22	305.29	207	216
75–79	220.10	233.76	242.88	263.40	284.32	129	117
80+	[214.48]	[224.26]	[232.53]	[271.26]	[277.98]	43	36
Partnered women	293.29	301.05	304.89	324.47	325.82	1831	1837
50–54	359.14	366.09	364.73	385.91	388.33	479	449
55–59	304.29	337.17	336.59	354.31	348.92	428	471
60–64	300.06	297.90	299.59	311.88	315.33	330	343
65–69	249.19	239.50	254.10	272.19	272.13	266	288
70–74	212.87	223.01	236.97	249.00	269.69	191	173
75–79	215.32	207.43	210.71	268.85	247.94	110	92
80+	-	-	-	-	-	27	21

For variable definitions, see AE.2, AE.3, AE.6, AE.8, AE.19 and AE.22. For related text, see E.21.

**Table EL1b. Mean equivalised weekly family EARNED 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	Weighted N	Unweighted N
Single men	92.16	80.21	78.21	62.36	44.16	449	426
50–54	218.86	193.23	207.25	175.30	127.41	85	70
55–59	137.01	141.68	133.77	119.60	77.70	96	93
60–64	79.32	62.23	47.37	9.69	13.70	75	67
65–69	20.25	12.51	11.71	8.42	2.69	74	74
70–74	39.88	8.08	7.50	10.55	8.54	52	55
75–79	[0.45]	[0.64]	[0.72]	[1.12]	[0.96]	32	32
80+	[3.20]	[5.48]	[0.69]	[0.00]	[0.00]	35	35
Single women	40.64	38.94	37.14	34.80	24.39	995	1063
50–54	144.77	156.50	165.27	161.72	120.38	142	151
55–59	104.18	84.65	86.92	57.10	42.59	117	150
60–64	39.05	38.81	18.79	27.66	11.71	123	145
65–69	11.50	10.88	5.81	5.85	2.79	154	196
70–74	6.01	2.56	0.67	3.29	3.56	156	171
75–79	1.79	1.75	2.05	1.43	0.12	150	129
80+	–0.66	–1.14	0.00	0.00	0.00	153	121
Partnered men	172.44	152.22	144.17	121.84	105.41	1889	1844
50–54	300.13	303.48	300.11	288.52	257.33	486	416
55–59	244.40	218.76	207.43	152.59	135.83	425	446
60–64	178.12	108.73	85.14	46.80	36.48	320	315
65–69	49.76	29.52	25.07	29.16	10.96	279	298
70–74	15.45	12.76	9.61	6.34	3.59	207	216
75–79	11.17	6.41	15.43	3.43	7.23	129	117
80+	[9.86]	[5.16]	[0.18]	[0.00]	[0.00]	43	36
Partnered women	150.75	132.03	116.68	95.86	72.99	1831	1837
50–54	292.29	276.60	266.35	237.01	194.96	479	449
55–59	204.80	188.23	159.57	111.55	75.92	428	471
60–64	107.09	73.24	44.02	36.48	19.93	330	343
65–69	40.68	17.06	13.28	10.10	5.82	266	288
70–74	7.74	3.94	4.57	0.61	2.02	191	173
75–79	4.28	0.36	0.21	0.31	0.00	110	92
80+	-	-	-	-	-	27	21

For variable definitions, see AE.2, AE.3, AE.5, AE.6, AE.8, AE.15 and AE.22. 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	Weighted N	Unweighted N
Single men	50.70	63.79	70.15	79.30	82.98	449	426
50–54	21.33	29.69	34.77	55.23	63.36	85	70
55–59	34.40	54.64	52.08	66.55	70.61	96	93
60–64	55.74	67.95	95.10	88.90	90.33	75	67
65–69	62.03	84.98	85.60	95.42	96.52	74	74
70–74	76.33	76.10	81.23	87.90	90.34	52	55
75–79	[58.73]	[70.84]	[73.61]	[68.17]	[84.24]	32	32
80+	[86.53]	[91.59]	[96.91]	[113.45]	[106.88]	35	35
Single women	22.43	25.92	36.09	49.51	59.32	995	1063
50–54	5.82	10.36	13.56	32.30	39.11	142	151
55–59	16.36	27.58	35.60	62.32	65.25	117	150
60–64	32.28	34.98	54.62	54.20	62.55	123	145
65–69	39.52	36.67	48.16	59.87	67.56	154	196
70–74	25.21	26.20	37.65	58.00	70.49	156	171
75–79	22.79	27.56	33.81	46.06	64.09	150	129
80+	14.18	19.07	30.96	36.53	46.58	153	121
Partnered men	54.22	70.04	77.27	96.71	109.28	1889	1844
50–54	16.81	32.99	40.77	64.07	85.20	486	416
55–59	38.35	59.60	70.96	99.63	117.49	425	446
60–64	75.56	102.25	109.88	126.92	138.21	320	315
65–69	87.24	95.56	101.35	113.27	107.42	279	298
70–74	77.39	83.22	87.06	94.46	114.53	207	216
75–79	81.29	84.49	83.67	99.64	101.42	129	117
80+	[68.28]	[82.74]	[84.17]	[107.42]	[95.46]	43	36
Partnered women	57.23	70.96	76.98	93.07	103.68	1831	1837
50–54	22.72	39.83	53.48	73.83	95.98	479	449
55–59	48.86	70.01	75.78	99.64	118.21	428	471
60–64	82.65	104.07	106.64	116.72	119.91	330	343
65–69	87.07	89.19	90.58	105.82	104.15	266	288
70–74	69.46	73.21	75.81	78.69	82.95	191	173
75–79	70.67	68.54	66.63	81.34	80.12	110	92
80+	-	-	-	-	-	27	21

For variable definitions, see AE.2, AE.3, AE.6, AE.8, AE.14 and AE.22. 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	Weighted N	Unweighted N
Single men	62.74	77.32	90.20	101.67	124.19	449	426
50–54	23.70	28.35	34.79	40.67	60.68	85	70
55–59	33.02	37.26	36.55	59.20	94.64	96	93
60–64	46.12	84.27	117.56	132.57	148.21	75	67
65–69	104.86	118.98	143.51	138.80	149.85	74	74
70–74	97.37	116.52	126.14	141.16	160.58	52	55
75–79	[99.44]	[111.90]	[117.18]	[126.99]	[173.67]	32	32
80+	[100.63]	[109.67]	[116.06]	[134.32]	[151.06]	35	35
Single women	88.31	104.40	111.91	132.36	143.88	995	1063
50–54	39.21	42.84	42.92	58.95	91.80	142	151
55–59	51.08	77.36	96.61	128.12	142.56	117	150
60–64	103.44	112.95	120.86	131.81	145.93	123	145
65–69	107.50	118.35	130.23	133.67	148.14	154	196
70–74	102.60	123.88	132.77	156.26	160.94	156	171
75–79	96.32	115.64	119.32	153.91	150.61	150	129
80+	108.49	129.42	132.79	157.48	162.60	153	121
Partnered men	51.59	63.10	72.35	88.36	109.66	1889	1844
50–54	12.62	15.21	16.93	24.11	38.27	486	416
55–59	31.98	33.21	38.89	62.72	101.86	425	446
60–64	35.65	71.86	102.18	124.71	135.70	320	315
65–69	99.55	112.66	116.06	130.79	152.31	279	298
70–74	101.89	117.03	127.94	138.01	155.09	207	216
75–79	101.59	115.87	118.63	136.92	158.35	129	117
80+	[101.91]	[98.11]	[115.32]	[139.69]	[153.70]	43	36
Partnered women	58.28	71.81	82.33	99.94	123.88	1831	1837
50–54	25.92	23.03	23.62	40.65	76.68	479	449
55–59	27.22	52.92	69.85	99.31	121.33	428	471
60–64	73.79	95.29	111.64	127.14	142.76	330	343
65–69	92.98	108.91	116.92	127.64	145.47	266	288
70–74	99.67	115.42	126.28	136.13	154.29	191	173
75–79	106.39	112.04	122.46	137.53	153.24	110	92
80+	-	-	-	-	-	27	21

For variable definitions, see AE.2, AE.3, AE.6, AE.8, AE.16, AE.18 and AE.22. 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	Weighted N	Unweighted N
Single men	22.14	21.65	24.22	27.36	17.74	449	426
50–54	10.02	8.36	11.66	17.74	18.55	85	70
55–59	28.00	19.33	24.41	29.76	12.40	96	93
60–64	25.86	33.12	44.76	36.17	20.58	75	67
65–69	20.74	22.52	16.29	21.99	18.62	74	74
70–74	16.41	30.25	24.74	29.22	18.07	52	55
75–79	[23.93]	[16.55]	[19.70]	[27.81]	[10.69]	32	32
80+	[37.14]	[25.15]	[29.66]	[33.16]	[28.25]	35	35
Single women	22.84	17.26	23.83	22.33	15.85	995	1063
50–54	26.80	22.29	25.25	31.21	35.47	142	151
55–59	26.70	20.07	17.83	31.29	14.67	117	150
60–64	14.87	15.65	25.83	25.02	19.49	123	145
65–69	21.24	17.69	30.22	27.17	20.06	154	196
70–74	26.38	13.16	16.51	17.08	9.79	156	171
75–79	25.85	15.11	23.56	15.95	6.37	150	129
80+	17.69	17.67	26.78	11.96	7.12	153	121
Partnered men	25.02	27.80	29.68	31.73	26.92	1889	1844
50–54	15.51	21.23	27.36	31.55	25.80	486	416
55–59	30.60	35.91	26.98	36.29	26.96	425	446
60–64	28.24	32.94	35.14	33.50	36.65	320	315
65–69	25.67	19.55	27.39	25.29	18.08	279	298
70–74	27.45	28.28	37.51	35.39	32.09	207	216
75–79	26.04	26.93	25.15	23.40	17.32	129	117
80+	[34.43]	[38.24]	[32.86]	[24.15]	[28.81]	43	36
Partnered women	27.02	26.21	29.63	35.26	26.26	1831	1837
50–54	18.21	26.75	21.53	32.95	22.54	479	449
55–59	23.42	26.01	32.31	43.17	33.70	428	471
60–64	36.53	25.09	37.30	31.55	32.72	330	343
65–69	28.45	24.28	33.33	28.63	16.69	266	288
70–74	36.01	30.45	30.30	33.56	30.43	191	173
75–79	33.97	26.49	21.41	49.67	14.58	110	92
80+	-	-	-	-	-	27	21

For variable definitions, see AE.1, AE.2, AE.3, AE.6, AE.8, AE.13 and AE.22. 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	Weighted N	Unweighted N
Aged 50–54	333.09	347.00	354.57	377.52	377.08	1173	1073
Low	280.40	278.54	295.76	303.16	298.27	488	403
Mid	320.78	351.28	348.89	388.03	374.27	454	425
High	468.42	485.43	491.76	515.40	548.45	231	245
Aged 55–59	302.97	320.18	321.38	338.73	345.22	1052	1146
Low	242.69	255.62	263.23	276.25	276.02	516	504
Mid	329.87	333.75	342.88	359.73	381.93	399	464
High	451.07	522.61	476.74	516.03	499.91	138	178
Aged 60–64	282.94	285.80	301.59	305.33	313.05	841	864
Low	225.96	220.12	240.38	245.62	258.20	452	420
Mid	305.31	314.10	329.08	330.38	345.00	262	290
High	438.44	458.74	464.80	468.60	440.36	128	154
Aged 65–69	237.08	234.68	252.86	272.06	269.56	759	842
Low	201.09	205.93	219.88	234.48	235.37	436	448
Mid	265.67	258.34	270.71	297.43	294.62	245	291
High	348.78	321.68	380.94	404.36	382.10	78	103
Aged 70–74	204.82	216.30	233.81	256.51	277.19	597	606
Low	171.79	197.07	210.59	230.38	256.41	376	351
Mid	228.79	224.08	248.18	269.64	286.44	179	200
High	400.39	358.86	385.23	437.12	424.98	42	55
Aged 75+	183.07	192.64	208.87	238.50	246.74	669	575
Low	152.82	162.38	174.25	213.43	222.12	384	301
Mid	210.85	221.60	244.09	256.46	265.18	249	232
High	[314.26]	[314.41]	[334.49]	[378.56]	[382.29]	36	42

For variable definitions, see AE.2, AE.3, AE.4, AE.6, AE.8, AE.19 and AE.22. For related text, see E.22.

**Table EL2b. Mean equivalised weekly family EARNED income (£),
by baseline (wave 1) age and education**

Age in 2002–03 and education	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Weighted N	Unweighted N
Aged 50–54	275.22	269.08	264.72	245.03	207.43	1173	1073
Low	228.66	214.77	223.44	194.73	154.89	488	403
Mid	259.44	269.99	259.17	254.98	208.49	454	425
High	404.40	382.97	362.84	333.30	316.63	231	245
Aged 55–59	203.50	184.82	168.65	122.68	96.39	1052	1146
Low	161.75	149.12	147.30	103.07	82.49	516	504
Mid	214.23	179.47	162.75	119.27	99.72	399	464
High	329.00	334.33	266.12	207.81	139.45	138	178
Aged 60–64	121.86	79.42	56.10	36.77	24.33	841	864
Low	106.53	61.59	47.53	29.30	20.79	452	420
Mid	109.47	77.35	47.98	32.81	22.59	262	290
High	201.39	146.59	103.38	71.86	40.24	128	154
Aged 65–69	36.26	19.79	16.01	15.93	6.69	759	842
Low	33.10	16.43	16.41	14.17	6.45	436	448
Mid	44.53	24.70	14.56	14.00	5.80	245	291
High	27.82	23.15	18.35	32.08	10.86	78	103
Aged 70–74	12.86	7.07	5.61	4.16	3.56	597	606
Low	10.92	5.04	5.09	2.52	2.64	376	351
Mid	11.72	8.31	5.64	7.09	5.11	179	200
High	35.29	20.23	10.22	6.50	5.33	42	55
Aged 75+	4.39	2.23	3.51	1.17	1.50	669	575
Low	3.76	1.44	1.11	1.10	1.22	384	301
Mid	4.44	2.70	5.64	0.46	1.03	249	232
High	[10.66]	[7.37]	[14.37]	[6.82]	[7.66]	36	42

For variable definitions, see AE.2, AE.3, AE.4, AE.5, AE.6, AE.8, AE.15 and AE.22. 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	Weighted N	Unweighted N
Aged 50–54	18.38	32.82	42.26	64.02	83.01	1173	1073
Low	12.05	23.22	28.23	45.38	57.87	488	403
Mid	22.77	37.87	47.90	67.13	80.29	454	425
High	23.10	43.32	61.07	97.68	141.20	231	245
Aged 55–59	39.85	60.09	67.50	93.05	108.29	1052	1146
Low	23.16	36.15	37.33	54.90	64.09	516	504
Mid	54.76	78.74	88.77	115.57	132.80	399	464
High	59.18	95.60	119.04	173.22	203.96	138	178
Aged 60–64	70.53	90.31	99.64	109.42	116.26	841	864
Low	38.83	50.20	60.62	67.77	70.82	452	420
Mid	90.72	113.36	118.80	135.54	143.41	262	290
High	141.15	184.23	200.34	205.27	220.32	128	154
Aged 65–69	75.94	80.48	85.54	98.56	96.98	759	842
Low	51.20	57.74	59.63	70.69	65.00	436	448
Mid	90.43	96.82	102.04	116.98	123.01	245	291
High	168.96	156.87	178.34	197.99	194.11	78	103
Aged 70–74	61.70	65.30	70.90	80.17	92.01	597	606
Low	44.22	50.55	53.09	58.76	73.99	376	351
Mid	74.69	73.47	80.21	92.67	103.75	179	200
High	163.80	165.00	194.41	220.81	204.41	42	55
Aged 75+	49.23	52.67	57.66	69.48	75.00	669	575
Low	29.62	28.95	36.08	44.69	49.68	384	301
Mid	65.36	73.94	76.64	89.25	96.75	249	232
High	[147.19]	[158.07]	[156.33]	[194.13]	[195.10]	36	42

For variable definitions see AE.2, AE.3, AE.4, AE.6, AE.8, AE.14 and AE.22. 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	Weighted N	Unweighted N
Aged 50–54	21.94	22.32	24.13	36.24	61.82	1173	1073
Low	32.56	30.57	32.92	45.31	75.47	488	403
Mid	17.74	19.58	21.47	33.89	57.48	454	425
High	7.76	10.11	10.64	21.54	41.47	231	245
Aged 55–59	32.27	46.43	56.97	84.30	113.58	1052	1146
Low	43.30	53.53	62.88	93.08	116.34	516	504
Mid	25.02	43.23	56.81	79.60	115.65	399	464
High	11.93	29.11	35.38	64.49	97.07	138	178
Aged 60–64	61.15	88.25	110.15	127.39	141.14	841	864
Low	67.96	93.64	114.90	132.67	146.69	452	420
Mid	57.13	85.33	111.18	123.56	135.69	262	290
High	45.30	75.27	91.03	116.34	132.82	128	154
Aged 65–69	99.32	112.95	121.92	130.98	147.54	759	842
Low	100.63	116.44	125.86	133.43	151.39	436	448
Mid	100.12	110.39	118.03	128.86	144.15	245	291
High	89.42	101.38	112.24	123.89	136.59	78	103
Aged 70–74	100.92	118.37	128.26	142.23	156.69	597	606
Low	102.23	124.37	135.91	149.98	165.08	376	351
Mid	100.55	108.76	116.91	132.64	144.56	179	200
High	90.60	104.92	106.99	112.84	132.50	42	55
Aged 75+	103.02	115.74	122.28	143.61	157.27	669	575
Low	105.19	119.51	125.31	149.08	164.52	384	301
Mid	100.18	109.83	117.38	135.02	146.19	249	232
High	[99.47]	[116.35]	[123.81]	[145.21]	[156.52]	36	42

For variable definitions, see AE.2, AE.3, AE.4, AE.6, AE.8, AE.16, AE.18 and AE.22. 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	Weighted N	Unweighted N
Aged 50–54	17.55	22.88	23.78	31.33	25.46	1173	1073
Low	7.12	9.98	11.05	16.06	11.13	488	403
Mid	20.82	23.84	21.08	32.04	28.96	454	425
High	33.15	48.66	56.41	62.51	48.86	231	245
Aged 55–59	27.35	28.69	28.14	38.10	27.27	1052	1146
Low	14.48	16.56	16.23	24.50	13.65	516	504
Mid	35.86	32.31	33.86	44.82	33.91	399	464
High	50.96	63.57	56.20	70.50	59.43	138	178
Aged 60–64	29.41	27.61	35.70	31.89	31.30	841	864
Low	12.65	14.42	17.32	16.13	19.91	452	420
Mid	47.99	38.06	51.12	38.37	43.31	262	290
High	50.61	52.65	70.05	75.24	46.68	128	154
Aged 65–69	25.57	21.42	29.37	26.64	18.34	759	842
Low	16.15	15.26	17.98	16.31	12.51	436	448
Mid	30.59	26.43	36.04	37.57	21.65	245	291
High	62.58	40.27	72.00	50.41	40.54	78	103
Aged 70–74	29.35	25.56	29.09	29.95	24.93	597	606
Low	14.41	17.10	16.50	19.13	14.70	376	351
Mid	41.84	33.50	45.42	37.22	33.02	179	200
High	110.71	68.70	74.19	96.97	82.73	42	55
Aged 75+	26.43	22.00	25.42	24.24	12.97	669	575
Low	14.24	12.48	11.75	18.55	6.70	384	301
Mid	40.86	35.13	44.41	31.74	21.21	249	232
High	[56.94]	[32.62]	[39.99]	[32.40]	[23.00]	36	42

For variable definitions, see AE.1, AE.2, AE.3, AE.4, AE.6, AE.8, AE.13 and AE.22. 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	Weighted N	Unweighted N
Single men	2.47	2.29	2.27	2.33	1.99	449	426
50–54	2.52	4.08	2.79	3.07	3.05	85	70
55–59	2.96	2.62	2.57	2.84	1.75	96	93
60–64	2.38	2.21	2.26	2.44	1.86	75	67
65–69	2.13	1.70	1.77	1.79	1.66	74	74
70–74	2.70	2.26	2.49	2.21	2.01	52	55
75–79	[1.48]	[1.94]	[1.82]	[1.50]	[1.56]	32	32
80+	[2.75]	[2.28]	[2.41]	[2.32]	[2.65]	35	35
Single women	2.09	1.95	2.03	2.06	1.87	995	1063
50–54	3.29	2.49	3.30	2.61	2.22	142	151
55–59	2.33	2.28	2.42	2.29	1.85	117	150
60–64	2.40	1.99	2.30	2.12	1.73	123	145
65–69	2.22	1.88	2.04	1.95	1.84	154	196
70–74	1.72	1.69	1.73	1.95	1.89	156	171
75–79	1.82	1.80	1.88	1.94	1.77	150	129
80+	1.95	1.89	1.95	2.22	1.78	153	121
Partnered men	2.08	2.03	2.17	2.10	2.03	1889	1844
50–54	1.96	1.99	2.12	1.98	2.24	486	416
55–59	2.07	2.07	2.14	2.38	2.16	425	446
60–64	2.06	1.97	2.02	1.94	2.03	320	315
65–69	1.87	1.83	1.77	1.94	1.77	279	298
70–74	1.91	1.72	1.90	1.86	1.74	207	216
75–79	2.03	1.98	2.07	1.84	1.67	129	117
80+	[1.80]	[1.75]	[1.65]	[1.69]	[2.36]	43	36
Partnered women	2.11	2.11	2.09	2.10	2.00	1831	1837
50–54	1.97	1.96	1.99	2.21	2.22	479	449
55–59	2.10	2.17	2.14	2.07	2.11	428	471
60–64	2.12	2.05	2.04	1.94	1.88	330	343
65–69	1.92	1.77	1.86	1.91	1.72	266	288
70–74	1.91	1.81	1.82	1.80	1.87	191	173
75–79	1.86	1.67	1.87	2.05	1.74	110	92
80+	-	-	-	-	-	27	21
All family types	2.32	2.23	2.23	2.20	2.06	5163	5170
50–54	2.16	2.15	2.23	2.31	2.36	1192	1086
55–59	2.30	2.22	2.21	2.32	2.12	1066	1160
60–64	2.25	2.06	2.08	2.01	1.94	848	870
65–69	2.00	1.90	1.92	1.92	1.76	773	856
70–74	2.03	1.94	1.92	1.91	1.86	606	615
75–79	2.15	1.89	1.88	1.89	1.76	420	370
80+	2.02	2.04	1.98	2.05	2.01	258	213

For variable definitions, see AE.2, AE.3, AE.6, AE.8, AE.19 and AE.22. For related text, see E.23.

Table EL4a. Persistency of making pension contributions in waves when observed to be under State Pension Age, by age, sex and wealth group: aged under 65 and employed or self-employed at baseline only

Age and wealth group in 2002–03	Contributes to a pension ...			Weighted N	Unweighted N
	Never (%)	Sometimes (%)	Always (%)		
All men 50–64	21.5	42.1	36.4	1065	1026
Lowest	39.2	32.5	28.3	89	68
2 nd	19.1	47.9	33.0	180	160
3 rd	22.3	37.8	39.9	254	242
4 th	16.9	41.8	41.3	303	300
Highest	21.6	46.3	32.1	239	256
Men 50–54	16.1	47.8	36.1	489	425
Lowest	[37.6]	[29.8]	[32.6]	43	30
2 nd	14.5	54.8	30.8	90	73
3 rd	16.9	42.2	41.0	114	100
4 th	12.0	48.5	39.5	143	128
Highest	13.4	54.7	31.9	99	94
Men 55–59	20.4	47.7	31.9	376	404
Lowest	[43.0]	[34.5]	[22.5]	35	30
2 nd	20.9	50.9	28.2	61	61
3 rd	18.7	49.5	31.8	86	90
4 th	15.9	46.7	37.4	107	121
Highest	18.2	50.4	31.4	87	102
Men 60–64	36.5	17.6	45.8	200	197
Lowest	-	-	-	11	8
2 nd	-	-	-	29	26
3 rd	39.5	9.7	50.8	54	52
4 th	32.1	13.8	54.1	53	51
Highest	42.7	23.7	33.7	52	60
All women 50–59	31.4	22.6	45.9	827	873
Lowest	49.6	20.1	30.3	93	83
2 nd	30.9	25.6	43.5	165	160
3 rd	31.0	19.4	49.5	177	189
4 th	29.5	17.4	53.1	205	226
Highest	25.3	30.1	44.6	187	215
Women 50–54	28.0	28.5	43.4	483	475
Lowest	49.1	22.5	28.4	65	56
2 nd	24.7	32.5	42.8	105	92
3 rd	28.4	27.3	44.3	98	100
4 th	23.3	22.5	54.3	118	122
Highest	23.1	36.9	40.0	98	105
Women 55–59	36.1	14.4	49.5	344	398
Lowest	-	-	-	28	27
2 nd	41.7	13.6	44.8	60	68
3 rd	34.3	9.6	56.1	79	89
4 th	37.8	10.7	51.5	88	104
Highest	27.7	22.7	49.6	89	110

For variable definitions, see AE.2, AE.3, AE.17, AE.21 and AE.22. For related text, see E.24 and E.25.

**Table EL4b. Persistency of making pension contributions in waves when observed to be under State Pension Age, by sex and wealth group:
employed or self-employed in all waves observed below State Pension Age**

Age and wealth group in 2002–03	Contributes to a pension ...			Weighted <i>N</i>	Unweighted <i>N</i>
	Never (%)	Sometimes (%)	Always (%)		
All aged 50–SPA	25.4	22.5	52.1	1404	1410
Lowest	35.3	24.8	39.8	129	108
2 nd	26.0	24.9	49.1	259	239
3 rd	26.3	17.5	56.1	317	317
4 th	21.5	20.8	57.7	386	401
Highest	24.8	26.5	48.7	313	345
Men 50–SPA	20.3	29.7	50.0	734	698
Lowest	[28.3]	[28.3]	[43.4]	56	44
2 nd	18.3	35.8	45.9	123	106
3 rd	21.6	23.1	55.3	175	164
4 th	16.3	29.8	53.9	215	210
Highest	22.8	32.6	44.7	165	174
Women 50–SPA	31.1	14.5	54.4	670	712
Lowest	40.8	22.2	37.0	73	64
2 nd	33.0	15.0	52.0	136	133
3 rd	32.2	10.6	57.1	142	153
4 th	28.0	9.4	62.6	171	191
Highest	27.1	19.8	53.1	148	171

For variable definitions, see AE.2, AE.17, AE.21 and AE.22. 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 difficulties ...			Reports managing very well ...			<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
	Never (%)	Sometimes (%)	Always (%)	Always (%)	Sometimes (%)	Never (%)		
Single men	83.2	16.3	0.5	9.4	48.5	42.1	449	426
50–54	76.9	23.1	0.0	4.0	46.5	49.5	85	70
55–59	81.5	17.3	1.2	8.0	47.6	44.5	96	93
60–64	81.3	18.7	0.0	8.3	49.8	41.9	75	67
65–69	81.6	16.6	1.8	13.1	42.3	44.6	74	74
70–74	91.1	8.9	0.0	17.4	55.8	26.8	52	55
75–79	[100.0]	[0.0]	[0.0]	[9.7]	[43.0]	[47.3]	32	32
80+	[83.3]	[16.7]	[0.0]	[9.3]	[60.5]	[30.1]	35	35
Single women	83.6	15.9	0.6	8.6	50.7	40.7	1001	1067
50–54	62.0	36.0	2.0	4.4	37.8	57.8	143	152
55–59	74.0	24.0	2.0	7.6	50.7	41.8	117	150
60–64	82.5	17.5	0.0	7.9	50.9	41.3	123	145
65–69	84.6	15.0	0.4	12.2	48.1	39.7	156	198
70–74	92.0	8.0	0.0	10.1	49.3	40.6	157	172
75–79	92.0	8.0	0.0	9.1	57.5	33.3	150	129
80+	94.0	6.0	0.0	8.2	60.1	31.7	153	121
Couples	90.5	9.2	0.3	12.2	54.1	33.8	3813	3769
50–54	88.3	11.3	0.5	12.3	51.0	36.6	994	891
55–59	87.6	12.2	0.2	12.6	51.6	35.8	881	947
60–64	92.8	7.1	0.1	14.2	53.4	32.4	662	669
65–69	90.8	8.8	0.4	12.2	54.4	33.4	550	592
70–74	93.2	6.8	0.0	7.5	62.6	29.9	408	397
75–79	97.9	2.1	0.0	12.7	58.0	29.3	248	215
80+	95.0	5.0	0.0	9.9	69.5	20.6	71	58

For variable definitions, see AE.2, AE.8 and AE.22. For related text, see E.27 and E.28.

Notes: 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).

Table EL6a. Persistence of having too little money to do three or more items of the material deprivation index (waves 2–5), by education and family type: aged 50–SPA

Education and family type in 2002–03	Reports three or more items ...			Weighted N	Unweighted N
	Never (%)	Sometimes (%)	Always (%)		
AGED 50–SPA	79.5	17.7	2.8	2672	2653
Single men	70.0	25.1	4.9	251	226
Low	70.2	23.8	6.0	147	122
Mid	70.5	25.4	4.1	65	64
High	[68.6]	[29.3]	[2.1]	39	40
Single women	53.7	32.8	13.4	254	295
Low	45.7	41.8	12.6	124	128
Mid	58.4	23.4	18.3	101	124
High	[72.1]	[27.9]	[0.0]	29	43
Partnered men	85.6	13.2	1.1	1235	1185
Low	81.9	16.3	1.8	538	465
Mid	86.2	12.7	1.1	435	435
High	92.3	7.7	0.0	261	285
Partnered women	80.9	17.6	1.5	932	947
Low	75.2	21.9	2.8	422	390
Mid	83.2	16.2	0.6	384	407
High	92.8	7.2	0.0	126	150

See paragraph E.29 for the definition and description of the items in the material deprivation index.

For variable definitions, see AE.2, AE.4, AE.17 and AE.22. 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 2–5), by education and family type: aged SPA–74

Education and family type in 2002–03	Reports three or more items ...			Weighted N	Unweighted N
	Never (%)	Sometimes (%)	Always (%)		
AGED SPA–74	80.1	18.0	1.9	1825	1952
Single men	79.9	19.1	1.1	124	127
Low	77.4	21.2	1.4	93	91
Mid	-	-	-	24	27
High	-	-	-	7	9
Single women	72.0	24.3	3.7	431	509
Low	66.3	28.5	5.2	248	271
Mid	78.2	19.6	2.2	145	182
High	85.9	14.1	0.0	38	56
Partnered men	82.1	16.5	1.4	484	512
Low	78.6	20.3	1.1	282	274
Mid	85.0	13.0	2.0	148	172
High	92.4	6.1	1.5	54	66
Partnered women	83.4	15.3	1.3	786	804
Low	81.7	16.7	1.5	436	406
Mid	82.7	15.9	1.4	265	292
High	93.7	6.3	0.0	83	104

See paragraph E.29 for the definition and description of the items in the material deprivation index.

For variable definitions, see AE.2, AE.4, AE.17 and AE.22. 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 2–5), by education and family type: aged 75+

Education and family type in 2002–03	Reports three or more items ...			Weighted N	Unweighted N
	Never (%)	Sometimes (%)	Always (%)		
AGED 75+	86.3	12.2	1.6	671	577
Single men	91.0	7.6	1.4	66	66
Low	[88.1]	[11.9]	[0.0]	42	39
Mid	-	-	-	19	20
High	-	-	-	5	7
Single women	85.7	12.4	2.0	289	241
Low	83.7	13.7	2.6	171	129
Mid	91.1	8.9	0.0	107	100
High	-	-	-	11	12
Partnered men	84.4	14.1	1.4	176	156
Low	82.0	15.4	2.6	99	79
Mid	89.4	10.6	0.0	61	60
High	-	-	-	15	17
Partnered women	87.6	11.4	0.9	140	114
Low	92.0	6.3	1.8	74	56
Mid	81.0	19.0	0.0	60	51
High	-	-	-	6	7

See paragraph E.29 for the definition and description of the items in the material deprivation index.

For variable definitions, see AE.2, AE.4 and AE.22. 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 2–5, by age and wealth group

Age and wealth group in 2002–03	Whole sample: % in employment or self-employment in 2002–03	Of those employed or self-employed at baseline:					Wted N	Unwted N
		% still in employment or self-employment at ...						
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5		
All men 50–74	55.7	100	82.5	74.4	65.0	53.4	1169	1133
Lowest	33.5	100	83.0	71.4	65.7	51.9	101	77
2 nd	50.3	100	84.4	74.7	67.5	54.5	194	173
3 rd	65.3	100	80.0	74.9	65.6	52.4	277	267
4 th	64.5	100	82.5	76.3	63.0	55.5	325	323
Highest	56.3	100	83.7	72.5	64.7	51.6	272	293
Men 50–54	85.8	100	93.3	88.6	86.1	75.5	489	425
Lowest	58.9	[100]	[90.1]	[73.6]	[82.4]	[78.4]	43	30
2 nd	82.1	100	97.5	91.6	87.1	74.4	90	73
3 rd	97.6	100	90.9	93.5	87.9	71.7	114	100
4 th	91.1	100	92.9	89.4	84.9	83.6	143	128
Highest	87.0	100	94.2	85.6	86.4	68.2	99	94
Men 55–59	72.2	100	84.0	78.9	65.5	50.3	376	404
Lowest	42.1	[100]	[84.6]	[79.4]	[62.8]	[41.9]	35	30
2 nd	71.0	100	82.3	71.8	64.9	52.0	61	61
3 rd	79.7	100	85.3	75.9	65.9	49.6	86	90
4 th	88.4	100	78.3	82.7	63.7	45.9	107	121
Highest	70.6	100	90.7	82.2	69.0	58.6	87	102
Men 60–64	50.6	100	67.7	46.3	30.0	21.0	200	197
Lowest	22.2	-	-	-	-	-	11	8
2 nd	47.6	-	-	-	-	-	29	26
3 rd	63.5	100	64.5	48.6	33.9	29.2	54	52
4 th	58.7	100	68.7	39.3	15.6	10.3	53	51
Highest	48.6	100	68.0	45.6	37.1	27.0	52	60
Men 65–74	16.9	100	55.2	44.6	31.1	21.9	103	107
Lowest	12.7	-	-	-	-	-	12	9
2 nd	10.5	-	-	-	-	-	13	13
3 rd	20.0	-	-	-	-	-	23	25
4 th	15.9	-	-	-	-	-	21	23
Highest	24.1	[100]	[58.7]	[50.4]	[32.1]	[22.4]	33	37

For variable definitions, see AE.2, AE.3, AE.8, AE.21 and AE.22. 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 2–5, by age and wealth group

Age and wealth group in 2002–03	Whole sample: % in employment or self-employment in 2002–03	Of those employed or self-employed at baseline:					Wted N	Unwted N
		% still in employment or self-employment at ...						
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5		
All women 50–74	43.6	100	81.0	70.0	55.1	42.4	1040	1115
Lowest	28.3	100	83.0	73.5	53.2	41.1	110	100
2 nd	43.5	100	82.4	73.2	58.7	44.9	203	201
3 rd	46.6	100	78.8	66.4	53.0	41.1	226	248
4 th	49.5	100	82.0	71.0	57.8	44.2	254	281
Highest	46.3	100	79.8	68.0	52.2	40.4	246	285
Women 50–54	77.8	100	92.4	87.0	74.0	57.2	483	475
Lowest	53.7	100	89.9	87.7	66.1	51.3	65	56
2 nd	84.3	100	93.8	90.1	76.6	58.3	105	92
3 rd	85.4	100	91.4	80.6	69.0	53.8	98	100
4 th	86.3	100	93.4	88.9	79.9	63.0	118	122
Highest	78.2	100	92.4	87.3	74.2	56.3	98	105
Women 55–59	63.1	100	78.0	62.9	43.6	33.0	344	398
Lowest	40.3	-	-	-	-	-	28	27
2 nd	61.7	100	81.1	64.5	51.8	35.7	60	68
3 rd	71.3	100	74.0	62.7	43.7	33.2	79	89
4 th	67.0	100	77.8	61.2	41.4	30.1	88	104
Highest	65.5	100	81.9	63.1	41.2	33.2	89	110
Women 60–64	30.4	100	61.8	45.3	30.8	25.2	137	154
Lowest	15.2	-	-	-	-	-	8	9
2 nd	26.6	-	-	-	-	-	23	23
3 rd	31.6	[100]	[53.8]	[40.9]	[34.0]	[25.5]	32	38
4 th	38.4	[100]	[70.4]	[51.4]	[36.1]	[23.7]	34	38
Highest	33.2	[100]	[67.6]	[49.5]	[36.9]	[34.3]	39	46
Women 65–74	9.8	100	55.7	38.5	31.1	22.1	75	88
Lowest	5.9	-	-	-	-	-	8	8
2 nd	9.6	-	-	-	-	-	15	18
3 rd	10.7	-	-	-	-	-	17	21
4 th	9.4	-	-	-	-	-	15	17
Highest	13.1	-	-	-	-	-	20	24

For variable definitions, see AE.2, AE.3, AE.8, AE.21 and AE.22. 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 2–5, by age and sex

Age in 2002–03 and sex	Whole sample: % not in employment or self- employment in 2002–03	Of those not employed or self-employed at baseline:					<i>Wted</i> <i>N</i>	<i>Unwted</i> <i>N</i>
		% in employment or self-employment at ...						
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5		
All men 50–74	44.3	0	4.1	4.4	2.8	2.2	930	917
50–54	14.2	0	5.3	13.7	9.2	8.9	81	61
55–59	27.8	0	9.5	10.7	6.2	4.3	145	135
60–64	49.4	0	5.4	3.5	2.2	2.0	195	185
65–74	83.1	0	1.9	1.5	1.1	0.5	508	536
All women 50–74	56.4	0	2.9	2.8	2.7	1.4	1346	1422
50–54	22.2	0	11.0	11.5	11.0	7.0	138	125
55–59	36.9	0	5.3	6.1	5.2	3.1	201	223
60–64	69.6	0	2.5	1.8	2.4	0.6	315	334
65–74	90.2	0	0.8	0.5	0.4	0.2	692	740

For variable definitions, see AE.2, AE.3 and AE.22. For related text, see E.33.

**Table EL9a. Persistency of health problem limiting ability to work in waves 1–5,
by age and wealth group: men aged under 75 at baseline only**

Age and wealth group in 2002–03	Health limits ability to work ...				Weighted N	Unweighted N
	Never (%)	Sometimes, transitory (%)	Sometimes, onset (%)	Always		
All men 50–74	67.7	21.1	8.9	2.3	2093	2045
Lowest	46.6	35.7	13.6	4.2	303	225
2 nd	61.2	25.7	9.3	3.8	383	349
3 rd	64.6	20.7	11.9	2.7	423	411
4 th	75.9	17.0	6.1	1.1	503	516
Highest	80.3	13.0	6.1	0.7	483	544
Men 50–54	77.6	13.7	6.3	2.4	570	485
Lowest	[52.5]	[27.6]	[14.7]	[5.3]	73	48
2 nd	69.8	18.6	8.1	3.4	109	86
3 rd	80.0	10.4	6.2	3.4	117	103
4 th	85.1	8.9	5.2	0.7	157	139
Highest	88.4	10.0	0.8	0.8	114	109
Men 55–59	67.9	22.2	7.7	2.3	521	539
Lowest	42.9	38.5	14.0	4.6	83	64
2 nd	55.8	36.2	7.0	1.1	86	84
3 rd	70.3	18.2	7.0	4.5	108	109
4 th	74.0	17.6	6.4	2.0	121	137
Highest	84.9	9.4	5.7	0.0	123	145
Men 60–64	66.8	22.2	9.6	1.5	393	380
Lowest	[45.6]	[36.0]	[14.1]	[4.3]	50	38
2 nd	66.9	17.2	12.1	3.8	60	53
3 rd	54.7	28.9	16.4	0.0	84	77
4 th	74.6	20.3	4.4	0.7	91	90
Highest	79.5	14.8	5.2	0.6	108	122
Men 65–74	58.8	26.5	12.1	2.6	610	641
Lowest	45.7	39.2	12.2	2.9	96	75
2 nd	54.8	28.6	10.5	6.1	128	126
3 rd	50.8	27.7	19.3	2.3	114	122
4 th	67.5	23.8	7.9	0.8	134	150
Highest	70.0	17.2	11.5	1.2	138	168

For variable definitions, see AE.2, AE.3, AE.8, AE.21 and AE.22. For related text, see E.34 and E.35.

**Table EL9b. Persistency of health problem limiting ability to work in waves 1–5,
by age and wealth group: women aged under 75 at baseline only**

Age and wealth group in 2002–03	Health limits ability to work ...				Weighted N	Unweighted N
	Never (%)	Sometimes, transitory (%)	Sometimes, onset (%)	Always		
All women 50–74	66.1	22.7	9.6	1.5	2383	2535
Lowest	45.9	37.6	13.4	3.2	388	346
2 nd	61.2	26.9	10.0	1.9	466	475
3 rd	70.6	18.1	10.1	1.2	484	523
4 th	72.7	18.4	7.7	1.2	513	572
Highest	74.6	16.7	8.0	0.6	531	619
Women 50–54	75.1	16.0	7.5	1.4	621	600
Lowest	53.8	28.5	15.7	2.0	120	101
2 nd	73.7	13.8	8.5	4.0	124	110
3 rd	80.7	14.3	3.8	1.2	115	116
4 th	84.0	11.2	4.8	0.0	136	141
Highest	82.0	13.2	4.8	0.0	125	132
Women 55–59	69.1	21.9	7.8	1.2	546	621
Lowest	46.2	38.8	11.5	3.5	70	67
2 nd	62.2	25.8	11.0	1.0	97	110
3 rd	75.4	15.6	8.4	0.6	111	120
4 th	73.8	20.2	4.9	1.1	131	154
Highest	76.4	17.0	6.0	0.6	136	170
Women 60–64	64.5	22.9	11.2	1.4	451	487
Lowest	41.9	45.2	9.0	3.9	56	51
2 nd	56.0	31.2	12.8	0.0	86	88
3 rd	67.5	16.0	15.7	0.8	102	111
4 th	71.7	18.6	7.0	2.7	89	97
Highest	73.4	15.6	10.3	0.7	118	140
Women 65–74	57.6	28.7	11.7	2.0	765	827
Lowest	40.7	41.7	13.9	3.7	142	127
2 nd	53.6	35.5	9.1	1.9	158	167
3 rd	61.9	24.0	12.3	1.8	156	176
4 th	62.7	23.0	12.8	1.5	157	180
Highest	68.0	20.2	10.7	1.1	152	177

For variable definitions, see AE.2, AE.3, AE.8, AE.21 and AE.22. For related text, see E.34 and E.35.

S. Social domain tables

Stephen Jivraj *University of Manchester*

James Nazroo *University of Manchester*

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 S1a–S16b) involve classification by sex and age (divided into five-year categories) and classification by sex and wealth group. Tables S9c and S10c show satisfaction with living accommodation and area by housing tenure. Tables S1a–S16b contain data for all core members at wave 5 (2010–11), including people from the original ELSA cohort in 2002–03 and the refreshment sample members added to ELSA in 2006–07 (wave 3) and 2008–09 (wave 4). These cross-sectional tables show a representative sample of people aged 52 and over in 2010–11.
- Longitudinal tables (Tables SL1a–SL5d) include a balanced ELSA sample who participated in all of waves 1 to 5. Again, both classifications by sex and age and by sex 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 5 (2010–11). 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 2010–11. The majority of men and women are married or have remarried. The percentage of women married or remarried declines with age from 78% in those aged 52–54 to 23% in those aged 80 and above. The percentage of men and women widowed rises considerably with age, particularly for women. Two-thirds of women aged 80 and above are widowed compared with a third of men aged 80 and above. There is a decline in the percentage of men single and never married at older ages compared with a U-shaped relationship with age for women. The decline in the percentage divorced or separated with age is similar for men and women.

S.4 Table S1b shows the percentage of men and women by marital status and wealth in 2010–11. The percentage of men and women married or remarried in the four highest wealth groups is almost 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 Economics domain tables).

S.5 Table S2a shows the percentage of men and women by ethnicity and age in 2010–11. Across each age group, the vast majority of men and women are white. However, the percentage of white individuals increases with age for men and women. Table S2b shows the percentage of men and women by ethnicity and wealth group in 2010–11. A slightly higher proportion of men and women in lower wealth groups are non-white compared with those in higher wealth groups.

S.6 Table S3a shows the percentage of men and women by religion and age in 2010–11. More than three-quarters of men and women are Christian. However, this varies by age in both men and women. For example, around one-in-four men and one-in-five women under the age of 60 have no religion. Less than one-in-twenty of all men and women have a non-Christian religion.

S.7 Table S3b shows the percentage of men and women by religion and wealth group in 2010–11. Men and women in lower wealth groups are more likely to have a religion. Moreover, the percentage of men in each wealth group with no religion is almost double the percentage of women with no religion in the three lowest wealth groups. Men are around 50% more likely than women to have no religion in the two highest wealth groups.

Internet and recreation

S.8 Table S4a shows the percentage of men and women by usage of the internet and age in 2010–11. More than half of men and women report that they use the internet. However, usage of the internet declines with age, particularly for women. Fewer than one-in-ten women aged 80 and above report using the internet compared with a quarter of similarly aged men.

S.9 Table S4b shows the percentage of men and women by usage of the internet and wealth in 2010–11. There is a strong wealth gradient in internet usage among men and women. About a third of men and women in the lowest wealth group report using the internet compared with around three-quarters of those in the highest wealth group.

S.10 Table S5a shows the mean weekly hours of TV watched, by sex and age in 2010–11. On average, men view 15 hours of TV per week and women view 16. The number of hours of TV viewed per week is similar across age groups for men and women. Table S5b shows the mean weekly hours of TV watched, by sex and wealth. It can be seen that men and women in higher wealth groups watch less TV, on average, than those in lower wealth groups.

S.11 Table S6a shows the percentage of men and women who have taken a holiday, at home or abroad, in the last year by age in 2010–11. Three-quarters of men and women aged between 50 and 70 have taken a holiday in the last year. The percentage is lower for men and women after age 70, and particularly for those aged 80 and over.

S.12 Table S6b shows the percentage of men and women who have taken a holiday, at home or abroad, in the last year by wealth in 2010–11. The proportion of men and

women in the highest wealth group taking a holiday is almost 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.

Transport and services

S.13 Table S7a shows the percentage of men and women by the frequency of public transport use and age in 2010–11. Women report using public transport more often than men, with almost a third of women using public transport at least once a week compared with a quarter of men. The frequency of public transport usage tends to increase for older individuals up to the age of 80. Public transport usage declines rapidly for men and women over the age of 80.

S.14 Table S7b shows the percentage of men and women by the frequency of public transport use and wealth in 2010–11. Men and women in lower wealth groups are more likely to use public transport regularly (e.g. at least once a week) than those in higher wealth groups, but those in lower wealth groups are also more likely to never use public transport.

S.15 Table S8a shows the percentages of men and women who find it difficult to get to a bank, post office, corner shop, supermarket, shopping centre, GP, chiroprapist, dentist, optician and hospital, by age in 2010–11. Hospitals and shopping centres are the places that men and women find it most difficult to get to. Older individuals, particularly women, find it more difficult to get to places than younger individuals. Almost two-fifths of women aged 80 and over find it difficult to get to a hospital.

S.16 Table S8b shows the percentages of men and women who find it difficult to get to a bank, post office, corner shop, supermarket, shopping centre, GP, chiroprapist, dentist, optician and hospital, by wealth in 2010–11. Men and women in lower wealth groups find it more difficult to get to these places than those in higher wealth groups. One-in-five men and one-in-four women in the lowest wealth group find it difficult to get to a shopping centre and hospital compared with less than one-in-ten men and women in the highest wealth group.

S.17 Table S9a shows the percentage of men and women by satisfaction with their accommodation and age in 2010–11. More than nine-in-ten men and women are very or fairly satisfied with their accommodation and there is little variation across age groups. Table S9b shows the percentage of men and women by satisfaction with their accommodation and wealth in 2010–11. At least 90% of men and women in each wealth group are very or fairly satisfied with their accommodation. Nonetheless, there is greater variation between wealth groups than between age groups in the percentage very satisfied. Table S9c shows the percentage of men and women by satisfaction with their accommodation and tenure in 2010–11. The percentage of men and women very satisfied with their accommodation is considerably higher for owner-occupiers than for those who rent.

S.18 Table S10a shows the percentage of men and women by satisfaction with the area in which they live and their age in 2010–11. More than nine-in-ten men and women are very or fairly satisfied with their area. The proportion satisfied with their area is slightly lower for younger men and women than for those who are older. Table S10b shows the percentage of men and women by satisfaction with the area in which they live and wealth in 2010–11. Men and women in the lowest wealth group are marginally more likely to be dissatisfied with their area than those in the higher wealth groups. Nonetheless, there is greater variation between wealth groups than

between age groups in the percentage very satisfied. Table S10c shows the percentage of men and women by satisfaction with the area in which they live and tenure in 2010–11. The percentage of men and women dissatisfied with their area is greater for those living in social rented housing than for those living in other housing tenures.

Providing social support

S.19 Table S11a shows the percentage of men and women by the frequency of volunteer work and age in 2010–11. The prevalence of regular volunteer work (e.g. twice a month or more) among men is greater as they age up to 75 and greater among women as they age up to 70. More than one-in-five men and women aged 70–74 do voluntary work at least twice a month. In later age, the prevalence of volunteering declines for men and women, particularly in those aged 80 and over.

S.20 Table S11b shows the percentage of men and women by the frequency of volunteer work and wealth. Men and women in higher wealth groups are more likely to volunteer and volunteer more often than those in lower wealth groups. At least two-fifths of men and women in the highest wealth group did some voluntary work in the last year compared with one-in-seven of those in the lowest wealth group.

S.21 Table S12a shows the percentage of men and women who cared for someone in the last month by age in 2010–11: 11% of men and 15% of women cared for someone in the last month. 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, from 23% for those aged 55–59 to 5% for those aged 80 and over.

S.22 Table S12b shows the percentage of men and women who cared for someone in the last month by wealth in 2010–11. The percentage of men who have cared for someone in the last month is stable across wealth groups. However, the percentage of women who cared for someone increases from 12% for those in the lowest wealth group to 17% for those in the highest wealth group.

Receipt of social support

S.23 Table S13a shows the percentage of men and women with a mobility, ADL or IADL difficulty who receive help (including from their partner or other people in the household) by age in 2010–11. More than a third of men and almost half of women with a difficulty receive help. The proportion increases with age in men and women. More than half of men aged 80 and over and two-thirds of women aged 80 and over with a difficulty receive help.

S.24 Table S13b shows the percentage of men and women with a mobility, ADL or IADL difficulty who receive help (including from their partner or other people in the household) by wealth in 2010–11. The proportion of men and women with a difficulty receiving help is lower for those in higher wealth groups. Almost a quarter of men and slightly more than a third of women in the highest wealth group with a difficulty receive help, compared with more than two-fifths of men and half of women in the lowest wealth group.

S.25 Table S14a shows the mean number of close relationships with children, family and friends for men and women by age in 2010–11. On average, men and women have seven close relationships. This varies marginally by age. Table S14b shows the mean number of close relationships with children, family and friends for

men and women by wealth in 2010–11. Men and women in the highest wealth group have one more close relationship, on average, than those in the lowest wealth group.

Perceived social status

S.26 Table S15a shows the percentage of men and women by self-perceived social status and age in 2010–11. 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. The ladder is collapsed from 10 points in the original data. Less than one-in-twenty men and women rank their social position as being on the first and fifth rungs of the social ladder. Men aged 60–69 and women aged 65–69 are less likely to rank their social position as being in the lower rungs of society than those younger or older. Men and women aged 50–69 are more likely to rank their social position as being in the higher rungs of society than those aged 70 and above.

S.27 Table S15b shows the percentage of men and women by self-perceived social status and wealth in 2010–11. 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. On the one hand, men in the lowest wealth group are more likely to rank their social position in the lowest rungs of society than women in the lowest wealth group. On the other hand, men in the highest wealth group are more likely to rank their social position in the highest rungs of society than women in the highest wealth group. This suggests that women in lower wealth groups might overestimate their social position relative to men, whereas women in higher wealth groups might underestimate their social position relative to men. Such an interpretation should be treated with caution since individual standing in society and family wealth do not measure the same concept.

Expectation of life expectancy

S.28 Table S16a shows the mean self-perceived chance of living to 85 for men and women aged below 70 by age. Women are more optimistic about their chances of living to 85 than men. The average man believes that there is a 50% chance he will live to 85, compared with the average woman believing she has a 55% chance of doing so. The average expected chance of living to 85 is similar across age groups among men and women.

S.29 Table S16b shows the mean self-perceived chance of living to 85 for men and women aged below 70 by wealth. 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 49% chance of living to 85 and men in the lowest wealth group, on average, believe they have a 43% chance of living to 85.

Longitudinal tables

Marital status

S.30 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 2010–11. However, this varies by age, particularly for women. For example, less than half of

married women aged 75 and over at baseline were still married by wave 5. Almost all previously married men and women became widowed in a later wave of ELSA rather than separated or divorced.

S.31 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 2010–11 than those in higher wealth groups.

Internet and holidays

S.32 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 2010–11.

S.33 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 much more likely to continue using the internet across each wave of ELSA than those in the lowest wealth group. This is most apparent for women in the lowest wealth group, of whom two-in-five reporting using the internet in 2002–03 stated they did not use it by 2010–11.

S.34 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. Half of men and women aged 50–54 who were not using the internet in 2002–03 stated that they started using it by 2010–11. The proportion of men and women starting to use the internet is lower for each older age group. For example, only one-in-twenty females aged 75 and over not using the internet at baseline started using it by wave 5.

S.35 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 and women in the lowest wealth group are much less likely to start using the internet than those in higher wealth groups. Furthermore, more than half of men in the highest wealth group not using the internet in 2002–03 did start using it by 2010–11.

S.36 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 and including wave 5, more than four-fifths of men and women having been on holiday in 2002–03 had also been on holiday in the last year. The proportion of men and women continuing to go on holiday in subsequent waves is lower for older individuals. More than half of women aged 75 and over and slightly less than half of men aged 75 and over reported having not been on holiday in 2010–11, having reported that they had been on holiday in 2002–03.

S.37 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 2010–11, around two-fifths of those in the lowest wealth group reported not going on holiday in the last year, having reported that they did at baseline. This compares with less than a fifth of those in the highest wealth group.

Public transport

S.38 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 2010–11 having already been using public transport in 2002–03. The proportion is slightly lower for those aged 70 and over for men and women. The proportion still using 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. The increase was greatest for men aged 55–64 and women aged 55–59.

S.39 Table SL4b shows the percentage of men and women who used public transport at baseline and the percentage still using public transport in subsequent waves, by wealth. The vast majority of men and women in each wealth group still used public transport in subsequent waves of ELSA.

S.40 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 50–64 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.41 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. Almost half of women in the highest wealth group not using public transport in 2002–03 started using public transport by 2010–11.

Volunteering

S.42 Table SL5a shows the percentage of men and women volunteering at baseline (wave 1) and the percentage still volunteering in subsequent waves, by age. Men and women aged 50–59 are less likely to continue volunteering than those aged 60–64. More than half of men and women aged 70 and over who volunteered in 2002–03 did not volunteer by 2010–11.

S.43 Table SL5b 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. Slightly more than a third of men in the lowest wealth group still volunteered by 2010–11, compared with two-thirds of those in the highest wealth group.

S.44 Table SL5c 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 2010–11. Men and women aged under 70 are more likely to have started volunteering than those aged 70 and above.

S.45 Table SL5d 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. More than one-in-five men and women in the highest wealth group not volunteering in 2002–03 had started to volunteer in 2010–11.

Caring

S.46 Table SL6a shows the percentage of men and women who have not cared 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 2010–11. However, men entering their late 60s and early 70s and, in particular, women aged under 70 are more likely to have started caring for someone than those at other ages.

S.47 Table SL6b shows the percentage of men and women who have not cared 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 2010–11. However, women in the lowest wealth group are less likely to have started caring for someone than those in higher wealth groups, particularly those in the third- and fourth-highest wealth groups.

Annex AS. Definitions

AS.1 *Access to services* is measured by whether a respondent finds it ‘quite’ or ‘very’ difficult to get to or is ‘unable to go to’ a range of places using their usual form of transport.

AS.2 *Age* is defined as age at last birthday.

AS.3 *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 5) conducted in 2010 and 2011.

AS.4 *Caring* is defined as whether a respondent cared for someone in the last month.

AS.5 *Close relationships* are defined as the number of close relationships a respondent has with their children, family and friends.

AS.6 *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.

AS.7 *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.8 *Internet usage* is defined by whether a respondent uses the internet and/or email.

AS.9 *Marital status* is defined as per a respondent’s legal status.

AS.10 *Mobility assistance* is defined as whether a respondent with a mobility, 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.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 *Religion* is measured by three groups: no religion, Christian and non-Christian religion. It is acknowledged that ELSA does not accurately represent the religious minority population aged 50.

AS.13 *Satisfaction with accommodation* is defined by how satisfied a respondent is with their living accommodation.

AS.14 *Satisfaction with area* is defined by how satisfied a respondent is with the area in which they live.

AS.15 *Self-perceived chance of living to 85* is measured by the mean probability (0 to 100) of respondents living to 85 for those aged 69 and below.

AS.16 *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.

Social domain tables

AS.17 *Tenure* is defined as accommodation type and is defined by the categories: own outright; own with mortgage or shared ownership; private renting or rent free; and social renting from local authority or housing association.

AS.18 *TV viewing* is defined as the mean number of hours of television watched during an ordinary week.

AS.19 *Volunteering* is defined by frequency of any voluntary work carried out.

AS.20 *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.21 *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 2011 prices and rounded to the nearest £1000:

	Wealth group definition wave 1 (2002–03)	Wealth group definition wave 5 (2010–11)
Lowest	Less than £18k	Less than £50k
2 nd	Between £18k and £118k	Between £50k and £175k
3 rd	Between £118k and £210k	Between £175k and £270k
4 th	Between £210k and £375k	Between £270k and £440k
Highest	More than £375k	More than £440k

AS.22 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 5 (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

Table S1a. Marital status (%), by age and sex: wave 5

	Age in 2010–11						Total	
	52–54	55–59	60–64	65–69	70–74	75–79		80+
Men								
Single	15.2	10.8	5.8	6.7	7.1	4.3	2.1	7.1
Married or civil partner	55.8	63.0	65.0	63.6	59.6	68.5	54.7	62.4
Remarried	10.1	12.1	13.7	14.4	14.7	8.1	6.6	12.0
Divorced or separated	18.1	13.0	12.0	9.5	9.6	6.4	2.9	10.1
Widowed	0.7	1.1	3.5	5.8	9.1	12.8	33.7	8.3
Women								
Single	6.3	8.2	4.5	2.8	3.1	4.1	6.5	5.2
Married or civil partner	64.8	55.3	57.8	57.1	51.5	44.3	20.7	49.2
Remarried	13.4	11.8	14.0	13.1	6.6	5.2	1.8	9.5
Divorced or separated	14.8	19.8	16.0	13.1	12.1	9.7	4.5	13.4
Widowed	0.7	4.9	7.7	13.8	26.7	36.7	66.4	22.7
<i>N (unweighted)</i>								
<i>Men</i>	101	788	878	709	651	455	448	4030
<i>Women</i>	114	963	1096	820	735	561	697	4986

For variable definitions, see AS.2, AS.9 and AS.22. For related text, see S.3. Figures weighted for non-response.

Table S1b. Marital status (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Single	14.3	7.7	6.3	4.2	4.4	7.2
Married or civil partner	34.1	59.1	69.4	72.1	73.7	62.5
Remarried	11.0	13.5	11.3	12.0	11.5	11.9
Divorced or separated	26.1	9.2	6.6	5.7	4.4	10.0
Widowed	14.6	10.4	6.3	6.1	6.0	8.5
Women						
Single	8.4	5.0	5.3	3.6	3.4	5.2
Married or civil partner	23.3	42.7	51.4	64.2	68.5	49.1
Remarried	7.2	10.6	9.6	8.9	10.7	9.4
Divorced or separated	27.8	14.3	9.1	7.7	5.9	13.4
Widowed	33.4	27.3	24.6	15.5	11.5	23.0
<i>N (unweighted)</i>						
<i>Men</i>	631	740	786	859	929	3945
<i>Women</i>	942	1025	1005	978	945	4895

For variable definitions, see AS.9, AS.20, AS.21 and AS.22. For related text, see S.4. Figures weighted for non-response.

Table S2a. Ethnicity (%), by age and sex: wave 5

	Age in 2010–11						Total	
	52–54	55–59	60–64	65–69	70–74	75–79		80+
Men								
White	93.5	92.8	96.5	96.0	96.0	97.2	97.5	95.5
Non-white	6.5	7.2	3.5	4.0	4.0	2.8	2.5	4.5
Women								
White	90.8	93.4	97.0	96.5	98.2	96.1	99.2	96.3
Non-white	9.2	6.6	3.0	3.5	1.8	3.9	0.8	3.7
<i>N (unweighted)</i>								
<i>Men</i>	101	789	876	710	651	456	448	4031
<i>Women</i>	114	963	1095	820	734	561	697	4984

For variable definitions, see AS.2, AS.6 and AS.22. For related text, see S.5. Figures weighted for non-response.

Table S2b. Ethnicity (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
White	93.8	95.8	95.9	96.2	95.5	95.5
Non-white	6.2	4.2	4.1	3.8	4.5	4.5
Women						
White	95.6	95.8	96.8	96.6	97.1	96.3
Non-white	4.4	4.2	3.2	3.4	2.9	3.7
<i>N (unweighted)</i>						
<i>Men</i>	632	741	786	859	928	3946
<i>Women</i>	942	1025	1005	978	943	4893

For variable definitions, see AS.6, AS.20, AS.21 and AS.22. For related text, see S.5. Figures weighted for non-response.

Table S3a. Religion (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
No religion	22.1	27.3	24.4	20.2	14.8	13.5	12.7	20.8
Christian	73.8	67.5	73.2	78.0	82.8	83.7	84.6	76.1
Other	4.1	5.1	2.3	1.9	2.4	2.8	2.8	3.0
Women								
No religion	12.4	19.5	11.4	9.7	9.2	7.6	5.1	11.5
Christian	85.1	77.5	86.7	88.4	89.7	92.0	92.1	86.5
Other	2.4	2.9	1.8	2.2	1.1	0.4	2.7	2.0
<i>N (unweighted)</i>								
<i>Men</i>	89	693	782	639	586	392	340	3521
<i>Women</i>	99	864	1008	752	678	481	514	4396

For variable definitions, see AS.2, AS.12 and AS.22. For related text, see S.6. Figures weighted for non-response.

Table S3b. Religion (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
No religion	20.2	17.0	18.3	21.0	26.7	20.9
Christian	75.7	80.9	78.3	75.9	70.0	75.9
Other	4.2	1.9	3.4	3.2	3.4	3.3
Women						
No religion	9.4	7.8	9.1	14.9	16.6	11.5
Christian	88.2	90.8	89.4	83.0	80.9	86.6
Other	2.4	1.3	1.4	2.1	2.5	1.9
<i>N (unweighted)</i>						
<i>Men</i>	504	636	687	769	855	3451
<i>Women</i>	785	904	881	889	859	4318

For variable definitions, see AS.12, AS.20, AS.21 and AS.22. For related text, see S.7. Figures weighted for non-response.

Table S4a. Use internet and/or email (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	78.4	81.6	75.9	61.8	47.0	45.3	27.9	62.9
Women	81.0	79.1	64.8	54.9	39.3	25.4	9.6	51.1
<i>N (unweighted)</i>								
<i>Men</i>	89	692	786	638	593	396	342	3536
<i>Women</i>	98	870	1017	762	680	482	527	4436

For variable definitions, see AS.2, AS.8 and AS.22. For related text, see S.8. Figures weighted for non-response.

Table S4b. Use internet and/or email (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	33.8	54.9	60.3	73.6	84.9	62.8
Women	29.0	42.9	49.8	61.5	74.9	50.7
<i>N (unweighted)</i>						
<i>Men</i>	515	645	686	769	850	3465
<i>Women</i>	786	915	897	898	861	4357

For variable definitions, see AS.8, AS.20, AS.21 and AS.22. For related text, see S.9. Figures weighted for non-response.

Table S5a. Mean total hours of TV watched per week, by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	15.2	14.1	14.4	14.9	15.0	16.1	14.9	14.7
Women	16.0	14.8	15.0	15.8	16.8	17.7	16.1	15.8
<i>N (unweighted)</i>								
<i>Men</i>	87	691	790	643	591	396	338	3536
<i>Women</i>	98	868	1014	746	676	477	503	4382

For variable definitions, see AS.2, AS.18 and AS.22. For related text, see S.10. Figures weighted for non-response.

Table S5b. Mean total hours of TV watched per week, by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	19.3	16.8	15.1	13.0	10.8	14.8
Women	19.0	17.4	16.2	13.9	12.0	15.8
<i>N (unweighted)</i>						
<i>Men</i>	509	646	685	770	855	3465
<i>Women</i>	768	905	881	894	856	4304

For variable definitions, see AS.18, AS.20, AS.21 and AS.22. For related text, see S.10. Figures weighted for non-response.

**Table S6a. Taken holiday (in UK or abroad) in last 12 months (%),
by age and sex: wave 5**

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	73.0	79.7	78.5	76.4	68.6	67.6	50.7	72.8
Women	68.3	78.8	77.5	79.4	71.9	64.5	40.4	70.0
<i>N (unweighted)</i>								
<i>Men</i>	89	692	786	638	593	396	342	3536
<i>Women</i>	98	870	1017	762	680	482	527	4436

For variable definitions, see AS.2, AS.7 and AS.22. For related text, see S.11. Figures weighted for non-response.

**Table S6b. Taken holiday (in UK or abroad) in last 12 months (%),
by wealth group and sex: wave 5**

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	48.2	69.4	74.0	79.3	87.9	72.7
Women	48.1	65.9	72.6	80.2	86.6	70.0
<i>N (unweighted)</i>						
<i>Men</i>	515	645	686	769	850	3465
<i>Women</i>	786	915	897	898	861	4357

For variable definitions, see AS.7, AS.20, AS.21 and AS.22. For related text, see S.12. Figures weighted for non-response.

Table S7a. Use of public transport (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Every day or nearly every day	5.8	8.1	6.5	5.9	7.8	6.9	5.8	6.9
Two or three times a week	7.2	5.1	9.9	12.9	14.1	13.2	12.4	10.3
Once a week	5.1	4.7	6.6	9.3	9.6	10.6	7.2	7.4
Two or three times a month	7.2	6.8	8.7	11.4	10.9	9.2	5.8	8.6
Once a month or less	33.3	32.0	34.6	30.4	29.0	31.2	21.9	30.7
Never	41.3	43.4	33.7	30.0	28.6	28.8	46.9	36.1
Women								
Every day or nearly every day	13.3	10.3	8.9	6.2	8.6	11.7	9.4	9.3
Two or three times a week	1.4	7.5	15.3	15.7	20.1	19.7	14.8	14.2
Once a week	3.5	5.4	10.5	11.6	12.8	11.1	7.5	9.2
Two or three times a month	6.3	8.2	11.7	12.7	9.2	10.7	4.1	9.3
Once a month or less	42.7	39.2	30.7	28.8	25.1	20.1	13.7	28.1
Never	32.9	29.4	22.9	24.9	24.3	26.7	50.5	30.0
<i>N (unweighted)</i>								
<i>Men</i>	101	788	876	710	651	456	448	4030
<i>Women</i>	114	963	1096	819	735	561	697	4985

For variable definitions, see AS.2, AS.11 and AS.22. For related text, see S.13. Figures weighted for non-response.

Table S7b. Use of public transport (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Every day or nearly every day	13.1	5.6	4.9	6.2	5.9	7.0
Two or three times a week	11.4	11.9	12.0	7.9	8.9	10.3
Once a week	8.3	6.1	7.4	6.6	8.0	7.3
Two or three times a month	7.7	8.1	7.2	9.1	10.5	8.6
Once a month or less	18.9	26.3	28.5	35.5	41.7	30.7
Never	40.6	42.0	40.0	34.8	25.0	36.1
Women						
Every day or nearly every day	16.8	10.0	8.1	6.3	4.2	9.3
Two or three times a week	17.0	17.3	15.2	11.6	8.9	14.2
Once a week	8.9	9.5	9.6	9.5	8.5	9.2
Two or three times a month	6.2	8.6	8.8	10.3	12.6	9.2
Once a month or less	15.7	24.1	29.1	32.7	41.1	28.0
Never	35.5	30.5	29.2	29.7	24.7	30.1
<i>N (unweighted)</i>						
<i>Men</i>	632	740	786	860	928	3946
<i>Women</i>	942	1025	1005	977	945	4894

For variable definitions, see AS.11, AS.20, AS.21 and AS.22. For related text, see S.14. Figures weighted for non-response.

Table S8a. Find it difficult to get to services (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Bank or cash point	7.3	3.2	3.2	4.7	5.2	3.2	12.7	4.9
Post office	3.2	4.0	4.8	4.4	6.3	4.9	14.9	5.8
Corner shop	3.2	4.2	5.4	4.5	5.8	6.3	13.2	5.8
Supermarket	5.7	4.2	3.7	4.9	5.9	5.1	13.4	5.6
Shopping centre	16.1	9.2	7.9	9.6	11.3	9.1	19.1	10.5
GP	7.3	5.1	3.5	3.8	5.1	4.7	13.1	5.4
Chiropodist	6.7	9.3	7.7	7.9	10.3	9.5	16.6	9.5
Dentist	14.5	8.6	6.7	9.6	9.2	9.6	12.6	9.2
Optician	8.1	8.1	4.9	5.4	6.6	6.2	12.7	7.1
Hospital	8.1	11.1	10.2	10.9	14.2	14.5	22.6	12.7
Women								
Bank or cash point	3.2	3.4	3.5	4.8	7.9	11.1	28.3	8.7
Post office	6.3	5.1	3.8	5.5	8.3	11.8	27.5	9.4
Corner shop	5.6	4.8	3.3	5.3	9.2	11.0	23.3	8.3
Supermarket	8.0	4.5	4.8	6.0	9.1	14.2	30.2	10.3
Shopping centre	9.8	8.0	8.6	10.0	14.3	19.0	38.5	14.7
GP	5.6	3.4	3.6	5.1	7.8	11.9	26.6	8.7
Chiropodist	8.7	5.9	4.8	6.6	12.7	11.6	24.5	10.0
Dentist	8.1	6.5	5.3	6.4	9.2	12.2	29.5	10.5
Optician	4.8	3.8	3.8	5.6	9.0	11.5	30.5	9.5
Hospital	4.8	12.3	10.0	11.3	15.8	21.2	38.7	16.7
<i>N (unweighted)</i>								
Men								
<i>Bank or cash point</i>	88	690	782	635	580	392	333	3500
<i>Post office</i>	88	690	783	630	587	393	325	3496
<i>Corner shop</i>	88	688	770	623	558	374	310	3411
<i>Supermarket</i>	88	688	784	632	586	394	331	3503
<i>Shopping centre</i>	88	688	773	621	570	377	303	3420
<i>GP</i>	88	689	786	631	587	394	331	3506
<i>Chiropodist</i>	85	625	682	532	461	326	269	2980
<i>Dentist</i>	88	688	768	621	567	375	305	3412
<i>Optician</i>	87	688	771	621	574	387	319	3447
<i>Hospital</i>	88	692	778	634	586	395	328	3501
Women								
<i>Bank or cash point</i>	98	864	1010	753	669	467	506	4367
<i>Post office</i>	98	862	1009	757	670	467	511	4374
<i>Corner shop</i>	96	850	978	720	628	422	444	4138
<i>Supermarket</i>	98	864	1004	754	671	469	511	4371
<i>Shopping centre</i>	96	861	1001	732	649	447	464	4250
<i>GP</i>	98	860	1014	758	671	473	514	4388
<i>Chiropodist</i>	81	773	853	614	525	353	410	3609
<i>Dentist</i>	96	855	999	742	650	447	458	4247
<i>Optician</i>	97	856	1007	745	661	468	495	4329
<i>Hospital</i>	97	858	1011	753	673	470	503	4365

For variable definitions, see AS.1, AS.2 and AS.22. For related text, see S.15. Figures weighted for non-response.

Table S8b. Find it difficult to get to services (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Bank or cash point	9.3	4.0	4.9	3.7	3.8	4.9
Post office	10.3	4.3	5.4	4.1	5.4	5.8
Corner shop	9.2	3.8	5.7	5.6	5.3	5.9
Supermarket	11.6	4.8	4.8	4.0	4.4	5.6
Shopping centre	19.7	8.1	10.1	7.8	8.4	10.5
GP	11.4	5.6	4.1	4.0	3.3	5.4
Chiropodist	15.1	11.0	8.1	7.7	7.2	9.4
Dentist	16.4	9.3	7.2	8.0	6.6	9.2
Optician	13.1	6.4	5.8	6.1	4.8	7.0
Hospital	19.9	11.5	13.4	10.9	9.7	12.8
Women						
Bank or cash point	17.9	10.0	8.1	4.3	2.4	8.8
Post office	16.4	10.9	8.8	6.3	3.8	9.4
Corner shop	14.3	9.1	8.2	5.3	4.8	8.4
Supermarket	20.8	11.8	10.4	5.4	2.6	10.4
Shopping centre	26.5	16.4	13.9	8.7	7.5	14.7
GP	18.1	8.9	9.1	4.4	2.4	8.8
Chiropodist	19.7	10.9	9.2	6.2	3.9	10.0
Dentist	20.6	10.7	10.6	5.4	4.8	10.5
Optician	17.9	11.4	9.7	4.3	3.5	9.5
Hospital	26.5	19.5	17.6	10.9	8.7	16.9
<i>N (unweighted)</i>						
Men						
Bank or cash point	494	638	679	767	851	3429
Post office	495	636	680	766	848	3425
Corner shop	486	617	667	745	825	3340
Supermarket	498	635	682	767	850	3432
Shopping centre	479	615	662	755	838	3349
GP	499	638	683	765	850	3435
Chiropodist	410	514	572	671	750	2917
Dentist	466	613	661	756	845	3341
Optician	485	617	672	758	845	3377
Hospital	499	636	683	767	846	3431
Women						
Bank or cash point	758	891	889	893	858	4289
Post office	760	900	887	893	855	4295
Corner shop	711	841	844	848	818	4062
Supermarket	761	897	892	894	849	4293
Shopping centre	732	862	863	876	838	4171
GP	775	901	891	890	853	4310
Chiropodist	593	734	732	763	721	3543
Dentist	706	867	872	878	849	4172
Optician	751	881	884	885	850	4251
Hospital	764	902	884	886	850	4286

For variable definitions, see AS.1, AS.20, AS.21 and AS.22. For related text, see S.16. Figures weighted for non-response.

Table S9a. Satisfaction with accommodation (%), by age and sex: wave 5

	Age in 2010–11						Total	
	52–54	55–59	60–64	65–69	70–74	75–79		80+
Men								
Very satisfied	67.2	69.4	71.5	77.6	79.0	80.0	76.9	74.3
Fairly satisfied	27.0	25.2	23.5	19.0	17.6	16.3	20.4	21.5
Neither satisfied nor dissatisfied	0.7	2.6	2.0	2.0	1.3	2.0	1.3	1.9
Slightly dissatisfied	2.9	1.4	2.0	0.9	1.1	1.2	0.7	1.4
Very dissatisfied	2.2	1.4	1.0	0.5	0.9	0.5	0.7	1.0
Women								
Very satisfied	61.7	67.1	74.3	77.7	78.1	79.3	76.0	74.1
Fairly satisfied	32.3	27.3	20.8	18.0	18.8	17.5	18.2	21.2
Neither satisfied nor dissatisfied	2.3	2.7	1.2	1.3	0.8	0.6	1.8	1.6
Slightly dissatisfied	3.0	1.8	1.8	2.1	1.0	1.6	3.3	2.0
Very dissatisfied	0.8	1.1	1.9	0.9	1.3	1.0	0.7	1.2
<i>N (unweighted)</i>								
<i>Men</i>	100	755	856	679	633	442	418	3883
<i>Women</i>	107	944	1075	798	721	546	651	4842

For variable definitions, see AS.2, AS.13 and AS.22. For related text, see S.17. Figures weighted for non-response.

Table S9b. Satisfaction with accommodation (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Very satisfied	59.8	67.6	77.8	80.2	83.4	74.3
Fairly satisfied	30.1	27.3	19.4	17.8	14.4	21.4
Neither satisfied nor dissatisfied	3.4	2.4	1.5	1.1	1.5	1.9
Slightly dissatisfied	2.9	2.1	0.9	0.6	0.5	1.3
Very dissatisfied	3.7	0.5	0.4	0.4	0.3	1.0
Women						
Very satisfied	63.6	70.7	77.3	78.1	82.5	74.1
Fairly satisfied	28.0	23.7	19.1	18.9	15.4	21.3
Neither satisfied nor dissatisfied	2.4	2.0	0.9	1.4	0.9	1.5
Slightly dissatisfied	3.4	2.3	1.9	0.9	1.0	1.9
Very dissatisfied	2.7	1.4	0.9	0.7	0.2	1.2
<i>N (unweighted)</i>						
<i>Men</i>	606	709	756	827	902	3800
<i>Women</i>	915	1000	978	951	909	4753

For variable definitions, see AS.13, AS.20, AS.21 and AS.22. For related text, see S.17. Figures weighted for non-response.

Table S9c. Satisfaction with accommodation (%), by tenure and sex: wave 5

	Housing tenure in 2010–11				Total
	Own outright	Mortgaged	Private renting	Social renting	
Men					
Very satisfied	78.9	72.6	58.8	59.3	74.3
Fairly satisfied	18.5	24.0	31.3	29.1	21.5
Neither satisfied nor dissatisfied	1.3	1.7	5.5	3.4	1.9
Slightly dissatisfied	0.8	1.0	1.6	4.5	1.4
Very dissatisfied	0.4	0.7	2.7	3.8	1.0
Women					
Very satisfied	78.9	68.4	62.4	63.0	74.0
Fairly satisfied	17.9	26.0	27.9	28.2	21.2
Neither satisfied nor dissatisfied	1.0	2.0	5.1	2.7	1.6
Slightly dissatisfied	1.5	2.3	2.0	3.7	2.0
Very dissatisfied	0.8	1.3	2.5	2.3	1.2
<i>N (unweighted)</i>					
<i>Men</i>	2575	718	160	419	3872
<i>Women</i>	3219	743	194	670	4826

For variable definitions, see AS.13, AS.17 and AS.22. For related text, see S.17. Figures weighted for non-response.

Table S10a. Satisfaction with area (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Very satisfied	64.2	59.9	60.6	62.4	69.4	69.9	69.1	63.9
Fairly satisfied	24.1	31.5	31.1	29.1	24.5	24.7	25.3	28.5
Neither satisfied nor dissatisfied	4.4	3.3	3.8	3.1	1.9	1.2	2.7	2.9
Slightly dissatisfied	5.8	3.4	2.4	3.0	2.2	3.2	1.6	2.8
Very dissatisfied	1.5	1.9	2.1	2.5	2.0	1.0	1.3	1.9
Women								
Very satisfied	49.6	61.0	61.6	67.5	69.4	70.6	72.0	65.6
Fairly satisfied	37.6	30.3	29.5	25.1	23.5	23.4	21.6	26.6
Neither satisfied nor dissatisfied	6.8	3.8	2.7	1.8	2.2	2.8	2.3	2.8
Slightly dissatisfied	3.8	3.1	3.3	2.6	3.0	2.4	2.7	2.9
Very dissatisfied	2.3	1.8	3.0	3.0	2.0	0.8	1.4	2.1
<i>N (unweighted)</i>								
<i>Men</i>	100	755	856	679	633	442	418	3883
<i>Women</i>	107	944	1075	798	721	545	650	4840

For variable definitions, see AS.2, AS.14 and AS.22. For related text, see S.18. Figures weighted for non-response.

Table S10b. Satisfaction with area (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2nd	3rd	4th	Highest	
Men						
Very satisfied	54.8	56.2	64.2	69.0	73.1	63.9
Fairly satisfied	33.3	33.5	29.4	24.5	22.3	28.3
Neither satisfied nor dissatisfied	4.7	3.0	2.0	2.8	2.6	3.0
Slightly dissatisfied	4.3	4.5	2.7	2.2	1.0	2.8
Very dissatisfied	2.9	2.8	1.6	1.5	1.0	1.9
Women						
Very satisfied	57.9	55.1	70.6	71.7	74.6	65.6
Fairly satisfied	31.9	34.5	23.6	21.6	19.5	26.5
Neither satisfied nor dissatisfied	3.7	3.7	2.0	2.3	2.5	2.8
Slightly dissatisfied	3.8	4.0	2.3	2.5	1.8	2.9
Very dissatisfied	2.7	2.7	1.5	1.9	1.6	2.1
<i>N (unweighted)</i>						
<i>Men</i>	606	709	756	827	902	3800
<i>Women</i>	913	1000	978	951	909	4751

For variable definitions, see AS.14, AS.20, AS.21 and AS.22. For related text, see S.18. Figures weighted for non-response.

Table S10c. Satisfaction with area (%), by tenure and sex: wave 5

	Housing tenure in 2010–11				Total
	Own outright	Mortgaged	Private renting	Social renting	
Men					
Very satisfied	66.1	64.5	61.5	52.1	63.8
Fairly satisfied	27.2	28.3	31.9	34.1	28.5
Neither satisfied nor dissatisfied	2.2	3.6	3.3	5.0	2.9
Slightly dissatisfied	2.6	1.8	2.2	5.9	2.8
Very dissatisfied	1.8	1.7	1.1	3.0	1.9
Women					
Very satisfied	69.4	58.4	65.2	56.9	65.5
Fairly satisfied	23.6	32.8	25.8	32.9	26.6
Neither satisfied nor dissatisfied	2.4	3.6	6.1	2.9	2.8
Slightly dissatisfied	2.6	3.2	1.0	4.5	3.0
Very dissatisfied	2.0	2.0	2.0	2.7	2.1
<i>N (unweighted)</i>					
<i>Men</i>	2575	718	160	419	3872
<i>Women</i>	3219	743	194	668	4824

For variable definitions, see AS.14, AS.17 and AS.22. For related text, see S.18. Figures weighted for non-response.

Table S11a. Voluntary work frequency (%), by age and sex: wave 5

	Age in 2010–11						Total	
	52–54	55–59	60–64	65–69	70–74	75–79		80+
Men								
Twice a month or more	12.3	12.4	18.4	17.4	20.4	15.9	7.3	15.3
About once a month	4.3	3.2	4.4	5.8	3.9	3.9	2.9	4.0
Every few months	5.1	3.9	4.4	3.0	2.8	2.0	2.0	3.3
About once or twice a year	2.9	4.7	2.6	2.5	2.0	2.0	1.3	2.8
Less than once a year	3.6	2.4	2.5	2.0	1.3	2.0	0.4	2.0
Never	71.7	73.5	67.6	69.4	69.6	74.3	86.0	72.5
Women								
Twice a month or more	14.3	14.4	19.7	24.6	21.8	17.9	9.7	17.6
About once a month	3.8	3.9	4.4	3.8	5.6	3.6	2.4	4.0
Every few months	6.0	3.0	2.5	3.0	2.0	1.6	1.6	2.5
About once or twice a year	4.5	4.9	3.3	2.3	3.1	1.4	1.0	3.0
Less than once a year	4.5	3.1	1.9	1.1	0.8	1.4	1.1	1.8
Never	66.9	70.6	68.2	65.1	66.6	74.1	84.2	71.1
<i>N (unweighted)</i>								
<i>Men</i>	100	755	856	679	633	442	418	3883
<i>Women</i>	107	944	1075	798	721	546	651	4842

For variable definitions, see AS.2, AS.19 and AS.22. For related text, see S.19. Figures weighted for non-response.

Table S11b. Voluntary work frequency (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Twice a month or more	7.0	11.9	13.8	19.3	22.9	15.4
About once a month	2.1	1.6	3.6	5.0	7.1	4.0
Every few months	2.1	2.6	2.3	3.7	5.3	3.3
About once or twice a year	1.4	2.0	2.7	3.5	4.5	2.9
Less than once a year	0.6	1.5	2.0	2.4	3.1	2.0
Never	86.9	80.4	75.6	66.1	57.1	72.5
Women						
Twice a month or more	10.3	13.9	17.8	21.4	26.8	17.7
About once a month	1.4	1.9	3.7	5.8	7.2	3.9
Every few months	1.0	1.9	2.3	2.7	5.0	2.5
About once or twice a year	1.7	2.1	2.4	4.4	4.4	2.9
Less than once a year	1.0	1.4	1.7	1.7	3.4	1.8
Never	84.5	78.9	72.1	64.0	53.1	71.2
<i>N (unweighted)</i>						
<i>Men</i>	606	709	756	827	902	3800
<i>Women</i>	915	1000	978	951	909	4753

For variable definitions, see AS.19, AS.20, AS.21 and AS.22. For related text, see S.20. Figures weighted for non-response.

Table S12a. Cared for someone in last month (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	12.4	11.6	12.1	9.8	11.4	9.9	8.7	10.9
Women	18.2	22.5	19.3	15.8	11.5	10.1	4.6	15.1
<i>N (unweighted)</i>								
<i>Men</i>	100	788	876	710	651	456	448	4029
<i>Women</i>	114	963	1095	819	735	561	697	4984

For variable definitions, see AS.2, AS.4 and AS.22. For related text, see S.21. Figures weighted for non-response.

Table S12b. Cared for someone in last month (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	8.5	11.9	11.3	11.5	11.0	10.9
Women	12.0	14.6	14.9	17.2	17.3	15.1
<i>N (unweighted)</i>						
<i>Men</i>	632	739	786	860	928	3945
<i>Women</i>	942	1025	1005	977	945	4894

For variable definitions, see AS.4, AS.20, AS.21 and AS.22. For related text, see S.22. Figures weighted for non-response.

Table S13a. Receives help with mobility, ADL or IADL problems (%), by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	[25.9]	31.2	31.1	34.6	31.8	39.9	51.6	36.4
Women	46.5	34.9	39.4	42.7	43.5	47.7	66.0	46.7
<i>N (unweighted)</i>								
<i>Men</i>	39	281	374	341	375	300	348	2058
<i>Women</i>	57	459	619	524	517	444	618	3238

For variable definitions, see AS.2, AS.10 and AS.22. For related text, see S.23. Base population only includes those with a mobility, ADL or IADL difficulty. Figures weighted for non-response.

Table S13b. Receives help with mobility, ADL or IADL problems (%), by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	44.8	38.0	34.1	36.3	24.3	36.6
Women	55.0	52.6	42.9	39.8	37.6	47.0
<i>N (unweighted)</i>						
<i>Men</i>	451	441	414	380	332	2018
<i>Women</i>	744	721	686	567	465	3183

For variable definitions, see AS.10, AS.20, AS.21 and AS.22. For related text, see S.24. Base population only includes those with a mobility, ADL or IADL difficulty. Figures weighted for non-response.

Table S14a. Mean number of close relationships with children, family and friends, by age and sex: wave 5

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	7.08	6.64	6.72	7.15	7.34	7.69	6.88	6.97
Women	6.55	7.70	7.34	7.83	8.09	7.61	6.40	7.46
<i>N (unweighted)</i>								
<i>Men</i>	86	694	782	632	582	392	337	3505
<i>Women</i>	99	870	1014	761	678	476	511	4409

For variable definitions, see AS.2, AS.5 and AS.22. For related text, see S.25. Figures weighted for non-response.

Table S14b. Mean number of close relationships with children, family and friends, by age and wealth group: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	6.28	6.84	7.08	6.96	7.59	6.99
Women	7.33	7.17	7.40	7.57	7.95	7.47
<i>N (unweighted)</i>						
<i>Men</i>	497	635	679	770	853	3434
<i>Women</i>	780	902	891	897	861	4331

For variable definitions, see AS.5, AS.20, AS.21 and AS.22. For related text, see S.25. Figures weighted for non-response.

**Table S15a. Self-perceived social standing in society (%),
by age and sex: wave 5**

	Age in 2010–11							Total
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Worst off	3.2	6.0	3.3	3.1	3.6	3.3	0.3	3.7
2 nd	21.8	17.2	16.2	15.6	18.8	19.7	20.3	17.7
3 rd	30.6	33.8	34.9	39.0	41.8	41.4	47.7	38.0
4 th	40.3	38.2	41.3	35.8	30.8	30.7	28.6	35.8
Best off	4.0	4.8	4.2	6.5	4.9	4.9	3.1	4.8
Women								
Worst off	4.9	4.2	2.3	2.4	1.7	3.3	3.0	3.0
2 nd	20.3	14.9	17.4	15.5	21.3	19.0	18.8	17.5
3 rd	40.7	42.2	43.6	49.4	49.7	52.3	52.1	47.0
4 th	32.5	33.8	32.6	28.8	25.7	23.0	23.0	29.0
Best off	1.6	4.9	4.1	3.8	1.5	2.3	3.0	3.5
<i>N (unweighted)</i>								
<i>Men</i>	88	684	781	635	568	393	320	3469
<i>Women</i>	96	860	996	739	658	461	468	4278

For variable definitions, see AS.2, AS.16 and AS.22. For related text, see S.26. Figures weighted for non-response.

**Table S15b. Self-perceived social standing in society (%),
by wealth group and sex: wave 5**

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men						
Worst off	12.7	4.9	2.4	0.7	0.1	3.8
2 nd	35.1	23.4	17.6	11.9	5.4	17.7
3 rd	38.5	47.9	42.2	40.6	24.2	38.2
4 th	13.0	21.8	34.6	43.4	57.9	35.6
Best off	0.8	2.1	3.2	3.5	12.5	4.7
Women						
Worst off	8.2	3.7	1.8	0.3	0.7	3.0
2 nd	32.3	22.3	18.1	9.9	3.8	17.6
3 rd	43.5	52.9	53.0	50.0	35.0	47.1
4 th	13.5	19.7	25.1	36.5	51.8	28.8
Best off	2.5	1.4	2.0	3.4	8.7	3.5
<i>N (unweighted)</i>						
<i>Men</i>	488	623	679	761	847	3398
<i>Women</i>	735	876	862	875	852	4200

For variable definitions, see AS.16, AS.20, AS.21 and AS.22. For related text, see S.27. Figures weighted for non-response.

Table S16a. Mean self-perceived chance (%) of living to 85, by age and sex: wave 5

	Age in 2010–11				Total
	52–54	55–59	60–64	65–69	
Men	52.35	50.42	49.25	50.88	50.25
Women	52.68	55.57	56.18	54.92	55.47
<i>N (unweighted)</i>					
<i>Men</i>	98	735	825	662	2320
<i>Women</i>	104	918	1051	769	2842

For variable definitions, see AS.2, AS.15 and AS.22. For related text, see S.28. Figures weighted for non-response.

Table S16b. Mean self-perceived chance (%) of living to 85, by wealth group and sex: wave 5

	Wealth group in 2010–11					Total
	Lowest	2 nd	3 rd	4 th	Highest	
Men	42.58	50.47	48.91	52.51	54.73	50.32
Women	49.16	54.28	53.90	58.60	59.46	55.34
<i>N (unweighted)</i>						
<i>Men</i>	339	424	399	509	595	2266
<i>Women</i>	440	569	520	606	634	2769

For variable definitions, see AS.15, AS.20, AS.21 and AS.22. For related text, see S.29. Base population only includes those aged under 70. Figures weighted for non-response.

Table SL1a. Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–5, by age and sex

Age in 2002–03	% married in 2002–03	Of those married or remarried at baseline:					<i>Unwtd</i> <i>N</i>
		% still married at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	78.2	100	97.0	95.7	94.7	92.7	1810
50–54	78.9	100	97.6	97.2	96.9	97.2	393
55–59	77.0	100	98.3	97.0	97.3	94.1	424
60–64	80.6	100	97.5	96.6	95.4	94.1	319
65–69	78.3	100	97.1	96.0	93.5	93.2	297
70–74	80.2	100	97.6	95.3	94.3	89.1	219
75+	73.0	100	91.0	87.6	83.7	78.7	158
Women	63.2	100	95.2	92.0	88.4	84.7	1820
50–54	73.2	100	96.6	95.9	95.5	94.2	437
55–59	75.2	100	97.2	95.5	93.2	90.6	467
60–64	71.2	100	97.2	93.3	89.3	86.8	335
65–69	61.8	100	93.9	92.0	88.6	83.6	285
70–74	55.9	100	92.9	84.4	79.3	72.9	179
75+	32.1	100	84.6	76.9	60.8	49.3	117

For variable definitions, see AS.2, AS.3, AS.9 and AS.22. For related text, see S.30. Figures weighted for non-response and attrition using longitudinal weights.

Table SL1b. Percentage married or remarried at baseline (wave 1) and, of those, percentage still married at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% married in 2002–03	Of those married at baseline:					<i>Unwtd</i> <i>N</i>
		% still married at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	78.1	100	97.1	95.7	94.6	92.6	1781
Lowest	55.0	100	92.0	88.8	85.6	81.9	134
2 nd	73.3	100	96.2	94.9	94.6	93.7	284
3 rd	80.3	100	97.9	96.5	95.5	94.7	358
4 th	84.5	100	98.5	97.2	96.4	93.4	477
Highest	88.0	100	97.9	96.6	95.6	93.7	528
Women	62.8	100	95.0	92.0	88.7	84.9	1774
Lowest	34.2	100	89.3	84.7	79.7	74.6	140
2 nd	59.5	100	93.0	89.1	85.2	82.1	303
3 rd	64.2	100	94.8	91.6	88.3	84.2	362
4 th	74.3	100	96.1	93.7	91.2	87.7	449
Highest	78.0	100	97.7	95.3	92.6	88.7	520

For variable definitions, see AS.3, AS.9, AS.20, AS.21 and AS.22. For related text, see S.31. Figures weighted for non-response and attrition using longitudinal weights.

Table SL2a. Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–5, by age and sex

Age in 2002–03	% using internet and/or email in 2002–03	Of those using internet and/or email at baseline:					<i>Unwtd</i> <i>N</i>
		% still using internet and/or email at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	44.1	100	91.2	91.6	90.9	91.2	773
50–54	63.7	100	96.2	96.9	95.0	95.4	243
55–59	51.5	100	91.5	92.0	92.0	92.5	215
60–64	39.0	100	91.5	91.5	94.0	92.3	129
65–69	31.5	100	86.6	87.8	90.2	89.0	99
70–74	24.4	100	81.8	86.0	76.7	88.4	51
75+	25.9	[100]	[71.4]	[65.7]	[64.7]	[58.8]	36
Women	31.1	100	84.4	83.1	82.6	84.5	711
50–54	49.1	100	93.0	92.1	90.8	91.6	238
55–59	42.0	100	87.6	89.2	89.7	89.7	225
60–64	29.5	100	80.2	80.2	81.3	84.4	114
65–69	21.4	100	74.2	74.2	76.9	80.0	84
70–74	10.7	-	-	-	-	-	25
75+	12.1	-	-	-	-	-	25

For variable definitions, see AS.2, AS.3, AS.8 and AS.22. For related text, see S.32. Figures weighted for non-response and attrition using longitudinal weights.

Table SL2b. Percentage using internet and/or email at baseline (wave 1) and, of those, percentage still using internet and/or email at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% using internet and/or email in 2002–03	Of those using internet and/or email at baseline:					<i>Unwtd</i> <i>N</i>
		% still using internet and/or email at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	43.9	100	91.2	91.7	91.0	90.9	760
Lowest	20.2	[100]	[72.5]	[85.0]	[72.5]	[75.0]	32
2 nd	31.4	100	83.5	81.5	82.4	84.6	89
3 rd	40.2	100	90.9	93.1	90.8	90.1	134
4 th	48.1	100	93.2	92.7	93.7	91.1	206
Highest	63.0	100	95.4	95.0	95.0	95.8	299
Women	31.2	100	84.4	83.0	82.8	84.9	699
Lowest	15.6	[100]	[58.7]	[60.9]	[58.7]	[60.9]	45
2 nd	22.4	100	79.3	76.8	74.7	77.1	88
3 rd	24.9	100	85.7	80.2	79.2	81.9	121
4 th	39.0	100	88.6	83.2	86.7	86.7	189
Highest	46.6	100	87.9	91.2	89.8	93.0	256

For variable definitions, see AS.3, AS.8, AS.20, AS.21 and AS.22. For related text, see S.33. Figures weighted for non-response and attrition using longitudinal weights.

Table SL2c. Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–5, by age and sex

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 ...					<i>Unwtd</i> <i>N</i>
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	55.9	0	18.8	23.2	29.3	35.3	874
50–54	36.3	0	30.2	37.6	50.3	55.7	114
55–59	48.5	0	19.1	23.7	30.5	40.1	174
60–64	61.0	0	20.8	29.0	33.3	36.8	168
65–69	68.5	0	16.3	18.5	24.2	30.3	184
70–74	75.6	0	12.0	14.3	21.1	25.4	141
75+	74.1	0	10.1	10.0	8.1	16.0	93
Women	68.9	0	13.8	17.9	22.7	28.3	1408
50–54	50.9	0	20.1	31.9	44.4	49.4	213
55–59	58.0	0	19.1	25.0	30.0	38.7	276
60–64	70.5	0	13.5	18.3	25.3	34.9	247
65–69	78.6	0	11.3	13.8	16.3	22.5	277
70–74	89.3	0	12.0	12.0	12.9	15.3	213
75+	87.9	0	5.5	4.1	4.1	5.0	182

For variable definitions, see AS.2, AS.3, AS.8 and AS.22. For related text, see S.34. Figures weighted for non-response and attrition using longitudinal weights.

Table SL2d. Percentage not using internet and/or email at baseline (wave 1) and, of those, percentage using internet and/or email at waves 2–5, by wealth group and sex

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 ...					<i>Unwtd</i> <i>N</i>
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	56.1	0	18.9	23.3	29.4	35.4	866
Lowest	79.8	0	13.2	16.5	15.7	19.0	122
2 nd	68.6	0	13.6	20.1	20.6	28.8	180
3 rd	59.8	0	16.4	24.1	30.3	34.5	190
4 th	51.9	0	25.9	23.8	35.9	42.0	204
Highest	37.0	0	25.5	32.7	45.1	53.2	170
Women	68.8	0	13.3	17.7	22.5	28.0	1381
Lowest	84.4	0	6.0	10.9	14.5	18.5	214
2 nd	77.6	0	9.4	14.2	17.8	23.3	284
3 rd	75.1	0	11.4	16.1	19.9	23.4	328
4 th	61.0	0	20.8	21.5	28.8	36.5	285
Highest	53.4	0	19.9	26.8	32.5	39.8	270

For variable definitions, see AS.3, AS.8, AS.20, AS.21 and AS.22. For related text, see S.35. Figures weighted for non-response and attrition using longitudinal weights.

Table SL3a. Percentage been on holiday in last year at baseline (wave 1) and, of those, percentage still been on holiday in last year at waves 2–5, by age and sex

Age in 2002–03	% been on holiday in 2002–03	Of those been on holiday in last year at baseline:					<i>Unwtd</i> <i>N</i>
		% still been on holiday in last year at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	80.6	100	91.2	89.4	85.6	82.3	1361
50–54	83.4	100	94.2	93.3	92.1	91.5	305
55–59	81.1	100	91.5	91.9	85.8	83.4	324
60–64	81.0	100	91.3	89.3	86.8	83.1	246
65–69	79.6	100	90.3	87.4	84.0	83.1	232
70–74	78.5	100	89.2	87.0	80.6	73.4	156
75+	74.1	100	84.0	76.8	69.0	56.0	98
Women	79.1	100	90.5	87.5	83.3	80.3	1709
50–54	83.5	100	92.5	90.7	89.9	87.6	379
55–59	80.3	100	93.8	91.0	90.1	87.3	410
60–64	86.2	100	91.1	90.7	85.8	84.6	316
65–69	80.3	100	89.4	85.7	86.1	81.2	292
70–74	72.5	100	89.3	90.0	78.1	70.6	175
75+	64.4	100	81.1	66.3	49.1	48.1	137

For variable definitions, see AS.2, AS.3, AS.7 and AS.22. For related text, see S.36. Figures weighted for non-response and attrition using longitudinal weights.

Table SL3b. Percentage been on holiday in last year at baseline (wave 1) and, of those, percentage still been on holiday in last year at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% been on holiday in 2002–03	Of those been on holiday in last year at baseline:					<i>Unwtd</i> <i>N</i>
		% still been on holiday in last year at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	80.5	100	91.0	89.4	85.5	82.1	1343
Lowest	53.8	100	81.1	72.0	59.4	57.5	87
2 nd	72.1	100	88.0	85.2	82.3	76.6	196
3 rd	83.1	100	91.5	89.7	87.1	84.5	272
4 th	87.2	100	93.1	92.2	88.5	84.1	360
Highest	90.8	100	93.4	93.9	90.7	88.5	428
Women	79.1	100	90.8	87.5	83.4	80.2	1677
Lowest	60.9	100	81.0	70.4	52.5	59.8	162
2 nd	71.4	100	90.2	84.5	83.8	76.2	267
3 rd	81.3	100	91.2	87.5	84.0	79.6	369
4 th	87.1	100	92.2	90.3	88.1	85.2	415
Highest	87.6	100	94.0	94.3	92.1	87.9	464

For variable definitions, see AS.3, AS.7, AS.20, AS.21 and AS.22. For related text, see S.37. Figures weighted for non-response and attrition using longitudinal weights.

Table SL4a. Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–5, by age and sex

Age in 2002–03	% using public transport in 2002–03	Of those using public transport at baseline:					<i>Unwtd</i> <i>N</i>
		% still using public transport at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	68.0	100	84.2	73.6	77.9	78.5	1575
50–54	67.8	100	84.0	68.2	71.2	76.6	344
55–59	66.7	100	82.7	73.4	82.9	80.9	369
60–64	66.2	100	85.4	73.9	81.7	85.4	256
65–69	72.0	100	88.9	78.2	81.0	82.9	264
70–74	68.8	100	85.8	83.0	80.1	75.7	188
75+	68.0	100	77.3	69.3	70.1	62.8	154
Women	79.7	100	89.3	79.0	80.2	78.5	2348
50–54	81.2	100	86.9	75.6	78.9	83.5	497
55–59	78.9	100	87.2	78.2	85.1	84.9	507
60–64	81.7	100	93.8	81.7	84.9	82.5	401
65–69	81.4	100	90.9	82.7	83.9	81.8	393
70–74	81.2	100	89.5	83.3	84.6	76.6	286
75+	73.9	100	88.3	74.8	61.8	54.6	264

For variable definitions, see AS.2, AS.3, AS.11 and AS.22. For related text, see S.38. Figures weighted for non-response and attrition using longitudinal weights.

Table SL4b. Percentage using public transport at baseline (wave 1) and, of those, percentage still using public transport at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% using public transport in 2002–03	Of those using public transport at baseline:					<i>Unwtd</i> <i>N</i>
		% still using public transport at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	68.1	100	84.0	73.4	77.8	78.3	1553
Lowest	65.6	100	84.0	76.8	78.2	79.0	161
2 nd	64.1	100	84.5	72.3	74.9	73.1	247
3 rd	62.5	100	82.0	69.6	78.5	75.3	284
4 th	69.4	100	82.6	70.3	75.2	77.9	396
Highest	76.4	100	86.5	77.9	81.4	83.8	465
Women	79.8	100	89.4	79.1	80.4	78.5	2303
Lowest	75.9	100	91.9	83.8	80.4	74.2	322
2 nd	83.7	100	89.0	80.5	80.0	79.0	454
3 rd	80.1	100	88.3	75.8	78.9	77.4	480
4 th	76.3	100	89.3	78.0	81.2	81.2	482
Highest	82.4	100	89.1	78.0	81.5	80.0	565

For variable definitions, see AS.3, AS.11, AS.20, AS.21 and AS.22. For related text, see S.39. Figures weighted for non-response and attrition using longitudinal weights.

Table SL4c. Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–5, by age and sex

Age in 2002–03	% not using public transport in 2002–03	Of those not using public transport at baseline:					<i>Unwtd</i> <i>N</i>
		% does use public transport at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	32.0	0	32.7	24.7	35.0	40.8	703
50–54	32.2	0	30.5	16.6	26.7	35.3	150
55–59	33.3	0	31.2	28.3	41.6	48.6	170
60–64	33.8	0	37.6	30.1	45.5	54.5	126
65–69	28.0	0	38.1	27.8	39.2	42.3	106
70–74	31.2	0	28.8	22.2	25.0	30.0	83
75+	32.0	0	30.3	26.0	26.3	22.1	68
Women	20.3	0	36.0	26.8	34.6	38.0	580
50–54	18.8	0	41.5	29.4	39.0	45.4	115
55–59	21.1	0	44.2	31.7	46.2	51.3	133
60–64	18.3	0	37.3	37.3	38.6	45.8	87
65–69	18.6	0	39.0	26.9	37.2	38.5	90
70–74	18.8	0	21.5	13.8	25.8	21.2	62
75+	26.1	0	26.8	18.8	18.8	19.6	93

For variable definitions, see AS.2, AS.3, AS.11 and AS.22. For related text, see S.40. Figures weighted for non-response and attrition using longitudinal weights.

Table SL4d. Percentage not using public transport at baseline (wave 1) and, of those, percentage using public transport at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% not using public transport in 2002–03	Of those not using public transport at baseline:					<i>Unwtd</i> <i>N</i>
		% does use public transport at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	31.9	0	33.0	24.9	34.8	40.7	691
Lowest	34.4	0	19.1	20.9	27.6	33.0	89
2 nd	35.9	0	35.5	24.3	29.6	36.8	139
3 rd	37.5	0	40.5	30.8	41.0	49.1	162
4 th	30.6	0	30.4	23.1	37.5	42.3	166
Highest	23.6	0	35.7	23.8	35.7	38.9	135
Women	20.2	0	36.2	26.7	34.5	38.1	571
Lowest	24.1	0	25.6	19.0	23.1	24.8	105
2 nd	16.3	0	32.6	25.8	28.1	29.5	87
3 rd	19.9	0	45.1	28.3	36.3	45.1	116
4 th	23.7	0	41.6	30.7	40.4	43.4	145
Highest	17.6	0	34.9	29.2	43.4	46.2	118

For variable definitions, see AS.3, AS.11, AS.20, AS.21 and AS.22. For related text, see S.41. Figures weighted for non-response and attrition using longitudinal weights.

Table SL5a. Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–5, by age and sex

Age in 2002–03	%	Of those volunteering at baseline:					<i>Unwtd</i> <i>N</i>
		% still volunteering at ...					
	in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	27.3	100	66.2	64.5	61.2	58.6	655
50–54	29.8	100	60.7	60.4	60.9	61.5	154
55–59	22.0	100	62.5	67.9	63.4	65.2	126
60–64	25.6	100	77.2	69.0	70.3	71.0	105
65–69	25.6	100	71.9	70.8	68.5	62.9	104
70–74	31.7	100	63.8	66.3	51.9	43.8	93
75+	33.3	100	66.2	54.1	48.0	36.0	73
Women	29.9	100	71.5	67.5	64.5	60.8	928
50–54	27.0	100	71.4	63.7	67.9	66.1	172
55–59	27.2	100	67.1	65.1	65.8	65.1	181
60–64	36.6	100	70.7	71.2	71.8	70.6	188
65–69	33.6	100	76.8	74.6	66.7	58.7	174
70–74	29.3	100	77.2	70.3	59.4	53.5	107
75+	27.4	100	66.7	59.5	48.6	42.3	106

For variable definitions, see AS.2, AS.3, AS.19 and AS.22. For related text, see S.42. Figures weighted for non-response and attrition using longitudinal weights.

Table SL5b. Percentage volunteering at baseline (wave 1) and, of those, percentage still volunteering at waves 2–5, by wealth group and sex

Wealth group in 2002–03	%	Of those volunteering at baseline:					<i>Unwtd</i> <i>N</i>
		% still volunteering at ...					
	in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	27.4	100	66.7	64.6	61.1	58.7	646
Lowest	17.8	[100]	[59.6]	[50.9]	[39.7]	[36.8]	42
2 nd	17.9	100	58.1	60.0	54.7	51.4	75
3 rd	23.1	100	64.4	51.0	56.7	48.1	106
4 th	31.1	100	66.1	69.6	66.1	66.7	177
Highest	40.6	100	73.1	72.6	67.5	66.0	246
Women	29.7	100	71.6	67.3	64.9	61.1	908
Lowest	14.3	100	62.9	61.4	50.0	51.4	69
2 nd	20.7	100	62.7	55.9	54.5	46.4	116
3 rd	29.9	100	69.7	63.3	57.2	50.6	183
4 th	34.0	100	70.3	68.2	68.1	66.1	215
Highest	46.4	100	79.6	75.2	75.2	72.3	325

For variable definitions, see AS.3, AS.19, AS.20, AS.21 and AS.22. For related text, see S.43. Figures weighted for non-response and attrition using longitudinal weights.

Table SL5c. Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–5, by age and sex

Age in 2002–03	% not volunteering in 2002–03	Of those not volunteering at baseline:					<i>Unwtd</i> <i>N</i>
		% does volunteer at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	72.7	0	12.0	13.0	14.1	14.7	1575
50–54	70.2	0	11.0	12.5	16.3	15.6	329
55–59	78.0	0	13.4	16.4	16.4	20.5	404
60–64	74.4	0	13.8	15.6	15.9	17.6	273
65–69	74.4	0	14.3	12.7	15.1	14.3	263
70–74	68.3	0	8.1	6.4	3.5	4.7	173
75+	66.7	0	7.4	8.8	8.8	3.4	133
Women	70.1	0	11.0	12.7	12.7	13.5	1946
50–54	73.0	0	10.1	15.2	14.5	16.3	432
55–59	72.8	0	12.8	13.5	16.7	17.4	454
60–64	63.4	0	13.7	16.9	17.6	19.7	293
65–69	66.4	0	12.1	13.9	11.7	15.4	301
70–74	70.7	0	8.6	6.1	8.6	6.1	234
75+	72.6	0	8.5	7.8	3.8	2.0	232

For variable definitions, see AS.2, AS.3, AS.19 and AS.22. For related text, see S.44. Figures weighted for non-response and attrition using longitudinal weights.

Table SL5d. Percentage not volunteering at baseline (wave 1) and, of those, percentage volunteering at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% not volunteering in 2002–03	Of those not volunteering at baseline:					<i>Unwtd</i> <i>N</i>
		% does volunteer at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	72.6	0	11.7	12.9	13.9	14.7	1550
Lowest	82.2	0	8.4	8.8	9.1	7.2	197
2 nd	82.1	0	8.7	8.4	10.2	10.8	306
3 rd	76.9	0	11.8	12.4	13.0	11.8	332
4 th	68.9	0	13.4	15.3	15.9	18.2	373
Highest	59.4	0	15.5	19.0	21.0	24.5	342
Women	70.3	0	10.9	12.4	12.5	13.5	1912
Lowest	85.7	0	6.4	6.4	7.9	8.4	348
2 nd	79.3	0	7.4	9.3	12.6	11.1	413
3 rd	70.1	0	13.6	14.9	12.3	13.8	401
4 th	66.0	0	13.2	16.1	14.2	15.1	403
Highest	53.6	0	15.5	17.0	16.4	21.5	347

For variable definitions, see AS.3, AS.19, AS.20, AS.21 and AS.22. For related text, see S.45. Figures weighted for non-response and attrition using longitudinal weights.

Table SL6a. Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–5, by age and sex

Age in 2002–03	% not caring in 2002–03	Of those not caring for someone at baseline:					<i>Unwtd N</i>
		% does care for someone at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	92.1	0	8.9	9.4	8.5	10.5	2112
50–54	92.0	0	9.5	9.3	10.1	11.0	455
55–59	90.7	0	8.2	9.2	6.1	9.0	493
60–64	94.0	0	10.3	7.7	10.8	14.6	362
65–69	91.8	0	10.1	10.7	8.3	11.0	345
70–74	92.0	0	10.4	9.2	7.5	8.3	251
75+	93.0	0	3.5	11.1	7.5	7.0	206
Women	87.8	0	15.0	12.5	11.8	11.7	2955
50–54	86.2	0	19.7	18.9	19.0	17.9	615
55–59	83.4	0	20.5	16.0	16.5	18.4	644
60–64	88.0	0	16.1	12.4	10.9	10.7	492
65–69	87.3	0	14.3	13.2	11.4	9.2	488
70–74	93.2	0	11.5	5.7	6.3	6.3	350
75+	91.5	0	4.4	4.9	2.5	3.2	366

For variable definitions, see AS.2, AS.3, AS.4 and AS.22. For related text, see S.46. Figures weighted for non-response and attrition using longitudinal weights.

Table SL6b. Percentage not caring for someone at baseline (wave 1) and, of those, percentage caring for someone at waves 2–5, by wealth group and sex

Wealth group in 2002–03	% not caring in 2002–03	Of those not caring for someone at baseline:					<i>Unwtd N</i>
		% does care for someone at ...					
		Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	
Men	92.0	0	9.0	9.4	8.6	10.5	2079
Lowest	92.1	0	6.4	8.3	8.0	8.3	234
2 nd	90.5	0	9.2	10.5	6.9	10.5	353
3 rd	90.8	0	6.6	9.1	10.1	11.5	410
4 th	94.4	0	10.9	9.9	9.4	10.7	531
Highest	91.7	0	10.5	9.1	8.3	10.7	551
Women	88.1	0	15.0	12.5	11.8	11.7	2555
Lowest	88.8	0	10.3	7.8	7.6	5.7	384
2 nd	87.7	0	14.0	12.6	9.7	10.3	483
3 rd	86.2	0	15.0	16.0	14.8	15.0	516
4 th	88.4	0	17.4	14.1	15.3	15.2	562
Highest	89.4	0	17.8	11.7	11.2	11.9	610

For variable definitions, see AS.3, AS.4, AS.20, AS.21 and AS.22. For related text, see S.47. Figures weighted for non-response and attrition using longitudinal weights.

H. Health domain tables

Paola Zaninotto *University College London*

Andrew Steptoe *University College London*

Introduction

H.1 This chapter presents results from the Health domain of the English Longitudinal Study of Ageing (ELSA). Results are presented according to seven domains of health: general health, diagnosed health conditions, disability, cognitive function, health behaviours, participation in cancer screening and quality-of-care indicators. A glossary of the measures is provided in the annex to this chapter. Results are presented as follows:

- Cross-sectional tables (H1a–H10) are based on core member respondents of wave 5 (including the refreshment sample members added in 2006–07 and 2008–09). Results for Tables H1a–H8b are classified by sex and age (divided into five-year categories) and by sex and wealth groups. Results are weighted using cross-sectional weights.
- Longitudinal tables (HL1a–HL9b) are based on a balanced ELSA sample of core members who participated in all waves (1 to 5). Results are classified by sex and age (divided into five-year categories) and by sex and wealth groups. Results are weighted using longitudinal weights.

Cross-sectional tables

General health

H.2 Table H1a shows the percentage of self-rated health by sex and age at wave 5. 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, 60% of men and women reported either very good or good health.

H.3 Table H1b shows the percentage of self-rated health by sex and wealth at wave 5. Among the highest wealth group, 17% of men and 19% of women rated their health as being excellent, while in the lowest wealth group only 6% of men and 5% of women rated their health as being excellent. Among the lowest wealth group, 30% of men reported their health as being fair while an equal proportion of women reported their health as being good or fair (30% in each category).

H.4 Table H2a shows the percentage of people reporting a limiting long-standing illness by sex and age at wave 5. The prevalence of men and women reporting a limiting long-standing illness increases with age and is highest at the age of 80 and over.

H.5 Table H2b shows the percentage of limiting long-standing illness by sex and wealth at wave 5. The prevalence of men and women reporting a limiting long-standing illness is highest in the lowest wealth group and is less than half that level in the highest wealth group.

Health conditions

H.6 Table H3a shows the percentage of health conditions by sex and age at wave 5. The prevalence of the health conditions reported in the table tends to increase with age, in both men and women, the only exception being for diagnosed depression which is highest in the younger age groups and then decreases at older ages. At each age, more men than women reported coronary heart disease (CHD), while more women than men reported arthritis and depression. Overall, the prevalence of chronic disease is high in wave 5 of ELSA, particularly for arthritis, CHD and respiratory illnesses.

H.7 Table H3b shows the percentage of health conditions by sex and wealth at wave 5. Among men and women, the prevalence of all health conditions, apart from cancer, is lowest in the highest wealth group and highest in the lowest wealth group.

Disability

H.8 Table H4a shows the mean walking speed in metres per second (m/s) by sex and age at wave 5. In both men and women, the mean walking speed decreases with age. At each age, it is lower for women than for men.

H.9 Table H4b shows the mean walking speed by sex and wealth at wave 5. The mean walking speed of men and women in the poorest wealth group is on average 0.3m/s lower than that of people in the highest wealth group. In each wealth group, women have lower mean walking speed than men; however, the gender gaps attenuate in the highest wealth groups.

H.10 Table H5a reports the prevalence of one or more limitations with activities of daily living (ADLs) and instrumental activities of daily living (IADLs) by sex and age at wave 5. The prevalence of men and women reporting one or more limitations in performing ADLs and IADLs increases with age. At each age, more women than men reported one or more limitations with ADLs and IADLs.

H.11 Table H5b reports the prevalence of one or more limitations with ADLs and IADLs by sex and wealth at wave 5. There is a strong gradient in all measures, with the proportion of men and women in the lowest wealth group having one or more limitations with ADLs and IADLs being more than triple that in the highest wealth group. In the lower wealth groups, there is a gender difference in the prevalence of those reporting one or more limitations with IADLs (with women being more at risk than men), which attenuates in the highest wealth group but remains significant ($p < 0.05$).

Cognitive function

H.12 Table H6a reports the mean cognitive function by sex and age at wave 5. Cognitive functioning declines with age in both sexes. Women achieve better memory and executive functioning than men; however, the gender gap is narrower at older ages and disappears among those aged 80 and over.

H.13 Table H6b reports the mean cognitive function by sex and wealth at wave 5. In both sexes, cognitive functioning is lowest in the lowest wealth group.

Health behaviours

H.14 Table H7a shows the prevalence of several health behaviours by sex and age at wave 5. In both sexes, the prevalence of current smokers decreases with age, while the

prevalence of those being physically inactive and those reporting daily alcohol consumption (for men only) increases with age. The prevalence of men and women consuming five or more portions of fruit and vegetables a day increases up to the age of 74 and then declines in the oldest groups.

H.15 Table H7b shows the prevalence of several health behaviours by sex and wealth at wave 5. In both sexes, the prevalence of current smokers and of physical inactivity is highest in the lowest wealth groups. The prevalence of daily alcohol consumption and of consumption of five or more portions of fruit and vegetables a day is lowest in the lowest wealth group. Over a third of the men and women in the lowest wealth group are physically inactive and do not eat five or more portions of fruit and vegetables a day.

Participation in NHS cancer screening

H.16 Table H8a reports the prevalence of NHS colorectal and breast cancer screening by sex and age at wave 5. The prevalence of women who had a colorectal cancer screening as part of the NHS programme is higher in the 65–69 age group than in the 60–64 age group, while for men the prevalence does not differ by age. About 97% of women aged 52–54 had a breast cancer screening as part of the NHS programme; this prevalence decreases with age.

H.17 Table H8b reports the prevalence of NHS colorectal and breast cancer screening by sex and wealth at wave 5. There are strong socio-economic gradients, so the prevalence of men and women who had a colorectal cancer screening as part of the NHS programme is lowest in the lowest wealth group. Similarly, the prevalence of women who had a breast cancer screening as part of the NHS programme is lowest in the lowest wealth group.

Quality-of-care indicators¹

H.18 In this subsection, we assess the quality of healthcare received for diabetes and smoking by the ELSA participants aged 52 and over. The age groups used in Tables H9 and H10 are different from those used in other tables mainly due to the small sample size involved in the analysis of quality of healthcare. For a detailed description of the derivation of the quality-of-care indicators, see AH.13 in the annex.

H.19 Table H9 reports the overall achievement of diabetes and smoking quality-of-care indicators at wave 5. At least 80% of participants with diabetes had received the care set out in indicators Diab1, 2, 6 and 9. This included a blood test or a foot check in the past year, and an intervention for raised cholesterol. Over 80% of participants who smoke were offered advice or therapy to stop smoking.

H.20 Table H10 reports the achievement of diabetes and smoking quality-of-care indicators by age and sex. Note that broader age groups are used due to the small sample size. Results are not given for Diab6 because of the small sample size. For the diabetes quality-of-care indicators, there are few variations by age. Fewer women than men reported receiving a foot check. Four-fifths of current smokers reported that they had been advised to stop by a doctor or nurse or had been told about nicotine products. There is no variation in the smoking quality-of-care indicator by age or sex.

¹ The authors are grateful to Nicholas Steel from the University of East Anglia for advice about the quality-of-care indicators.

Longitudinal tables

H.21 Cross-sectional tables using a series of data from different time periods combine the effects 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 (that is, 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. The tables that follow take the set of individuals who have responded in every wave from 1 to 5 (the ‘balanced panel’) and track some health conditions by age, sex and wealth in 2002–03 (the ‘baseline’ year) across time (waves).

General health

H.22 Table HL1a shows the percentage of fair or poor self-rated health by sex and age for waves 1 to 5. The prevalence of men and women reporting fair or poor health increases from wave 1 to wave 5, particularly in the older age groups.

H.23 Table HL1b shows the percentage of fair or poor self-rated health by sex and wealth for waves 1 to 5. The prevalence of men and women reporting fair or poor health increases in each wealth group from wave 1 to wave 5 and is highest at wave 5 among the lowest group.

Health conditions

H.24 Tables HL2a and HL3a show the percentage of CHD and diabetes by sex and age for waves 1 to 5. As might be expected, the prevalence of men and women reporting CHD and diabetes increases from wave 1 to wave 5, particularly in older age groups.

H.25 Tables HL2b and HL3b show the percentage of CHD and diabetes by sex and wealth for waves 1 to 5. The prevalence of men and women reporting CHD and diabetes increases in each wealth group from wave 1 to wave 5 and is highest at wave 5 among the lowest group. The prevalence of diabetes is over three times higher in wave 5 than in wave 1 in the lowest wealth group, for both sexes. It is worth mentioning that, by wave 5, people in the highest wealth group have not yet reached the CHD prevalence seen in the lowest wealth group in wave 1 (for women) and wave 2 (for men). This finding suggests that there might be a postponement of CHD by several years for those in the highest wealth group.

H.26 Table HL4a reports the prevalence of diagnosed depression by sex and age in waves 1 to 5. The prevalence of men and women reporting depression increases from wave 1 to wave 5 and at each wave is higher among women than among men. Increases over time are particularly marked in younger age groups.

H.27 Table HL4b reports the prevalence of diagnosed depression by sex and wealth in waves 1 to 5. The prevalence of diagnosed depression increases with time in each wealth group. In each wealth group, women have a higher prevalence of depression than men at each point in time.

Disability

H.28 Table HL5a reports the mean walking speed by sex and age for waves 1 to 5. For men aged 60–64, walking speed does not change between waves 1 and 2 or between waves 3 and 4. For both men and women, mean walking speed decreases from wave 1 to wave 5 in each age group, and the decline is steeper for women up to the age of 79 than for men.

H.29 Table HL5b reports the mean walking speed by sex and wealth for waves 1 to 5. For both men and women, walking speed decreases over time in each wealth group, with the exception of women from the third wealth group, for whom walking speed is constant over time.

H.30 Table HL6a reports the prevalence of one or more limitations with ADLs by sex and age for waves 1 to 5. In both sexes, there is a clear gradient in the prevalence of those reporting one or more limitations with ADLs by age.

H.31 Table HL6b reports the prevalence of one or more limitations with ADLs by sex and wealth for waves 1 to 5. In both sexes, the prevalence of one or more limitations with ADLs increases with time in each wealth group.

Cognitive function

H.32 Table HL7a reports the mean cognitive function (memory) by sex and age at waves 1 to 5. Memory declines over time in each age group and in both sexes, with somewhat larger decreases in older age groups. The decline is slightly steeper for women than for men.

H.33 Table HL7b reports the mean cognitive function (memory) by sex and wealth at waves 1 to 5. For both men and women, the decreases in memory over time are similar in participants across the five wealth groups.

Health behaviours

H.34 Table HL8a shows the prevalence of smoking by sex and age for waves 1 to 5. Among men, the prevalence of current smokers decreases over time up to the age of 69, is stable over time among those aged 70–74 and decreases over time for people older than that. Among women, the prevalence of current smokers decreases over time in all age groups.

H.35 Table HL8b shows the prevalence of smoking by sex and wealth for waves 1 to 5. In both sexes, the prevalence of current smokers decreases over time in all wealth groups.

H.36 Table HL9a shows the prevalence of physical inactivity by sex and age for waves 1 to 5. In both sexes, the prevalence of those physically inactive increases with time in older ages only, and is relatively constant at younger ages.

H.37 Table HL9b shows the prevalence of physical inactivity by sex and wealth for waves 1 to 5. Although the increases in physical inactivity over time occur in all wealth groups, the absolute levels of inactivity in the lower wealth groups are very high.

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 activities of daily living (dressing, walking across a room, bathing or showering, eating, getting out of bed, using the toilet) and with instrumental activities of daily living (using a map, preparing a hot meal, shopping for groceries, making phone calls, taking medications, doing work around the house, managing money). From these questions, two variables were derived to indicate whether the respondent had one or more difficulties with ADLs and with IADLs.

AH.2 *Age*: Defined as age at last birthday.

AH.3 *Alcohol consumption*: Based on the questions on frequency of alcohol consumption, a variable was derived to indicate whether or not the respondent was drinking alcohol three days a week and more (which was then labelled as daily alcohol consumption).

AH.4 *Balanced panel*: The set of individuals who are interviewed in all waves of interest.

AH.5 *Baseline*: The wave of data that is chosen to be the starting point for characteristics in longitudinal analysis that may change over time.

AH.6 *Executive function*: This is measured by an index that combines the scores on the objective executive tests (word finding and letter cancellation). Higher scores indicate better executive function.

AH.7 *Fruit and vegetables consumption*: Based on the questions on fruit and vegetables consumption, a variable was derived to indicate whether the respondent ate five or more portions of fruit and vegetables a day.

AH.8 *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.9 *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.10 *Memory function*: This is measured by an index that combines the scores on the objective memory tests (orientation in time, word-list learning and prospective memory). Higher scores indicate better memory.

AH.11 *NHS cancer screening*: There are currently two cancer screening programmes available to people in the ELSA age range. The NHS colorectal (bowel) cancer screening programme is offered every two years to people aged 60–70, while breast cancer screening (mammography) is offered every three years to women aged 50 and over. Respondents were asked whether they used a bowel testing kit as part of the NHS programme and, if so, in which year. Based on this information and on the age of participants, a variable was derived that indicates whether the respondents had a colorectal cancer screening. We included respondents aged 60–72 in this analysis.

Similarly, for women, a breast cancer screening variable was derived and we included respondents aged 52 and over in this analysis.

AH.12 *Physical activity*: Based on the questions on frequency of leisure-time physical activity, a variable was derived to indicate whether or not the respondent was physically inactive (sedentary physical activity).

AH.13 *Quality-of-care indicators for diabetes and smoking defined as follows*:

Diab1. IF a person aged 50 or older has diabetes, THEN his or her glycosylated haemoglobin or fructosamine level should be measured at least annually. Respondents were asked whether they had had this test [glycosylated haemoglobin or HbA1c or fructosamine] performed in the past 12 months.

Diab2. IF a diabetic person aged 50 or older does not have established renal disease and is not receiving an ACE inhibitor or angiotensin II receptor blocker, THEN he or she should receive an annual test for proteinuria. Respondents were asked whether they had had a urine test for protein in the last 12 months.

Diab6. IF a diabetic person aged 50 or older has a fasting total cholesterol level of 5mmol/L or greater, THEN he or she should be offered an intervention to lower cholesterol. Respondents were asked whether the doctor had talked to them about how to lower their cholesterol. This would include changing their diet, losing weight, getting more exercise or taking medication.

Diab9. ALL diabetic people aged 50 or older should have an annual examination of their feet. Respondents were asked whether, in the past year, any doctor or nurse had examined their bare feet.

Smok3. IF a person aged 50 or older uses tobacco regularly, THEN he or she should be offered advice and/or pharmacological therapy to stop tobacco use at least once. Respondents were asked whether they had either been advised to stop smoking or been told about pharmacological therapy.

AH.14 *Self-rated general health*: Respondents were asked to rate their health as excellent, very good, good, fair or poor. Since at wave 3 self-rated general health was collected using a different version, for comparability results from that wave are omitted from tables.

AH.15 *Smoking status*: Defined as whether the respondent was a current smoker or not.

AH.16 *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.17 *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).

AH.18 *Wealth groups*: 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 2011 prices and rounded to the nearest £1000:

	Wealth group definition wave 1 (2002–03)	Wealth group definition wave 5 (2010–11)
Lowest	Less than £18k	Less than £50k
2 nd	Between £18k and £118k	Between £50k and £175k
3 rd	Between £118k and £210k	Between £175k and £270k
4 th	Between £210k and £375k	Between £270k and £440k
Highest	More than £375k	More than £440k

AH.19 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 5 (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

Table H1a. Self-rated health (%), by age and sex: wave 5

Self-rated health	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Excellent	23.1	15.6	13.9	10.0	9.7	8.4	6.0	12.0
Very good	37.3	36.0	29.8	31.4	28.6	24.4	21.1	30.2
Good	25.0	27.1	32.6	35.2	31.3	31.8	32.5	31.1
Fair	9.8	12.4	16.4	16.1	21.1	26.3	27.9	18.0
Poor	4.8	9.0	7.3	7.3	9.4	9.2	12.5	8.7
Women								
Excellent	15.1	16.0	12.9	13.3	8.3	5.9	5.1	11.2
Very good	26.0	32.7	33.4	26.9	28.4	22.8	19.5	28.1
Good	35.1	28.9	33.7	32.7	31.9	36.9	31.9	32.3
Fair	16.2	15.4	14.7	20.2	22.7	22.9	29.0	19.8
Poor	7.6	7.0	5.4	6.9	8.8	11.5	14.6	8.6
<i>Unweighted N</i>								
<i>Men</i>	100	755	855	679	633	442	419	3883
<i>Women</i>	107	941	1075	799	720	547	659	4848

For variable definitions, see AH.2, AH.14 and AH.19. For related text, see H.2. Figures weighted for non-response.

Table H1b. Self-rated health (%), by wealth group and sex: wave 5

Self-rated health	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
Excellent	6.0	8.9	11.9	14.8	17.0
Very good	16.9	24.8	26.6	37.3	41.3
Good	25.3	34.7	35.3	29.0	31.0
Fair	29.5	22.0	19.4	14.6	8.0
Poor	22.4	9.6	6.8	4.2	2.7
Women					
Excellent	4.7	9.3	9.9	13.8	19.1
Very good	17.3	23.9	28.7	35.0	37.6
Good	29.7	34.0	35.1	33.0	30.1
Fair	29.8	23.4	19.1	14.2	10.6
Poor	18.5	9.4	7.2	4.1	2.6
<i>Unweighted N</i>					
<i>Men</i>	605	709	756	827	901
<i>Women</i>	913	999	977	951	909

For variable definitions, see AH.14, AH.16, AH.18 and AH.19. For related text, see H.3. Figures weighted for non-response.

Table H2a. Limiting long-standing illness (%), by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men	20.2	24.3	30.6	31.4	34.0	44.7	50.8	33.0
Women	28.9	28.7	31.0	36.5	42.0	46.0	56.7	38.4
<i>Unweighted N</i>								
<i>Men</i>	101	789	877	711	651	460	460	4049
<i>Women</i>	114	961	1096	819	737	564	738	5029

For variable definitions, see AH.2, AH.9 and AH.19. For related text, see H.4. Figures weighted for non-response.

Table H2b. Limiting long-standing illness (%), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men	54.2	37.6	32.9	25.3	20.1
Women	56.8	41.9	37.1	29.8	23.7
<i>Unweighted N</i>					
<i>Men</i>	631	740	785	859	928
<i>Women</i>	942	1024	1004	975	945

For variable definitions, see AH.9, AH.16, AH.18 and AH.19. For related text, see H.5. Figures weighted for non-response.

Table H3a. Diagnosed health conditions (%), by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
CHD	3.8	9.6	11.9	19.9	21.0	32.0	34.2	18.1
Diabetes	6.9	10.7	12.1	15.0	17.6	18.5	15.7	13.8
Cancer	0.8	2.4	4.6	7.3	8.6	10.7	7.3	5.8
Respiratory illness	14.0	9.6	13.7	16.5	17.2	15.0	15.1	13.9
Arthritis	13.5	18.1	27.2	29.0	33.3	35.5	38.1	27.6
Depression	8.2	8.3	8.4	5.8	2.1	2.3	2.9	5.9
Women								
CHD	1.6	3.3	5.5	10.6	14.5	21.4	25.7	11.7
Diabetes	9.2	5.8	7.6	10.0	11.3	15.8	13.7	9.9
Cancer	7.8	4.9	5.1	7.6	6.5	7.8	7.1	6.3
Respiratory illness	12.3	14.6	15.0	16.3	20.1	19.4	15.6	16.2
Arthritis	25.1	30.7	39.0	45.6	49.8	54.2	57.5	43.5
Depression	15.7	10.1	10.4	6.8	6.6	4.4	3.3	7.7
<i>Unweighted N</i>								
Men								
CHD	101	790	880	713	652	460	460	4056
Diabetes	101	789	876	712	652	460	459	4049
Cancer	101	790	880	713	652	460	460	4056
Respiratory illness	101	789	877	712	652	459	459	4049
Arthritis	98	768	861	692	628	443	433	3923
Depression	101	788	879	713	650	460	460	4051
Women								
CHD	114	963	1096	821	737	565	738	5034
Diabetes	114	963	1095	820	737	565	734	5028
Cancer	114	963	1096	821	737	565	738	5034
Respiratory illness	114	962	1096	820	737	564	735	5028
Arthritis	112	938	1059	792	714	525	687	4827
Depression	114	963	1095	820	737	564	738	5031

For variable definitions, see AH.2, AH.8 and AH.19. For related text, see H.6. Figures weighted for non-response.

Table H3b. Diagnosed health conditions (%), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
CHD	25.9	20.8	19.1	15.3	11.3
Diabetes	18.4	16.4	16.1	11.0	8.9
Cancer	6.2	4.3	7.2	5.6	6.0
Respiratory illness	19.4	17.9	11.7	12.4	9.6
Arthritis	40.6	31.1	26.6	23.8	19.7
Depression	12.2	5.9	4.9	4.8	2.9
Women					
CHD	19.0	13.0	12.9	8.9	3.8
Diabetes	15.7	11.1	10.9	6.7	4.0
Cancer	6.3	6.7	5.5	7.3	5.9
Respiratory illness	23.8	17.9	14.5	12.7	11.3
Arthritis	53.9	47.8	42.9	38.9	33.5
Depression	11.3	7.9	6.5	6.7	5.5
<i>Unweighted N</i>					
Men					
CHD	632	741	786	860	930
Diabetes	631	739	786	859	928
Cancer	632	741	786	860	930
Respiratory illness	632	738	786	859	928
Arthritis	600	712	763	839	907
Depression	631	739	786	860	928
Women					
CHD	942	1025	1005	978	945
Diabetes	940	1024	1005	977	945
Cancer	942	1025	1005	978	945
Respiratory illness	941	1024	1004	977	943
Arthritis	887	975	958	956	915
Depression	941	1025	1004	978	944

For variable definitions, see AH.8, AH.16, AH.18 and AH.19. For related text, see H.7. Figures weighted for non-response.

Table H4a. Mean walking speed (m/s), by age and sex: wave 5

	Age in 2010–11					All
	60–64	65–69	70–74	75–79	80+	
Men	0.99	0.97	0.90	0.82	0.70	0.90
Women	0.96	0.92	0.85	0.75	0.62	0.85
<i>Unweighted N</i>						
Men	801	636	578	404	329	2748
Women	1002	732	655	477	441	3307

For variable definitions, see AH.2, AH.17 and AH.19. For related text, see H.8. Figures weighted for non-response.

Table H4b. Mean walking speed (m/s), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men	0.75	0.86	0.88	0.95	1.03
Women	0.69	0.79	0.84	0.91	1.00
<i>Unweighted N</i>					
Men	376	503	552	609	656
Women	583	640	722	665	646

For variable definitions, see AH.16, AH.17, AH.18 and AH.19. For related text, see H.9. Base population only includes people aged 60 and over. Figures weighted for non-response.

Table H5a. One or more limitations with ADLs and IADLs (%), by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
ADLs	14.2	11.4	14.1	16.0	21.0	24.6	35.9	18.2
IADLs	7.1	9.2	9.7	8.5	12.5	17.8	32.2	13.1
Women								
ADLs	14.1	12.4	12.4	16.5	22.0	29.2	43.5	21.0
IADLs	13.8	10.3	12.2	13.8	17.1	24.8	45.8	19.4
<i>Unweighted N</i>								
<i>Men</i>	101	789	877	712	652	460	460	4051
<i>Women</i>	114	963	1096	820	737	565	738	5033

For variable definitions, see AH.1, AH.2 and AH.19. For related text, see H.10. Figures weighted for non-response.

Table H5b. One or more limitations with ADLs and IADLs (%), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
ADLs	34.2	19.9	16.2	14.7	9.6
IADLs	26.6	14.9	11.9	9.1	5.7
Women					
ADLs	35.9	25.4	18.6	13.8	9.1
IADLs	34.3	21.6	17.5	13.1	8.2
<i>Unweighted N</i>					
<i>Men</i>	632	741	786	860	930
<i>Women</i>	942	1025	1005	978	945

For variable definitions, see AH.1, AH.16, AH.18 and AH.19. For related text, see H.11. Figures weighted for non-response.

Table H6a. Mean cognitive function, by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Memory	16.4	17.5	17.0	16.2	14.7	13.8	12.2	15.8
Executive	14.3	14.7	14.2	13.3	12.6	11.7	10.8	13.4
Women								
Memory	17.9	17.9	18.0	17.0	15.8	14.6	11.9	16.3
Executive	15.0	15.1	14.6	14.0	13.1	12.2	10.8	13.7
<i>Unweighted N</i>								
Men								
Memory	99	746	840	667	622	431	382	3787
Executive	94	720	808	649	601	411	359	3642
Women								
Memory	107	931	1064	782	704	524	590	4702
Executive	102	901	1026	764	675	507	552	4527

For variable definitions, see AH.2, AH.6, AH.10 and AH.19. For related text, see H.12. Figures weighted for non-response.

Table H6b. Mean cognitive function, by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
Memory	14.2	15.3	15.7	16.5	17.1
Executive	12.4	12.8	13.2	13.7	14.4
Women					
Memory	14.5	15.7	16.1	17.2	18.1
Executive	12.4	13.4	13.4	14.3	14.8
<i>Unweighted N</i>					
Men					
Memory	579	693	734	811	890
Executive	546	663	706	789	867
Women					
Memory	868	966	950	933	895
Executive	824	925	920	899	870

For variable definitions, see AH.6, AH.10, AH.16, AH.18 and AH.19. For related text, see H.13. Figures weighted for non-response.

Table H7a. Health behaviours (%), by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Current smokers	20.3	21.2	16.9	13.3	14.4	8.9	5.6	15.1
Physically inactive	6.9	10.0	12.6	12.0	20.4	22.5	36.9	16.5
Daily alcohol consumption	12.5	22.9	30.2	30.5	25.7	29.6	25.9	26.7
At least 5 portions of fruit and vegetables	44.4	41.2	52.7	53.7	55.2	54.6	45.9	49.6
Women								
Current smokers	18.7	21.9	18.1	13.3	10.2	10.3	5.4	14.4
Physically inactive	14.4	12.2	11.5	17.2	21.2	34.0	55.4	23.3
Daily alcohol consumption	16.2	17.9	15.9	19.1	14.3	16.4	15.7	16.7
At least 5 portions of fruit and vegetables	51.9	59.1	61.8	62.5	64.7	63.6	51.2	60.2
<i>Unweighted N</i>								
Men								
Current smokers	99	737	834	667	601	425	432	3795
Physically inactive	101	789	876	712	652	460	460	4050
Daily alcohol consumption	89	690	787	641	591	401	340	3539
At least 5 portions of fruit and vegetables	88	687	781	632	578	397	332	3495
Women								
Current smokers	110	919	1036	774	705	544	696	4784
Physically inactive	114	963	1095	820	737	565	738	5032
Daily alcohol consumption	98	871	1018	755	677	480	517	4416
At least 5 portions of fruit and vegetables	97	865	1014	745	665	475	507	4368

For variable definitions, see AH.2, AH.3, AH.7, AH.12, AH.15 and AH.19. For related text, see H.14.

Figures weighted for non-response.

Table H7b. Health behaviours (%), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
Current smokers	36.3	15.2	12.1	9.1	6.5
Physically inactive	35.2	20.2	13.8	11.0	5.8
Daily alcohol consumption	18.6	21.3	20.9	28.7	40.3
At least 5 portions of fruit and vegetables	42.5	49.3	49.3	51.3	53.6
Women					
Current smokers	26.5	17.4	11.8	8.9	5.4
Physically inactive	42.8	27.3	20.2	13.0	10.4
Daily alcohol consumption	8.3	9.4	13.7	21.2	31.6
At least 5 portions of fruit and vegetables	48.5	55.4	62.1	65.7	70.7
<i>Unweighted N</i>					
Men					
<i>Current smokers</i>	578	683	745	805	889
<i>Physically inactive</i>	632	740	786	859	927
<i>Daily alcohol consumption</i>	507	641	688	775	857
<i>At least 5 portions of fruit and vegetables</i>	493	626	680	770	856
Women					
<i>Current smokers</i>	892	973	954	935	903
<i>Physically inactive</i>	942	1025	1004	977	945
<i>Daily alcohol consumption</i>	774	908	890	901	863
<i>At least 5 portions of fruit and vegetables</i>	770	891	881	890	858

For variable definitions, see AH.3, AH.7, AH.12, AH.15, AH.16, AH.18 and AH.19. For related text, see H.15. Figures weighted for non-response.

Table H8a. Participation in NHS cancer screening (%), by age and sex: wave 5

	Age in 2010–11							All
	52–54	55–59	60–64	65–69	70–74	75–79	80+	
Men								
Colorectal cancer screening	na	na	54.2	55.3	39.2	na	na	50.8
Women								
Colorectal cancer screening	na	na	60.0	65.3	42.5	na	na	57.3
Breast cancer screening	96.9	92.3	94.8	93.1	88.1	57.7	25.4	80.2
<i>Unweighted N</i>								
Men								
Colorectal cancer screening	49	517	547	415	370	248	245	2391
Women								
Colorectal cancer screening	57	675	696	502	411	314	353	3008
Breast cancer screening	57	675	697	502	411	313	350	3005

For variable definitions, see AH.2, AH.11 and AH.19. For related text, see H.16. Figures weighted for non-response.

Table H8b. Participation in NHS cancer screening (%), by wealth group and sex: wave 5

	Wealth group in 2010–11				
	Lowest	2 nd	3 rd	4 th	Highest
Men					
Colorectal cancer screening	30.0	53.7	58.2	54.6	54.4
Women					
Colorectal cancer screening	45.4	55.2	62.4	60.2	61.0
Breast cancer screening	67.9	79.4	83.7	85.3	85.0
<i>Unweighted N</i>					
Men					
Colorectal cancer screening	184	223	232	307	355
Women					
Colorectal cancer screening	230	299	356	331	352
Breast cancer screening	538	611	600	601	580

For variable definitions, see AH.11, AH.16, AH.18 and AH.19. For related text, see H.17. For colorectal cancer screening, base population only includes people aged 60–72. Figures weighted for non-response.

Table H9. Diabetes and smoking quality-of-care indicators (QIs): wave 5

Quality-of-care indicator, 2010–11	No. of times QIs eligible	No. of times QIs achieved	% of QIs achieved
Diabetes mellitus			
Diab1 (annual glycosylated haemoglobin)	972	800	82.3
Diab2 (annual proteinuria test)	401	319	79.6
Diab6 (intervention to lower cholesterol)	51	44	86.3
Diab9 (annual feet examination)	1020	845	82.8
Smoking			
Smok3 (offered advice/therapy to stop)	1237	1030	83.3

For variable definitions, see AH.13 and AH.19. For related text, see H.18 and H.19.

Table H10. Diabetes and smoking quality-of-care indicators (%), by age and sex: wave 5

Quality-of-care indicator, 2010–11	Age in 2010–11			All
	52–59	60–74	75+	
Men				
Diab1 (annual glycosylated haemoglobin)	90	82	79	83
Diab2 (annual proteinuria test)	[81]	84	[81]	83
Diab9 (annual feet examination)	90	86	87	87
Smok3 (offered advice/therapy to stop)	86	85	77	84
Women				
Diab1 (annual glycosylated haemoglobin)	85	82	81	82
Diab2 (annual proteinuria test)	[75]	76	77	76
Diab9 (annual feet examination)	78	80	76	78
Smok3 (offered advice/therapy to stop)	82	83	82	82
<i>Unweighted N</i>				
Men				
<i>Diab1</i>	96	309	137	542
<i>Diab2</i>	31	129	48	208
<i>Diab9</i>	97	321	141	559
<i>Smok3</i>	241	288	70	599
Women				
<i>Diab1</i>	66	225	139	430
<i>Diab2</i>	32	104	57	193
<i>Diab9</i>	69	234	158	461
<i>Smok3</i>	290	326	103	719

For variable definitions, see AH.2, AH.13 and AH.19. For related text, see H.18 and H.20. Figures weighted for non-response.

Table HL1a. Fair or poor self-rated health (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 4	Wave 5	Unweighted N
Men	20.6	23.8	28.0	30.9	2307
50–54	16.3	18.4	21.1	21.6	496
55–59	23.1	26.5	25.7	28.5	546
60–64	22.6	23.0	28.6	31.0	385
65–69	23.9	28.2	30.6	34.3	372
70–74	20.8	23.3	32.6	39.1	276
75–79	21.4	29.6	42.3	45.5	158
80+	10.0	18.6	33.5	42.5	74
Women	22.9	26.6	30.3	32.4	2985
50–54	19.2	22.1	23.2	20.6	615
55–59	21.7	25.9	24.4	26.0	644
60–64	23.2	25.1	30.1	29.8	491
65–69	18.4	23.9	28.7	33.0	490
70–74	32.7	33.6	39.8	46.2	352
75–79	22.2	30.2	41.1	45.9	233
80+	31.0	36.3	43.2	52.4	160

For variable definitions, see AH.2, AH.14 and AH.19. For related text, see H.22. Figures weighted for non-response and attrition using longitudinal weights.

Table HL1b. Fair or poor self-rated health (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 4	Wave 5	Unweighted N
Men					
Lowest	42.2	47.2	50.1	53.1	254
2 nd	27.9	32.7	40.6	42.8	388
3 rd	18.1	19.2	27.7	29.6	451
4 th	16.4	18.9	21.0	24.0	563
Highest	8.7	11.8	12.1	16.2	602
Women					
Lowest	39.1	43.7	50.9	49.7	431
2 nd	32.5	34.5	36.6	40.3	546
3 rd	19.8	24.5	28.4	30.6	599
4 th	14.6	17.9	21.8	24.0	631
Highest	11.8	15.8	17.3	21.0	684

For variable definitions, see AH.14, AH.16, AH.18 and AH.19. For related text, see H.23. Figures weighted for non-response and attrition using longitudinal weights.

Table HL2a. Diagnosed CHD (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	11.9	14.1	15.5	16.7	23.8	2303
50–54	3.9	5.9	6.6	7.8	12.1	497
55–59	9.5	11.8	12.6	13.6	20.0	546
60–64	14.1	15.1	16.9	17.5	24.4	388
65–69	15.9	18.2	19.8	21.0	29.0	375
70–74	20.2	22.9	26.1	28.7	39.9	274
75–79	20.0	24.0	25.7	26.8	37.3	152
80+	12.8	16.9	17.5	18.7	26.7	71
Women	7.6	8.9	10.3	11.8	17.3	2956
50–54	1.6	2.1	2.7	2.8	5.1	616
55–59	4.1	5.4	6.0	7.0	10.5	644
60–64	6.8	8.1	9.0	10.7	16.3	492
65–69	10.3	11.5	13.1	14.4	23.4	488
70–74	13.0	15.0	16.7	20.4	30.1	350
75–79	13.2	15.7	17.6	20.1	26.2	223
80+	16.6	18.5	23.1	26.6	31.9	143

For variable definitions, see AH.2, AH.8 and AH.19. For related text, see H.24. Figures weighted for non-response and attrition using longitudinal weights.

Table HL2b. Diagnosed CHD (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	16.6	20.0	22.1	24.2	32.4	254
2 nd	12.8	15.6	16.4	17.7	28.5	392
3 rd	14.3	17.3	18.3	19.4	26.6	454
4 th	8.6	10.6	12.0	13.0	19.4	564
Highest	9.8	10.5	12.2	13.1	17.1	605
Women						
Lowest	14.7	16.6	18.5	20.5	26.8	434
2 nd	10.2	11.3	12.2	13.9	20.4	548
3 rd	6.3	7.5	9.7	10.9	16.9	600
4 th	3.7	5.0	6.0	7.4	13.5	632
Highest	4.2	5.6	6.4	7.5	10.3	685

For variable definitions, see AH.8, AH.16, AH.18 and AH.19. For related text, see H.25. Figures weighted for non-response and attrition using longitudinal weights.

Table HL3a. Diagnosed diabetes (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	7.0	8.6	11.8	14.2	16.7	2303
50–54	4.0	6.0	7.6	9.6	11.8	497
55–59	6.5	7.8	11.4	13.4	16.4	546
60–64	7.2	8.4	13.5	16.3	19.3	388
65–69	10.2	11.9	15.0	17.7	19.4	375
70–74	9.0	11.8	14.6	18.4	19.8	274
75–79	9.0	10.6	12.4	13.1	17.3	152
80+	5.8	5.8	10.1	15.7	16.9	71
Women	4.7	6.5	8.7	10.6	12.1	2956
50–54	1.6	3.8	4.8	7.0	7.5	616
55–59	4.9	5.8	8.3	10.0	11.7	644
60–64	5.3	5.7	8.3	10.5	11.9	492
65–69	4.3	6.4	8.9	9.5	12.5	488
70–74	7.6	10.2	14.2	16.8	18.3	350
75–79	6.2	8.6	10.9	12.6	14.2	223
80+	6.4	10.0	10.5	12.2	13.9	143

For variable definitions, see AH.2, AH.8 and AH.19. For related text, see H.24. Figures weighted for non-response and attrition using longitudinal weights.

Table HL3b. Diagnosed diabetes (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	5.8	9.3	15.7	19.6	24.2	254
2 nd	10.7	12.1	14.5	17.3	20.0	392
3 rd	9.0	10.4	14.1	16.8	18.7	454
4 th	5.4	6.9	8.9	11.0	12.9	564
Highest	4.6	5.6	8.1	9.5	11.8	605
Women						
Lowest	7.5	12.7	17.4	20.9	22.8	434
2 nd	5.5	7.0	9.0	11.4	13.3	548
3 rd	4.9	6.0	8.0	10.1	12.2	600
4 th	3.9	5.1	6.6	7.2	8.2	632
Highest	2.3	2.8	4.1	5.2	6.3	685

For variable definitions, see AH.8, AH.16, AH.18 and AH.19. For related text, see H.25. Figures weighted for non-response and attrition using longitudinal weights.

Table HL4a. Diagnosed depression (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	4.8	6.2	7.1	8.0	8.8	2304
50–54	7.0	8.3	9.4	11.5	12.9	497
55–59	6.7	9.8	10.8	11.0	11.7	546
60–64	4.2	5.2	6.4	7.6	8.0	388
65–69	3.5	4.3	4.9	5.0	5.2	375
70–74	1.6	1.6	2.0	2.9	3.8	274
75–79	0.6	2.2	2.8	2.8	4.1	153
80+	3.2	4.4	4.4	4.6	4.4	71
Women	6.8	8.6	10.0	11.4	12.1	2958
50–54	9.6	12.9	15.6	17.1	18.5	616
55–59	10.7	13.5	14.9	16.3	17.2	644
60–64	6.3	8.1	9.4	10.4	11.5	493
65–69	4.2	4.6	5.9	7.5	7.6	489
70–74	2.9	3.7	4.7	5.9	6.5	350
75–79	2.4	2.7	3.1	4.8	5.7	223
80+	5.5	6.5	6.5	6.6	6.5	143

For variable definitions, see AH.2, AH.8 and AH.19. For related text, see H.26. Figures weighted for non-response and attrition using longitudinal weights.

Table HL4b. Diagnosed depression (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	7.4	10.8	13.4	14.7	15.7	254
2 nd	5.7	7.0	7.8	8.5	9.1	392
3 rd	5.3	6.5	7.7	9.0	10.0	454
4 th	3.8	5.1	5.2	6.4	7.3	565
Highest	3.3	3.7	4.1	4.3	4.9	605
Women						
Lowest	9.0	12.4	14.3	16.6	17.5	434
2 nd	6.5	8.2	9.4	10.9	12.0	548
3 rd	7.2	9.3	10.7	11.4	12.3	600
4 th	5.6	6.5	7.9	8.8	9.6	632
Highest	6.0	7.4	8.9	10.3	10.6	686

For variable definitions, see AH.8, AH.16, AH.18 and AH.19. For related text, see H.27. Figures weighted for non-response and attrition using longitudinal weights.

Table HL5a. Mean walking speed (m/s), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	0.97	0.94	0.92	0.89	0.86	1173
60–64	0.99	1.00	0.97	0.97	0.95	352
65–69	0.97	0.94	0.92	0.89	0.88	351
70–74	0.92	0.89	0.86	0.82	0.78	253
75–79	0.83	0.77	0.77	0.71	0.68	146
80+	0.79	0.74	0.70	0.65	0.62	71
Women	0.92	0.89	0.86	0.82	0.80	1575
60–64	0.96	0.94	0.91	0.89	0.88	452
65–69	0.92	0.90	0.87	0.84	0.81	450
70–74	0.85	0.81	0.76	0.71	0.70	315
75–79	0.79	0.73	0.68	0.62	0.61	214
80+	0.65	0.62	0.55	0.54	0.54	144

For variable definitions, see AH.2, AH.17 and AH.19. For related text, see H.28. Figures weighted for non-response and attrition using longitudinal weights.

Table HL5b. Mean walking speed (m/s), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	0.81	0.79	0.77	0.75	0.78	125
2 nd	0.86	0.85	0.83	0.83	0.85	205
3 rd	0.94	0.92	0.90	0.89	0.88	229
4 th	0.95	0.96	0.94	0.94	0.94	273
Highest	1.02	1.03	1.01	1.00	0.99	326
Women						
Lowest	0.74	0.72	0.69	0.68	0.69	236
2 nd	0.82	0.80	0.79	0.77	0.79	298
3 rd	0.84	0.85	0.83	0.83	0.84	346
4 th	0.93	0.93	0.89	0.88	0.91	318
Highest	0.98	0.96	0.94	0.93	0.95	362

For variable definitions, see AH.16, AH.17, AH.18 and AH.19. For related text, see H.29. Base population only includes people aged 60 and over. Figures weighted for non-response and attrition using longitudinal weights.

Table HL6a. One or more limitations with ADLs (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	15.3	15.7	18.0	18.5	20.4	2293
50–54	9.6	9.1	12.6	10.3	12.9	496
55–59	14.6	14.4	16.3	16.1	15.7	544
60–64	16.2	18.4	17.9	18.1	20.0	384
65–69	14.5	14.9	18.2	19.5	19.8	372
70–74	22.0	22.1	20.8	30.4	32.1	273
75–79	22.8	25.0	27.3	29.1	33.5	153
80+	24.9	21.0	39.8	31.9	45.4	71
Women	17.9	20.6	20.9	22.2	24.9	2948
50–54	9.8	12.9	14.1	11.3	11.6	615
55–59	14.7	17.7	15.0	15.2	14.8	644
60–64	15.9	15.2	18.4	19.3	21.5	490
65–69	18.4	20.4	21.9	23.2	28.1	487
70–74	25.1	28.0	27.0	30.5	34.2	350
75–79	26.1	29.9	28.7	37.5	41.3	222
80+	35.3	43.6	44.0	49.6	62.1	140

For variable definitions, see AH.1, AH.2 and AH.19. For related text, see H.30. Figures weighted for non-response and attrition using longitudinal weights.

**Table HL6b. One or more limitations with ADLs (%), by wealth group and sex:
waves 1 to 5**

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	28.7	28.7	32.2	28.7	34.1	254
2 nd	19.1	20.0	21.3	22.5	22.6	388
3 rd	14.4	14.2	18.5	17.6	21.7	451
4 th	11.9	13.1	14.7	15.9	17.4	564
Highest	9.0	7.9	9.5	12.8	12.4	602
Women						
Lowest	34.2	33.4	36.3	41.5	41.3	431
2 nd	20.8	25.2	23.6	26.1	31.2	546
3 rd	16.3	19.5	22.3	18.6	23.6	599
4 th	11.3	15.5	13.5	16.8	16.0	631
Highest	10.5	12.0	12.1	11.8	15.4	684

For variable definitions, see AH.1, AH.16, AH.18 and AH.19. For related text, see H.31. Figures weighted for non-response and attrition using longitudinal weights.

Table HL7a. Mean cognitive function (memory), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	17.8	16.2	16.3	16.1	15.8	2290
50–54	19.0	19.3	17.7	17.8	17.8	490
55–59	18.1	18.4	17.1	16.9	16.7	542
60–64	17.7	18.0	16.4	16.0	16.1	383
65–69	16.2	16.7	15.1	15.2	14.5	370
70–74	15.9	16.1	14.4	14.2	13.7	274
75–79	14.3	14.4	13.1	12.9	12.2	157
80+	14.2	14.6	12.3	11.2	11.1	74
Women	17.9	16.8	16.8	16.6	16.3	2971
50–54	19.3	17.6	17.7	17.8	17.8	614
55–59	18.4	16.9	17.1	16.9	16.7	641
60–64	18.0	16.3	16.4	16.0	16.1	489
65–69	16.7	15.1	15.1	15.2	14.5	484
70–74	16.1	14.5	14.4	14.2	13.7	350
75–79	14.4	12.9	13.1	12.9	12.2	233
80+	14.6	12.9	12.3	11.2	11.1	160

For variable definitions, see AH.2, AH.10 and AH.19. For related text, see H.32. Figures weighted for non-response and attrition using longitudinal weights.

Table HL7b. Mean cognitive function (memory), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	15.9	14.0	14.0	14.3	14.1	256
2 nd	16.5	15.2	15.3	14.9	14.5	389
3 rd	17.4	15.8	15.8	15.7	15.6	453
4 th	18.0	16.4	16.5	16.2	16.2	559
Highest	18.6	16.9	17.2	17.1	16.7	601
Women						
Lowest	15.6	14.8	14.8	14.4	14.4	436
2 nd	17.0	16.0	15.6	15.6	15.4	556
3 rd	17.5	16.6	16.6	16.4	16.2	599
4 th	18.3	17.1	17.2	17.2	17.1	634
Highest	19.0	17.5	17.7	17.5	17.4	688

For variable definitions, see AH.10, AH.16, AH.18 and AH.19. For related text, see H.33. Figures weighted for non-response and attrition using longitudinal weights.

Table HL8a. Current smoking (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	17.1	15.9	14.3	13.2	12.3	2293
50–54	20.5	20.3	16.1	15.8	15.1	496
55–59	23.7	20.1	19.4	16.1	14.5	544
60–64	17.7	16.1	15.4	14.6	14.2	384
65–69	15.7	14.1	13.5	12.7	11.7	372
70–74	7.7	8.9	8.6	8.3	7.4	273
75–79	7.8	8.4	7.1	5.8	6.3	153
80+	2.3	0.9	0.9	0.9	0.9	71
Women	17.5	15.2	14.2	12.9	11.7	2948
50–54	25.5	23.1	21.9	21.0	20.2	615
55–59	20.5	17.7	15.8	14.2	12.0	644
60–64	19.1	15.5	13.8	12.9	10.7	490
65–69	12.0	10.6	9.6	8.5	9.3	487
70–74	14.4	11.9	12.2	10.3	9.8	350
75–79	10.0	8.9	9.2	6.9	5.8	222
80+	5.5	5.3	4.8	4.1	1.5	140

For variable definitions, see AH.2, AH.15 and AH.19. For related text, see H.34. Figures weighted for non-response and attrition using longitudinal weights.

Table HL8b. Current smoking (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	41.4	35.8	35.1	31.2	33.3	254
2 nd	23.2	20.8	16.8	16.2	15.7	388
3 rd	12.6	10.7	9.8	9.7	9.6	451
4 th	9.5	7.9	7.3	6.6	6.4	564
Highest	9.2	6.4	6.1	6.4	5.3	602
Women						
Lowest	31.0	28.8	28.2	25.1	24.3	431
2 nd	21.9	18.8	17.5	17.8	15.8	546
3 rd	14.1	12.7	10.4	9.3	8.0	599
4 th	12.9	9.8	10.1	8.5	7.6	631
Highest	10.3	8.4	7.4	6.0	5.1	684

For variable definitions, see AH.15, AH.16, AH.18 and AH.19. For related text, see H.35. Figures weighted for non-response and attrition using longitudinal weights.

Table HL9a. Physical inactivity (%), by age and sex: waves 1 to 5

Age in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men	10.2	9.8	11.4	14.5	18.5	2292
50–54	7.7	6.6	7.5	7.9	10.4	495
55–59	10.5	10.2	10.5	13.5	13.5	544
60–64	13.9	9.8	11.4	12.7	16.0	384
65–69	8.8	10.7	11.2	15.0	20.7	372
70–74	9.0	11.0	13.1	18.9	26.4	273
75–79	12.4	13.4	19.7	26.5	34.4	153
80+	12.9	16.7	23.1	36.9	56.4	71
Women	16.4	16.4	19.8	24.7	27.2	2946
50–54	11.4	11.0	12.2	12.5	11.9	615
55–59	10.4	10.3	11.6	13.8	15.0	643
60–64	12.7	11.1	13.7	17.6	19.0	490
65–69	15.4	14.9	20.1	23.5	26.8	487
70–74	23.8	23.9	25.9	38.1	43.4	350
75–79	25.3	27.0	35.2	47.8	50.7	222
80+	38.4	42.4	51.9	62.4	75.1	139

For variable definitions, see AH.2, AH.12 and AH.19. For related text, see H.36. Figures weighted for non-response and attrition using longitudinal weights.

Table HL9b. Physical inactivity (%), by wealth group and sex: waves 1 to 5

Wealth group in 2002–03	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Unweighted N
Men						
Lowest	25.9	24.2	27.8	32.1	38.8	253
2 nd	13.3	13.7	14.1	19.7	25.2	388
3 rd	6.6	9.0	10.2	12.5	14.4	451
4 th	6.4	4.3	6.5	8.4	13.1	564
Highest	4.8	4.5	5.0	7.7	9.9	602
Women						
Lowest	30.9	33.7	41.5	44.7	48.0	429
2 nd	19.7	20.8	22.2	30.4	34.2	546
3 rd	16.6	13.5	19.6	22.4	23.5	599
4 th	8.8	8.9	11.0	14.5	15.7	631
Highest	8.9	8.7	8.4	14.6	17.7	684

For variable definitions, see AH.12, AH.16, AH.18 and AH.19. For related text, see H.37. Figures weighted for non-response and attrition using longitudinal weights.