Title: Understanding the Importance of Work Histories in Determining Poverty in Old Age: National Insurance Contributions and Later Life Income

1. Background

This research aims to understand the relative importance of work histories in determining financial poverty in later life. Work histories include the proportion and timing of the working life spent in part-time and full-time work, as self-employed and unemployed, as well as the degree of instability in the working life. Understanding the roles that work histories play in the accumulation of later life income is crucial for optimal policy reform and for enabling individuals to develop the financial capability to provide better for their retirement, while pensioner poverty is a key area of political and social interest (reinforced by the Government's decision to develop specific performance indicators in this area).

Although pensioner poverty has been declining over the last 10 to 15 years it still affects close to one quarter of all older people in the U.K. (Institute for Fiscal Studies 2009). Moreover, the risk of poverty for an older person in the U.K. is almost 1.5 times higher than the typical risk of poverty for older people in Europe, and the fourth highest of the EU 25[i] (Eurostat 2009; Zaidi 2006). Thus pensioner poverty remains a key area of political and social interest, reinforced by the Government's recent decision to set specific indicators to monitor performance in this area.[ii] Although much is known about the current income and asset position of pensioners and how these have changed over time (Department for Work and Pensions 2009), we continue to know little about why some pensioners end up poor and in particular, the role that life course experiences (e.g. work histories) play in leading people into poverty. Research has shown that work histories (Ginn and Arber 1996), family roles (Evandrou and Glaser 2003), and gendered roles (Arber and Ginn 2004) all play an important part in determining well-being in later life. However, most research on the implications of life course factors for later life outcomes has focused on health (Breeze *et al.* 2001; Davey Smith *et al.* 1997; Grundy and Tomassini 2005; Kuh *et al.* 2002; Luo and Waite 2005). Relatively little work takes into account labour market participation when investigating later life financial outcomes (Bardasi *et al.* 2002; Glaser *et al.* Forthcoming; Sefton *et al.* 2008). Such research as has been done suggests, for example, that work histories may have less impact on the chances of having low income in later life than has generally been assumed (Bardasi, Jenkins and Rigg 2002; Glaser *et al.* Forthcoming).

1.1 Why work histories should matter

Work histories are thought to matter for income at older ages because entitlements to state, occupational and private pensions are built up during this period along with other financial assets (Bardasi, Jenkins and Rigg 2002). The complex UK pension system encompasses state provision, occupational provision and private provision, with all elements playing a part in the avoidance of poverty in later life (Pensions Commission 2005). Accrual of state provision in the form of a basic state pension and additional state pension is dependent on national insurance contributions paid from earnings, or national insurance credits, made during working life.

However, the relationships between work histories, state and private pension accumulation, and national insurance contributions are complex (Pensions Commission 2004; Pensions Commission 2005). For example, not all those in paid work pay, or are credited with, national insurance contributions (if their pay is too low, for example), and many of those not in paid work receive credits to national insurance (for example if they are in receipt of child benefit, or unemployment or disability benefits, or care for a

severely disabled person). The system of national insurance credits is therefore generally redistributive from those in paid work to those who are not, but many people have gaps in their national insurance records because they were not earning enough to pay contributions but also did not qualify for or claim credits. While almost all people accrue state pensions, the value accrued is relatively low. In November 2006, the average amount of all state pensions combined paid to pensioners was just £87 per week[iii] when the poverty line was £145 a week[iv]. Many pensioners therefore need occupational or private pensions for adequate income in later life. Non-state pension income accounts for most of the observed financial inequality among older people (Pensions Commission 2005). In addition, research has highlighted the importance of considering the nature of work undertaken (i.e. occupation and type of job held) and not just the number of years spent in employment as pension entitlements will clearly be affected by both levels of earnings and the likelihood of being offered membership of a pension scheme.

The reliance on a contribution based national insurance system and on private and occupational pension for adequate income means that those who are disadvantaged in the workplace – either because they are not in paid work, or because of low pay or poor terms and conditions – have high risks of poverty in later life (Evandrou and Glaser 2003). This means that it is not clear to what extent pension disadvantage in later life is the result of work histories, gaps in national insurance contributions or credits, or to what extent it is a result of terms and conditions at work.

Despite the acknowledged importance of empirical research about the connections between lifetime work histories and later life income in a pension system that relies heavily on private provision, very little research exists. For example, we know little about the life course events of people who live on relatively low incomes in retirement and how these differ from the life experiences of better off pensioners. Developing this line of research is important in order to understand better why some pensioners end up poor and what may drive future changes in pensioner incomes.

2. Objectives
The research's aims and objectives were originally to:

(i)   understand the relative importance of national insurance contributions and work histories in determining later life poverty, and develop understanding of these dynamics within the policy making community;

(ii) build capacity within the Department for Work and Pensions in the social and economic analysis of large datasets generally, and in the analysis of the linked HMRC/NI/ELSA dataset in particular;

(iii) prepare a documented derived variable dataset to be deposited at the ESRC data archive and made available to the wider analytical community within the Department for Work and Pensions and the academic community in general.

Given difficulties involved in the linkage between the National Insurance dataset and ELSA we have been unable to examine the relative importance of national insurance contributions in determining later life poverty and instead expanded this objective to include the relationship between family histories and poverty (more details this are given below). We have however, through the User Fellow (Malcom Nichols), built capacity within the DWP in the social and economic analysis of large datasets and in the analysis of ELSA in particular. Malcolm has increased his skills in data management and analysis using ELSA. This has included: 1) downloading the dataset from the data archive; 2) creating SAS programmes to set up the data for analysis (e.g. creating core variables from both the individual and household files, linking datasets from different waves, and

creating a couple dataset); 3) working with the life history data and creating appropriate summary measures; and 4) using logistic and multinomial regression modelling. With these skills Malcolm has gone on to address the third objective: to create a documented ELSA dataset with key variables of interest to the DWP to be used by their analysts. He is also in the process of training the analysts at the DWP to work with the data.

Given difficulties with the data linkage it was decided to refocus the first research objective to examine the association between work <u>and</u> family histories and poverty in old age taking into account the role of the state in order to address why some older people end up poor. Investigating the impact of family histories (in addition to work histories) on income at older ages is important given (i) that family histories are closely tied to paid work histories (i.e. women's traditional caring responsibilities within marriage and motherhood generally result in greater variation in their own work histories in comparison to men's) and (ii) that family obligations and responsibilities may affect the nature of jobs undertaken and, in particular, the terms and conditions of work and the level of earnings, all factors which will have an impact on incomes in later life.

2.1 Why family histories should matter

Research to date on this issue presents a very confusing picture. While many studies have found an association between current marital status and low incomes at older ages most have not found an association between women's marital histories and later life incomes (Bardasi and Francesconi 2004). However, some studies have shown that histories of divorce and motherhood are critical, although the mechanisms by which they lead to low income in later life are not always clear (Rake *et al.* 2000). An assumption is that they lead to discontinuous or chequered work histories, but this then needs to be reconciled with the studies showing that work histories matter less than one might initially think. Another possibility is that these characteristics lead to employment trajectories which reflect lower lifetime earnings and/or poorer terms and conditions.

To conclude, the association between life course events and later life poverty may be weaker than expected because of government programmes designed to protect people against income-threatening disruptions to work (e.g. due to prolonged periods of poor health or child rearing). Consequently, our key aim is to investigate the association between life course factors (e.g. work and family histories) and poverty in old age taking into account the role of the state in order to address the question of why some older people end up poor.

3. Methods

The project focused on using the ELSA dataset and used a variety of statistical approaches. Unique features of the work included using the rich life history data (i.e. employment, partnership, parenthood and health histories) collected in the Life History Interview in the third wave of ELSA. Comprehensive information concerning data management, data preparation and statistical methodologies employed to examine the research question is included in the article listed in section X. Here we limit ourselves to a non-technical summary with a particular focus on how poverty and the life history measures were operationalised in the ELSA dataset. It should be noted that the derivation of the variables involved a substantial amount of work, both theoretical (deciding on the measures and the hypothesised relationships to investigate, with reference to the literature) and computational. We begin by describing how we operationalised the key dependent variable (i.e. poverty) and to on to discuss how we created the key life history measures.

3.1 Poverty

The most commonly used poverty measure is based on incomes, where poverty is defined as having an income below a specified level. Following this convention the poverty line used here is having an income below 60 per cent of the median income in the population as a whole. This approach follows that commonly used in official statistics to monitor poverty trends (Blekesaune *et al.* 2008). In addition, the income measure used captures the combined income of the family unit in which a person lives. So in the case of couples, it reflects their joint income (which is assumed to be shared equally by both partners). To take into account economies of scale from the sharing of some joint costs, incomes are 'equivalised', using the modified OECD equivalence scale, which takes a single person living alone as 1 and adds 0.5 for each additional adult (and 0.3 for each child). So, for example, the combined income of two people living as a couple would be divided by 1.5 and that income is then attributed to both partners. The income measure in ELSA is taken from the derived variable data set and includes net income (after direct taxes) from all sources – principally pensions (both state and private), other state benefits[v], income from savings and investments, and earnings. As reported in Banks et al. (2008), Chapter 4, income measures in ELSA are comparable with those derived from other surveys (e.g. FRS), although differences in methodology and sampling mean the estimates of average incomes in ELSA are slightly higher than those based on the Family Resources Survey.

In order to more clearly understand how the state pension and benefit systems interacts with life-course measures the 'non-poor' group (i.e. those not below 60% of the median population income) was decomposed into three categories. The approach taken was to identify those who were above the poverty line initially but who would fall below the poverty line if specific items of income were removed. Four mutually exclusive groups were identified as follows: (a) those with total incomes below the poverty line; (b) those above the poverty line whose income would fall below the poverty line if non means tested state benefits (such as disability benefits) were removed; (c) those not in the above groups whose income would fall below the poverty line if means-tested benefits (e.g. pension credit), and state pensions were removed; and (d) those whose private incomes on their own are sufficient to keep them above the poverty line (after removing means-tested benefits, other state benefits and state pensions). Appendix 1 shows the components and average amounts of income received by those in each group).

The first group represents those who fall into the conventional definition of poverty. The second group are mainly recipients of disability benefits which push them above the poverty line. The third group are recipients of state pensions or means-tested benefits, whose other income would not be sufficient to put them above the poverty line. The fourth group are those who have sufficient private income (e.g from pensions or earnings) to lift them above the poverty line before any state pensions or benefits. Means-tested benefits are often paid alongside state pensions and there is some evidence that pensioners may report means-tested benefits as state pension, so no attempt has been made to show the effect of means-tested benefits separately.

3.2 Life History Measures

A range of measures capturing work, family and health histories were created. Following previous studies work histories were assessed by the following measures: percentage of working life spent in full-time paid employment; and an indicator of early exit from the labour market (defined as those who left the labour market before state pension age), categorised into voluntary and involuntary (forced) exit. The first measure was derived from the work history information in the Life History Interview. The period of 'working

life' was defined to be from age 21 to state pensionable age, i.e. 65 for men and 60 for women. Thus, any periods spent in paid work either before the age of 21 or after the age of 66 were not considered. The second measure was derived from a series of questions in the work and pensions module of the main questionnaire on retirement and reasons for stopping work. Thus, voluntary exit from the labour market typically covered reasons such as 'took voluntary redundancy', 'could afford to stop working', 'to spend more time with family', 'to enjoy life while still young enough', 'fed up' or 'to stop working at same time as partner'. Involuntary exit from work typically covered reasons for stopping work such as ill health/disability, companies closing down, being made redundant and not being able to find another job. Respondents who answered don't know to the series of questions about reasons for stopping work were included in the involuntary category (there were 191 don't knows). The reference group for these two categories of early exit from the labour market largely consisted of those who left work at state pension age or beyond. However, it also included the few people who were still in work after state retirement age (n=212) and the few people who had never worked (n=60).

Family histories were captured by (a) the percentage of working life spent in legal marital unions; and (b) total number of children (natural, adopted and step children). Time spent in a legal union was derived from the partnership histories collected in the life interview in Wave 3. As with work histories, the family history variables were based on the period from 21 to state pension age.' Therefore, time spent married for someone who only married at age 66 was not included. Similarly, any periods spent in marriage either before the age of 21 or after the age of 66 were not considered. The partnership histories collected information on cohabiting unions. However, only legal marital unions were considered here as cohabitors are not legally entitled to their partner's pension benefits. Total number of children (natural, adopted and step children) was derived from the parenthood histories also collected in the Life History Interview.

Indicators of respondents' earlier health were derived from a series of question on the health module in the Life History Interview. The following binary indicators were created: (a) a measure of fair or poor health as a child from a question on self-reported health during childhood (with the reference category being those who experienced excellent, very good or good health as a child); and (b) two or more periods of ill-health/disability as an adult (periods lasting at least 1 year) derived from a question on the number of periods of ill health as an adult (with the reference group being those who stated none or one).

In subsequent analyses based on mothers only, the occurrence and timing of additional family events were included, i.e. a first birth under the age of 20 and the experience of a divorce or widowhood before or after the age of 45. These variables were dichotomised: the reference category consisted of those who had not experienced the event. All of these variables were created from the parenthood and partnership histories in the Life History Interview

3.3 Analysis

Our aim was to study the association between life course factors and poverty in later life taking into account the role of the state in keeping people out of poverty. The descriptive and bivariate analyses investigated differences in key socio-economic and life course characteristics across the 4 income groups using Chi-square and t-tests as appropriate. In addition, we used multinomial logistic regression models to examine the extent to which poverty in later life is associated with a range of life-course history measures and other individual characteristics once the state's role is taken into account.

Thus a multinomial logit model was fitted in order to examine the probability distribution across four possible categories: (0= income above the poverty line without benefits or state pension; 1=income below the poverty line; 2=income below the poverty line without non means-tested benefits; and 3=income below the poverty line without state benefits and state pension). We conducted separate analyses for unmarried men and women and married couples given well known gender and marital status differences in economic circumstances in later life. Moreover, we fitted a separate multinomial model to data on older mothers to examine the relative importance of key family events and their timing (from the partnership and parenthood histories) on poverty in later life.

4. Results

4.1 Characteristics associated with later life poverty in 2006

We report first the characteristics of the sample and the bivariate associations between individual characteristics and the risk of falling into the defined poverty groups. These are set out in Table 1 (a and b) separately for men and women and in Table 2 for unmarried men and women and for married men and women. Table 1 (a and b) reports row percentages i.e. the percentage 'kept out of poverty' by the benefit and state pension systems. Table 2 reports column percentages (or means where appropriate) separately for unmarried men and women and married men and women across the four poverty categories, i.e. the distribution of key characteristics within each 'poverty' group.

The associations with the conventional poverty rate shown in the tables are consistent with previous findings (DWP 2009, Banks et al 2008). Overall, women in our sample were poorer than men: 30% of older women had family incomes below the relative poverty line in 2006 compared with 22% of men (Table 1a and b). The state played a similar role for both sexes in keeping people out of poverty: for men and women 7% were kept out of poverty largely by health related benefits and close to 40% by the receipt of the state pension. As expected, the percentage of those with private incomes sufficient enough to keep them out of poverty without benefits or state pensions was higher for men than for women (33% versus 24% respectively). All the work and marital history variables (with the exception of partners' work history and the experience of a teenage birth for men) showed a significant association with the poverty categories: longer work and marital histories, early exit from the labour force, number of children, and fewer periods of poor health were all associated with being kept out of poverty (Table 1a and b). In addition, older men and women were more likely to kept out of poverty (either by mostly health related benefits, the state pension or private income) if they were younger, married, owned their own homes, had higher educational qualifications and did not have a limiting long-standing illness.

Table 2 shows the distribution of the key characteristics for unmarried men and women and married men and women across the four poverty groups: how the characteristics differ across each of the groups. The table shows few significant differences across the poverty groups in the amount of time spent in paid full-time work; early exit from the labour force is associated with being kept out of poverty due to private income; and early involuntary exit from the labour force is associated with being kept out of poverty largely due to health related benefits. Family histories show few significant relationships. Those with two or more periods of ill-health or disability as an adult were more likely to have been kept out of poverty due to health related benefits as expected. All of the respondents' current demographic and socio-economic characteristics show a significant association with the poverty categories.

Table 3 shows for mothers aged 65 and over the distribution of key characteristics across the four income groups. Those in income categories 1 or 2 generally had shorter

working lives, and were more likely to experience involuntary exit from the labour market, a first birth before the age of 20, widowhood after the age of 45, two or more periods of ill-health or disability as an adult and were generally older, non-owner occupiers, belonged to the manual group, had no educational qualifications and had a limiting-long term illness.

4.2 Multivariate analyses of later life poverty

Table 4 presents the results for the multinomial logistic regression using the 4 income categories defined earlier. The reference category is group 0, i.e those who have enough private income to lift them clear of the poverty line. The odds ratios represent the effect of the explanatory variable on the log odds of being in the group shown, relative to the reference group. In order to explore the importance of partners' histories, the sample was split by current marital status and sex. We report results for 3 groups – unmarried men, unmarried women and a combined group of currently married men and women. Odds ratios for the estimated parameters (adjusted for all the covariates shown) and levels of significance are reported.

Our results show that although there is some association between the life course factors and the poverty categories a number of measures of 'current' characteristics are consistently significant. For example, being older, a tenant, in a manual occupation, having no educational qualifications and reporting a limiting-long term illness are all consistently associated with falling into all 3 poverty categories: those who have not built up enough private income to keep them above the poverty line. The amount of time spent in full-time paid work does have a significant association with the first two poverty categories for married men and women and with the first poverty category for unmarried women, i.e. those with longer work histories report lower odds of falling into the poverty groups. Partner's work history is also important in determining the risk of falling into the first two poverty categories for married men and women. Early forced exit from the labour market is strongly associated with a higher risk of falling into the second poverty category, which is consistent with those individuals suffering ill-health or disability before state pension age. Those who experienced poor health as a child and 2 or more periods of ill-health/disability as an adult reported higher odds of being in the second poverty category: those kept out of poverty by health benefits.

Table 5 presents the multinomial model of life course factors associated with the poverty categories for mothers aged 65 and over. Those who worked longer were less likely to be in poverty; mothers who exited the labour force reported lower odds of being in poverty category 3 and those who reported involuntary exit from the labour force were more likely to be in poverty category 2. Mothers who had more children reported lower odds of being in poverty category 1 in comparison to those who were not in poverty. Women who had their first birth before 20 reported higher odds of being in poverty or being kept out of poverty by health benefits. Experiencing widowhood after age 45 was also positively associated with all 3 poverty groups. The occurrence of divorce, either before or after age 45 was also positively associated with being in poverty. Once again 'current' characteristics all demonstrated significant positive associations with the 3 poverty categories.

5. Activities

During the 6-month fellowship, the User Fellow and other members of the project team have undertaken the following activities:

Presentations:

1. Dec 2008, 'Working with ELSA', Presentation to DWP Pensions Analysis and Incomes Division. Outlined the background to the UPTAP project and described some of the initial results looking at changes in incomes between waves and comparisons between incomes and other measures of living standards.

2. March 2009, 'Understanding the Importance of Work Histories in Determining Poverty in Old Age', Presentation to UPTAP Workshop. Outlined main research questions and set out initial findings.

3. May 2009, 'Incomes and Living Standards of Over 65s in ELSA', Presentation to analysts at the Institute of Fiscal Studies. Presented analysis of incomes and other measures of living standards for over 65s in ELSA; also outlined plans for life-history analyses.

4. June 2009, 'Understanding the importance of work histories and other life course influences in determining poverty in old age', Presentation to Social Policy Association conference. Presented main findings from the project.

5. July 2009, Informal presentation to team leaders in DWP Pensions Analysis and Incomes Division. Described main outcomes from the project and plans for making the data and programs from the project accessible in DWP.

6. Forthcoming presentation at the UPTAP/BURISA conference in October 2009 and a presentation in DWP based on the final SPA paper as well as a presentation at the IoG Research Seminars.

Activities

1. Since returning to DWP, Malcolm has been making progress in ensuring that the derived ELSA data set he developed for the project, and the associated SAS programs, can be used by others in DWP:

2. Malcolm has had individual discussions with a number of analyst teams in DWP's Pensions Incomes and Analysis Division to identify areas of their work where ELSA could provide useful new analysis;

3. Malcolm has made arrangements for DWP to download the latest release of ELSA data and make it accessible on DWP IT systems (DWP currently only holds an old version of the data); once this is complete (soon) he will then be able to recreate the derived data files that he developed as part of the project and make these available to DWP analysts;

4. He has written documentation for the derived data set, which details the variables that are available, and produced a documented set of SAS programs. These will be circulated to analysts in DWP once the download of the main ELSA data sets has been completed.

7. Impacts

It is too early to state whether the research has had any impact on policy making within government or amongst other user groups. There has been considerable interest in the results at meetings with the DWP and at the EHRC. Further meetings with users are planned.

8. Future Research Priorities

This research has highlighted the complexities inherent in trying to understand the impact of life course factors on poverty in later life. In short, this research has shown that we need to understand much more clearly *what it is about paid work* that leads to differentials in poverty rates in later life, since participation in paid work itself is not strongly associated with the chances of being on a low income in retirement. Only then can we more clearly begin to assess the impact of current government reforms, and understand how important it might be for government policies to take into account differential working conditions.

Thus this research demonstrates why linking survey to administrative data is so important. Although there is an agreement that information on National Insurance Contributions, benefits, tax records, savings and pensions data held by Her Majesty's Revenue and Customs and the Department for Work and Pensions will be linked to individual-level ELSA data (for those respondents who gave their consent) this linked dataset has yet to be released to researchers. Such investment, in addition to investment in larger sample sizes and high quality longitudinal studies is needed to enable more robust analysis in the future. It is hoped that we will one day be able to analyse this linked dataset as originally intended.

Moreover, this project has rekindled our interest in sequence analysis, i.e. a technique originating from the biosciences which would permit us to combine employment, partnering and parenthood histories into what we term a 'lifecourse career'. This would enable us to better describe the complex life histories of older people in order to be able to more clearly understand the impact of the lifecourse on material resources in later life.

Table 1a: Poverty rates by sample characteristics, all men aged 65 and over

Weighted, those over 65 in wave 3 — Row percentages

MEN

Poverty/non-poverty rates — Kept out of poverty by:

Characteristics in 2006	Sample size	In poverty	Benefits	State pensions	Private income	Significance test χ^2	df
Age						67.0***	9
65-69	538	17%	7%	32%	44%		
70-74	522	20%	7%	40%	32%		
75-79	379	21%	6%	45%	28%		
80+	434	30%	5%	41%	24%		
Legal Marital Status						59.6***	9
Single, never married	85	29%	2%	49%	19%		
Married	1348	19%	7%	36%	37%		
Divorced, separated	134	21%	8%	41%	30%		
Widowed	306	31%	4%	45%	20%		
Tenure						105.9***	6
Owned outright	1398	18%	5%	39%	38%		
Buying with help of mortgage or loan	129	27%	6%	29%	38%		
Renting	340	32%	13%	41%	14%		
Social class						219.7***	12
Managerial and professional	686	14%	2%	29%	54%		
Intermediate	94	11%	5%	49%	35%		
Small employers and own-account workers	266	30%	5%	38%	27%		
Lower supervisory and technical	325	27%	9%	43%	21%		
Semi-routine	489	25%	10%	46%	19%		
Educational qualifications						260.8***	9
Degree	253	11%	3%	15%	71%		
A-levels and higher education	339	18%	3%	31%	48%		
O-levels, CSE, Others	529	20%	5%	43%	33%		
None	727	27%	9%	46%	18%		
Long-standing illness/disability/infirmity						104.7***	6
No	733	21%	3%	37%	39%		
Yes - limiting	717	22%	13%	43%	23%		
Yes - not limiting	423	21%	3%	35%	40%		
All		**22%**	**7%**	**39%**	**33%**		
Sample size (current characteristics)	1873	389	110	717	657		

MEN

Poverty/non-poverty rates — Kept out of poverty by:

Paid work histories	Sample size	In poverty	Benefits	State pensions	Private income	Significance test χ^2	df
Percentage of working life spent in full-time work (21 to 65/60)						31.4***	9
Under 25%	17	29%	19%	21%	31%		
25%-50%	26	32%	23%	21%	25%		
50%-75%	176	16%	8%	38%	37%		
75%-100%	1309	22%	5%	39%	34%		
Percentage of partner's working life spent in full-time work (21 to 65/60)						16.0	9
Under 25%	529	22%	6%	38%	34%		
25%-50%	214	15%	6%	38%	41%		
50%-75%	169	11%	5%	38%	47%		
75%-100%	101	16%	7%	37%	39%		
Labour market exit						211.1***	12
Early, voluntary exit (before state pension age)	387	18%	3%	33%	46%		
Early, involuntary exit (before state pension age)	659	23%	11%	40%	25%		
Exit at state pension age or later	662	25%	4%	45%	26%		
Still working	120	2%	0%	20%	78%		
Partnership and fertility histories							
Percentage of working life spent in marriage (21 to 65/60)						27.0**	9
Under 25%	110	32%	4%	44%	19%		
25%-50%	64	15%	8%	44%	33%		
50%-75%	186	28%	8%	37%	28%		
75%-100%	1126	19%	6%	38%	37%		
Number of children:						28.0***	9
0	186	25%	4%	44%	27%		
1	214	30%	8%	37%	25%		
2	564	19%	4%	39%	38%		
3+	564	20%	7%	37%	37%		
Family history						11.3	6
First child born before age 20	36	26%	12%	34%	28%		
First child born at age 20+	1254	20%	6%	38%	36%		
Health histories							
Periods of ill-health/disability lasting over 1 year as an adult						39.6***	9
None	909	22%	3%	37%	38%		
1 period	399	21%	9%	39%	31%		
2 periods	141	18%	7%	49%	26%		
3 or more periods	78	22%	13%	41%	23%		
Health as a child						44.7***	9
Excellent	500	19%	5%	33%	43%		
Very good	514	25%	5%	43%	27%		
Good	336	21%	6%	37%	36%		
Fair, Poor or Varied a lot	177	19%	11%	41%	29%		
All		**22%**	**7%**	**39%**	**33%**		
Sample size (paid work histories)	1528	305	77	576	570		
Sample size (partnership and fertility histories)	1486	297	76	562	551		
Sample size (health histories)	1527	305	77	576	569		

Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 1b : Poverty rates by sample characteristics, all women aged 65 and over

Weighted, those over 65 in wave 3 — Row percentages

WOMEN	Sample size	In poverty	Benefits	State pensions	Private income	Significance test χ^2	df
Characteristics in 2006							
Age						177.0***	9
65-69	632	21%	5%	33%	41%		
70-74	596	26%	6%	43%	25%		
75-79	519	32%	7%	42%	19%		
80+	638	39%	10%	39%	12%		
Legal Marital Status						204.0***	9
Single, never married	122	33%	7%	34%	27%		
Married	1077	21%	7%	37%	36%		
Divorced, separated	202	43%	4%	34%	20%		
Widowed	984	38%	8%	43%	11%		
Tenure						133.3***	6
Owned outright	1685	26%	6%	38%	30%		
Buying with help of mortgage or loan	153	30%	5%	37%	27%		
Renting	537	40%	11%	41%	7%		
Social class						205.8***	12
Managerial and professional	527	19%	4%	32%	45%		
Intermediate	525	27%	5%	39%	30%		
Small employers and own-account workers	181	31%	3%	38%	29%		
Lower supervisory and technical	171	27%	11%	49%	14%		
Semi-routine	896	35%	9%	42%	13%		
Educational qualifications						256.0***	9
Degree	138	13%	3%	23%	61%		
A-levels and higher education	309	17%	4%	33%	45%		
O-levels, CSE, Others	666	29%	3%	40%	29%		
None	1236	35%	10%	41%	14%		
Long-standing illness/disability/infirmity						101.4***	6
No	858	32%	4%	35%	29%		
Yes - limiting	1066	29%	11%	43%	17%		
Yes - not limiting	461	29%	3%	36%	32%		
All		30%	7%	39%	24%		
Sample size (current characteristics)	2385	690	160	933	602		

Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001

WOMEN	Sample size	In poverty	Benefits	State pensions	Private income	Significance te χ^2	df
Paid work histories							
Percentage of working life spent in full-time work (21 to 65/60)						30.0***	9
Under 25%	931	33%	8%	39%	21%		
25%-50%	377	27%	6%	42%	25%		
50%-75%	322	24%	5%	40%	32%		
75%-100%	322	27%	8%	34%	31%		
Percentage of partner's working life spent in full-time work (21 to 65/60)						50.9***	9
Under 25%	3	0%	100%	0%	0%		
25%-50%	9	22%	32%	17%	28%		
50%-75%	84	11%	7%	30%	52%		
75%-100%	717	20%	5%	39%	36%		
Labour market exit						128.5***	12
Early, voluntary exit (before state pension age)	399	27%	5%	34%	34%		
Early, involuntary exit (before state pension age)	618	28%	11%	41%	20%		
Exit at state pension age or later	1151	31%	6%	41%	21%		
Still working	92	13%	0%	26%	61%		
Partnership and fertility histories							
Percentage of working life spent in marriage (21 to 65/60)						8.5	9
Under 25%	143	31%	5%	37%	27%		
25%-50%	97	27%	5%	38%	30%		
50%-75%	245	34%	7%	35%	23%		
75%-100%	1421	27%	7%	40%	25%		
Number of children:						22.7**	9
0	258	30%	6%	36%	28%		
1	305	36%	7%	37%	19%		
2	690	26%	5%	42%	26%		
3+	698	29%	9%	37%	25%		
Family history						27.3***	6
First child born before age 20	184	34%	14%	38%	15%		
First child born at age 20+	1448	29%	6%	39%	26%		
Health histories							
Periods of ill-health/disability lasting over 1 year as an adult						50.1***	9
None	1165	30%	5%	36%	28%		
1 period	455	28%	6%	46%	20%		
2 periods	182	30%	10%	37%	23%		
3 or more periods	145	28%	17%	39%	15%		
Health as a child						11.7	9
Excellent	516	27%	5%	40%	28%		
Very good	707	31%	7%	39%	23%		
Good	450	31%	8%	36%	25%		
Fair, Poor or Varied a lot	273	27%	9%	41%	23%		
All		30%	7%	39%	24%		
Sample size (paid work histories)	1952	544	120	763	525		
Sample size (partnership and fertility histories)	1906	519	119	749	519		
Sample size (health histories)	1947	542	120	761	524		

Table 2: Means of independent variables, by income category: All over 65s

Weighted, those aged 65 and over in Wave 3 (2005/6)　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　*Means*

| | Unmarried men | | | | | | Unmarried women | | | | | | Married men/women | | | | | |
| | Income category | | | | | Significance test | Income category | | | | | Significance test | Income category | | | | | Significance test |
	Cat 1	Cat 2	Cat 3	Cat 4	All	F / χ2	Cat 1	Cat 2	Cat 3	Cat 4	All	F / χ2	Cat 1	Cat 2	Cat 3	Cat 4	All	F / χ2
Paid work histories																		
Percentage of working life in full-time work	85%	79%	85%	86%	85%	0.9	34%	35%	38%	57%	39%	16.7***	63%	57%	63%	63%	63%	1.2
Partner's percentage of working life in full-time work	-	-	-	-			-	-	-	-			57%	52%	58%	58%	57%	0.9
Early voluntary exit from labour market	12%	4%	15%	28%	17%	14.9**	13%	10%	14%	21%	14%	7.0	19%	11%	17%	26%	20%	31.2***
Early involuntary exit from labour market	38%	87%	44%	34%	42%	23.3***	24%	39%	26%	18%	25%	14.3**	36%	50%	33%	25%	32%	44.8***
Partnership and fertility histories																		
Percentage of working life in legal marriage	-	-	-	-			-	-	-	-			88%	86%	89%	87%	87%	2.5
Total number of children	1.6	2.0	1.8	1.7	1.8	0.5	2.0	2.3	2.0	1.5	2.0	5.9***	2.4	2.8	2.4	2.5	2.5	2.3
Health histories																		
2 or more periods of ill-health/disability as an adult	8%	18%	20%	10%	14%	9.3*	17%	31%	16%	15%	17%	11.2*	15%	28%	16%	11%	15%	25.7***
Fair or poor health as a child	12%	21%	11%	6%	11%	4.7	14%	20%	15%	14%	15%	2.1	11%	20%	14%	12%	13%	7.8
Characteristics in 2006																		
Age	78.0	76.5	75.8	76.1	76.5	2.1	79.2	80.7	78.5	76.4	78.7	6.3***	74.6	73.1	73.7	71.4	73.0	34.3***
Widowed	63%	47%	55%	50%	56%	5.3	73%	83%	80%	62%	75%	24.2***	-	-	-	-		
Divorced/separated	17%	40%	21%	32%	23%	11.5**	16%	7%	11%	16%	13%	9.6*	-	-	-	-		
Not own home outright, or renter	52%	66%	42%	22%	42%	29.0***	45%	49%	43%	14%	40%	53.3***	29%	38%	19%	15%	21%	67.8***
Manual worker	84%	95%	78%	39%	72%	78.3***	70%	72%	65%	29%	63%	89.3***	70%	79%	64%	41%	58%	172.9***
No educational qualifications	64%	83%	60%	36%	57%	29.1***	67%	82%	62%	26%	61%	109.2***	55%	65%	52%	27%	44%	171.4***
Has limiting long-term illness	43%	78%	42%	23%	40%	28.9***	44%	75%	53%	36%	49%	46.3***	39%	70%	44%	28%	39%	118.6***
Overall sample sizes:	141	22	231	123	517		484	97	535	184	1300		454	151	884	952	2441	

Significance tests shown are F tests for continuous variables and χ2 tests for categorical (0/1) variables.
Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001

Table 3: Means of independent variables, by income category: Mothers

Weighted, women aged 65 or over, who have ever had children *Means*

		Mothers				
		Income category				Significance test
	All mothers	Cat 1	Cat 2	Cat 3	Cat 4	F / χ2
Paid work histories						
Percentage of working life in full-time work	32%	29%	32%	32%	36%	4.3**
Early voluntary exit from labour market	17%	16%	14%	15%	23%	14.7**
Early involuntary exit from labour market	26%	27%	39%	26%	21%	15.1**
Partnership and fertility histories						
Percentage of working life in legal marriage	86%	86%	87%	86%	87%	0.3
Total number of children	2.5	2.5	2.8	2.5	2.6	2.6
First birth before age 20	12%	13%	24%	11%	7%	25.0***
Widowed before age 45	4%	6%	2%	4%	2%	7.0
Widowed after age 45	37%	45%	48%	42%	16%	95.0***
Divorced before age 45	10%	10%	19%	9%	10%	10.3*
Divorced after age 45	5%	7%	2%	4%	5%	7.6
Health histories						
2 or more periods of ill-health/disability as an adult	16%	16%	32%	17%	11%	27.3***
Fair or poor health as a child	13%	12%	14%	14%	13%	1.4
Characteristics in 2006						
Age	74.9	76.5	75.9	75.2	71.5	42.3***
Not own home outright, or renter	29%	36%	40%	29%	14%	64.6***
Manual worker	62%	69%	75%	65%	40%	98.8***
No educational qualifications	57%	64%	80%	58%	34%	115.6***
Has limiting long-term illness	43%	41%	69%	48%	29%	70.1***
Overall sample sizes:	1693	471	107	671	444	

Significance tests shown are F tests for continuous variables and χ2 tests for categorical (0/1) variables.
Significance levels: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 4: Multinomial logistic regression models of factors associated with poverty category in 2006: All over 65s

Reference category 4 - those above poverty line without benefits or state pension

Cat 1 - total income below poverty line

Cat 2 - below poverty line without non means-tested state benefits

Cat 3 - below poverty line without state benefits and state pension

	Unmarried men			Unmarried women			Married men/women		
	Cat 1	Cat 2	Cat 3	Cat 1	Cat 2	Cat 3	Cat 1	Cat 2	Cat 3
Paid work histories									
Percentage of working life in full-time work	0.99	-	1.00	**0.99****	1.00	0.99	**0.99***	**0.99***	1.00
	(0.97-1.02)		(0.98-1.02)	(0.98-1.00)	(0.98-1.01)	(0.99-1.00)	(0.99-1.00)	(0.98-1.00)	(1.00-1.00)
Partner's percentage of working life in full-time work	-	-	-	-	-	-	**0.99***	**0.99****	1.00
							(0.99-1.00)	(0.98-1.00)	(0.99-1.00)
Early voluntary exit from labour market	**0.34***	-	0.46	0.78	0.74	0.92	1.00	1.06	**0.61****
	(0.14-0.84)		(0.21-1.00)	(0.42-1.48)	(0.27-2.04)	(0.50-1.70)	(0.67-1.48)	(0.53-2.11)	(0.44-0.84)
Early involuntary exit from labour market	0.59	-	0.84	1.41	**3.14****	1.61	**1.54***	**1.71***	1.14
	(0.27-1.30)		(0.42-1.70)	(0.77-2.61)	(1.44-6.81)	(0.88-2.94)	(1.08-2.19)	(1.01-2.91)	(0.85-1.52)
Partnership and fertility histories									
Percentage of working life in legal marriage	-	-	-	-	-	-	1.01	1.00	**1.01****
							(1.00-1.01)	(0.98-1.01)	(1.00-1.02)
Total number of children	1.15	-	1.22	1.02	1.23	1.05	0.89	1.05	**0.89***
	(0.89-1.48)		(0.97-1.53)	(0.84-1.25)	(0.96-1.57)	(0.86-1.28)	(0.79-1.00)	(0.89-1.24)	(0.81-0.98)
Health histories									
2 or more periods of ill-health/disability as an adult	0.47	-	1.54	1.10	1.72	0.84	1.20	**2.17****	1.15
	(0.14-1.58)		(0.57-4.12)	(0.56-2.13)	(0.76-3.89)	(0.44-1.63)	(0.77-1.88)	(1.23-3.84)	(0.79-1.65)
Fair or poor health as a child	3.75	-	**3.78***	1.00	1.19	1.08	0.92	1.13	0.99
	(0.96-14.59)		(1.09-13.18)	(0.51-1.94)	(0.50-2.83)	(0.56-2.08)	(0.58-1.44)	(0.61-2.07)	(0.69-1.43)
Characteristics in 2006									
Age	1.01	-	0.99	**1.03***	**1.06****	1.02	**1.10*****	1.03	**1.07*****
	(0.96-1.05)		(0.95-1.03)	(1.00-1.07)	(1.02-1.11)	(0.99-1.05)	(1.07-1.13)	(0.98-1.07)	(1.05-1.10)
Widowed	1.20	-	0.66	1.84	3.15	**2.74****	-	-	-
	(0.42-3.44)		(0.27-1.64)	(0.88-3.84)	(0.92-10.84)	(1.33-5.63)			
Divorced/separated	**0.29***	-	**0.23****	1.95	1.15	1.48	-	-	-
	(0.09-0.92)		(0.09-0.62)	(0.81-4.68)	(0.23-5.70)	(0.61-3.58)			
Not own home outright, or renter	**2.41***	-	1.89	**3.33*****	2.42	**2.96*****	**1.83****	1.66	1.12
	(1.12-5.18)		(0.94-3.82)	(1.85-6.00)	(1.14-5.14)	(1.65-5.32)	(1.24-2.71)	(0.96-2.87)	(0.79-1.59)
Manual worker	**7.84*****	-	**4.20*****	**2.12****	**2.15***	**2.40*****	**2.94*****	**4.72*****	**2.06*****
	(3.61-17.03)		(2.24-7.89)	(1.26-3.56)	(1.02-4.51)	(1.44-3.99)	(2.10-4.12)	(2.55-8.74)	(1.58-2.69)
No educational qualifications	**2.17***	-	**1.85***	**3.39*****	**7.20*****	**2.54*****	**1.83*****	**2.56*****	**1.77*****
	(1.09-4.31)		(1.01-3.39)	(2.01-5.72)	(3.19-16.29)	(1.52-4.26)	(1.31-2.53)	(1.54-4.25)	(1.35-2.32)
Has limiting long-term illness	**2.73****	-	**1.99***	1.08	**4.38*****	1.55	1.09	**3.63*****	**1.70*****
	(1.28-5.81)		(1.01-3.89)	(0.66-1.76)	(2.08-9.23)	(0.96-2.51)	(0.78-1.52)	(2.19-6.03)	(1.30-2.22)
Sample sizes:									
N in category	96	16	176	348	69	409	295	87	629
N in reference category	98	98	98	151	151	151	674	674	674

Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001

Table 5: Multinomial logistic regression models of factors associated with poverty category in 2006:

Weighted, women aged 65 or over, who have ever had children	*Odds ratios (95% confidence intervals)*		
Reference category 4 - those above poverty line without benefits or state pension			
Cat 1 - total income below poverty line	**Mothers**		
Cat 2 - below poverty line without non means-tested state benefits			
Cat 3 - below poverty line without state benefits and state pension			
	Cat 1	Cat 2	Cat 3
Paid work histories			
Percentage of working life in full-time work	**0.99****	1.00	1.00
	(0.98-1.00)	(0.99-1.01)	(0.99-1.00)
Early voluntary exit from labour market	0.82	1.04	**0.67***
	(0.53-1.26)	(0.51-2.12)	(0.46-0.99)
Early involuntary exit from labour market	1.30	**2.18****	1.09
	(0.87-1.92)	(1.24-3.81)	(0.76-1.57)
Partnership and fertility histories			
Percentage of working life in legal marriage	1.00	1.01	1.00
	(0.99-1.01)	(0.99-1.03)	(0.99-1.01)
Total number of children	**0.82****	1.01	0.88
	(0.71-0.94)	(0.83-1.23)	(0.77-1.00)
First birth before age 20	**2.45****	**2.80****	1.70
	(1.38-4.35)	(1.33-5.87)	(0.98-2.95)
Widowed before age 45	2.29	0.25	0.98
	(0.89-5.92)	(0.03-2.29)	(0.39-2.46)
Widowed after age 45	**3.67*****	**2.93*****	**2.53*****
	(2.45-5.51)	(1.60-5.35)	(1.74-3.66)
Divorced before age 45	**2.01***	2.43	1.10
	(1.03-3.93)	(0.92-6.45)	(0.60-2.04)
Divorced after age 45	**3.24****	0.34	1.31
	(1.57-6.69)	(0.03-3.36)	(0.65-2.68)
Health histories			
2 or more periods of ill-health/disability as an adult	1.29	**2.42****	1.19
	(0.79-2.09)	(1.31-4.49)	(0.76-1.86)
Fair or poor health as a child	0.86	0.84	0.96
	(0.53-1.39)	(0.42-1.68)	(0.63-1.48)
Characteristics in 2006			
Age	**1.07*****	**1.08*****	**1.06*****
	(1.04-1.10)	(1.04-1.13)	(1.03-1.09)
Not own home outright, or renter	**1.94****	1.60	**1.55***
	(1.29-2.92)	(0.91-2.83)	(1.05-2.28)
Manual worker	**2.12*****	**2.51****	**2.00*****
	(1.48-3.03)	(1.38-4.59)	(1.45-2.75)
No educational qualifications	**1.77****	**3.90*****	**1.53***
	(1.24-2.54)	(2.11-7.23)	(1.10-2.11)
Has limiting long-term illness	1.20	**2.94*****	**1.67****
	(0.84-1.70)	(1.71-5.07)	(1.21-2.30)
Sample sizes:			
N in category	398	90	597
N in reference category	400	400	400
Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001			

[i] Only Cyprus, Greece, Spain, Portugal and Ireland have higher rates for older people's poverty

[ii] 2007 Pre-Budget Report and Comprehensive Spending Review, HM Treasury.

[iii] Calculated using the DWP Resource Centre Tabulation Tool at http://www.dwp.gov.uk/resourcecentre/ .

[iv] For a single person before housing costs, 60 per cent of median income equivalised for household size (HBAI, 2007)

[v] Housing Benefit and Council Tax Benefit are not included.