



Office of the  
Deputy Prime Minister  

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Creating sustainable communities

*The Social Exclusion of Older  
People: Evidence from the  
first wave of the English  
Longitudinal Study  
of Ageing (ELSA)*

*Final Report*



Social  
Exclusion  
Unit



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January 2006

Prepared for the Office of the Deputy Prime Minister

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The findings and recommendations in this report are those of the consultant authors and do not necessarily represent the views or proposed policies of the Office of the Deputy Prime Minister

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# Contents

<b>ABOUT THE AUTHORS</b>	<b>5</b>
<b>ACKNOWLEDGEMENTS</b>	<b>6</b>
<b>EXECUTIVE SUMMARY</b>	<b>7</b>
<b>1 INTRODUCTION</b>	<b>11</b>
1.1 Aims	11
1.2 What is social exclusion and how can it be measured?	11
1.3 Using the English Longitudinal Survey of Ageing to measure social exclusion	12
1.4 A profile of older people	13
<b>2 MEASURING SOCIAL EXCLUSION AMONG OLDER PEOPLE</b>	<b>15</b>
2.1 Identifying the dimensions of social exclusion	15
2.1.1 Social relationships	16
2.1.2 Cultural activities	16
2.1.3 Civic activities	16
2.1.4 Access to basic services	16
2.1.5 Neighbourhood exclusion	17
2.1.6 Financial products	17
2.1.7 Material goods	17
2.2 Defining exclusion on each dimension	17
<b>3 INVESTIGATING THE DIFFERENT DIMENSIONS OF EXCLUSION AMONG OLDER PEOPLE</b>	<b>20</b>
3.1 Characteristics of excluded older people	20
3.1.1 Age	20
3.1.2 Gender	21
3.1.3 Ethnicity	22
3.1.4 Living arrangements and other family members	23
3.1.5 Main activity status	25
3.1.6 Health	26
3.1.7 Income and wealth	29
3.1.8 Residence	30
3.1.9 Means of communication and travel	32
3.2 Risk factors for the separate dimensions of exclusion	36

<b>4</b>	<b>INVESTIGATING MULTIPLE EXCLUSION AMONG OLDER PEOPLE</b>	<b>40</b>
4.1	Identifying multiple exclusion	40
4.2	Patterns of multi-dimensional exclusion	41
4.3	Risk factors for multiple exclusion	51
4.4	Exclusion and quality of life	53
<b>5</b>	<b>SUMMARY OF MAIN FINDINGS AND POLICY DIRECTIONS</b>	<b>57</b>
5.1	The social exclusion of older people: the evidence from ELSA	57
5.2	Policy directions	59
	<b>REFERENCES</b>	<b>61</b>
	<b>APPENDICES</b>	<b>63</b>
<b>A</b>	<b>CONSTRUCTING DIMENSIONS OF EXCLUSION</b>	<b>64</b>
	Exclusion from social relationships	64
	Exclusion from cultural activities	70
	Exclusion from civic activities	72
	Exclusion from access to basic services	74
	Neighbourhood exclusion	77
	Exclusion from financial products	80
	Exclusion from common consumer goods	83
<b>B</b>	<b>EXPLORING RISK FACTORS FOR THE DIFFERENT DIMENSIONS OF EXCLUSION</b>	<b>86</b>
<b>C</b>	<b>EXPLORING RISK FACTORS FOR MULTIPLE EXCLUSION</b>	<b>110</b>

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**Although this report was commissioned by the Office, the findings and recommendations are those of the authors and DO NOT necessarily represent the views of the Office of the Deputy Prime Minister. This report will form part of our evidence base when tackling future issues and policies.**

# EXECUTIVE SUMMARY

This report presents the results of an innovative study about the social exclusion of older people. The study of exclusion experienced by older people is relatively new. In the past, most research has focussed on exclusion experienced by people of working age or by families with children.

The study was carried out by the National Centre for Social Research and Professor Alan Walker from the University of Sheffield. It uses 2002-3 data from the English Longitudinal Study of Ageing (ELSA) which is a large-scale survey of people aged 50 and over living in England. The broad aim of the study was to see whether insights about social exclusion could be drawn from this relatively new data source in a way that might strengthen existing knowledge about the particular experiences of exclusion among older people. The main objective of this short project was to measure the patterns of different forms of social exclusion among older people and to examine the key risk factors, or indicators, of social exclusion among older people. The main report presents the results of this analysis and some interpretations. Key findings are summarised below.

## How was social exclusion measured?

Social exclusion is multi-dimensional and, in this study, seven dimensions are constructed from the ELSA data:

- social relationships (contact with family and friends),
- cultural and leisure activities (for example going to cinema or theatre),
- civic activities (for example membership of a local interest group, voluntary work, voting),
- basic services (for example health services, shops),
- neighbourhood (for example safety and friendliness of local people),
- financial products (for example bank account, pension),
- material goods (for example consumer durables, central heating).

The concept of “multiple exclusion” was applied when people were excluded on three or more of these dimensions.

## What are the main findings?

Around half of older people are *not* excluded on any of the dimensions but...

- 29% are excluded on one dimension,
- 13% on two dimensions, and
- 7% on three or more dimensions.



## What are the main risk factors for multiple exclusion amongst older people?

There are seven key characteristics that are most strongly related to an older person experiencing multiple exclusion:

- age: being 80 and over,
- family type: living alone, having no living children,
- health: poor mental or physical health,
- mobility: no access to private car and never uses public transport,
- housing tenure: rented accommodation,
- income: low income, benefits as the main source of income,
- telephone: those without access to a telephone.

Being unemployed, living in a city and undertaking no physical exercise were also related to multiple exclusion but less strongly so than the characteristics above.

The study also revealed some connections between the different forms of exclusion but there was no simple domino effect where exclusion in one area appears to link to exclusion in another and so on. There are two sets of circular connections: social relationships, civic activities and neighbourhood exclusion; and civic activities, financial products and material goods. Not surprisingly the strongest interconnections are between exclusion in the areas of material goods and financial products, and between exclusion from cultural activities and basic services. The report did not look in detail at these associations and hence further work in this area could investigate whether particular groups of older people experience distinctly different forms of multiple exclusion.

The release of the second wave of ELSA data in late 2005 will allow an analysis and better understanding of how social exclusion develops and whether it is briefly felt or long lasting. This may provide important insights into the experiences of exclusion, in those aged 50 and over.

## Were the risk factors the same for each dimension?

No. While there are some characteristics that increase the chances of exclusion across several dimensions, there are none that span all of them. There are some that are particularly strongly related to one of them.

*The factors with the widest influence over the dimensions are:*

- depression (6 dimensions, not material goods),

- poor health (related to 5 dimensions: not civic activities and financial products),
- living alone (related to 4 dimensions: basic services, material goods, social relationships and civic activities),
- membership of a non-white ethnic group (related to 4 dimensions: cultural activities, civic activities, financial products and material goods),
- renting accommodation (related to 4 dimensions: civic activities, neighbourhood, financial products and material goods),
- not having access to a private car or van (related to 4 dimensions: social relationships, cultural activities, basic services and material goods),
- low income (related to 3 dimensions: financial products, material goods and cultural activities),
- being female (related to 3 dimensions: cultural activities, civic activities and financial products).

Age itself is not strongly connected to every dimension. It is a risk factor for the older-old with regard to exclusion from basic services and material goods and, for the younger-old, with regard to civic activities.

*The factors that are closely related to a single dimension of exclusion are:*

- Social relationships: being male, living alone, having no partner or children.
- Cultural activities: having poor health and feeling depressed.
- Civic activities: never using public transport, having a low education and feeling depressed.
- Basic services: being older, having poor health, lacking access to transport (public or private) and living alone.
- Neighbourhood: having poor health and living in a deprived area.
- Financial products: having low income, relying on benefits or self-employment as the main source of income and renting accommodation.
- Material goods: living alone, having no children, being without a telephone and access to a car or van and renting accommodation.

## What is the impact of social exclusion on quality of life?

Not surprisingly, there appears to be a connection between multiple exclusion and the quality of life/well-being of older people. Overall quality of life falls as the number of dimensions older people are excluded on increases. The aspects of quality of life defined in terms of self-

realisation (optimism, life satisfaction, disposition, energy) appear to be most related to multiple exclusion. Multiply excluded older people are also likely to report a lack of control over their lives. This was not the main focus of the study, so it was only possible to look briefly at the relationship between social exclusion and quality of life. As such the findings are not conclusive but they do suggest that future analysis would be worthwhile.

## Which policy areas should be targeted?

The possible policy implications of our findings will be elaborated in a separate report that is due to be published in Autumn 2006, nevertheless there are some key issues to which we should draw attention. For example, the report identifies that 7 per cent of older people are currently experiencing multiple exclusion and this group seems sensibly to be the focus of policy action. Our findings suggest six targets for policy action. These are people with physical and mental health problems; problems of place (living alone and living in the social rented sector); problems with transport; the particular experiences of the oldest old; those living on lower incomes and those over 50 but under pension age who are unemployed. As well as national policies with regard to employment of the over 50s and incomes in older age, the report suggests the need for co-ordinated actions at the local level in order to target the most vulnerable. It is suggested that local strategies, focussed explicitly on addressing the problems faced by the multiply excluded, should unite local government, NHS providers, the voluntary sector and private sector providers.

# CHAPTER 1

## Introduction

### 1.1 Aims

In the summer of 2005, the Office of the Deputy Prime Minister commissioned the National Centre for Social Research and Professor Alan Walker from the University of Sheffield, to analyse data from the English Longitudinal Study of Ageing (ELSA). The aim was to see whether insights about social exclusion could be drawn from this relatively new data source in a way that might strengthen existing knowledge about the particular experiences of exclusion among older people.

Specifically, the aim of this short project was to:

- measure the patterns of different forms of social exclusion among older people, and to
- examine the key risk factors of social exclusion among older people.

This report presents initial findings from the analysis and provides some interpretations.

A second element of the project was to discuss these findings with key stakeholders – including academics and policy specialists – to explore the implications that the findings might have for future policy. Who, for example, are the groups most likely to be socially excluded in 2010 or 2020? And how might social exclusion among older people be countered in the future? The deliberations from these discussions will be presented in a separate report (Walker et al, forthcoming 2006).

### 1.2 What is social exclusion and how can it be measured?

Social exclusion is commonly used to refer to the process that leads to a breakdown of the relationship between society and the individual (Room, 1998). It is a dynamic process, which prevents access to different elements of the social, economic, political or cultural components of everyday life and is usually contrasted with static concepts of poverty (Walker and Walker, 1997). There is an emerging national and international literature which explores how we should measure this difficult concept (Barnes, 2005; Berthoud, 2003; Barnes et al, 2002; Burchardt et al, 1999; Lessof and Jowell, 1999). Nolan and Whelan (1996) were among the first to emphasise the importance of identifying different dimensions of disadvantage, and the relationship between them, in order to thoroughly understand social exclusion. Since then, various attempts have been made to measure the prevalence and risk factors of social exclusion using survey data (see studies referred to above).

The Social Exclusion Unit offers one of the clearest explanations of what social exclusion is, and how it might be measured. It is "...what can happen when people or areas suffer from a combination of *linked* problems such as unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown" (SEU, 2000, emphasis added). Exploring these multiple dimensions of social exclusion among older people is one of the key aims of this report.

To date, our understanding of the complex structure of social exclusion among older people has been limited, with most research focussing on social exclusion amongst the general population. The ESRC Growing Older Programme provided the first reliable information about social exclusion in deprived neighbourhoods and among ethnic minorities (Scharf et al 2004; Nazroo et al 2004). The Social Exclusion Unit's 'Excluded older people' programme is breaking new ground in this area (Phillipson and Scharf, 2004). Other research has been more limited in its scope but has gradually developed our understanding of different aspects of social exclusion, for example finding that retired people on low income are less likely to belong to a club or social organisation than their counterparts with higher incomes (Middleton, 2002; Adelman and Cebulla, 2002). A great deal is still to be learnt.

## 1.3 Using the English Longitudinal Survey of Ageing to measure social exclusion

The English Longitudinal Study of Ageing (ELSA) provides a rich new data source with which to examine social exclusion and its drivers over time. This section provides some background to the study.

ELSA is funded by the National Institute on Ageing and a consortium of UK government departments led by the Office for National Statistics. It is designed and carried out through a collaboration between University College London, the Institute for Fiscal Studies and the National Centre for Social Research.

The ELSA sample was originally drawn from households who responded to the Health Survey for England (HSE) in 1998, 1999 or 2001<sup>1</sup>. Individuals were considered eligible to be core members of ELSA if they had been living in an HSE household, were 50 or over and were still living in a private residential address in England<sup>2</sup>.

The first ELSA survey was carried out in 2002-3. It is considered the 'baseline' study and is referred to as wave 1. ELSA is a longitudinal study and the design strategy is to collect data every two years. The second ELSA survey took place in 2004-5, and interviewers went back to as many wave 1 respondents as possible. Data from wave 2 will be available from the Data Archive in early 2006 and fieldwork for wave 3 will begin in Spring 2006. This longitudinal design means that ELSA will aid understanding of how and why people's lives change as they grow older. As a result it will become possible to look at experiences of social exclusion over time and to explore its dynamic nature.

Great efforts were made to ensure that fieldwork for wave 1 of ELSA was successful, including a thorough strategy for tracing and contacting eligible individuals who had moved since the

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1 As well as providing a good sampling frame this also means that there is a great deal of information about each respondents health status even before they took part in ELSA.

2 Details about eligibility can be found in the ELSA report (Marmot et al, 2003)

HSE interview. The wave 1 survey achieved a household response rate of 70 per cent, and 96 per cent of eligible individuals in these households agreed to take part. This meant that approximately 12,000 older people took part in the survey.

The analysis in this report is based on wave 1 information only. A number of respondents' information was not included in this analysis for a variety of reasons:

- 636 respondents were not included in the analysis because they were partners of ELSA core members who were too young to be eligible for the study in their own right;
- 72 respondents were not included in the analysis because they moved into the household after the HSE interview took place;
- 158 respondents were not included in the analysis because they were interviewed by proxy because they were physically or mentally unable to take part personally;
- 204 respondents were not included in the analysis because their face-to-face interview was not complete.

Furthermore, this analysis relied on answers to specific questions that were used to construct the seven dimension of exclusion. In practice this meant that:

- 215 respondents were not included in the analysis because they did not return the self-completion questionnaire which contained many of the questions that are relevant to social exclusion;
- a further 422 respondents were not included in the analysis because they did not respond to particular questions that were used to construct the seven dimension of exclusion.

In total, the analysis in this report uses the 9,901 core ELSA members who took part in person and completed both a face-to-face interview and a self-completion questionnaire (and were not excluded from the analysis for any of the other reasons given above). The remaining sample size is far larger than is available from other surveys because of the focus of ELSA on older people and the analysis in this report uses weights that account for non-response.

One of the great strengths of ELSA is that it covers a very wide range of topics including individual and household characteristics; physical, cognitive, mental and psychological health; housing, work, pensions, income and assets; expectations for the future; social participation and social support. This diversity is invaluable here, as examining the relationship between social exclusion and a wide range of other factors is key to the investigations in this study.

## 1.4 A profile of older people

This section describes some of the basic social, demographic and economic characteristics of older people (defined in this report as people aged 50 years and over, the target sample of ELSA). It is important to understand these characteristics as they help us remember how diverse the population of older people is and how many older people fall into different sub-groups. Indeed, these are the characteristics that we will use to explore what might drive social exclusion later in the report. Understanding the profile of older people also matters when deciding how to prioritise policies that might affect different groups. For example, factors that seem to drive social exclusion *and* affect large groups might be given a particular policy

priority. Alternatively, those that have a very significant effect on a distinct minority in the population may need to be given particular focus. Appendix A provides a series of detailed tables where more information can be found<sup>3</sup>.

The socio-demographic and economic characteristics of the population of older people are diverse, and a detailed description can be found in Marmot et al (2003). Some of the main conclusions are summarised below.

There are more women than men in the older population, a consequence of the higher survival rate of women than of men. The proportion of older people living with a partner is small compared with the proportion for younger people. As age increases, so does the likelihood of widowhood, and simultaneously there is a fall in the likelihood of living with a spouse or partner and in the average number of people who live in a household. These are very important factors in determining health, mortality and a number of other aspects in the quality of life of older people.

Over three-quarters of the ELSA population live in households without children. A relatively small proportion reported living with children in the household and there was a clear age gradient in the proportion of people who had two or three children, with this proportion decreasing with age.

Kinship relationships are likely to be important to older people because of their effects on mortality and well being. Over three-quarters of ELSA respondents reported having at least one living sibling. There were some age differences in the number of siblings, with the proportions of people who report having living siblings declining with age.

Marmot et al (2003) found that marital status differed by educational attainment of the respondent and so did cohabitation with a partner. People with a higher level of education were more likely either to be married or to be living with a partner. The number of children varied with educational attainment for women but not for men. The mean number of children per woman was lower for those with a degree or other higher educational qualification than for those with no qualifications. A similar pattern was found when analyses were carried out by occupational classification.

Comparing the youngest-old (people aged 50 to 59 years) with the oldest-old (people aged 80 years and above) reveals that the younger age group is particularly likely to live with their partner and children, to be employed, have better physical and mental health, have less mobility problems, a higher income and more likely to have access to a car or van. Conversely the older age groups are more likely to live alone, to not be working, have a worse physical and mental health, more mobility problems, to have had a fall in the past two years, have a lower income and to lack access to a car or van.

These findings provide an important starting point for analyses of social exclusion among older people using the ELSA data.

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<sup>3</sup> In addition, this indicates the size of different sub-sets of the sample - the larger the group of people interviewed the more likely we are to have meaningful results to report.



# CHAPTER 2

## Measuring Social Exclusion Among Older People

In this chapter the rationale for choosing seven different dimensions of social exclusion is explained, as are the details of how each was constructed using information collected for ELSA. The majority of the chapter explores the experience of the different forms of exclusion for various socio-demographic and economic characteristics of older people and looks at the characteristics that are significantly related to exclusion when taking other, potentially confounding characteristics into account.

### 2.1 Identifying the dimensions of social exclusion

In order to understand social exclusion and how it affects older people, we first need to identify the different dimensions of disadvantage that it is comprised of, and decide how they can be measured using data from ELSA. It is important to remember that ELSA was not designed specifically to measure social exclusion though, because of its multi-disciplinary nature, a number of questions that relate to social exclusion were included in the questionnaire. Since there is no universally agreed way to measure social exclusion, the choice of dimensions used in this study has been guided by the theoretical literature on social exclusion of older people and by current policy interests. These dimensions have been amended and built on as appropriate, taking the opportunities and constraints of the ELSA survey into account. The seven dimensions of exclusion that we use for this research are:

1. Exclusion from social relationships
2. Exclusion from cultural activities
3. Exclusion from civic activities
4. Exclusion from access to basic services
5. Neighbourhood exclusion
6. Exclusion from financial products
7. Exclusion from material goods

This list is not definitive. There are other aspects of older people's lives that might be considered to be evidence that someone is experiencing social exclusion. For the purpose of this study various decisions have been made. For example, having poor health (either physical or mental) is not considered to be a measure of exclusion. There may be instances where poor health can be perceived as an outcome of social exclusion, for example where isolation and low income contribute to poor mental health, but in this study poor health is considered as a



risk factor of social exclusion. Considering the health of older people in this way means the study can investigate how different degrees of health are related to the seven dimensions of exclusion listed above and, from a policy perspective, how changes in health status are related to the experiences of older people (for example how poor health might be related to an increase in the experience of exclusion).

The conceptual meaning of each of the seven dimensions of exclusion is outlined below. Greater detail about each dimension is provided in Appendix B.

### **2.1.1 SOCIAL RELATIONSHIPS**

The social relationships dimension tries to capture the frequency of contact with family and friends and the density of these relationships. It explores close social bonds within the household through relationships with any partners and children who live there. So as not to bias against people that live alone, special consideration is given to relationships outside of the household, either in person or by telephone, with children, other immediate family or friends.

### **2.1.2 CULTURAL ACTIVITIES**

The cultural activities dimension tries to capture the notion of exclusion from cultural activities for which people have to leave the home. Activities considered include going to the cinema, visiting an art gallery or museum and going to the theatre, concert or opera. This limited list of activities is quite specific and hence does not capture the broadest definition of culture. The activities are also associated with particular groups of society, such as white, middle class older people. As a result, some care is needed in interpreting the findings. To understand exclusion from these activities, the frequency of taking part in each activity was considered, as was the desire to do the activity more often if the activities were undertaken rarely. To allow for a broader notion of cultural life, this measure of exclusion also incorporates whether people eat out of the home and whether people have taken a holiday in the last 12 months.

### **2.1.3 CIVIC ACTIVITIES**

The civic activities dimension tries to capture participation in activities that contribute to a healthy civil society. These activities include being a member of a political party, trade union or environmental group; a tenants group, resident group or neighbourhood watch scheme; the church or other religious organisation; and charitable associations. Other activities taken into consideration include doing voluntary work and voting in the last general election. We are aware that this dimension covers a disparate collection of items but include it because it taps an important aspect of everyday life and provides continuity and some comparability with previous research<sup>4</sup>.

### **2.1.4 ACCESS TO BASIC SERVICES**

Exclusion from basic services captures the disadvantage that older people face from being unable to access certain services that provide basic provisions, many of which are crucial to the quality of life of older people. The dimension considers how difficult it is for older people to get to a number of services using usual forms of transport. The dimension considers three types of service provision; financial services such as bank, cash point, and post office; health services, such as chiropodist, dentist, general practitioner, hospital and optician; and, provision suppliers such as local shops, a shopping centre and a supermarket.

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<sup>4</sup> This dimension follows closely the methodology used by Scharf et al (2004).

### **2.1.5 NEIGHBOURHOOD EXCLUSION**

The concept of neighbourhood exclusion captures older people's feelings of the area surrounding where they live and their ability to rely on people living close to them. The dimension considers feelings of being part of the local area, feeling lonely living in the area, the trustworthiness of the people in the area, feeling safe to walk the streets after dark, the friendliness of people in the area, and whether there are people in the area who would help in times of trouble. These questions were originally collected in order to measure the social capital of an area. Here they are treated as attributes of an individual on the assumption that those who feel comfortable and supported in their neighbourhood are less excluded than those who do not.

### **2.1.6 FINANCIAL PRODUCTS**

The concept of exclusion from basic financial products considers how older people manage their finances. Research by Kempson and Whyley (1999) found that people without access to financial products identify day-to-day money management and long-term financial security as the most important areas of unmet need of financial services. These concepts are used in this dimension. To capture the day-to-day money management aspect of exclusion from financial products, information on current accounts at a bank, building society or elsewhere is used. For the long-term financial security measure, information on current and future private pension income and life insurance is used. The dimension also considers medium-term savings products such as savings accounts, stocks and shares and other investments.

### **2.1.7 MATERIAL GOODS**

The concept of exclusion from material goods measures the ownership of common consumer goods. Each item included in this dimension is available to at least three-quarters of older people. The items included in the dimension are a television, video recorder, deep freeze or fridge freezer, washing machine and microwave oven. In addition the measure takes account of whether or not individuals had central heating in their home. In fact, ELSA also asked about the use of some less common items such as a computer, CD player or tumble dryer but these were not included in the final measure of exclusion from material goods. An analysis of these less common items revealed that the oldest-old were less likely to own them, which could be because the oldest-old do not want these items or that the oldest-old are less likely to catch up with new technologies. This was something that we did not want to capture in the dimension. The dimension should also not be regarded as a measure of low income, as the questions used to construct this dimension did not ask the respondent whether he or she did not own the goods because of an inability to afford them. In other words, exclusion from common material goods as measured in this dimension may or may not be due to low income.

## **2.2 Defining exclusion on each dimension**

Each older person in the sample is given an exclusion 'score' on each dimension based on their responses to the questions relevant to that dimension<sup>5</sup>. So, for example, each older person is given an exclusion score for the material goods dimension which is related to the number of items that is not available to them (where a higher score indicates greater exclusion from material goods).

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5 Further information on the construction of the indicators is detailed in Appendix A.

For each of the seven dimensions there is no absolute threshold at which an older person can be determined to be excluded. So, for example, there is no agreed number of material goods, or combination of material goods, that an older person has to be without to indicate that they should be treated as excluded on the material goods dimension. This is true for each of the seven dimensions. Therefore a decision was made to create a threshold that signifies exclusion on each dimension.

The distribution of exclusion scores for each dimension was examined to see if any naturally appearing thresholds were present. These would be identified by a point in the distribution where a noticeable proportion of older people experienced more exclusion than the norm. Few obvious exclusion points were present.

A decision was made to construct a threshold for each dimension that identified approximately 10 per cent of older people as excluded. This means that exclusion is defined relative to the population of people aged 50 and over. This acknowledges that the nature of social exclusion may be different for older people than for the population as a whole. The methodology, in effect, identifies the most excluded 10 per cent of older people on each dimension.

Various caveats to this approach should be noted. Given that it is not possible to determine an 'absolute' level of exclusion on any dimension, exclusion as measured in this study does depend on how each dimension is defined and where the exclusion threshold is set. If we were to decide, for example, that having a washing machine made no difference to the extent that someone was excluded from material goods, then the definition of the meaning of the material goods dimension would change (albeit only slightly in this case).

Likewise, the proportion of older people defined as excluded on each dimension is set at around 10 per cent. Because the distribution of exclusion scores differs for each threshold, the percentage of older people defined as excluded on each dimension actually varies between 9 and 13 per cent<sup>6</sup>. If we altered the threshold, the proportion of people excluded would change accordingly.

As a result, these measures do not provide sufficient evidence to say, with confidence, that one kind of exclusion is 'worse' than another. Nevertheless, the thresholds are useful. They are set at levels that identify the most excluded 10 per cent of older people on each dimension. These magnitudes are also comparable with rates of exclusion found in other research.

It is important to note that the definitions of excluded people on each dimension were also checked to ensure that they seemed intuitively reasonable (see the examples of the conditions that accompany exclusion on each of the seven dimensions are given in Table 2.1 below) and no single dimension is so prevalent or rare that it is likely to distort a broader look at exclusion across dimensions.

In effect, the value of each threshold is greatest when looking at the relative level of exclusion among different groups of older people. For example while 13 per cent of all older people experience neighbourhood exclusion it is more helpful to know that this is a particular problem for renters, for those living in the most deprived areas, for those with fair or poor eyesight, and for those with mobility problems in their upper and lower limbs. This will be the basis for the analysis presented throughout this report.

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<sup>6</sup> The actual percentage of older people excluded on each dimension is: social relationships (12 per cent), cultural activities (11 per cent), civic activities (12 per cent), basic services (9 per cent), neighbourhood exclusion (13 per cent), financial products (10 per cent) and material goods (11 per cent).

<b>Table 2.1 Examples of exclusion on each of the seven dimensions</b>	
<b>Dimension</b>	<b>Example of someone who is defined as excluded</b>
Social relationships	Close relationship with partner, speaks to a child on the phone but no other contacts outside the home.
Cultural activities	Never goes to the theatre, concert or opera but would like to. Goes to an art gallery or museum less than once a year but would like to go more. Goes to the cinema less than twice a year and would like to go more.
Civic activities	Not a member of any civic organisation. Has not done any voluntary work and did not vote in the last general election.
Access to basic services	Has difficulty getting to the GP and has difficulty getting to the bank/post office.
Neighbourhood exclusion	Agrees very strongly with the statement 'Most people in this area cannot be trusted' and quite strongly with the statement 'If in trouble there is no one in this area that would help you'.
Financial products	Has a current bank account to help with day-to-day money management but has no medium-term savings or longer-term financial products.
Material goods	Has a TV, video player and fridge-freezer. Has no microwave, or washing machine.

Note: Of course there are many other examples that could be presented here given the range of information used in the construction of each indicator.

# CHAPTER 3

## Investigating the Different Dimensions of Exclusion Among Older People

The previous chapter has summarised the experience of different kinds of exclusion as measured by the seven dimensions of exclusion constructed for this study. This chapter examines in more detail the experience of social exclusion for various groups of older people, defined according to their socio-demographic and economic characteristics.

First the relationship between the various characteristics and the different forms of exclusion are explored. The analyses show how exclusion varies according to the characteristics of older people. Since exclusion is explored here by just one characteristic at a time, it is important to note that although exclusion may vary significantly according to a particular characteristic it may not be this characteristic that is driving this association. For example, widows may be seen to experience more exclusion than married women, but it may be their age (widows are generally older than married women) that drives the association rather than their marital status. Nevertheless, this bivariate analyses gives an early indication of some of the underlying factors that may be driving social exclusion.

Later in the chapter the relationships between older people's socio-demographic and economic characteristics and exclusion are investigated using multivariate analyses. This analyses explores the relationship of each characteristic to exclusion when taking into account any possible confounding influence of other characteristics. The multivariate analyses is used, therefore, to determine the main risk factors for the different forms of exclusion.

### 3.1 Characteristics of excluded older people

The section begins with some of the main defining characteristics of older people – their age, gender and ethnicity. Other characteristics of older people are then considered, including their living arrangements and family situation, main activity status, health, income and wealth, residence, and means of communication and travel. In each table presented below, bold text indicates a statistically significant difference between the percentage of all older people excluded on one particular exclusion dimension and that category of the characteristic of interest.

#### 3.1.1 AGE

Throughout this report we talk about 'older people' and define this as individuals aged 50 and over. Clearly, this definition incorporates a wide spectrum of experience and it is useful to examine how similar (or varied) the experiences of different age groups are. Does it seem that age itself is a factor related to social exclusion? And, if so, is social exclusion mainly a problem of the oldest old?

Table 3.1 shows the percentage of each age group that experience social exclusion in each of the seven dimensions. Percentages in bold show that the population sub-group (for example of 50-59 year olds) experience significantly more or less exclusion than is experienced by the sample as a whole (that is than for all older people – presented in italics). For example, it can be seen that 12 per cent of all older people are excluded from social relationships based on this threshold. Table 3.1 shows that significantly less (9 per cent) of 50-59 year olds have this experience, as do significantly more (25 per cent) of those aged 80 years and older (the oldest-old). Some of the key findings are presented below the table.

<b>Table 3.1</b> The risk of exclusion by age group								
	Cell per cent							
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
50-59 years	<b>9</b>	<b>12</b>	<b>13</b>	<b>5</b>	<b>12</b>	9	<b>5</b>	3764
60-69 years	<b>11</b>	<b>10</b>	<b>10</b>	<b>6</b>	14	<b>9</b>	<b>6</b>	3041
70-79 years	<b>14</b>	11	<b>10</b>	<b>11</b>	15	11	<b>15</b>	2166
80+ years	<b>25</b>	<b>14</b>	12	<b>29</b>	14	<b>14</b>	<b>33</b>	930
<i>All older people</i>	<i>12</i>	<i>11</i>	<i>12</i>	<i>9</i>	<i>13</i>	<i>10</i>	<i>11</i>	<i>9901</i>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings

- The oldest old are significantly more likely to experience exclusion from material goods (33 per cent), from basic services (29 per cent) and from social relationships (25 per cent). The oldest old are particularly likely to be living alone, or without a partner, which may help to explain the high levels of exclusion in these dimensions.
- The variation in exclusion by age group is not as apparent for the other four dimensions, suggesting that being older does not necessarily lead to a marked increase in all forms of exclusion.
- The younger old are significantly less likely to experience exclusion from social relationships (9 per cent), basic services (5 per cent) and material goods (5 per cent) dimensions.

### 3.1.2 GENDER

Men and women are likely to experience different levels of social exclusion and to experience exclusion in different ways. During their lives, men and women may have had different amounts of employment, different wage levels, and different experiences of family life. Many of these factors will determine the extent to which they are excluded in later life. Table 3.2 highlights some of these issues.

<b>Table 3.2 The risk of exclusion by gender</b>								Cell per cent
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
Male	<b>14</b>	<b>10</b>	<b>10</b>	<b>8</b>	13	<b>8</b>	<b>10</b>	4496
Female	<b>11</b>	<b>13</b>	<b>13</b>	<b>11</b>	14	<b>12</b>	<b>11</b>	5405
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings

- The level of exclusion experienced by men and women is significantly different on several dimensions, and is likely to be important but, relative to differences by age group, the gap is not very large.
- Women are generally more likely than men to experience exclusion. They are more likely to be excluded from cultural activities (13 per cent women, 10 per cent men), civic activities (13 per cent women, 10 per cent men), to experience financial exclusion (12 per cent women, 8 per cent men), be excluded from basic services (11 per cent women, 8 per cent men) and from material goods (11 per cent women, 10 per cent men).
- There is only one dimension in which a greater percentage of men are excluded than women – this is exclusion from social relationships where 14 per cent of men are defined as excluded compared to 11 per cent of women. This is a finding replicated in research by Davidson and Arber (2004).

### 3.1.3 ETHNICITY

Older people from ethnic minority groups are under-represented in the ELSA survey for several reasons<sup>7</sup>. As a result it has not been possible to examine the nature of social exclusion experienced by specific minority groups or to reveal any of the potential diversity of the experiences of different groups. It has only been possible to define two crude groups of older people based on ethnicity – white and non-white older people. The small numbers of ethnic minority respondents in the analysis means that significant differences in estimates of exclusion may not be evident. Furthermore, the study does not capture notions of social exclusion that may be particular to minority groups, for example the experience of racism. This means that the experience of social exclusion reported here is limited and may underestimate the true picture (see Nazroo *et al*, 2004; Butt and Moriarty, 2004). Despite these limitations, some patterns are evident as shown in Table 3.3 below.

<b>Table 3.3 The risk of exclusion by ethnicity</b>								Cell per cent
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
White	12	11	12	9	13	<b>9</b>	11	9663
Non-white	12	<b>21</b>	10	13	17	<b>30</b>	12	210
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

<sup>7</sup> For example, no funding was available for ELSA to follow up a boosted ethnic minority population, the original HSE sampling strategy did not allow for interviews to be translated into other languages so some individuals were excluded and the level of attrition of ethnic minority individuals is higher than average.



## Key findings

- A higher percentage of non-white older people are financially excluded (30 per cent compared to 10 per cent of all older people). This means that the non-white population are more likely to go without financial products such as bank accounts, saving schemes or pensions, and the benefits that may accrue from them.
- Non-white older people are also more likely to be excluded from cultural activities (21 per cent compared to 11 per cent of white older people). However, it is important to note that most of the items used to define cultural exclusion are very specific – including opera, concerts and museums – and activities that many would consider predominantly white, middle class activities.
- Based on this small sample, there is no evidence of a (statistically significant) difference between whites and non-whites in exclusion from social activities, civic activities, material goods or neighbourhood exclusion though we cannot say conclusively that they do not exist.

### 3.1.4 LIVING ARRANGEMENTS AND OTHER FAMILY MEMBERS<sup>8</sup>

Living arrangements are very fundamental to people's day to day experience. Co-residents are potential providers of emotional support, domestic help, and personal and nursing care. External social support from family, such as children and siblings, is also crucial for older people's well being. The level of exclusion experienced by older people varies according to these characteristics, as shown in Tables 3.4 to 3.6 below.

<b>Table 3.4</b> The risk of exclusion by living arrangements and family type								
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Cell per cent Base
<b>Lives:</b>								
Alone	25	13	14	18	18	15	26	2373
With partner only	7	10	10	6	11	7	6	5212
With children only	23	17	19	14	18	20	8	421
Partner & children	5	12	11	5	12	7	2	1587
Others (not partner or children)	18	12	14	9	17	14	10	308
<b>Marital status:</b>								
Single, never married	47	12	12	14	17	12	35	529
Married, only marriage	6	10	10	6	11	7	5	5642
Remarried	10	12	12	6	12	9	4	1100
Legally separated	11	16	22	18	25	31	17	114
Divorced	17	17	18	10	19	20	13	911
Widowed	20	12	13	19	16	13	21	1604
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

<sup>8</sup> Although information on older people who care for another sick or disabled person (including their partner) is included in ELSA, the definition of a carer in the survey is broad and it was not possible to look at the exclusion of carers in detail for this particular study.



**Key findings: Living arrangements**

- Living alone is associated with high rates of exclusion on all dimensions.
- Living with children (and no partner) is associated with high rates of exclusion on all dimensions, except for exclusion from material goods.
- Living with your partner, or with your partner and children, is associated with low levels of all types of exclusion.

**Key findings: Marital status**

- There is a very striking relationship between experience of exclusion and marital status. Almost one half (47 per cent) of individuals who are single and never married are defined here as excluded from social relationships. In large part this is because having contact with a partner and with children forms a high proportion of people's key social contacts. Further consideration would need to be given to whether all of these individuals feel excluded from social relationships as to some extent this may be a partial definition.
- Individuals who are widowed or divorced are also over-represented among those who are excluded from social relationships. They and people who are legally separated are also more likely to be excluded on almost all dimensions.
- There is no strong difference between the experiences of those that are married for the first time or have a second or later marriage, all are less excluded on almost all dimensions.

**Table 3.5** The risk of exclusion by living arrangements and family type

	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Cell per cent Base
<b>Number of living children:</b>								
No children	40	12	11	13	15	10	27	1232
1 child	15	11	12	13	14	10	14	1416
2 children	7	10	9	7	12	8	7	3746
3 children	7	12	12	9	13	10	7	1944
4+ children	7	14	15	10	15	15	6	1563
<b>Number of living siblings:</b>								
No siblings	20	11	11	12	12	9	15	2151
1 sibling	11	11	10	8	13	7	11	3051
2 siblings	10	11	11	9	13	10	9	2022
3 siblings	9	12	13	9	14	12	9	1104
4+ siblings	9	14	14	10	17	15	8	1545
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

**Key findings: Number of living children**

- The relationship with number of living children is complex and some of the dimensions of exclusion show no clear pattern.
- Forty per cent of people with no living children were socially excluded compared to 12 per cent of all older people. This is not entirely unexpected as the indicator for social

exclusion is based on the reported frequency and closeness of relationships with family and friends. Similarly, people with no living children (27 per cent) were more likely to be excluded from material goods than all older people.

- A greater percentage of people with no children or only one child (both 13 per cent) were excluded from basic services, which is a greater proportion than for all older people.
- In contrast, those with four or more children were more likely to be excluded on all dimensions except social relationships and material goods.

### Key findings: Number of living siblings

- Number of living siblings is associated with different levels of social exclusion for different dimensions of exclusion.
- Those with no living siblings are more likely to be socially excluded than those with siblings (20 per cent compared to between 9 and 11 per cent). As above, this is partly due to the fact that this indicator is based on contact with family and friends. However, these people are also more likely to be excluded from basic services (12 per cent compared to between 8 and 10 per cent of all older people).

### 3.1.5 MAIN ACTIVITY STATUS

ELSA takes two approaches to considering a respondent's status in terms of economic activity. It asks people to identify their own status from a pre-defined set that includes items such as retired and permanently sick or disabled. And it asks whether or not the individual has done any work in the last month. For this purpose the most important issue is how people define themselves.

We can hypothesise that main activity status will be associated with various aspects of social exclusion. In particular, employed people may have greater access to friends and cultural activities and may be more likely to have access to financial products. This is explored in Table 3.6 below.

<b>Table 3.6</b> The risk of exclusion by main activity status								
	Cell per cent							
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
Retired	15	10	10	12	14	10	15	4873
Employed	8	10	12	3	11	4	3	2715
Self-employed	10	12	11	2	8	7	6	562
Unemployed	29	22	24	8	31	27	21	99
Permanently sick or disabled	18	24	22	30	23	31	12	587
Looking after home or family	10	14	12	9	13	15	10	953
Semi-retired	10	8	12	0	12	4	7	74
<b>All older people</b>	12	11	12	9	13	10	11	9901

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings:

- On the whole, those who define themselves as unemployed or permanently sick or disabled are most likely to be socially excluded.
- Those who are employed or self-employed are less likely to be excluded in almost all dimensions, and have very low chances of being excluded from basic services, financial and material goods.
- People who are retired are more likely to be excluded from social relationships, material goods and basic services but less likely to be excluded from cultural and civic activities.
- Very few older people define themselves as unemployed (only 99 are identified here) but a significantly higher percentage of these individuals were excluded from social relationships (29 per cent) than all older people (12 per cent). Similarly a quarter of those unemployed (24 per cent compared to 12 per cent of all older people) were excluded from civic activities and a third experienced neighbourhood exclusion (31 per cent compared to 13 per cent of all older people). This pattern is also true, perhaps unsurprisingly, for exclusion from financial products (27 per cent compared to 10 per cent of all older people) and material goods (21 per cent compared to 11 per cent of all older people).
- A much larger group describe themselves as permanently sick or disabled and among these people there is a high percentage of individuals experiencing a wide range of types of exclusion. Three in ten individuals who describe themselves as permanently sick or disabled are also defined as being excluded from basic services and 31 report being financially excluded. On all dimensions the permanently sick or disabled are more excluded than their counterparts. This is a significant and consistent message, and is considered in more detail in the next section.

### 3.1.6 HEALTH

Having poor health can make it difficult to participate in particular aspects of society. There are many different ways we can consider health – we can summarise general health quite subjectively, or can report on the quality of specific aspects of health such as someone’s vision, hearing or mental health. The way in which exclusion of different kinds varies by different measures of health is shown in Tables 3.7 below.

### Key findings:

- Table 3.7 above shows a large number of different measures of health. For all of them, individuals with better health are less likely to be excluded across the dimensions of exclusion than those who have poor health.
- Far greater proportions of those who report their general health to be poor, rather than excellent, are excluded across all dimensions. This pattern is least strong for exclusion from material goods although those in poor health are still twice as likely to be excluded than those whose health is excellent.
- Approximately one-fifth of older people who report having poor health are defined as being excluded from social relationships compared with just less than one-tenth of those with excellent health. A very similar pattern can be seen among those who are excluded from civic activities, cultural activities, and those who experience neighbourhood and financial exclusion.

- Most strikingly, one third (35 per cent) of those who report having the poorest health are considerably excluded from access to basic services, compared to a tiny minority (just 3 per cent) that report having excellent health. As the indicator for exclusion from basic services was based on perceived difficulty with getting to these places, those with poor health may be excluded because of their frailty or disability. They are also most likely to need some of these services (which included chiropodist, dentist, GP, hospital and optician) and so may be more likely to report difficulties getting to them, whereas people with good health may not need to access these services very frequently and are therefore less likely to report this as difficult.
- The tables show that in general having poor eyesight is associated with higher levels of exclusion on most of the dimensions. This is less true of people with difficulties with hearing but these people are still significantly more likely to be excluded on the social relationships, civic activities and basic services dimensions.
- Those with mobility difficulties in both their upper and lower body are more likely to be excluded on all dimensions. This finding is generally supported by the evidence that those who carry out some physical activity tend to be less excluded than those who carry out no physical activities at all.
- Those who have experienced falls are more likely to experience exclusion in terms of social relationships (18 per cent compared to 12 per cent of all older people), access to basic services (19 per cent compared to 9 per cent of all older people) and material goods (18 per cent compared to 11 per cent of all older people).

Both of the measures of people's mental well-being, which are the general health questionnaire (GHQ12) and a measure of depression using the Centre for Epidemiologic Studies Depression Scale (CES-D), show that those who have poor mental health are more likely to be excluded across all dimensions. Again, those with most ill health have most difficulty accessing services (or report these difficulties more readily).

**Table 3.7** The risk of exclusion by health status

	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Cell per cent Base
<b>General health:</b>								
Excellent	9	9	9	3	8	5	7	1293
Very good	11	9	9	5	11	7	9	2948
Good	12	11	11	7	13	9	11	3131
Fair	16	15	15	16	19	16	13	1843
Poor	19	21	21	35	22	25	14	684
<b>Eyesight:</b>								
Excellent	8	10	8	4	10	6	6	1532
Very good	11	9	10	7	12	8	10	3108
Good	13	12	12	9	14	10	10	3812
Fair	18	17	16	17	17	17	15	1140
Poor	18	17	17	30	24	18	21	288
<b>Hearing:</b>								
Excellent	11	11	11	7	12	10	9	2301
Very good	11	10	12	8	13	9	10	2605
Good	13	12	10	9	13	9	11	2935
Fair	15	13	11	12	15	13	13	1596
Poor	17	12	18	22	18	14	14	461
<b>Problems with:</b>								
Lower limb mobility	12	10	10	6	12	8	10	2550
Upper limb mobility	13	10	11	4	15	10	11	343
Both	16	18	15	23	18	17	14	2734
Neither	11	8	10	3	11	7	9	4273
<b>Fallen in past two years:</b>								
No	11	11	12	7	13	9	9	7906
Yes	18	14	11	19	15	12	18	1860
<b>GHQ12 grouped:</b>								
No symptoms	10	9	10	5	11	8	9	7148
1-3 symptoms	16	16	14	16	17	12	13	2083
4+ symptoms	20	23	19	35	29	22	17	665
<b>CESD scale:</b>								
Depressed (3+ symptoms)	18	19	18	21	22	18	14	2297
Not depressed (0-2 symptoms)	11	9	9	6	11	7	10	7544
<b>Physical activity</b>								
Regular vigorous activity	9	9	9	4	9	6	6	1820
Regular moderate activity	7	8	8	3	10	6	7	1157
Some moderate activity	12	12	11	5	12	8	9	2627
Some mild activity	14	12	13	11	16	11	12	3581
No activity	23	17	19	36	20	24	22	714
<b>All older people</b>	12	11	12	9	13	10	11	9901

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### 3.1.7 INCOME AND WEALTH

We can expect income and wealth<sup>9</sup> to be associated with different forms of exclusion. Indeed, we can hypothesise that income and wealth are likely to be closely associated with and be part of the cause of exclusion from material goods. It is also easy to imagine the link between having little access to financial resources and difficulties taking part in cultural or even social activities. In this section we also look at main source of income which distinguishes, for example, between those who rely on savings and those who live primarily on benefits or earned income. These issues are explored in Tables 3.8 and 3.9 below.

<b>Table 3.8 The risk of exclusion by income<sup>10</sup></b>								Cell per cent
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
<b>Income:</b>								
Lowest income quintile	<b>18</b>	14	<b>15</b>	<b>13</b>	<b>19</b>	<b>22</b>	<b>21</b>	1919
Second quintile	14	13	14	<b>14</b>	16	<b>14</b>	13	1933
Third quintile	12	13	13	12	15	8	9	1963
Fourth quintile	<b>9</b>	10	10	<b>5</b>	<b>9</b>	<b>4</b>	<b>5</b>	1989
Highest income quintile	<b>9</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>8</b>	<b>2</b>	<b>4</b>	2018
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

Notes: Total equivalised household income is divided into quintiles: £0-£5,550; £5,551- £11,700; £11,701- £19,500; £19,501 or more

#### Key findings:

- There is a clear relationship between income and exclusion that is significant across almost all dimensions of exclusion.
- Older people in the lowest income quintile are significantly more likely than those further up the income distribution to be excluded on all but one of the dimensions. Around one fifth of older people in the lowest income quintile are excluded from financial products (22 per cent), material goods (21 per cent), experience neighbourhood exclusion (19 per cent) and exclusion from social relationships (18 per cent). Even those in the second lowest income quintile are more likely to be excluded from basic services (14 per cent) and financial products (14 per cent). Those in the highest income quartile are less likely to be excluded on all dimensions and this is largely true of those in the fourth income quintile.

9 It is important to remember that housing wealth, though a strong and stable measure of someone's underlying financial situation, does not necessarily 'convert' easily into money to spend on activities or services.

10 It should be noted that the measure of equivalised household income used in ELSA uses a different equivalisation scale from that used in the Households Below Low Income (HBAI) series. The equivalisation scale used in ELSA 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 in order to be equally well off. Children aged 13 and under contribute 0.3 to the scale and older children contribute 0.5.

**Table 3.9** The risk of exclusion by income source and housing wealth

	Cell per cent							
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
<b>Main source of income</b>								
Employment	8	9	12	3	11	4	4	2918
Self-employment	7	13	13	2	7	8	4	507
Private pension	11	8	6	6	9	2	6	1626
State pension	16	12	11	14	15	13	19	3425
Benefits	17	25	22	22	26	36	14	849
Assets	16	8	7	7	10	4	12	464
Other	8	9	8	7	12	15	6	112
<b>Housing wealth:</b>								
None	18	16	18	16	21	24	20	2418
Less than £50,000	9	10	10	8	13	7	7	1853
Less than £100,000	10	11	11	8	11	5	7	2634
Less than £150,000	11	10	8	6	8	3	7	1397
£150,000 or more	12	9	8	6	10	4	8	1520
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

Notes: Household equivalised income in quintiles: £0-£5,550; £5,551- £11,700; £11,701- £19,500; £19,501 or more

### Key findings:

- The relationship between main source of income and exclusion is also strong. Those on state pension or other benefits as their primary source of income are more likely to be excluded on almost all dimensions. These findings confirm the previous analysis of main activity status that showed that those who were not in employment, particularly those unemployed or sick or disabled were the most likely to face exclusion.
- Those whose main sources are employment or self-employment income are consistently less likely to be excluded across all dimensions
- Older people whose main source of income is a private pension are significantly less likely to be excluded on all dimensions (though there is no significant relationship with exclusion from social relationships, perhaps because of the preponderance of men, who report fewer social relationships, among those with private pensions).
- Those whose main source of income is assets are less likely to be excluded than all older people.
- A far greater proportion of people with no housing wealth were excluded compared to those who did have housing wealth. However, differences in amount of housing wealth is less significantly associated with exclusion.

### 3.1.8 RESIDENCE

To this point we have looked at the characteristics of individuals such as age, gender, ethnicity, living arrangements, health, income and wealth. Here we look at characteristics of individuals in terms of their tenure, and at the characteristics of the area in which they live. The immediate environment may be a vital element of how excluded one is likely to be.

<b>Table 3.10</b> The risk of exclusion by housing type and area								
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Cell per cent Base
<b>Tenure:</b>								
Outright owner	12	<b>9</b>	<b>9</b>	<b>8</b>	<b>11</b>	<b>6</b>	<b>9</b>	5575
Buyer	<b>8</b>	11	11	<b>5</b>	<b>11</b>	<b>5</b>	<b>3</b>	2449
Private renter/part-renter	<b>20</b>	<b>17</b>	<b>19</b>	<b>19</b>	<b>24</b>	<b>30</b>	<b>22</b>	1487
Social renter/part-renter	<b>20</b>	<b>17</b>	<b>22</b>	<b>15</b>	<b>18</b>	<b>21</b>	<b>26</b>	266
Rent free	16	11	11	7	15	6	<b>16</b>	104
<b>Index of multiple deprivation:</b>								
Least deprived	<b>10</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>4</b>	<b>7</b>	2304
Second quintile	12	<b>10</b>	<b>10</b>	<b>7</b>	<b>9</b>	<b>6</b>	<b>9</b>	2350
Third quintile	<b>11</b>	<b>11</b>	11	10	<b>12</b>	<b>9</b>	<b>10</b>	2028
Fourth quintile	<b>14</b>	11	12	<b>11</b>	<b>17</b>	<b>12</b>	<b>13</b>	1812
Most deprived	<b>16</b>	<b>16</b>	<b>17</b>	<b>14</b>	<b>24</b>	<b>23</b>	<b>17</b>	1403
<b>Urban/rural:</b>								
City	13	11	12	10	15	11	11	7386
Town	<b>11</b>	<b>12</b>	<b>9</b>	9	<b>11</b>	<b>7</b>	<b>8</b>	1193
Village	<b>10</b>	<b>12</b>	<b>10</b>	9	<b>8</b>	<b>6</b>	<b>9</b>	933
Hamlet	<b>9</b>	<b>9</b>	<b>10</b>	9	<b>9</b>	<b>8</b>	<b>10</b>	385
<b>Region:</b>								
North East	<b>10</b>	<b>14</b>	<b>13</b>	<b>11</b>	13	<b>11</b>	<b>7</b>	630
North West	12	11	<b>10</b>	9	<b>14</b>	<b>13</b>	<b>12</b>	1310
Yorkshire/Humber	<b>11</b>	<b>9</b>	<b>14</b>	<b>11</b>	<b>16</b>	<b>11</b>	11	1091
East Midlands	<b>11</b>	11	<b>13</b>	<b>12</b>	<b>12</b>	<b>11</b>	<b>8</b>	948
West Midlands	<b>11</b>	<b>13</b>	<b>13</b>	<b>11</b>	<b>14</b>	<b>12</b>	11	1064
East of England	<b>12</b>	11	<b>10</b>	<b>6</b>	<b>11</b>	<b>7</b>	<b>10</b>	1159
London	<b>15</b>	<b>14</b>	<b>11</b>	9	<b>18</b>	<b>16</b>	<b>16</b>	918
South East	<b>14</b>	12	<b>11</b>	<b>8</b>	<b>12</b>	<b>5</b>	<b>9</b>	1619
South West	<b>14</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>7</b>	10	1158
<b>All older people</b>	<b>12</b>	<b>11</b>	<b>12</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>9901</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings:

- Renters and part renters in the private and social rental sector have the highest proportion of individuals excluded on all dimensions. Private renters are even more likely to be excluded from basic services, and are more likely to experience neighbourhood and financial exclusion. Previous analysis has shown that those with no housing wealth are significantly more likely to be excluded on each of the seven dimensions of exclusion.
- Individuals living in the most deprived areas (according to the 2004 Index of Multiple Deprivation) are consistently those most likely to experience exclusion across all dimensions. Not surprisingly the relationship between area and neighbourhood exclusion is strong.
- The pattern of exclusion among those living in urban and rural areas is generally less clear cut. Nevertheless, there are two dimensions of exclusion which seem to show a clear linear relationship with the urban/rural indicator. Those in hamlets are less likely to experience exclusion from social relationships and are less likely to experience neighbourhood exclusion.



- The majority of people live in cities and there is no significant difference between their experience of exclusion and those of older people in general. Older people living in towns seem less likely to be excluded on most dimensions but are significantly (though only slightly) more likely to be excluded from social relationships.
- Region on its own is not helpful in terms of variations in levels of exclusion experienced and in any case represents such varied circumstances that conclusions on relationships are difficult to reach. However, it is noticeable that older people who live in London are most likely to suffer from neighbourhood exclusion (although we do know that London contains a number of the most deprived areas in terms of IMD status).
- These findings only touch on the relationship between area and social exclusion, and do not provide an entirely clear picture and it is likely that further investigation will provide interesting insights in the future.

### 3.1.9 MEANS OF COMMUNICATION AND TRAVEL

Having the means to communicate with other people by telephone provides the opportunity to talk to people outside the vicinity of the household, whether as a form of conversation to develop social relationships, to arrange social activities or to organise other services such as paying bills or arranging domestic help. This is explored in Table 3.11 below.

Like the absence of a telephone, the lack of use of a car or van is both associated with material deprivation and is likely to cause exclusion because it means people cannot travel long distances easily. It is commonly acknowledged that access to private transport is extremely important to people’s ability to take part in society and especially for those who are limited in the use of public transport. Having no access to a car or van for a journey if needed can present real difficulties for older people. Public transport can provide an alternative and this is also considered in Table 3.12 below.

Table 3.11 The risk of exclusion by access to communication								Cell per cent
	Social %	Cultural %	Civic %	Services %	N’brhood %	Financial %	Material %	Base
No land line/mobile	39	6	16	22	25	30	63	102
Has telephone	13	7	11	9	13	9	9	10221
<b>All older people</b>	<i>13</i>	<i>7</i>	<i>11</i>	<i>9</i>	<i>13</i>	<i>9</i>	<i>10</i>	<i>10332</i>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)  
 Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

#### Key findings:

- Only a small minority of older people (1 per cent) have neither a landline nor a mobile telephone, and being without a phone can be seen as a clear marker of deprivation. Perhaps because of the small numbers, the findings are not statistically significant, and the results of these analyses should be interpreted with caution. Nevertheless, very strong patterns were observed and can be noted.
- Greater proportions of those without a telephone are excluded on all of the dimensions except cultural activities. The strongest difference is that almost two-thirds (63 per cent)

of those with no telephone are excluded from material goods compared to only one-tenth of all older people.

- Similarly, nearly four in ten (39 per cent) of those with no telephone are excluded from social relationships, while only 13 per cent of older people as a whole are defined as such.
- Furthermore, almost one third (30 per cent) of those with no telephone are excluded from financial services compared to less than one-tenth (9 per cent) of all older people.
- One-quarter of those with no telephone are defined as excluded from neighbourhood compared to 13 per cent of all older people.
- A higher percentage of people with no telephone are excluded from basic services (22 per cent compared to 9 per cent).

<b>Table 3.12</b> The risk of exclusion by access to travel								
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Cell per cent Base
<b>Use of car/van</b>								
Yes	<b>10</b>	10	11	<b>7</b>	12	<b>8</b>	<b>7</b>	8266
No	<b>24</b>	<b>17</b>	<b>16</b>	<b>23</b>	<b>21</b>	<b>20</b>	<b>27</b>	1633
<b>Use of public transport</b>								
A lot	17	13	13	9	<b>17</b>	<b>15</b>	<b>16</b>	1290
Quite often	14	11	<b>9</b>	8	14	11	15	1083
Sometimes	<b>9</b>	10	<b>9</b>	<b>6</b>	12	10	9	1937
Rarely	<b>10</b>	10	<b>9</b>	<b>5</b>	<b>11</b>	<b>5</b>	<b>7</b>	2832
Never	14	13	<b>16</b>	<b>16</b>	15	12	11	2755
	12	11	12	9	13	10	11	9901
<b>All older people</b>	<b>13</b>	<b>7</b>	<b>11</b>	<b>9</b>	<b>13</b>	<b>9</b>	<b>10</b>	<b>10332</b>

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)  
 Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings

- On all dimensions of exclusion, older people with no use of a car or van are more likely to be excluded than older people as a whole.
- A far higher percentage of those with no use of a car or van are excluded from material goods (27 per cent), from basic services (23 per cent) and are financially excluded (20 per cent).
- Those who use a lot of public transport are likely to face exclusion on several dimensions – social relationships, material goods, financial products and neighbourhood exclusion.
- Those who never use public transport also face exclusion, but in different forms from those who do use public transport, most notably exclusion from civic activities and basic services.

Table 3.13 explores whether access to a car or van has a differential relationship to exclusion depending on whether an older person is based in an urban or rural location. Though the

numbers involved are small and the finding indicative, the table suggests that in all locations, having no use of a car or van creates very fundamental problems in terms of access. This seems intuitively reasonable.

<b>Table 3.13</b> The risk of exclusion by access to travel and rural/urban location								Cell per cent
	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
<b>Lives in a city</b>								
Has use of car/van	<b>10</b>	<b>10</b>	11	<b>6</b>	13	9	<b>7</b>	5983
No use of car/van	<b>25</b>	<b>16</b>	16	<b>22</b>	22	21	<b>28</b>	1401
<b>Lives in a town</b>								
Has use of car/van	9	10	9	6	10	6	6	1040
No use of car/van	21	25	13	30	21	17	20	153
<b>Lives in a village</b>								
Has use of car/van	10	11	10	7	7	5	7	874
No use of car/van	19	16	13	34	11	22	31	59
<b>Lives in a hamlet</b>								
Has use of car/van	9	9	10	8	9	7	8	366
No use of car/van	*	*	*	*	*	*	*	19

Base: Adults aged 50 plus (excluding new and younger partners, non-respondents to self-completion)

Source: ELSA wave 1, percentages are weighted to account for sampling and non-response, base unweighted.

### Key findings

- As the location becomes more rural, older people without access to a car or van are more likely to face exclusion from access to basic services (although the small number of the ELSA sample who live in these areas may be the reason that these differences are not statistically significant).
- One quarter of older people who live in a city and do not have access to a car or van are excluded on the social relationships dimension. This group is also significantly more likely to be excluded on the social relationships, cultural activities, basic services and material goods dimensions.

Having provided a description of the different forms of exclusion that older people experience, and having compared the incidence of social exclusion across particular sub-groups of older people, the focus of this study now goes on to examine which specific characteristics are the most important risk factors for exclusion. Logistic regression analysis was used to unravel which characteristics are related to an increased risk of exclusion when holding other, potentially confounding characteristics constant. This included a range of socio-demographic and economic characteristics which are listed in Figure 3.1 below.

The important quality of the analyses presented here is that the relationship of each characteristic to exclusion is explored taking into account any possible confounding influence of other characteristics. For example, descriptive analyses may show that the oldest-old are more likely than the youngest-old to experience exclusion and that women are more likely to experience exclusion than men. Given that we know that women are also more likely than men to live longer, the key issue is whether it is age or gender (or indeed both) that is driving these relationships to exclusion. The analysis in the following sections considers just this question for the variety of characteristics discussed in the report so far.

It is important to note that the analysis presents significant *relationships* between the characteristics of older people and the risk of exclusion – the analysis does not unravel any *cause and effect* in the relationship. For example, if there is a relationship between lack of access to a car and exclusion from social relationships, the analysis cannot unravel whether lack of access to a car is a cause of loss of social relationships. To provide one example, lack of access to a car may restrict the ability to travel to see other people, but it could be argued that having fewer social relationships means that having access to a car becomes less of a necessity. There may also be mediating factors such as loss of health and low income which lead to a decision to give up driving – and these intermediary factors may themselves reduce the level of social relationships that an individual can maintain. The point to note here is that the analysis presented here does not provide cause, furthermore respondents were not asked to attribute cause themselves. It is possible that in the future, the existence of longitudinal data will make some understanding of the directions of causality possible<sup>11</sup>.

**Figure 3.1** Characteristics included in the logistic regression analysis

<b>Age group</b>	50-59 years (reference group), 60-69 years, 70-79 years, 80+ years
<b>Sex</b>	Male (ref), Female
<b>Ethnicity</b>	White (ref), Non-white
<b>Family type</b>	Lives alone, Partner only, Children no partner, Partner and children (ref), Other
<b>No. of children</b>	0 (ref), 1, 2, 3, 4 or more
<b>No. of siblings</b>	0 (ref), 1, 2, 3, 4 or more
<b>Education</b>	Degree or equivalent (ref), Higher education or equivalent, A level or equivalent, O level or equivalent, CSE or equivalent, Other, No qualification
<b>Main activity</b>	Retired, Employed (ref), Self-employed, Unemployed, Sick or disabled, Look after home, Semi retired
<b>Health</b>	Excellent, Very good, Good (ref), Fair, Poor
<b>Fallen in past two years</b>	No (ref), Yes
<b>Physical activity</b>	Regular vigorous activity, Regular moderate activity, Some moderate activity (ref) Some mild activity, No activity
<b>Psychosocial well being (GHQ12)</b>	No symptoms (ref), 1-3 symptoms, 4+ symptoms (potential for mental health problems)
<b>Depression (CESD scale)</b>	Depressed, Not depressed (ref)
<b>Care for sick or disabled adult, including partner</b>	Yes, No (ref)
<b>Equivalised total household income quintile</b>	Lowest quintile, second quintile, third quintile (ref), fourth quintile, highest quintile
<b>Main source of income</b>	Employment (ref), Self-employment, Private pension, State pension, Benefits, Assets, Other
<b>Index of Multiple Deprivation 2004</b>	Least deprived (ref), Second quintile, Third quintile, Fourth quintile, Most deprived
<b>Tenure</b>	Owner (ref), Buyer, Private renter/part-renter, Social renter/part-renter, Rent free
<b>Urban/rural</b>	City (ref), Town, Village, Hamlet
<b>Government Office Region</b>	North East, North West, Yorkshire&Humberside, East Midlands, West Midlands (ref), East of England, London, South East, South West
<b>Has telephone (landline or mobile),</b>	Yes (ref), No
<b>Use of car or van,</b>	Yes, No (ref)
<b>Frequency of using public transport</b>	A lot, Quite often, Sometimes, Rarely, Never (ref)

<sup>11</sup> However, longitudinal analysis of ELSA data would aid interpretation of such findings. Currently only one wave of ELSA is available to analysts.

## 3.2 Risk factors for the separate dimensions of exclusion

In order to examine the risk factors for exclusion, the analysis considers each of the seven dimensions separately. The analysis uses the socio-demographic and economic characteristics of older people to determine which characteristics are significantly related to exclusion.

The main findings of the analysis in the form of the characteristics of older people that increase the odds of exclusion on each separate dimension is presented in Figure 3.2<sup>12</sup>. This shows that there are a number of characteristics of older people that increase their odds of exclusion and that these characteristics can vary according to the dimension of exclusion in question. This conclusion first emerged earlier in the chapter and is now supported with the multivariate analysis. For example, being male is related to exclusion from social relationships and material goods, whilst being female is related to exclusion from cultural activities, civic activities and financial products.

There are a number of characteristics that increase the odds of exclusion across more than one of the dimensions of exclusion. Suffering from depression is related to all the dimensions except exclusion from material goods. Health status is related to exclusion on all but two of the dimensions – civic activities and financial products. Poor mental or physical health therefore is clearly linked to an increased chance of experiencing different elements of exclusion (as explained earlier, the analysis is unable to determine whether poor health is a risk factor in exclusion or a consequence of exclusion, or indeed both<sup>13</sup>).

A number of characteristics are related to four of the dimensions of exclusion. Living alone is related to exclusion from basic services, material goods, social relationships and civic activities. The same is true for ethnicity; being non-white is significantly related to exclusion from cultural activities, civic activities, financial products and material goods.

Age is linked to exclusion but perhaps not as strongly as suggested from the descriptive analysis presented earlier. Being older-old is associated with an increased risk of exclusion from basic services and material goods, whilst being younger-old is related to exclusion from civic activities. Being 60 or over is associated with an increased risk of exclusion from social relationships. Age is not significantly related to exclusion on the other three dimensions.

Renting accommodation is linked to exclusion from civic activities, neighbourhood exclusion, financial products and material goods dimensions. Living in social rented accommodation is particularly linked to exclusion from civic activities.

Not having access to a private car or van is linked to exclusion from social relationships, cultural activities, basic services and material goods. Never using public transport is also associated with exclusion from basic services which suggests, logically, that having no access to transport is particularly related to the inability to access financial and health services and local shops. Low income is significantly related to three dimensions of exclusion – exclusion from financial products, material goods and cultural activities.

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<sup>12</sup> See Appendix B for further details on the analysis.

<sup>13</sup> Further research that makes use of the longitudinal element of ELSA would allow further insight into these and other relationships.

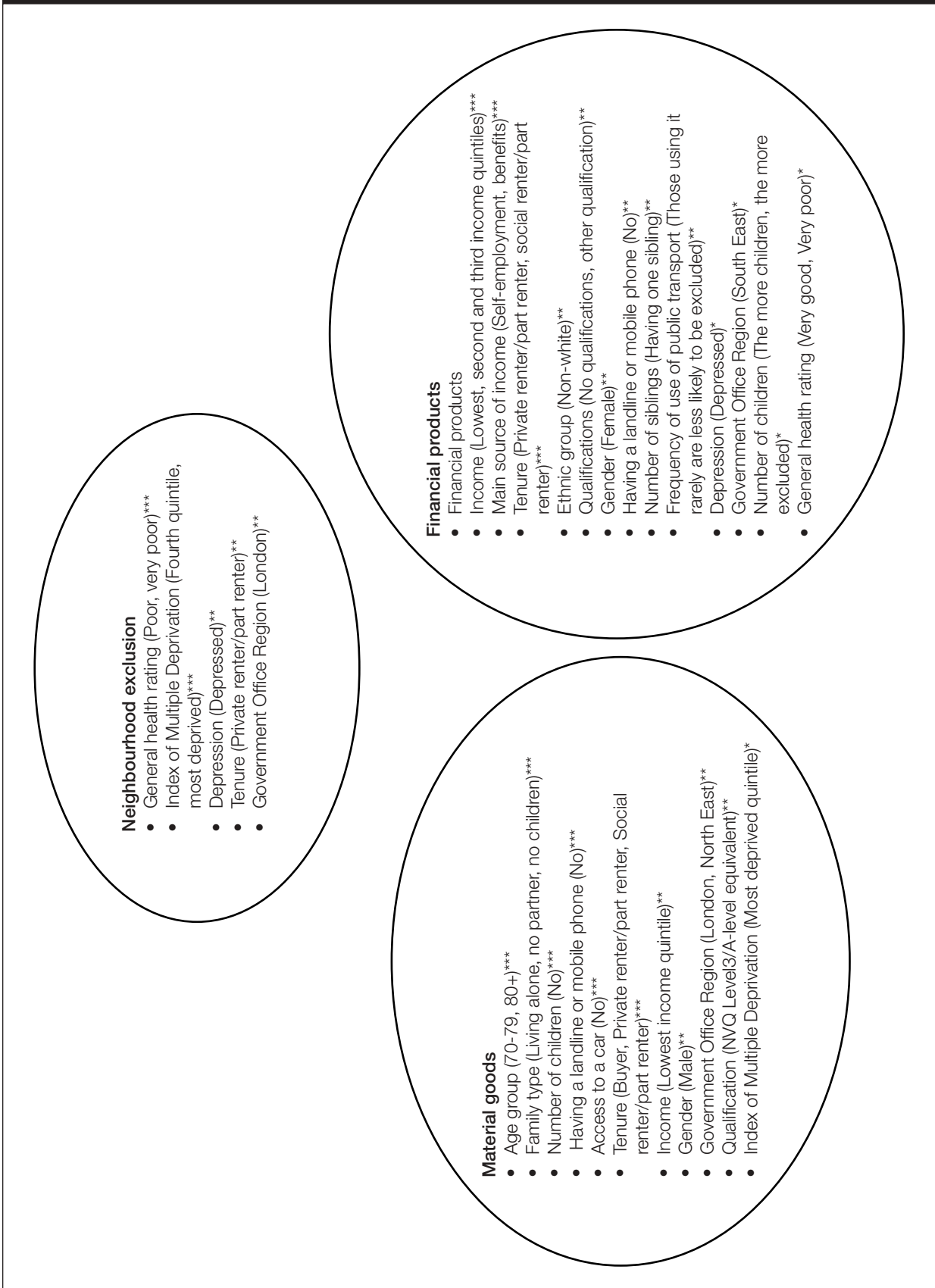
In terms of the characteristics that are particularly related to an increased likelihood of exclusion on each of the separate dimensions (and taking account of the interpretation of the characteristics mentioned above) we can summarise in the following way.

- Social relationships – living alone, having no partner, children or siblings or being unemployed.
- Cultural activities – having poor health or feeling depressed.
- Civic activities – having no private transport, feeling depressed or being unemployed.
- Basic services – being older, having poor health, lacking access to transport (whether private or public), living alone or feeling depressed.
- Neighbourhood exclusion – having poor health or living in a deprived area.
- Financial products – having a low income, being non-white or renting accommodation.
- Material goods – living alone, being older, not having access to a car or van or not owning their accommodation.

**Figure 3.2** Characteristics of older people that increase the odds of exclusion on each separate dimension



Figure 3.2 continued



Note: All variables included in the diagrams are significantly related to an increased likelihood of exclusion. Variables are ordered according to their importance to the fit of each model, where more asterisks indicates greater importance.

For reference groups of each characteristic see Figure 3.1 above.



# CHAPTER 4

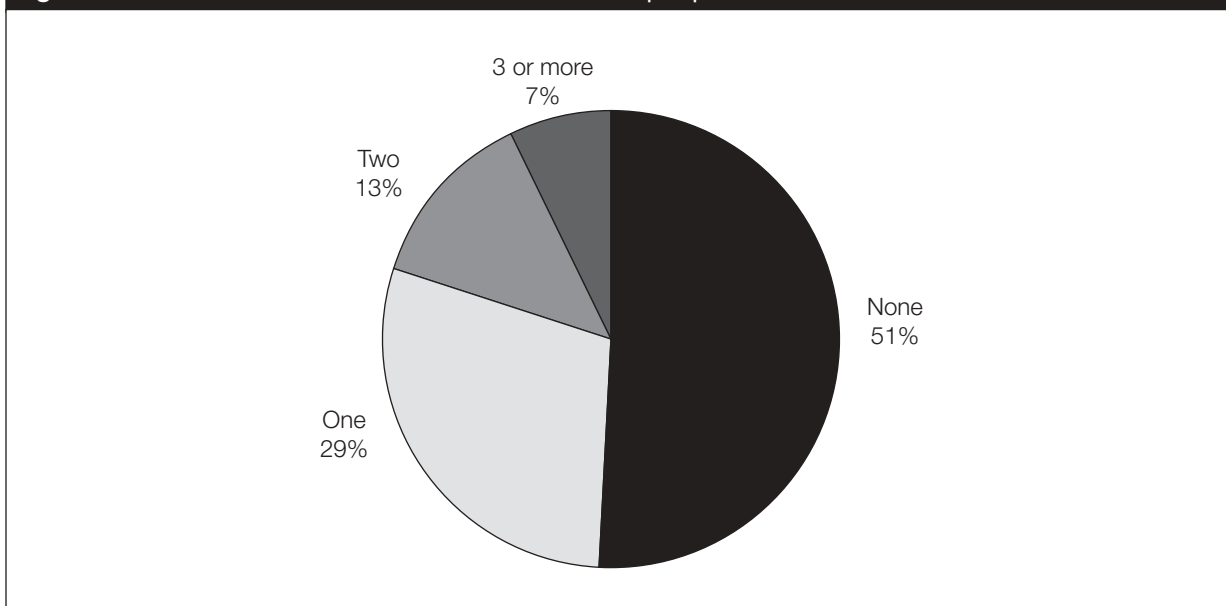
## Investigating Multiple Exclusion Among Older People

The previous chapter offered some insights into the proportions of older people that experience each form of exclusion and how this varies according to the socio-demographic and economic characteristics of older people. This section focuses on the extent to which older people may be affected by more than one dimension of exclusion and by particular combinations of exclusion.

### 4.1 Identifying multiple exclusion

Figure 4.1 shows the number of dimensions of exclusion that older people are excluded on. This can vary from zero, i.e. not experiencing exclusion on any of the dimensions, to seven, i.e. experiencing exclusion on all of the dimensions. Anyone excluded on two or more dimensions is, by definition, experiencing some form of multi-dimensional exclusion.

**Figure 4.1** Number of dimensions of exclusion older people are excluded on



Base: All older people

Note: Not all respondents gave sufficient information on all dimensions to be considered in the analysis of multi-dimensional exclusion. These respondents are not included in the analysis of multi-dimensional exclusion in this chapter.

The pie chart shows that approximately half (51 per cent) of older people do not experience exclusion on any of the seven dimensions. Of those that do experience exclusion the majority do so on just one dimension. However, there is still a notable proportion of older people that experience exclusion on more than one dimension. Approximately one in five older people experience exclusion on two or more dimensions. Though not shown in Figure 4.1, two per

cent of older people experience exclusion on four or more dimensions with just a handful experiencing all or almost all dimensions of exclusion.

The percentage of older people excluded on one dimension is actually less than would be expected if there was no relationship between the dimensions<sup>14</sup>, which suggests that multiple exclusion is a concept validated by the data (there is further evidence of this in Section 4.2 below). The analysis in the remainder of this section, therefore, considers multi-dimensional exclusion according to the number of dimensions on which older people experience exclusion. Particular attention is given to those that experience exclusion on three or more dimensions, as these are people who, arguably, experience the most complex and multi-faceted forms of exclusion.

Table 4.1 provides estimates of the number of older people that experienced multi-dimensional exclusion in England in 2002<sup>15</sup> based on these estimates.

<b>Table 4.1</b> Mid-2002 estimates of the number of older people experiencing multi-dimensional exclusion: estimated England resident population		
Number of dimensions excluded on (thousands)	Per cent	Population estimate
Zero	51	8438.8
One	29	4798.5
Two	13	2151.1
Three or more	7	1158.2
Total	100	16546.6 <sup>1</sup>

1 Source: National Statistics (2004).

Table 4.1 suggests that over 8 million older people experience exclusion on at least one of the seven dimensions of exclusion constructed for this study. The most multi-faceted form of exclusion explored in this study – exclusion on three or more dimensions – was experienced by almost 1.2 million older people.

## 4.2 Patterns of multi-dimensional exclusion

This section considers whether an older person experiencing one particular form of exclusion is more likely to experience any other specific form of exclusion. To give an example, are those experiencing exclusion from social relationships also more likely to experience exclusion from cultural activities?

The analysis begins by considering exclusion on two dimensions. Table 4.2 presents the percentage of older people excluded on a particular dimension who are also excluded on another dimension, for each two-way combination of the seven exclusion dimensions.

<sup>14</sup> Given that the probability of being excluded on any one dimension is approximately 0.1, the probability of being excluded on just one dimension, assuming the dimensions are independent, is  $7 \times 0.9 \times 0.1^6 = 0.372$ .

<sup>15</sup> The population estimates of exclusion are simple approximations based on a total population estimate as no grossing weight is available in the ELSA dataset. Also, each dimension of exclusion was constructed to identify the most excluded 10 per cent of older people which has ramifications for estimates of multiple exclusion. Hence these estimates should be treated with caution.

**Table 4.2** Percentage of older people excluded on a dimension given exclusion on another dimension

								Cell per cent
Percentage excluded on this dimension								
Excluded on this dimension	Social %	Cultural %	Civic %	Services %	N'brhood %	Financial %	Material %	Base
Social	–	<b>15</b>	<b>16</b>	<b>18</b>	<b>21</b>	<b>15</b>	<b>25</b>	1156
Cultural	<b>16</b>	–	<b>15</b>	<b>20</b>	<b>20</b>	<b>15</b>	<b>12</b>	1108
Civic	<b>18</b>	<b>15</b>	–	<b>16</b>	<b>21</b>	<b>19</b>	<b>14</b>	1102
Services	<b>24</b>	<b>24</b>	<b>20</b>	–	<b>22</b>	<b>22</b>	<b>21</b>	868
Nbrhood	<b>20</b>	<b>17</b>	<b>18</b>	<b>15</b>	–	<b>18</b>	<b>14</b>	1285
Financial	<b>19</b>	<b>17</b>	<b>22</b>	<b>21</b>	<b>24</b>	–	<b>24</b>	918
Material	<b>29</b>	14	<b>16</b>	<b>19</b>	<b>18</b>	<b>22</b>	–	948
<i>All</i>	12	11	12	9	13	10	11	<b>9901</b>

Base: All older people (aged 50 years and over)

Note: Bold text indicates a statistically significant ( $p < 0.05$ ) difference between the percentage of older people excluded on a dimension given exclusion on another dimension and the percentage of all older people excluded on the dimension.

As can be seen from the table, being excluded on one dimension is related to a significantly greater chance of experiencing exclusion on another dimension. The exception is in the lack of a correlation between exclusion from cultural activities and material goods. Certain combinations were, however, more likely than others. For example, almost three in ten (29 per cent) of people excluded on the material goods dimension are also excluded from social relationships (this compares to 12 per cent of all older people excluded on the social relationships dimension). Also, one fifth (21 per cent) of people excluded from basic services are also excluded on the material goods dimension (this compares to 11 per cent of all older people excluded on the material goods dimension). Exclusion in one dimension indicates a markedly higher than average risk of exclusion on a second dimension for;

- basic services and social relationships,
- basic services and cultural activities,
- financial products and civic activities,
- financial products and basic services,
- cultural activities and basic services,
- financial products and neighbourhood exclusion,
- basic services and neighbourhood exclusion;
- material goods and financial services; and
- social relationships and material goods.<sup>16</sup>

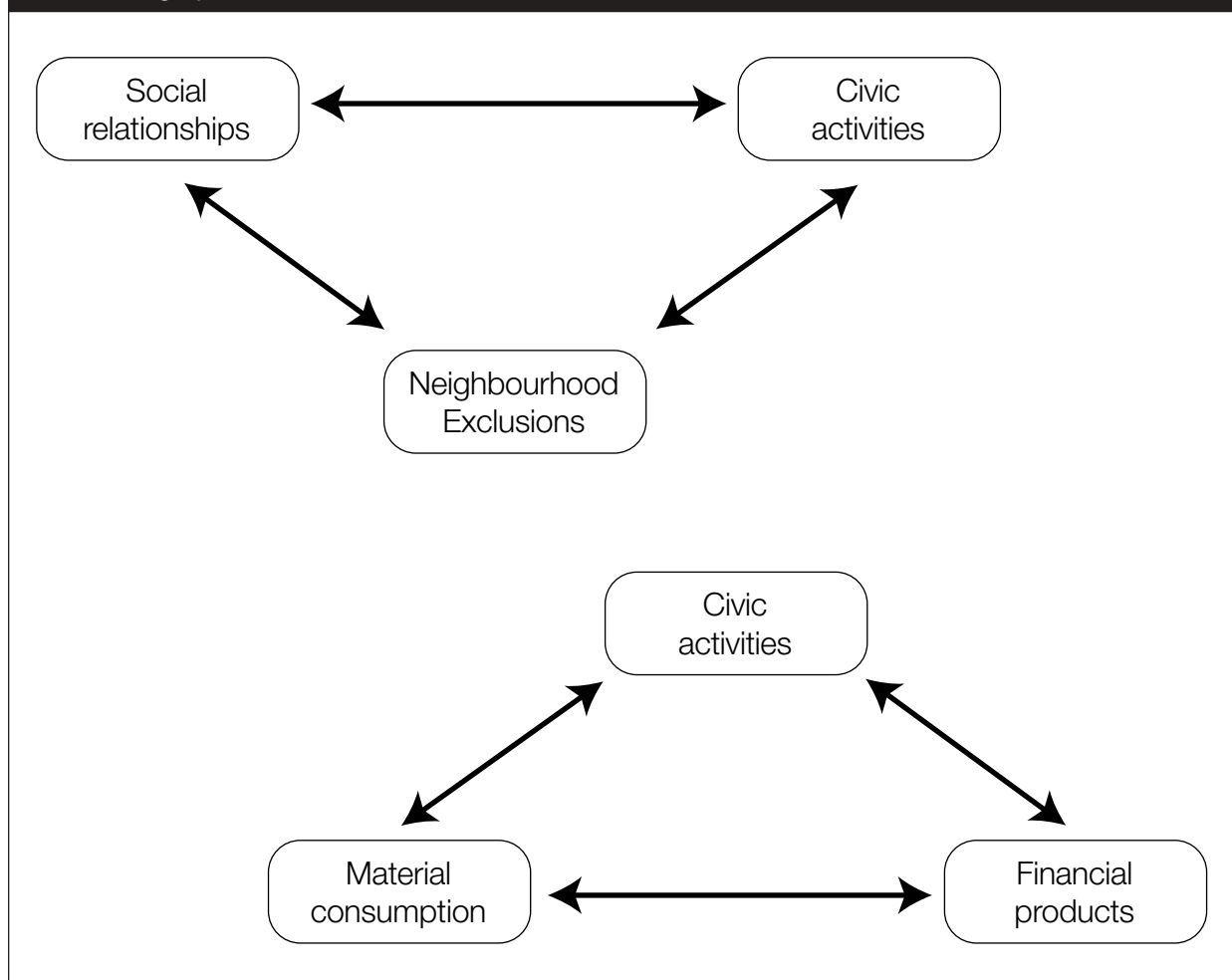
<sup>16</sup> These relationships were also verified with a correlation analysis.

To further investigate the patterns of multi-dimensional exclusion that older people experience, an analysis of exclusion on three or more dimensions was performed using factor analysis. This explored whether groups of older people experience particular combinations of the exclusion dimensions. The analysis suggested this was not the case.

To verify this finding, the seven dimensions were added to the regression analysis described in the previous chapter, to see whether exclusion on a particular dimension is significantly associated with exclusion on another dimension when various socio-demographic and economic factors are allowed for<sup>17</sup>. There are a number of significant relationships that suggest exclusion on one dimension is related to an increased risk of exclusion on another.

The relationships could also be reciprocal between more than two dimensions – as when links were shown between exclusion from social relationships and civic activities and neighbourhood exclusion, or when exclusion from civic activities were associated with exclusions from financial products and material goods. These relationships are presented graphically in Figure 4.2.

**Figure 4.2** Reciprocal relationships between dimensions of exclusion, controlling for socio-demographic and economic characteristics



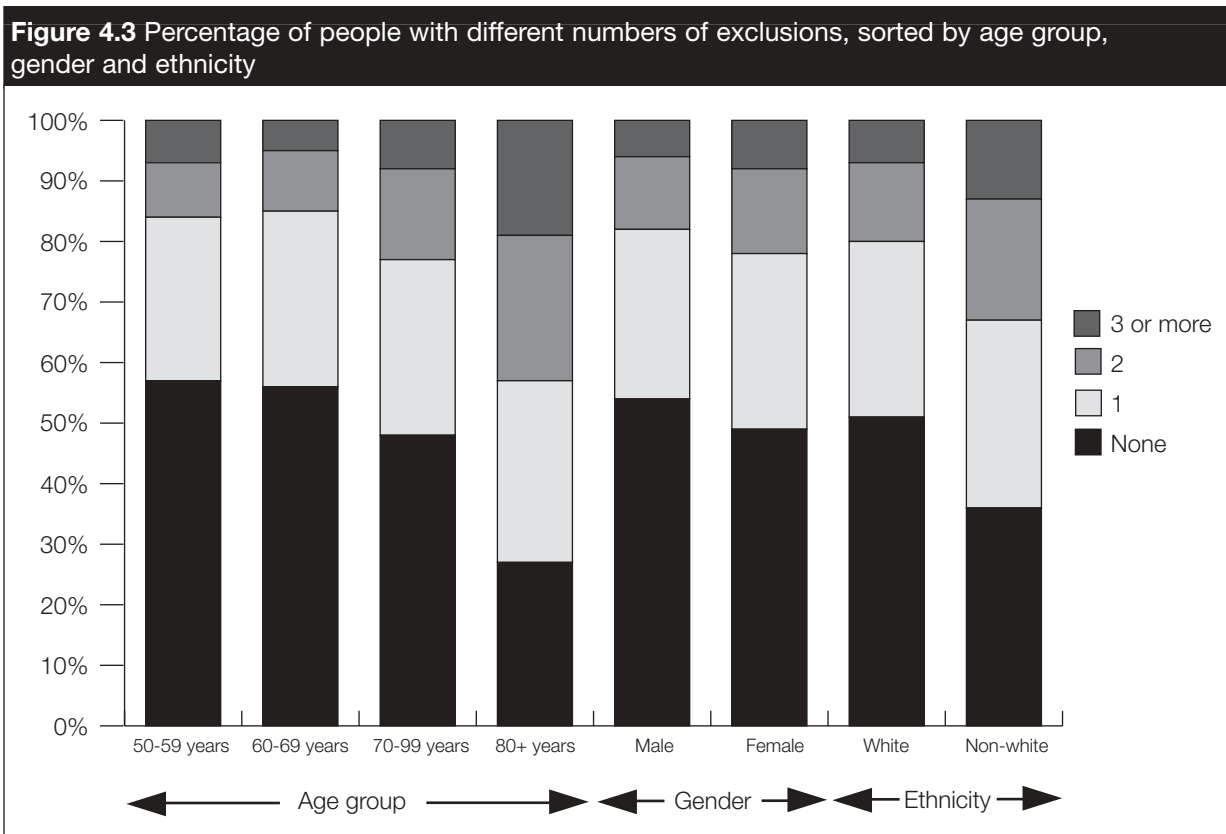
Notes:

The double-arrowed line indicates that exclusion on a dimension is statistically significantly related to exclusion on the connecting dimension, and vice-versa.

<sup>17</sup> For details of the regression analysis see Appendix B.

The relationship between any two dimensions was seldom a strong one, except for a close relationship between exclusions from material goods and financial products. This supports the findings of the factor analysis presented earlier that suggests no underlying latent factor describing the relationship between a group or groups of dimensions exists.

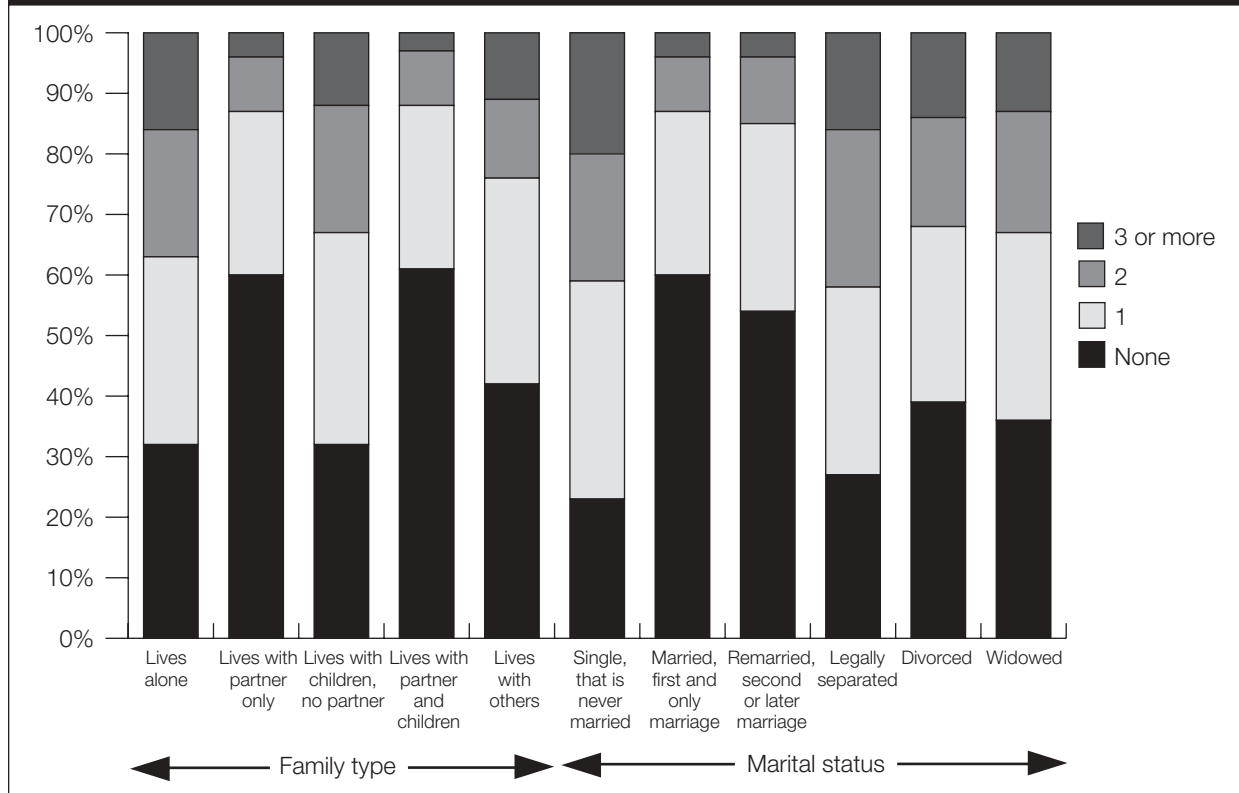
Those who experience multi-dimensional exclusion form an especially deprived group. The graphs on the following pages help to show that older people with certain socio-demographic and economic characteristics are more likely to experience multi-dimensional exclusion than others.



**Key findings:**

- People aged 80 years and over are more likely than their younger counterparts to experience exclusions on two, three or more dimensions.
- There is little difference between the percentage of men and women in the most deprived (multi-dimensional exclusion) group.
- Non-white people are more likely than white people to experience exclusion on two, three or more dimensions.

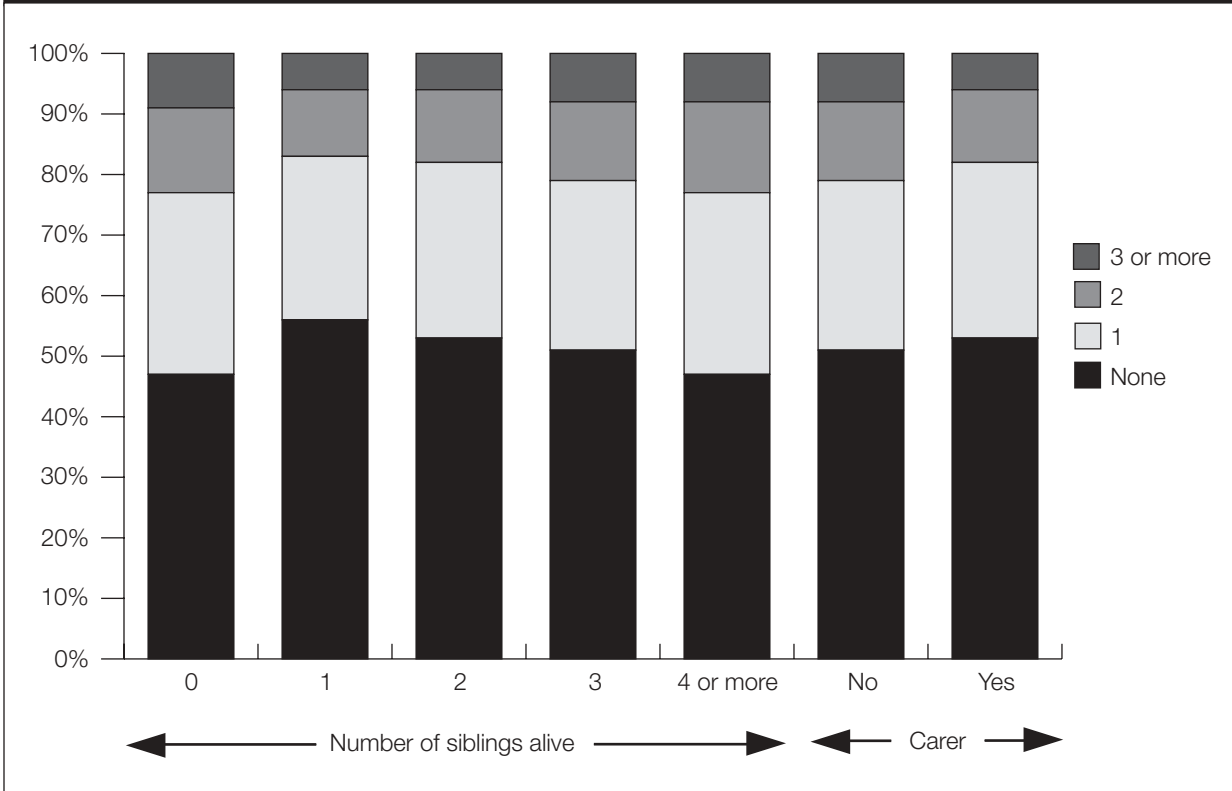
**Figure 4.4** Percentage of people with different numbers of exclusions, sorted by family type and marital status



**Key findings:**

- People who live alone or have children but no partner are the most likely to experience exclusion in two, three or more dimensions. (This is particularly important given that approximately a quarter of older people live alone).
- Of those people who were previously cohabiting or married, those who are legally separated, rather than divorced or widowed, are most likely to experience exclusion in two, three or more dimensions

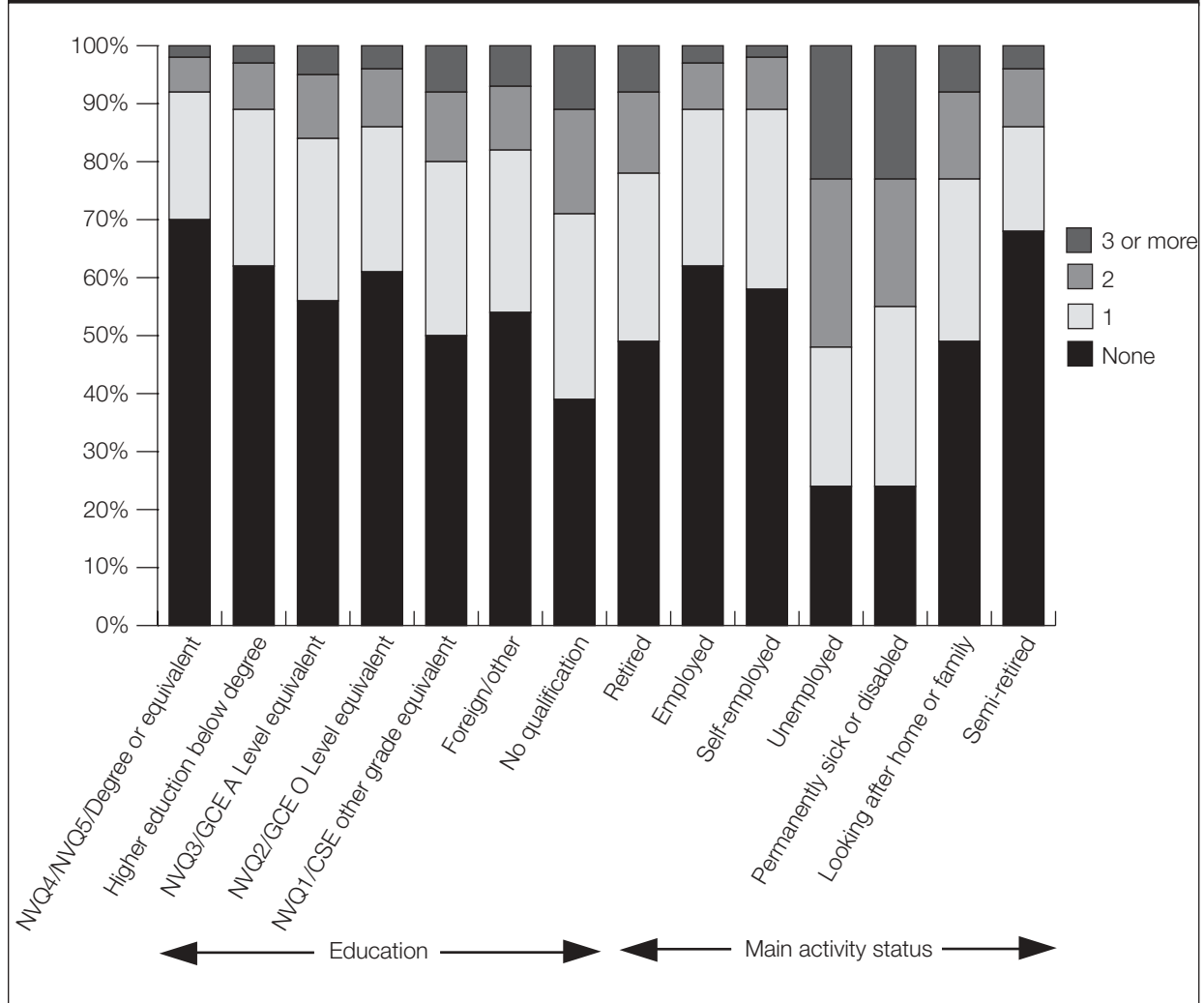
**Figure 4.5** Percentage of people with different numbers of exclusions, sorted by number of siblings and whether respondent cares for a sick or disabled person (including a partner)



**Key findings:**

- The percentage of people excluded in two or more dimensions is not strongly affected by the number of their siblings.
- The percentage of people excluded in two or more dimensions is not strongly affected if the older person also cares for somebody else.

**Figure 4.6** Percentage of people with different numbers of exclusions, sorted by educational achievement and by their “activity status”.

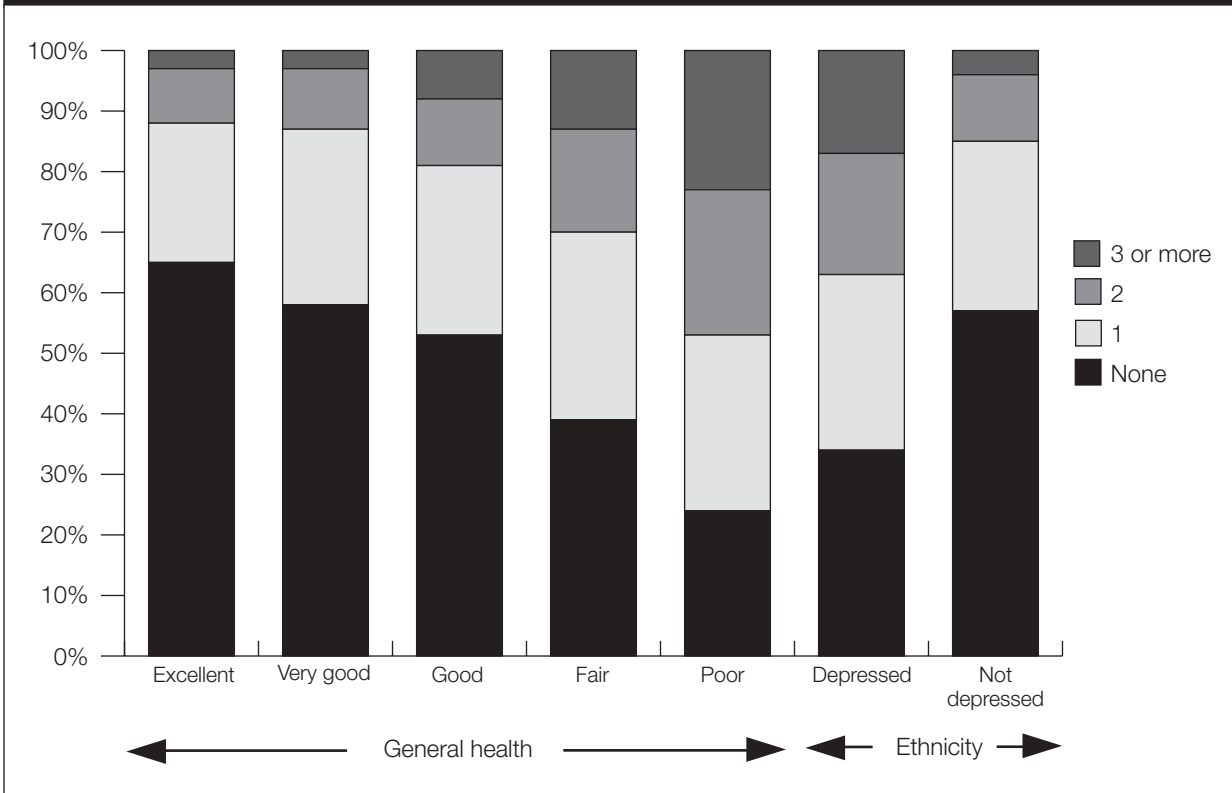


**Key findings:**

- People who have no qualifications are the most likely to experience exclusion on two, three or more dimensions. (More than two in five older people have no qualifications).
- Over a fifth of those who describe themselves as unemployed and permanently sick or disabled experience exclusion in two, three or more dimensions. (Approximately one in twenty older people define themselves as permanently sick or disabled).



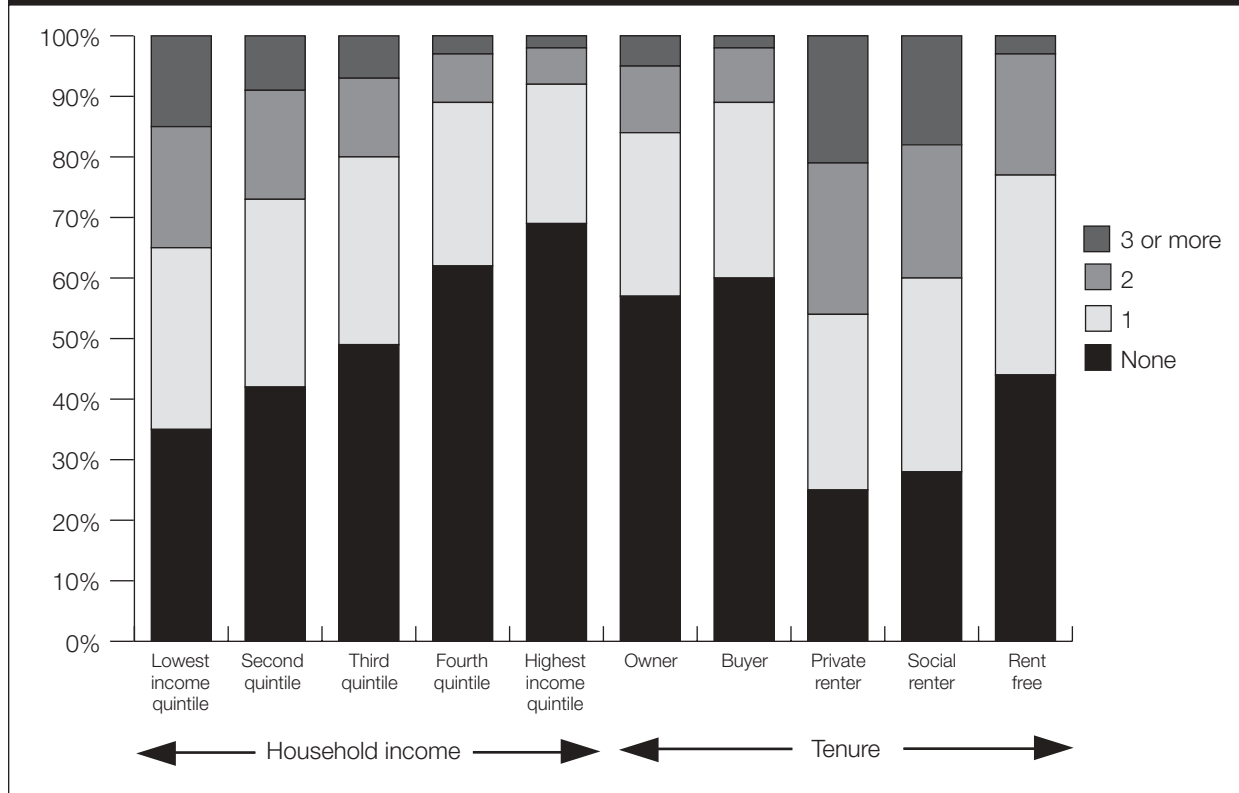
**Figure 4.7** Percentage of people with different numbers of exclusions, sorted by general health or depression



**Key findings:**

- The percentage of people excluded in two or more dimensions steadily increases as health status decreases. Seven per cent of older people have poor health, and of these 23 per cent experience exclusion in three or more dimensions.
- People who experience depression are more likely to experience multi-dimensional exclusion. (Almost one quarter of older people are classified as depressed – having three or more symptoms on the CESD scale).

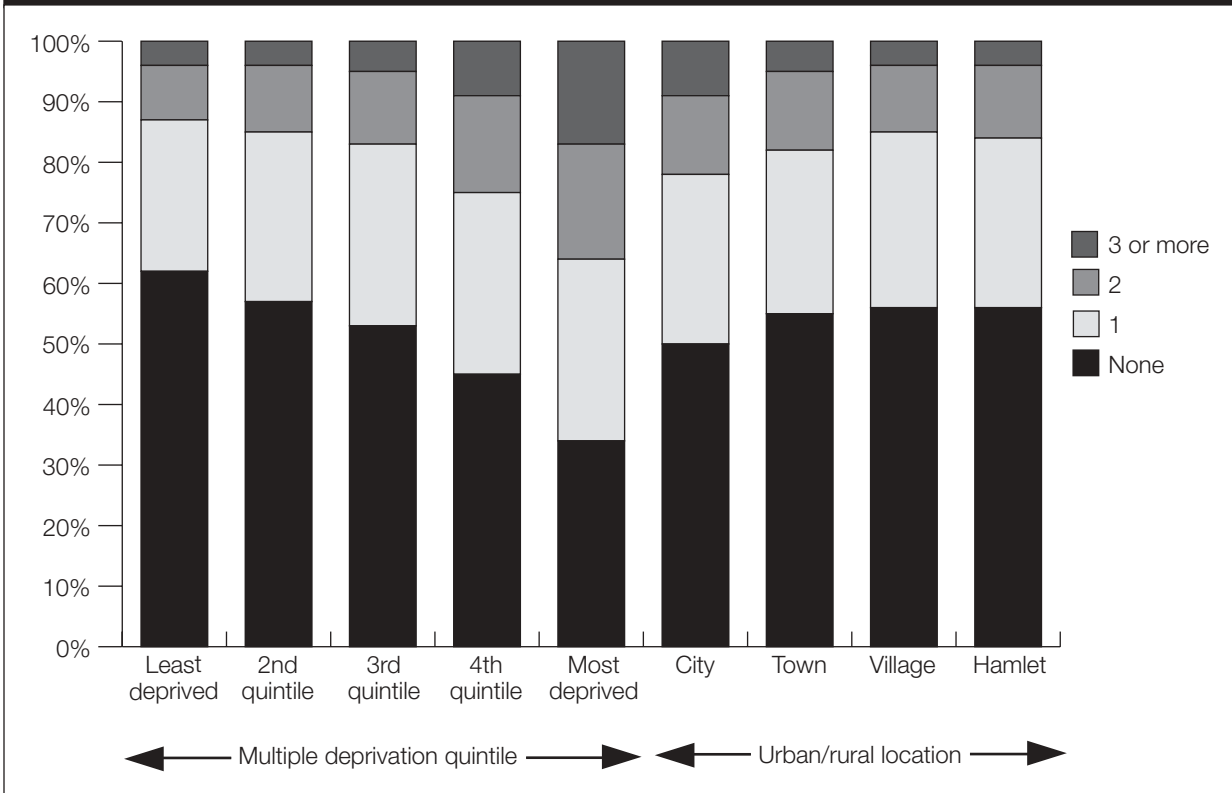
**Figure 4.8** Percentage of people with different numbers of exclusions, sorted by tenure of their residence and household income



**Key findings:**

- The lower the household income quintile, the more likely the person is to experience exclusion on two, three or more dimensions.
- People who live in rented or part-rented accommodation are the most likely to experience exclusion in two, three or more dimensions (Approximately one in five older people live in rented or part-rented accommodation, the majority of whom have a low household income). Private sector tenants are slightly more likely than social sector tenants to experience major exclusions. (Older people are far less likely to rent from the private sector than the social sector).

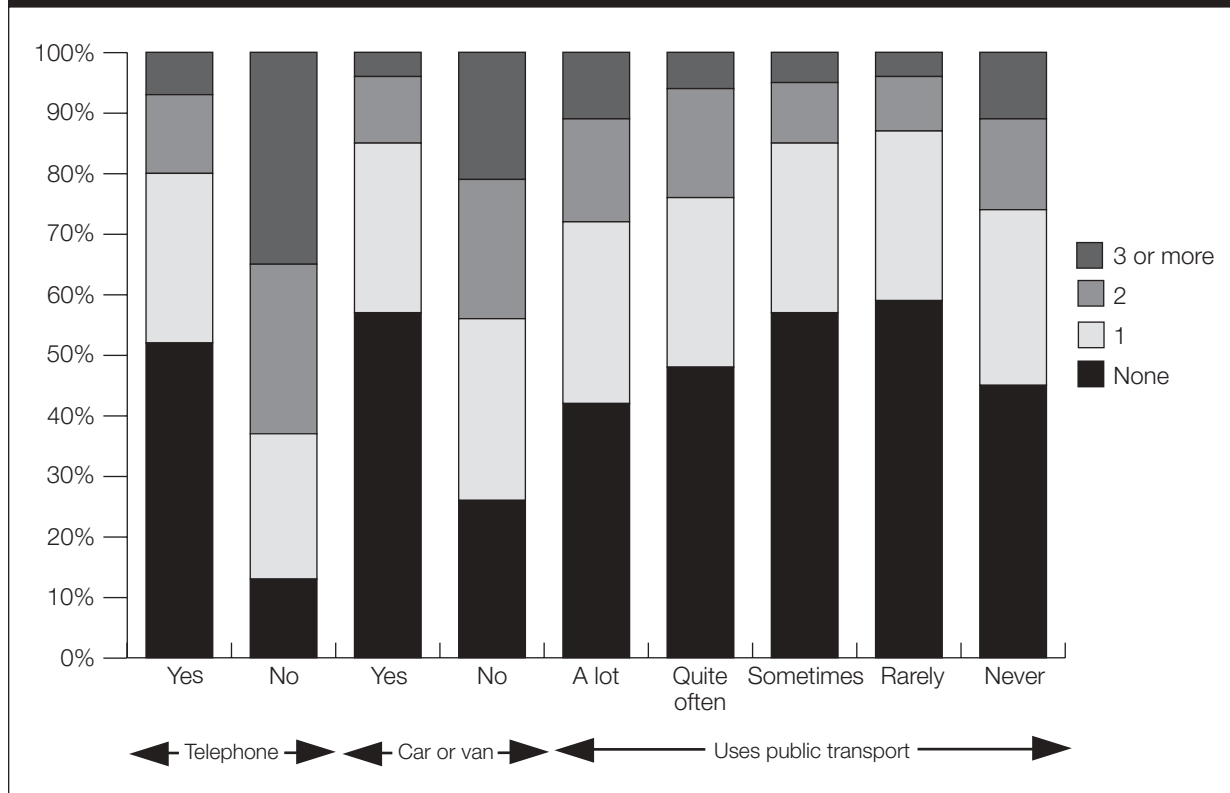
**Figure 4.9** Percentage of people with different numbers of exclusions, sorted by deprivation index and urban/rural location



**Key findings:**

- The more deprived the area a person lives in, the more likely he or she is to experience exclusion in two, three or more dimensions.
- People who live in a city are more likely than others to experience exclusion in two, three or more dimensions.

**Figure 4.10** Percentage of people with different numbers of exclusions, sorted by their possession of telephone (landline or mobile), access to car/van and use of public transport



### Key findings:

- The one per cent of older people who are without the use of a telephone are particularly likely to suffer exclusions in two, three or more dimensions.
- People without access to a car or van (approximately one in five older people) are more likely than others to experience exclusion in two, three or more dimensions.
- Those who never use public transport, and those who use it most, are more likely than others to experience multi-dimensional exclusion.
- Older people without access to a car and who never use public transport constitute approximately three per cent of all older people. Two in five (39 per cent) are excluded on three or more dimensions (this is not shown in Figure 4.10).

## 4.3 Risk factors for multiple exclusion

Our next step was to explore the risk factors for multi-dimensional exclusion among older people. Logistic regression analysis was used to determine the characteristics of older people that are significantly related to exclusion on three or more dimensions when taking other, potentially confounding characteristics into account. The regression analysis identified only those factors that are significantly related to multiple exclusion by using a step-wise approach to fitting the most appropriate statistical model. These characteristics are presented in Figure 4.11.

**Figure 4.11** Characteristics of older people that increase the odds of multi-dimensional exclusion (exclusion on 3 or more dimensions)



Notes:

Variables are ordered according to their importance to the fit of each model, where more asterisks indicates greater importance (measured using the Wald test<sup>18</sup>).

For the reference groups of each characteristic see Figure 3.1 above.

The analysis presented in Figure 4.11 shows the key risk factors for multiple exclusion of older people identified in the ELSA data. The reasons for their effect may be complex – living alone, for example, or not having a partner or children to turn to can be detrimental for a number of reasons, whether through having no share in material resources or having nobody to provide help or companionship. Severe physical or mental health problems also increase the risk of multiple exclusion. If there is difficulty in leaving the house, there can be little access to cultural activities or to basic services. These difficulties are also apparent for those without a car or van, who may have difficulty in reaching a bank or a hospital or even to see friends and family. Never using public transport, for whatever reason, is likely to amplify these problems.

<sup>18</sup> The Wald test is a way of testing the significance of the explanatory variables in the logistic regression analysis. The Wald test is one of a number of ways of testing whether the parameters associated with a group of explanatory variables are zero. If for a particular explanatory variable, or group of explanatory variables, the Wald test is significant, then we would conclude that the parameters associated with these variables are not zero, so that the variables should be included in the model. If the Wald test is not significant then these explanatory variables can be omitted from the model. The magnitude of the Wald statistic is used to determine the relative strength of each explanatory variable.

Those particularly at risk of multiple exclusion are the oldest-old (aged 80 years and above), those that live alone and have no living children, with poor health, who suffer depression, have no access to a car and never use public transport, and who do not own their accommodation. Multi-dimensional exclusion is also related to low income and those who are unemployed or whose main source of income is via benefits, living in a city and taking little physical exercise. These people – identified in this study as approximately seven per cent of people aged 50 years and older – clearly suffer numerous forms of disadvantage<sup>19</sup>.

## 4.4 Exclusion and quality of life

Implicitly or explicitly, the goal of a great array of social policies is to maximise quality of life. This section explores how the experience of the seven dimensions of exclusion used in this study relates to the quality of life of older people. Examining the relationship between social exclusion and quality of life was not the primary aim of this study, and more time and effort would be needed to do this topic justice. Nevertheless it was possible to draw out some indicative findings which could then be further examined elsewhere.

Quality of life is based on a theory that once people have satisfied fundamental needs for the basic requirements of human existence (food, shelter, clothing etc.) they pursue such objectives as self-realisation, happiness and esteem (Maslow, 1968). The ELSA study uses a measure called the CASP-19, which is comprised of 19 questions (listed in the information box on the following page) which are used to measure quality of life in four categories:

**Control** – the ability to intervene actively in one’s own environment (Patrick et al, 1993)

**Autonomy** – the right of an individual to be free from unwanted interference by others

**Self-realisation** – the active processes of human fulfilment

**Pleasure** – explained as the “reflexive processes of being human” (Doyal and Gough, 1991)

The CASP-19 measure takes account of whether or how often (often, sometime, not often, never), statements on the four categories of quality of life apply to older people. A scale is created that ranges from 0, which represents a complete absence of quality of life, to 57, which represents total satisfaction on all domains (see Hyde et al, 2003 for more details on the theory and construction of the CASP-19 measure<sup>20</sup>). The mean quality of life score for all older people in the ELSA study is 42.2.

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<sup>19</sup> For more discussion of the drivers of social exclusion see Walker (2006, forthcoming).

<sup>20</sup> It should be noted that the CASP-19 measure was developed specifically for those in early old age and is not, as yet, validated for the oldest-old. ELSA does contain other questions on the quality of life of older people but an investigation of these measures was beyond the scope of this paper.

**Information box – Statements used in the CASP-19 quality of life measure**

**Control**

My age prevents me from doing the things I would like to  
 I feel that what happens to me is out of my control  
 I feel free to plan for the future  
 I feel left out of things

**Autonomy**

I can do the things that I want to do  
 Family responsibilities prevent me from doing what I want to do  
 I feel that I can please myself what I do  
 My health stops me from doing things I want to do  
 Shortage of money stops me from doing things I want to do

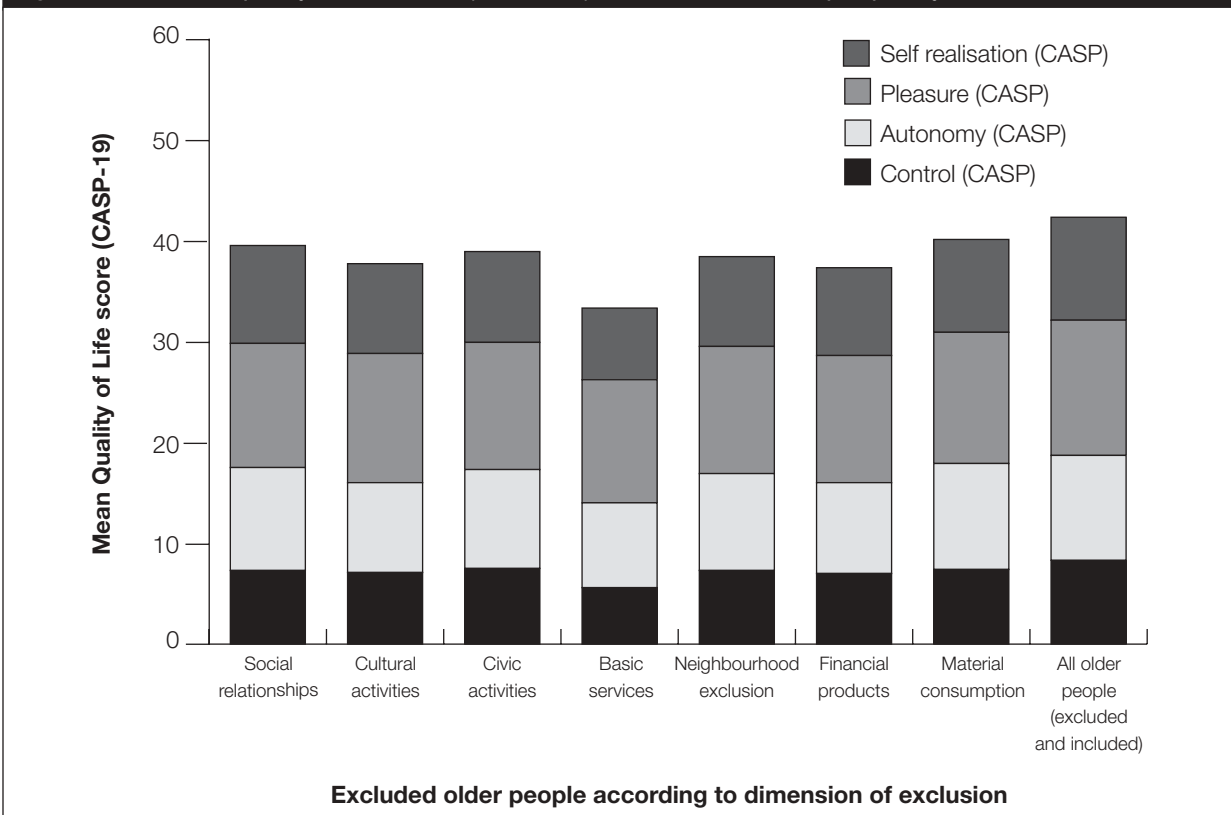
**Pleasure**

I look forward to every day  
 I feel that my life has meaning  
 I enjoy the things that I do  
 I enjoy being in the company of others  
 On balance, I look back on my life with a sense of happiness

**Self-realisation**

I feel full of energy these days  
 I choose to do things that I have never done before  
 I feel satisfied with the way my life has turned out  
 I feel that life is full of opportunities  
 I feel that the future looks good for me

**Figure 4.12 Mean quality of life score (CASP-19) for excluded older people by dimension of exclusion**

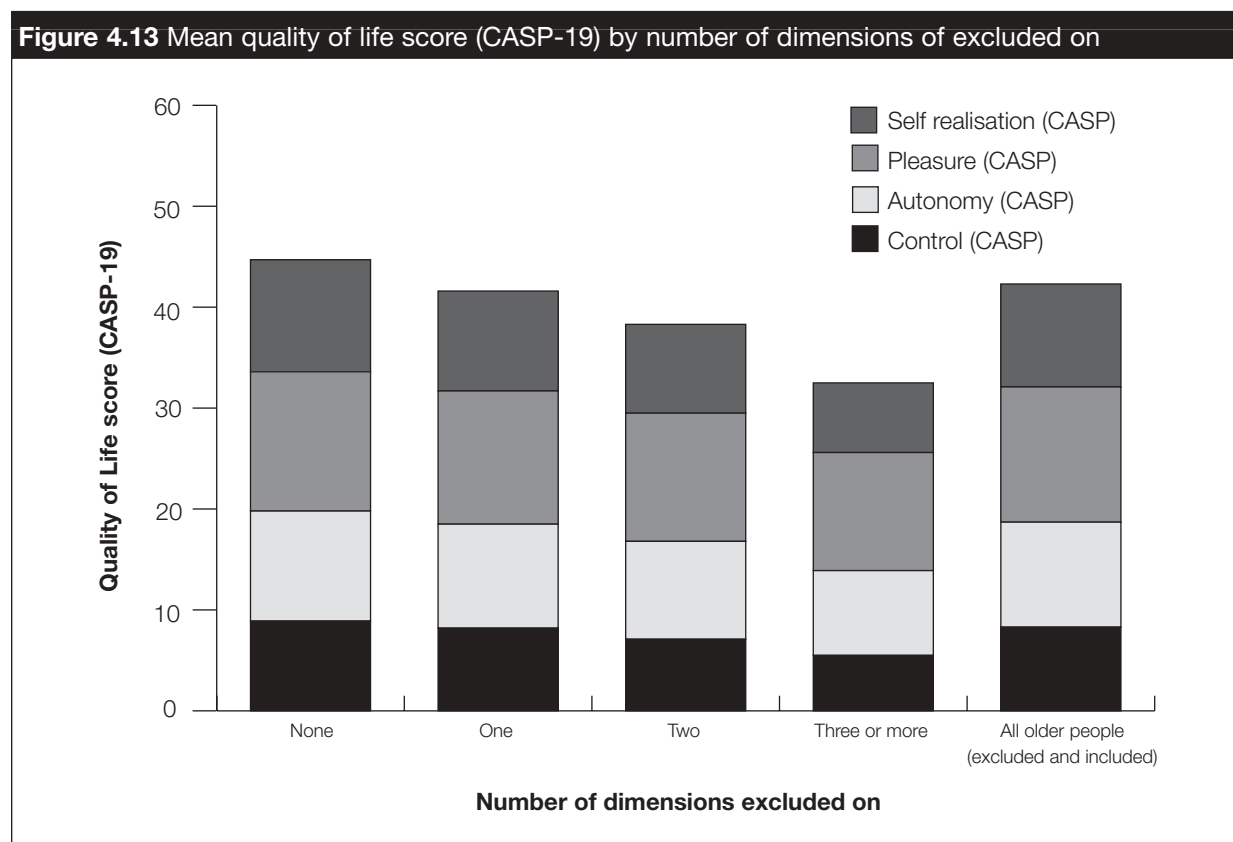


Note: A higher CASP score indicates a better quality of life

Figure 4.12 presents the quality of life scores for older people excluded on each of the seven dimensions of exclusion (and the score for all older people). The overall CASP-19 score is broken down into the four components (control, autonomy, self-realisation and pleasure) – each of which is treated with equal importance in the measure. Excluded people recorded significantly lower scores than non-excluded people for each of the seven dimensions. However, the difference in scores varied across the dimensions and the difference was only marginal in some cases.

Tests of statistical significance were performed to assess whether the quality of life score (both the overall score and the score for each of the four components of the scale) was different for people who were and were not excluded on each dimension. With one exception, people who were excluded had a significantly ( $p < 0.05$ ) lower quality of life score than people who were not excluded. (The exception was that the autonomy score did not vary significantly for those who were and were not excluded on the material goods dimension).

The lowest overall quality of life score was recorded by people who were excluded on the basic services dimension (lack of access to financial services, health services and local shops). This group of older people had an overall quality of life score of 33.5 and were particularly likely to record low scores for self-realisation and control. The next lowest scores were for people excluded on the cultural activities (overall score of 36.7) and the financial products dimensions (overall score of 37.3). When focussing on the four domains of quality of life, it is apparent that people excluded on the financial products and cultural activities dimensions recorded low control scores, people excluded on the cultural activities and civic activities dimensions recorded low autonomy scores, people excluded on the social relationships dimension recorded a low pleasure score, and people excluded on the social relationships and financial products dimensions recorded low self realisation scores<sup>21</sup>.



Note: A higher CASP score indicates a better quality of life

21 Further investigation is required to establish the relationship between exclusion and quality of life taking into account the associations of other possibly confounding factors such as age, health and income. However, this analysis is beyond the scope of this report.



Figure 4.13 presents the quality of life scores according to the levels of multi-dimensional exclusion that older people experience. It is clear from Figure 4.13 that the overall quality of life score decreases as the number of dimensions people are excluded on increases. For example, people who are not excluded on any dimension record an overall score of 44.7 whilst people excluded on three or more dimensions record an overall score of 32.5.

Again tests of statistical significance were performed to assess whether the quality of life score (both the overall score and the score for each of the four components of the scale) was different according to the number of dimensions people were excluded on. The test showed that multiply excluded people (excluded on three or more dimensions) had a significantly ( $p < 0.05$ ) lower quality of life score than people excluded on two, one or no dimensions.

There is also a decrease within the four domains used in the quality of life measure. Comparing people excluded on three or more dimensions with people not excluded on any dimension reveals that the greatest reduction in score is for self-realisation. This suggests that life satisfaction and opportunities are particularly likely to reduce as the number of dimensions of exclusion a person experiences increases. Scores for control also see a markedly higher decrease than scores for pleasure and autonomy.

Though these findings are interesting, and invite further analysis, it is important to reiterate the point made earlier. That is, the brief consideration of CASP-19 presented here can only be seen as indicative and ideally would be further elaborated and supported by analyses of quality of life and well being using other measures. A fuller understanding of the sensitivity of the CASP measure, and its distribution in the general population, is also needed to fully understand the significance of these findings.

# CHAPTER 5

## Summary of Main Findings and Policy Directions

This chapter summarises the main findings of the study, highlighting the main risk factors for the separate dimensions of social exclusion and the types of older people particularly likely to face multiple exclusion. Drawing on these findings, the discussion points towards the areas on which policy may need to focus in order to reduce and prevent social exclusion among older people. An additional report from this study discusses these policy implications and potential prescriptions in more detail (Walker et al, 2006).

### 5.1 The social exclusion of older people: the evidence from ELSA

The main objective of this study was to measure the incidence and patterns of different forms of social exclusion among older people, and to examine the risk factors for social exclusion. The study used data from the English Longitudinal Study of Ageing (ELSA), a relatively new study that focuses on the circumstances, behaviour and attitudes of people aged 50 years and older. The first ELSA survey (wave 1) was carried out in 2002-3 and achieved a household response rate of 70 per cent with 96 per cent of eligible individuals in these households agreeing to take part. The second wave of ELSA took place in 2004-5 and wave 3 will begin in Spring 2006. The statistics in this report are based on wave 1 only and as such do not capture the dynamic aspect of social exclusion over time.

The study used the ELSA data to identify seven dimensions of social exclusion; social relationships, cultural activities, civic activities, basic services, neighbourhood exclusion, financial products and material goods. Each measure of exclusion used combinations of relevant questions in ELSA to construct an exclusion score for each dimension. Its findings are limited by the need to use the answers to questions asked by ELSA which were not commissioned specifically to study social exclusion. No clear threshold was available to signify exclusion, so thresholds of exclusion were set up to identify the 10 per cent of older people on each dimension who had the highest indicators of deprivation<sup>22</sup>.

The risk of exclusion on a particular dimension was compared for different groups of older people. So, for example, the analysis explored whether men are more likely than women to face exclusion from social relationships. Multivariate analysis was used to reveal the characteristics of older people that are significantly related to each dimension of exclusion (when taking other, potentially confounding, characteristics into account). The risk factors for the key dimensions of exclusion are summarised in Table 5.1.

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<sup>22</sup> The different distribution of exclusion scores for each dimension meant that the percentage of older people defined as excluded on each dimension varied between 9 and 13 per cent.

**Table 5.1** A comparison of the risk factors for the seven dimensions of exclusion and for multiple exclusion

	Dimension of exclusion							Multiple Exclusion
	Soc	Cul	Civ	Ser	Nbr	Fin	Mat	
Depression	✓	✓	✗	✗	✓	✓		✗
Poor health	✓	✗		✗	✗		✓	✓
Live alone	✗		✓	✗			✗	✗
No children alive	✗						✓	✗
No siblings alive	✓							
No private transport	✓	✓	✗	✓			✗	✗
Not use public transport	✓	✓	✓	✓	✓			✓
Social renter			✓			✗	✗	✗
Private renter	✓		✓		✓	✗	✓	✗
Low income		✓				✗	✓	✗
Oldest-old	✓			✗			✗	✓
Youngest-old			✓					
Unemployed	✗		✗					
Main income source: benefits								✗
Non-white		✓				✗		
Female		✓	✓			✓		
Male	✓						✓	
Live in deprived area					✗		✓	
City resident		✓						✓
Village resident				✓				
No physical activity	✓					✓		✓
Low education						✓	✓	

Note:

✗ denotes a statistically significant and strong relationship between the indicator and the dimension of exclusion

✓ denotes a weaker, yet significant relationship between the indicator and the dimension of exclusion

There are a number of characteristics that increase the odds of exclusion across more than one of the dimensions of exclusion. Being depressed is linked to an increased chance of experiencing the most varied forms of exclusion (all bar material goods). Having poor health and living alone are also strongly associated with strong indicators (3+ dimensions) of social exclusion. Other risk factors related to a number of dimensions are having a low income, no private transport, not using public transport and living in rented accommodation (particularly privately rented).

Age is linked to exclusion but perhaps not as strongly as suggested from the descriptive analysis presented in chapter 3. Being older is associated with an increased risk of exclusion from basic services and material goods, and also social relationships (those who are 60 or over have an increased risk of exclusion in respect of social relationships). Age is not significantly related to exclusion on the other three dimensions.

There is evidence to suggest that exclusion on one dimension is related to an increased risk of exclusion on another dimension. We found some evidence of dimensions of exclusion that were associated with each other. For example we found a three-way relationship between

exclusion from social relationships, civic activities and neighbourhood exclusion. Similarly we found a three-way relationship between exclusion from civic activities, financial products and material goods. However these were not very strong relationships and we concluded that there was not clear evidence of 'sets' of dimensions of exclusion. Instead, older people experience a wide variety of combinations of the seven dimensions and many experience more than one dimension of exclusion. Indeed, our analysis showed that approximately one in five older people experience exclusion on two or more dimensions and seven per cent experience exclusion on three or more.

Characteristically, those who were considered to be excluded in three or more dimensions belonged to one or more of these categories: the oldest-old (aged 80 years and above), those who live alone, have no living children, have poor health, suffer depression, have no access to a car, never use public transport, and do not own their accommodation. Multi-dimensional exclusion is also related to low income and those whose main source of income is via benefits, who are unemployed, live in a city or take no physical exercise. These people are indicated by their complex pattern of exclusion and appear to be some of the most deprived among the older population. Though the findings were only indicative, we found that they were more likely to experience a lower quality of life, and were particularly likely to feel less life satisfaction and control of their own situation.

This short project has identified significant new information about social exclusion among older people and suggests the need for further analysis of both wave 1 and wave 2 data. The ELSA dataset has proved to be a rich source of information on social exclusion, and the findings can indicate useful directions for future policy.

## 5.2 Policy directions

The size and representativeness of the ELSA survey enabled the main individual risk factors associated with social exclusion in later life to be identified with greater precision. It also provided data which allowed the five dimensional scale used by Scharf and Smith (2004) to be supplemented by the additional dimensions of exclusion – from cultural and leisure activities and financial products.

The obvious policy directions identified by this report is a focus first on the 7 per cent of people aged 50 and over who are currently experiencing the most complex forms of social exclusion. The threshold of three out of seven dimensions which has been employed in this study to denote multiple exclusion indicates a substantial degree of exclusion affecting some 1.1 million people in the older population.

The characteristics identified as being strongly linked with multiple exclusion are also those associated with the most deprived part of the older population: advanced old age, single person households, those with no children, poor mental and/or physical health, lack of access to private transport, living in rented accommodation, living on a low income, with benefits (including state pensions) as the main source of income and, in a few cases, lacking access to a telephone. The fact that other well-known risk factors especially gender, ethnicity and spatial location are not on this priority list requires some comment. Gender and ethnicity are unquestionably two of the main factors associated with poverty and deprivation in old age. They are also strongly associated with specific dimensions of social exclusion. With regard to multiple exclusion, however, the stepwise logistic regression analysis found that, when tested, gender and ethnicity are subsumed within other individual risk factors. Women are much more likely than men to be aged 80 and over, to live alone and to lack private transport, and

minority ethnic elders are more likely than their white counterparts to live in rented accommodation. Similarly rented housing is common in many deprived inner-city areas.

The ELSA data has illustrated that multiple exclusion is associated with a diverse range of the older population. At the local level, this suggests that a co-ordinated policy involving all the relevant agencies can help link the support that older people need to reduce exclusion and improve their quality of life. Providing greater flexibility and access to integrated services can help to provide the assistance that the most disadvantaged older people require for an independent and pleasurable old age.

That there are particular characteristics of older people strongly related to multiple exclusion suggests areas where policy should focus to contact the most excluded and hardest to reach. This is not to deny the need for long-term policies that focus on preventing exclusion earlier in the life course (Walker et al, 2006). Key targets for action suggested by the research include poor mental and physical health, transport and lack of physical activity.

While the policy focus will inevitably fall on the most severely excluded older people, a key finding of this project is that there are specific characteristics associated with each individual dimension of exclusion that must be taken on board in any comprehensive strategy to tackle social exclusion. For example, although not directly related to the risk of multiple exclusion (defined as exclusion on three or more dimensions) gender was a significant factor in four dimensions. On one of them, exclusion from social relationships, the vulnerability of men highlighted by this study echoes previous research (Davidson and Arber, 2004) and emphasises the need for targeted efforts if this dimension is to be tackled.

That a number of different public, private and voluntary organisations deal with the specific characteristics of older people linked to exclusion, implies that the necessary systems need to be in place to deliver an integrated strategy. So, for example, this research has highlighted the link between exclusion and poor health, and between exclusion and living alone. Many of the multiply deprived older people are likely to endure both of these 'risk factor' situations and hence without an integrated strategy involving organisations such as the NHS and local housing and social services approaches to tackle exclusion are likely to be ineffective.

Despite the call for an integrated approach to tackling exclusion, there are distinct areas where more focussed, singular strands of policy are likely to make an impact on the exclusion of older people. The ELSA data highlighted that older people on lower incomes are likely to experience exclusion, particularly economic exclusion, and hence draw attention to remedial policies in the areas of pensions, benefits and employment. Likewise the link between a lack of private transport and exclusion from social, cultural and civic aspects of older people's lives suggests a focus on the role of local government, particularly with regard to the provision or encouragement of affordable and accessible public transport. Local authorities also have a pivotal role with regard to the social rented sector and in co-ordinating activities to ensure that those living alone are in touch with local services and amenities. Close co-ordination is needed between housing departments, housing associations, social services and the voluntary sector with an explicit strategy aimed at keeping the most vulnerable in touch with services and civic life more generally. Similarly close co-ordination is required, particularly between primary care, specialist mental health services, social services and the voluntary sector (e.g. Age Well) to address poor physical and mental health. Again services require explicit strategies aimed at overcoming exclusion among the most vulnerable. As emphasised above the starting point should be those experiencing the most complex forms of multiple exclusion with urgent action being taken to contact them and enable them to feel connected to services and their local communities.

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## **APPENDICES**

**Appendix A: Constructing dimensions of exclusion**

**Appendix B: Exploring risk factors for the separate dimensions of exclusion**

**Appendix C: Exploring risk factors for multiple exclusion**



# APPENDIX A

## Constructing Dimensions of Exclusion

### Exclusion from social relationships

The social relationships dimension tries to capture the frequency of contact with family and friends and the density of these relationships. It includes close social bonds within the household, however, gives special weight to relationships outside of the household, as not to bias against single people.

#### The ELSA questions

The relationships that ELSA explores are relationships with (1) a husband, wife or partner the respondent lives with, (2) children, (3) immediate family and (4) friends. All respondents are asked whether they have any of the above relationships.

In order to look at the frequency of contact, respondents are further asked how often they meet up or speak on the phone with their children outside of the household, immediate family or friends. Frequency of contact with household members is not investigated.

In order to look at the density of a respondent's relationship, ELSA asks how close their relationship with their partner is and how many children, immediate family members and friends they have a close relationship with.

ELSA also investigates the quality of a respondent's relationships and asks:

- How much do they really understand the way you feel about things?
- How much can you rely on them if you have a serious problem?
- How much can you open up to them if you need to talk about your worries?
- How much do they criticise you?
- How much do they let you down when you are counting on them?
- How much do they get on your nerves?

Interpreting the meaning of these questions to determine the quality of the relationship is rather involved. Furthermore, considering that these questions are asked about each category of social contact, the dimension would get rather complicated and unclear. Therefore, it is advisable to restrict the dimension to the frequency and density of relationships only.

Measures of social relations exclusion by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Do you have a husband or wife with whom you live?	Not answered	1	1	3	4	2
	Yes	80	75	59	33	69
	No	19	24	38	63	30
Do you have any children?	Not answered	1	1	3	4	1
	Yes	86	88	84	81	86
	No	14	11	13	16	13
Do you have any other immediate family?	Not answered	1	3	5	8	3
	Yes	94	89	84	76	88
	No	5	8	10	17	8
Do you have any friends?	Not answered	2	3	6	8	4
	Yes	94	92	88	83	91
	No	4	5	6	9	6
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### (1) partner

Measures of social relations exclusion by age group: partner						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
How close is your relationship with your spouse or partner?	Not answered	1	1	2	3	1
	Very close	75	75	77	78	76
	Quite close	20	21	19	16	20
	Not very close	4	2	2	3	3
	Not at all close	1	0	0		0
Total		100	100	100	100	100
	Unweighted base	3119	2387	1406	371	7283

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

Note: The base size is lower as only respondents with partners were asked

**(2) children**

Measures of social relations exclusion by age group: children						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
On average how often do you meet up with your children (include both)	Not answered	12	4	5	8	8
	Three or more times a week	24	24	21	20	23
	Once or twice a week	30	35	37	37	34
	Once or twice a month	16	18	18	18	17
	Every few months	12	12	12	12	12
	Once or twice a year	3	4	4	4	4
	Less than once a year or never	3	2	2	1	2
On average how often do you speak on the phone to your children	Not answered	12	4	3	5	7
	Three or more times a week	39	43	40	39	40
	Once or twice a week	37	41	45	43	41
	Once or twice a month	8	9	8	9	8
	Every few months	2	2	2	2	2
	Once or twice a year	1	1	1	1	1
	Less than once a year or never	2	2	1	1	2
Number of children respondent has close relationship with	Not answered	4	4	7	7	5
	DK		0		0	
	Close relationship with 0 children	3	2	2	2	2
	Close relationship with 1 child	21	22	24	34	23
	Close relationship with 2 children	48	42	35	34	42
	Close relationship with 3 or more children	25	30	32	23	28
	Total		100	100	100	100
	Unweighted base	3321	2785	1953	822	8881

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

Note: The base size is lower as only respondents with children were asked

**(3) family**

		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
On average how often do you meet up with family members?	Not answered	2	3	5	7	3
	Three or more times a week	11	12	11	11	11
	Once or twice a week	22	22	25	26	23
	Once or twice a month	19	18	18	17	18
	Every few months	21	20	18	18	20
	Once or twice a year	13	14	13	13	14
	Less than once a year or never	10	11	10	8	10
On average how often do you speak on the phone with these family members?	Not answered	2	3	3	5	3
	Three or more times a week	16	17	20	21	18
	Once or twice a week	36	30	35	37	34
	Once or twice a month	23	25	21	20	23
	Every few months	12	13	11	9	12
	Once or twice a year	5	6	5	5	5
	Less than once a year or never	6	6	5	2	6
Number of family members respondent has close relationship with	Not answered	5	9	12	13	9
	Close relationship with 0 family members	16	13	12	9	14
	Close relationship with 1 family member	25	24	20	24	23
	Close relationship with 2 family members	22	20	21	19	21
	Close relationship with 3 or more family members	32	34	36	35	34
Total		100	100	100	100	100
	Unweighted base	3627	2804	1953	779	9163

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

Note: The base size is lower as only respondents with children were asked

**(4) friends**

Measures of social relations exclusion by age group: friends		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
On average how often do you meet up with your friends?	Not answered	1	2	3	6	2
	Three or more times a week	16	15	18	20	17
	Once or twice a week	41	43	43	40	42
	Once or twice a month	26	24	21	18	24
	Every few months	12	11	9	8	10
	Once or twice a year	3	4	4	4	4
	Less than once a year or never	1	1	2	4	2
On average how often do you speak on the phone with your friends?	Not answered	2	3	4	6	3
	Three or more times a week	16	15	18	22	17
	Once or twice a week	41	43	38	36	41
	Once or twice a month	27	24	25	17	25
	Every few months	9	9	9	9	9
	Once or twice a year	2	3	3	4	3
	Less than once a year or never	3	3	3	6	3
Number of friends respondent has close relationship with	Not answered	3	5	7	10	6
	Close relationship with 0 friends	19	16	16	14	17
	Close relationship with 1 friend	12	11	11	15	11
	Close relationship with 2 friends	22	22	19	18	21
	Close relationship with 3 or more friends	44	45	47	43	45
Total		100	100	100	100	100
	Unweighted base	3645	2883	2039	850	9417

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

Note: The base size is lower as only respondents with children were asked

**The method of combining questions to create an indicator**

Since the idea behind exclusion from social relationships is that a person is excluded from this dimension if he/she has no or few social relationships, and since one social relationship may well make up for the lack of another social relationship, it is believed that an index for this dimension is the most useful strategy.<sup>23</sup> Respondents are therefore given points for the frequency of their social contacts and the density thereof.

Regarding the frequency of contact we consider meeting up with another person to carry more weight to the inclusion on this dimension than speaking to them on the phone. Respondents are given up to 1 point for meeting up with a child that lives outside of the household, family member or friend and up to 0.5 points for speaking on the phone to them. The table below illustrates the distribution. Respondents who have a partner or children living with them are not allocated any points for frequency of contact with them. Respondents can therefore receive a maximum of 4.5 points on the frequency of their social relationships.

<sup>23</sup> This is also in line with Scharf et al.'s approach.

	Points	Points
Three or more times a week	1.0	0.5
Once or twice a week	0.8	0.4
Once or twice a month	0.6	0.3
Every few months	0.4	0.2
Once or twice a year	0.2	0.1
Less than once a year or never	0.0	0.0

For the density of their relationship networks respondents are allocated a maximum of 1.5 points, depending on the amount of people they have a close relationship with. For a close relationship with one child, relative or friend they receive 0.5, for a close relationship with two 1 point and for a close relationship with 3 or more 1.5 points. Respondents who have a quite or very close relationship with their partner are allocated 1.5 points on this measure. Respondents can therefore again receive a maximum of 6 points on the density of their social relationships.

In total respondents can therefore receive a minimum of 0 points and a maximum of 10.5 points. On this scale respondents with 0 points are most excluded from social relations, while respondents with 10.5 points are least excluded. The table below shows the distribution of the scale. It shows that older respondents are more excluded on this dimension.

Respondents who did not answer a certain question were given 0 points for this question, as it was assumed that they do not have this type of social relationship. However, if respondents failed to answer all questions used for this dimension, they were excluded from the analysis.<sup>24</sup>

<sup>24</sup> 54 respondents (0.5%) did not answer any of these questions and were excluded from the analysis on this dimension.

Measures of social relations exclusion by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – most excluded	0	0	0	0	0
	0.1 to 0.5 points	0	0	0	1	0
	0.6 to 1 point	0	0	0	1	0
	1.1 to 1.5 points	1	1	1	3	1
	1.6 to 2 points	1	1	1	3	1
	2.1 to 2.5 points	1	2	3	5	2
	2.6 to 3 points	2	2	4	6	3
	3.1 to 3.5 points	3	4	4	6	4
	3.6 to 4 points	4	5	6	8	5
	4.1 to 4.5 points	6	5	6	9	6
	4.6 to 5 points	7	7	7	9	7
	5.1 to 5.5 points	8	8	7	8	8
	5.6 to 6 points	9	8	10	7	9
	6.1 to 6.5 points	10	10	9	7	9
	6.6 to 7 points	10	10	8	7	9
	7.1 to 7.5 points	9	9	8	7	9
	7.6 to 8 points	9	9	8	5	8
	8.1 to 8.5 points	7	8	6	2	7
	8.6 to 9 points	6	6	4	2	5
9.1 to 9.5 points	5	4	3	1	4	
9.6 to 10 points	1	2	1	0	1	
10.1 to 10.5 points – least excluded	0	0	0		0	
Total		100	100	100	100	100
	Unweighted base	3843	3135	2265	989	10232

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The threshold at which exclusion occurs

The suggested threshold at which exclusion occurs is 3.5 points on the scale, which means that respondents scoring fewer than 3.5 points are considered excluded from social relationships.

**The percentage of older people excluded on the dimension is therefore 12 per cent**

### EXCLUSION FROM CULTURAL ACTIVITIES

The cultural activities dimension tries to capture the notion of exclusion from cultural and leisure activities, for which people have to leave the home.

#### The ELSA questions

Respondents were asked about their participation in a number of activities, including:

- going to the cinema
- visiting an art gallery or museum

- going to the theatre, concert or opera
- eating out of the house.

Those respondents who participated in each of these activities ‘about once or twice a year’ or less often, where further asked whether they would like to go more often, but felt that, for whatever reason, they could not. Furthermore, respondents were asked whether they had been on a daytrip or holiday (in the UK or abroad) in the last year.

## Responses to the questions

The first table describes the frequency with which respondents participated in each activity.

Measures of cultural and leisure activities: frequency of activities by age group						
	Age groups				All	
	50–59 years	60–69 years	70–79 years	80+ years		
<b>Frequency of going to the cinema</b>						
Twice a month or more	2	2	1	0	2	
About once a month	5	4	2	1	4	
Every few months	16	10	5	3	11	
Less than once a year and would like to go more, but cannot	20	17	15	16	17	
Less than once a year, would not like to go more	56	67	77	80	67	
<b>Frequency of going to the art gallery or museum</b>						
Twice a month or more	2	3	1	0	2	
About once a month	4	4	3	1	3	
Every few months	13	12	8	5	11	
Less than once a year and would like to go more, but cannot	31	25	25	24	27	
Less than once a year, would not like to go more	50	56	62	70	57	
<b>Frequency of going to the theatre,concert,opera</b>						
Twice a month or more	2	2	1	1	2	
About once a month	4	5	4	2	4	
Every few months	19	18	13	9	16	
Less than once a year and would like to go more	35	29	29	33	32	
Less than once a year, would not like to go more	40	45	52	55	46	
<b>Frequency of going to the restaurant,café or pub</b>						
Twice a month or more	41	41	35	31	38	
About once a month	22	21	18	14	20	
Every few months	20	17	19	20	19	
Less than once a year, would like to go more	7	7	8	8	7	
Less than once a year, would not like to go more	10	14	20	27	16	
<b>Daytrip, holiday in the UK or holiday abroad</b>						
Refused to answer	0	0	1	1	1	
Has taken a daytrip or holiday in the last year	90	87	77	66	84	
Has not taken a daytrip or holiday in the last year	9	12	22	33	16	
Total	100	100	100	100	100	
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

Note: Respondents with Don't know answers excluded from base



### The method of combining questions to create an indicator

In order to construct this dimension we constructed a scale. Respondents are given a point for each activity that they do less than twice a year, but would like to do more often. Furthermore, they are given a point if they have not been on a daytrip or holiday in the past year.

Respondents can be given a maximum of 5 points, where those least excluded on this dimension get 0 points and those most excluded get 5 points.

From these measures the points-scale was derived. The distribution of the scale across age groups is displayed below.

Cultural activities exclusion dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – least excluded	44	47	43	33	44
	1 point	25	27	30	36	28
	2 points	19	16	16	17	17
	3 points	9	8	7	10	8
	4 points	3	2	3	3	3
	5 points – most excluded	0	0	1	0	1
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The threshold at which exclusion occurs

The suggested threshold at which exclusion occurs is 3 points on the scale, i.e. respondents scoring 3 points are considered excluded from social activities.

### **The percentage of older people excluded on the cultural activities dimension is 11 per cent**

## EXCLUSION FROM CIVIC ACTIVITIES

The civic activities dimension tries to capture participation in activities that contribute to a healthy civil society.

### The ELSA questions

Respondents were asked whether they were a member of political, trade union or environmental groups; tenants groups resident groups or neighbourhood watch; Church or other religious organization; and charitable associations. They were further asked how often they did voluntary work and whether they had voted in the last general election.

## Responses to the questions

Measures of civic exclusion and civic exclusion dimensions by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Political party, trade union or environmental groups	Not answered	3	4	7	8	5
	Not a member	79	84	82	82	81
	Member	19	12	11	10	14
Tenants groups, resident groups, neighbourhood watch	Not answered	3	4	7	8	5
	Not a member	83	76	74	76	78
	Member	15	19	19	16	17
Church or other religious groups	Not answered	3	4	7	8	5
	Not a member	83	75	69	64	75
	Member	14	21	24	28	20
Charitable associations	Not answered	3	4	7	8	5
	Not a member	80	79	77	77	79
	Member	17	17	15	15	16
Refusal/DK		0		0		0
Does voluntary work at least once a year		25	27	23	15	24
Does voluntary work less than once a year		4	2	1	1	2
Never does voluntary work		72	72	76	84	74
Narrow civic activity dimension	Not included on dimension	50	50	51	52	50
	Included on this dimension	50	50	49	48	50
I voted in the last general election	Not answered	0	0	1	1	1
	Not mentioned	21	16	14	16	18
	Mentioned	78	84	85	82	82
Broad civic activity dimension	Not included on dimension	14	10	10	12	12
	Included on this dimension	86	90	90	88	88
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The method of combining questions to create an indicator

As one can see from this table the number of people organised in any civic organisation is rather low in general. Looking at active civic participation only between 14 per cent and 20 per cent of respondents were members of a civic organisation and 24 per cent do voluntary work at least once a year. Even when combining this to a dimension where the respondent is member of a civic organisation or has done voluntary work at least once a year only 50 per cent of respondents are included on this dimension.

If one takes a broad approach to civic activities and widens the concept to include interest in the society that one lives in, one might include in the dimension whether the respondent voted in the last election. Scharf, Phillipson and Smith considered this measure in their forthcoming article.

### The threshold at which exclusion occurs

Constructing the civic activities dimension then a person is judged to be excluded from civic activities if he/she is not member of a civic organisation, has not done any voluntary work and did not vote in the last general election. Given the distribution of the data, it is not possible to define a group of respondents that is approaching exclusion.

### **The percentage of older people excluded on the civic activities dimension is 12 per cent**

### **EXCLUSION FROM ACCESS TO BASIC SERVICES**

Exclusion from basic services captures the notion that people are more included in society if they can access certain services that give basic provisions.

### The ELSA questions

The basic services dimension is constructed by means of a set of variables in the ELSA data that ask: 'How easy or difficult would it be for you to get to each of the following places, using your usual form of transports?'. The services considered for this dimension were:

- Bank or cash point
- Post Office
- Chiropodist
- Dentist
- General Practitioner
- Hospital
- Optician
- Local Shops
- Shopping centre
- Supermarket

### Responses to the questions

The following table displays the distribution of respondents' answers to each measure, by age group.

Measures in the basic services dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
How do you find getting to the bank or cash point?	Not answered	2	3	8	9	4
	Very easy	73	65	49	30	60
	Quite easy	22	27	34	36	28
	Quite difficult	3	3	6	12	4
	Very difficult	1	1	3	13	3
How do you find getting to the Post Office?	Not answered	1	2	3	5	2
	Very easy	81	76	62	42	71
	Quite easy	15	19	28	34	22
	Quite difficult	2	2	4	10	3
	Very difficult	1	1	2	9	2
How do you find getting to the Chiropodist?	Not answered	15	19	22	22	18
	Very easy	57	51	40	30	48
	Quite easy	23	25	28	27	25
	Quite difficult	4	4	6	10	5
	Very difficult	2	2	4	11	3
How do you find getting to the Dentist?	Not answered	2	6	12	20	7
	Very easy	69	62	46	27	57
	Quite easy	24	27	33	32	28
	Quite difficult	4	3	6	10	5
	Very difficult	1	2	3	11	3
How do you find getting to your General Practitioner?	Not answered	2	3	5	7	3
	Very easy	76	72	58	40	67
	Quite easy	20	22	31	35	25
	Quite difficult	2	2	4	10	4
	Very difficult	1	1	2	9	2
How do you find getting to the Hospital?	Not answered	1	2	5	8	3
	Very easy	59	51	39	24	48
	Quite easy	32	36	41	38	36
	Quite difficult	6	8	11	18	9
	Very difficult	2	2	4	12	3
How do you find getting to the Optician?	Not answered	2	3	6	9	4
	Very easy	69	62	49	31	58
	Quite easy	25	30	37	37	31
	Quite difficult	3	3	6	12	5
	Very difficult	1	1	2	10	2
How do you find getting to your Local Shops?	Not answered	1	2	4	7	3
	Very easy	80	74	60	39	69
	Quite easy	16	20	29	33	22
	Quite difficult	2	2	4	11	4
	Very difficult	1	1	3	9	2
How do you find getting to the Shopping Centre?	Not answered	1	3	5	8	3
	Very easy	68	60	48	33	57
	Quite easy	26	31	37	33	31
	Quite difficult	4	4	5	13	5
	Very difficult	1	2	4	13	3

Measures in the basic services dimension by age group ... continued						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
How do you find getting to the Supermarket?	Not answered	1	2	4	6	2
	Very easy	74	66	52	34	62
	Quite easy	21	28	35	34	28
	Quite difficult	2	3	5	13	4
	Very difficult	1	2	4	13	3
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The method of combining questions to create an indicator

In order to define a dimension of exclusion from basic services, we devised a scale reaching from 0 to 7 points. For each basic service which a respondent answered that they found it quite or very difficult to access it, they receive one point. Since some of the categories are rather close to each other conceptually, we treat them as substitutes. Respondents only receive a point if they find it quite or very difficult to get to a bank or cash point and to the post office, and they also only receive a point if they find it quite or very difficult to get to the local shops, the shopping centre and the supermarket.

Respondents who did not answer a certain question receive 0 points for that question.

Respondents who did not answer any question used in this dimension were excluded from analysis.<sup>25</sup>

Respondents with 0 points are therefore least excluded on this dimension, while respondents with 7 points are most excluded.

<sup>25</sup> 149 respondents (1.4%) were excluded on this basis.

Basic services exclusion dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – least excluded	88	86	78	60	82
	1 point	7	8	12	12	9
	2 points	2	2	4	6	3
	3 points	1	1	2	4	1
	4 points	1	1	1	3	1
	5 points	1	1	1	3	1
	6 points	0	0	1	4	1
	7 points – most excluded	1	1	3	9	2
Total		100	100	100	100	100
	Unweighted base	3832	3107	2260	984	10183

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The threshold at which exclusion occurs

The table above displays the distribution of the points on the scale. Considering that 82 per cent of respondents are not excluded on any of the measures and another 9 per cent have difficulty accessing one service, it makes sense to put the threshold at 2 points. That means that respondents who have difficulty with accessing 2 or more basic services are considered excluded from basic services. Respondents who have difficulty accessing one service only are approaching exclusion.

### The percentage of older people excluded on the basic services dimension is 9 per cent

## NEIGHBOURHOOD EXCLUSION

The concept of a neighbourhood exclusion dimension entails that respondents are more excluded if they do not feel part of their surroundings and feel that they cannot rely on people living close to them.

### The ELSA questions

The first set of measures used to construct this dimension asks: “How do you feel about your local area, that is everywhere within a 20 minute walk or about a mile of your home?”. The items asked about are: feeling part of the area, feeling lonely living in the area, the trustworthiness of the people in the area, feeling safe to walk the streets after dark, the friendliness of people in the area, whether people in the area will take advantage of you, and whether there are people in the area who would help if you were in trouble. The responses are given on a 7-points scale of polar statements, as can be seen in the table below.

## Responses to the questions

		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
I really feel part of this area/I feel that I don't belong in this area	Not answered (9)	1	1	4	5	2
	I really feel part of this area	35	46	57	56	45
	2	23	20	16	11	19
	3	16	13	9	10	13
	4	15	11	7	9	11
	5	5	4	3	2	4
	6	3	2	1	2	2
I feel that I don't belong in this area		3	2	3	3	3
I often feel lonely living in this area/I have never felt lonely living in this area	Not answered	2	2	5	9	3
	I often feel lonely living in this area	6	7	9	10	8
	2	4	4	5	5	5
	3	5	5	4	6	5
	4	9	8	6	7	8
	5	8	6	6	4	6
	6	20	15	11	11	15
I have never felt lonely living in this area		46	53	54	48	50
Most people in this area can be trusted/Most people in this area can't be trusted	Not answered	2	2	5	6	3
	Most people in this area can be trusted	24	34	45	48	34
	2	26	25	19	18	23
	3	18	13	10	10	14
	4	18	14	11	9	14
	5	6	4	3	2	4
	6	4	3	2	2	3
Most people in this area cannot be trusted		3	4	6	5	4
People would be afraid to walk alone in this area after dark/People feel safe walking alone in this area after dark	Not answered	1	2	6	10	3
	People would be afraid to walk alone in this area after dark	7	9	14	17	10
	2	8	9	8	9	8
	3	9	9	11	9	10
	4	16	17	15	15	16
	5	15	13	11	10	13
	6	25	21	14	11	20
People feel safe walking alone in this area after dark		19	20	22	19	20
Most people in this area are friendly/Most people in this area are unfriendly	Not answered	1	1	3	5	2
	Most people in this area are friendly	32	43	51	55	42
	2	30	26	22	17	26
	3	16	13	9	11	13
	4	12	10	8	6	10
	5	4	3	2	2	3
	6	3	2	2	2	2
Most people in this area are unfriendly		2	2	2	2	2

		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
People in this area will take advantage of you/People in this area will always treat you fairly	Not answered	2	3	6	10	4
	People in this area will take advantage of you	2	2	4	2	3
	2	3	3	2	1	2
	3	4	4	3	3	4
	4	19	14	9	8	14
	5	19	15	12	9	15
6	33	30	25	22	29	
People in this area will always treat you fairly		19	30	40	44	30
If you were in trouble there are lots of people in this area who would help you/If you were in trouble there is nobody in this area who would help you	Not answered	1	1	4	6	2
	If in trouble, there are lots of people in this area who would help	19	28	38	44	29
	2	21	23	21	17	21
	3	21	18	15	14	18
	4	21	17	12	10	17
	5	8	6	4	3	6
6	5	4	3	2	4	
If in trouble, there is nobody in this area to help you		3	2	3	3	3
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The method of combining questions to create an indicator

Respondents are given 1 to 3 points for each neighbourhood exclusion problem they mentioned. Those problems that are given the most severe negative rating (1 or 7 depending on the direction of the scale) are given 3 points, those with the least severe negative rating (3 or 5) 1 point. Consequently, the most excluded respondents receive 21 points, while the least excluded receive 0 points.

Respondents who did not answer a certain question are given 0 points for this question. However, if they did not answer any of the questions used in this dimension, they were excluded from the analysis.<sup>26</sup>

<sup>26</sup> 124 respondents (1.2%) were excluded on these grounds.



Neighbourhood exclusion dimension by age group		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – most excluded	48	50	45	41	47
	1 point	13	11	11	9	11
	2 points	12	10	10	10	11
	3 points	11	12	15	20	13
	4 points	5	4	5	6	5
	5 points	3	3	3	4	3
	6 points	3	4	5	5	4
	7 points	2	2	2	1	2
	8 points	1	1	1	1	1
	9 points	1	1	2	1	1
	10 points	0	0	0	0	0
	11 points	0	0	0	1	0
	12 points	0	0	0	1	0
	13 points	0	0	0		0
	14 points	0	0		0	0
	15 points	0	0	0	0	0
	16 points	0	0			0
	17 points	0		0		0
	18 points	0	0	0	0	0
	19 points	0		0		0
	20 points	0				0
21 points – most excluded	0	0	0		0	
Total		100	100	100	100	100
	Unweighted base	3830	3135	2257	986	10208

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The threshold at which exclusion occurs

Considering the distribution of the dimension scale it seems sensible to lay the threshold at 5 points. Respondents with 5 or more points on the scale are considered excluded on this dimension.

### The percentage of older people excluded on the basic services dimension is 13 per cent

#### EXCLUSION FROM FINANCIAL PRODUCTS

The concept of exclusion from financial products looks at basic financial products that people use to manage their life. Three types of financial products can be distinguished. Products for day-to-day money management, for medium-term savings and for long-term financial security.

#### The ELSA questions

ELSA contains a number of measures that can be used for this indicator. For the day-to-day money management aspect ELSA asks whether respondents have a current account at a bank, building society or elsewhere. For the medium-term savings products ELSA asks about a

number of different products: savings Account at a bank, building society or elsewhere, Tessa, ISA, Premium Bonds, National Savings Accounts or Certificates, PEP, stocks and/or shares, share options/employee share ownership, share clubs, unit or investment trusts, bonds and gilts (government or corporate) and other savings or investments. For the long-term financial security measures ELSA offers derived variables on current and future private pension income and whether they have a life insurance policy.

Measures in the financial products dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Current account	Not mentioned	10	11	18	22	13
	Mentioned	90	89	82	78	87
Savings account	Not mentioned	30	30	34	35	31
	Mentioned	70	70	66	65	69
TESSA	Not mentioned	84	82	86	92	84
	Mentioned	16	18	14	8	16
ISA	Not mentioned	52	51	60	73	56
	Mentioned	48	49	40	27	44
Premium Bonds	Not mentioned	63	65	67	73	66
	Mentioned	37	35	33	27	34
National Savings Accounts or Certificates	Not mentioned	94	93	91	88	92
	Mentioned	6	7	9	12	8
PEP	Not mentioned	81	78	86	92	83
	Mentioned	19	22	14	8	17
Stocks and/or Shares	Not mentioned	64	68	75	80	69
	Mentioned	36	32	25	20	31
Share Options/Employee share ownership	Not mentioned	93	98	99	100	96
	Mentioned	7	2	1	0	4
Share clubs	Not mentioned	99	99	100	100	99
	Mentioned	1	1	0	0	1
Unit or Investment Trusts	Not mentioned	89	89	91	95	90
	Mentioned	11	11	9	5	10
Bonds and Gilts (gov. or corporate)	Not mentioned	91	87	90	91	90
	Mentioned	9	13	10	9	10
Other savings or investments	Not mentioned	92	94	95	97	94
	Mentioned	8	6	5	3	6
Receives or will receive a private pension	No payout	25	33	38	45	33
	Payout	75	67	62	55	67
Life insurance future payout of respondent or spouse	Not answered	1	0	1		1
	No payout	36	50	55	63	47
	Payout	63	49	44	37	52
Total		100	100	100	100	100
	Unweighted base	3817	3093	2268	995	10173

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The method of combining questions to create an indicator

When combining these measures into one indicator it makes sense to sort them according to whether they address day-to-day money management, medium-term savings or long-term financial security. The current account addresses the day-to-day money management. Respondents, who have at least one of the medium-term savings products are combined. Finally, respondents who or whose spouse have either a future pension payout or future life insurance payout are combined.

Respondents who did not answer any of the battery of questions regarding financial products were excluded from the analysis.<sup>27</sup> Those who failed to answer a certain question were given 0 points for this question.

Combined measures in the financial products dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Current account	Not mentioned	10	11	18	22	13
	Mentioned	90	89	82	78	87
Any form of medium-term saving	Not mentioned	16	16	17	21	17
	Mentioned	84	84	83	79	83
Any form of long-term financial security	Not available	12	17	21	29	18
	Available	88	83	79	71	82
Total		100	100	100	100	100
	Unweighted base	3817	3093	2268	995	10173

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

As described in research by Kempson and Whyley<sup>28</sup>, people without access to financial products identify day-to-day money management and the long-term financial security as most important areas of unmet need of financial services. Therefore it makes sense to weight these products more heavily. By a factor of 2 seems appropriate. Respondents therefore receive 1 point if they have medium-term savings and 2 points each if they have a current account and long-term financial security.

<sup>27</sup> 159 respondents (1.5%) were excluded on these grounds.

<sup>28</sup> E Kempson and C Whyley (1999). 'Kept out or opted out? Understanding and combating financial exclusion'. Bristol: Policy Press.

Financial products dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – most excluded	3	2	2	3	2
	1 point	1	1	3	5	2
	2 points	6	6	6	7	6
	3 points	9	17	23	29	17
	4 points	8	8	10	11	9
	5 points – least excluded	74	66	56	46	64
Total		100	100	100	100	100
	Unweighted base	3817	3093	2268	995	10173

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The threshold at which exclusion occurs

Respondents are regarded excluded on this dimension if they have only one of the day-to-day money management and the long-term financial security product types, and no medium-term savings, which corresponds to up to 2 points.

### **The percentage of older people excluded on the financial products dimension is 10 per cent**

### **EXCLUSION FROM COMMON CONSUMER GOODS**

The concept of exclusion from common consumer goods comprises basic items that are owned by at least half the sampling population in each age group, yet which those excluded on this dimension cannot afford.

### The ELSA questions

ELSA provides a number of measures that can be used for this dimension. Those included in this dimension ask respondents or their household have any of the following items: television, video recorder, Deep freeze or fridge freezer, washing machine and microwave. Furthermore, it asks if respondents have central heating.

Measures of common consumer goods dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Television	Not mentioned	2	1	1	1	1
	Mentioned	98	99	99	99	99
Video recorder	Not mentioned	4	6	15	42	11
	Mentioned	96	94	85	58	89
Freezer	Not mentioned	4	3	6	12	5
	Mentioned	96	97	94	88	95
Washing machine	Not mentioned	5	8	11	23	9
	Mentioned	95	92	89	77	91
Microwave	Not mentioned	8	11	20	35	15
	Mentioned	92	89	80	65	85
Do you have any form of central heating in your accommodation?	Yes	94	94	91	91	93
	No	5	6	9	9	7
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

### The method of combining questions to create an indicator

Respondents are given points on a scale reaching from 0 to 6, where 0 is most excluded and 6 least excluded. For each item that respondents own they receive 1 point.<sup>29</sup>

Common consumer goods dimension by age group						
		Age groups				
		50–59 years	60–69 years	70–79 years	80+ years	All
Points on the dimension index	0 points – most excluded	0	0	0	0	0
	1 point	0	0	0	0	0
	2 points	0	0	1	6	1
	3 points	1	1	4	11	3
	4 points	3	4	9	15	6
	5 points	15	17	24	32	19
	6 points – least excluded	80	76	61	35	70
Total		100	100	100	100	100
	Unweighted base	3859	3148	2309	1016	10332

Base: Adults aged 50 years and over

Source: ELSA wave 1 (2003)

Note: New partners and partners under 50 excluded from base

Note: Statistics calculated using weighting factor

Note: Non-respondents to self-completion questionnaire excluded from base

<sup>29</sup> 1 respondent (0.0%) was excluded from analysis as he/she did not provide answers to any questions on common durables.

### The threshold at which exclusion occurs

Considering the distribution of the scale it makes sense to put the threshold at 4 points, where respondents with 4 points or less are excluded from material goods.

**The percentage of older people excluded on the materials good dimension is 11 per cent**

# APPENDIX B

## Exploring Risk Factors for the Different Dimensions of Exclusion

The tables below present a logistic regression analysis of socio-demographic and economic risk factors associated with the experience of each dimension of exclusion. The estimates reported in these tables are the ratio of the odds (the ‘odds ratio’) of the characteristic variable category to the reference category for that variable. The definition of odds is similar but significantly different to that of probability. This is best explained in the form of an example. If 200 individuals out of a population of 1000 experienced exclusion, the *probability* of being excluded is 0.2. The *odds* in favour of being excluded relative to not being excluded are calculated as the ratio of these two mutually exclusive events. The odds in favour of being excluded relative to not being excluded, is therefore  $0.2/0.8=0.25$ .

For example, if the outcome variable is ‘experiences exclusion on the social relationships dimension’/‘experiences no exclusion’, where ‘experiences exclusion’ is deemed our ‘success’ event, the ratio of the expected number of those who ‘experience exclusion’ to the expected number of those who ‘experience no exclusion’ is of interest. As a consequence, odds ratios higher (lower) than 1 imply that the characteristic was associated with an increased (decreased) probability of experiencing exclusion.

Risk factors for exclusion on the social relationships dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	<b>1.37</b>	0.01
70-79 years	<b>1.48</b>	0.01
80+ years	<b>1.71</b>	0.00
<b>Sex</b>		
Male	REF	REF
Female	<b>0.49</b>	0.00
<b>Ethnicity</b>		
White	REF	REF
Non-white	0.91	0.75
<b>Family type</b>		
Lives alone	<b>2.03</b>	0.00
Partner only	0.78	0.08
Children, no partner	<b>3.57</b>	0.00
Partner and children	REF	REF
Other	<b>1.67</b>	0.02
<b>No. of children</b>		
0	REF	REF
1	<b>0.28</b>	0.00
2	<b>0.15</b>	0.00
3	<b>0.13</b>	0.00
4 or more	<b>0.13</b>	0.00

Risk factors for exclusion on the social relationships dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>No. of siblings</b>		
0	REF	REF
1	<b>0.55</b>	0.00
2	<b>0.54</b>	0.00
3	<b>0.48</b>	0.00
4 or more	<b>0.47</b>	0.00
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	1.15	0.39
A level or equiv	1.03	0.88
O level or equiv	1.14	0.41
CSE or equiv	1.34	0.16
Other	<b>1.51</b>	0.02
No qualification	1.24	0.15
<b>Main activity</b>		
Retired	0.97	0.89
Employed	REF	REF
Self-employed	1.36	0.20
Unemployed	<b>1.92</b>	0.03
Sick or disabled	1.27	0.28
Look after home	1.33	0.19
Semi retired	1.45	0.39
<b>Health</b>		
Excellent	0.95	0.69
Very good	1.06	0.57
Good	REF	REF
Fair	1.10	0.39
Poor	1.11	0.51
<b>Fallen in past two years</b>		
No	REF	REF
Yes	1.11	0.51
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	<b>1.33</b>	0.00
4+ symptoms (potential for mental health problems)	<b>1.41</b>	0.02
<b>Depression (CESD scale)</b>		
Depressed	<b>1.30</b>	0.01
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	0.82	0.05
No	REF	REF
<b>Equivalent total household income</b>		
Lowest quintile	1.07	0.59
Second quintile	0.90	0.39
Third quintile	REF	REF
Fourth quintile	0.85	0.22
Highest quintile	0.98	0.87



<b>Risk factors for exclusion on the social relationships dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	1.02	0.87
2nd quintile	1.16	0.18
3rd quintile	REF	REF
4th quintile	1.04	0.77
Most deprived	1.02	0.91
<b>Urban/rural</b>		
City	1.08	0.50
Town	REF	REF
Village	0.97	0.88
Hamlet	0.78	0.30
<b>Government Office Region</b>		
North East	0.94	0.74
North West	1.16	0.33
Yorkshire&Humbr	1.15	0.38
East Midlands	1.31	0.11
West Midlands	REF	REF
East of England	1.38	0.05
London	1.16	0.38
South East	<b>1.55</b>	0.00
South West	<b>1.50</b>	0.01
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	1.49	0.18
<b>Use of car or van</b>		
Yes	<b>0.77</b>	0.01
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	0.67	0.14
Private pension	0.86	0.40
State pension	0.87	0.46
Benefits	0.85	0.42
Assets	1.19	0.42
Other	1.80	0.19
<b>Frequency of using public transport</b>		
A lot	<b>1.41</b>	0.01
Quite often	1.13	0.39
Sometimes	REF	REF
Rarely	<b>1.30</b>	0.02
Never	<b>1.37</b>	0.01
<b>Physical activity</b>		
Regular vigorous activity	1.35	0.05
Regular moderate activity	REF	REF
Some moderate activity	<b>1.49</b>	0.01
Some mild activity	<b>1.45</b>	0.01
No activity	<b>1.82</b>	0.00

Risk factors for exclusion on the social relationships dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Tenure</b>		
Owner	REF	REF
Buyer	0.98	0.88
Private renter/part-renter	<b>1.26</b>	0.03
Social renter/part-renter	1.24	0.29
Rent free	1.08	0.82
<b>Excluded on social relationships</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	0.96	0.78
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	<b>1.29</b>	0.02
<b>Excluded on basic services</b>		
No	REF	REF
Yes	1.10	0.45
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	<b>1.41</b>	0.00
<b>Excluded on financial products</b>		
No	REF	REF
Yes	1.09	0.48
<b>Excluded on material goods</b>		
No	REF	REF
Yes	<b>1.35</b>	0.01

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

Risk factors for exclusion on the cultural activities dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	0.84	0.16
70-79 years	0.98	0.88
80+ years	1.06	0.76
<b>Sex</b>		
Male	REF	REF
Female	<b>1.31</b>	0.00
<b>Ethnicity</b>		
White	REF	REF
Non-white	<b>1.55</b>	0.05
<b>Family type</b>		
Lives alone	0.95	0.73
Partner only	0.94	0.55
Children, no partner	1.10	0.58
Partner and children	REF	REF
Other	0.84	0.45
<b>No. of children</b>		
0	REF	REF
1	0.90	0.46
2	0.83	0.12
3	0.95	0.70
4 or more	1.04	0.77
<b>No. of siblings</b>		
0	REF	REF
1	1.03	0.76
2	1.01	0.95
3	1.12	0.38
4 or more	1.08	0.51
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	1.21	0.24
A level or equiv	1.11	0.59
O level or equiv	1.10	0.54
CSE or equiv	1.10	0.67
Other	1.10	0.60
No qualification	0.96	0.78
<b>Main activity</b>		
Retired	0.75	0.05
Employed	REF	REF
Self-employed	1.23	0.27
Unemployed	1.37	0.3
Sick or disabled	1.05	0.78
Look after home	0.94	0.66
Semi retired	0.82	0.68

<b>Risk factors for exclusion on the cultural activities dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Health</b>		
Excellent	1.09	0.50
Very good	0.90	0.28
Good	REF	REF
Fair	1.09	0.41
Poor	1.12	0.41
<b>Fallen in past two years</b>		
No	REF	REF
Yes	1.12	0.41
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	<b>1.47</b>	0.00
4+ symptoms (potential for mental health problems)	<b>1.64</b>	0.00
<b>Depression (CESD scale)</b>		
Depressed	<b>1.45</b>	0.00
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	<b>1.32</b>	0.00
No	REF	REF
<b>Equivalised total household income</b>		
Lowest quintile	1.30	0.08
Second quintile	<b>1.43</b>	0.01
Third quintile	<b>1.54</b>	0.00
Fourth quintile	<b>1.39</b>	0.01
Highest quintile	REF	REF
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	1.14	0.25
2nd quintile	0.98	0.84
3rd quintile	REF	REF
4th quintile	0.94	0.56
Most deprived	1.06	0.66
<b>Urban/rural</b>		
City	<b>0.74</b>	0.01
Town	0.93	0.61
Village	REF	REF
Hamlet	0.77	0.22
<b>Government Office Region</b>		
North East	0.92	0.64
North West	0.80	0.11
Yorkshire&Humbr	<b>0.68</b>	0.01
East Midlands	0.80	0.13
West Midlands	REF	REF
East of England	<b>0.92</b>	0.58
London	1.04	0.79
South East	0.97	0.79
South West	0.75	0.05

<b>Risk factors for exclusion on the cultural activities dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	1.01	0.97
<b>Use of car or van</b>		
Yes	<b>0.74</b>	0.00
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	1.41	0.07
Private pension	1.00	1.00
State pension	1.24	0.18
Benefits	<b>2.00</b>	0.00
Assets	0.81	0.37
Other	0.58	0.49
<b>Frequency of using public transport</b>		
A lot	1.08	0.56
Quite often	0.98	0.88
Sometimes	REF	REF
Rarely	1.09	0.43
Never	<b>1.24</b>	0.04
<b>Physical activity</b>		
Regular vigorous activity	0.87	0.21
Regular moderate activity	REF	REF
Some moderate activity	<b>0.69</b>	0.01
Some mild activity	<b>0.81</b>	0.02
No activity	0.82	0.15
<b>Tenure</b>		
Owner	REF	REF
Buyer	<b>1.21</b>	0.04
Private renter/part-renter	1.20	0.09
Social renter/part-renter	1.23	0.29
Rent free	1.20	0.57
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	0.96	0.79
<b>Excluded on cultural activities</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	1.03	0.85
<b>Excluded on basic services</b>		
No	REF	REF
Yes	<b>1.87</b>	0.00
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	<b>1.35</b>	0.02

Risk factors for exclusion on the cultural activities dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Excluded on financial products</b>		
No	REF	REF
Yes	0.88	0.41
<b>Excluded on material goods</b>		
No	REF	REF
Yes	0.72	0.09

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient.

Risk factors for exclusion on the civic activities dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	<b>1.75</b>	0.00
60-69 years	<b>1.39</b>	0.02
70-79 years	1.05	0.72
80+ years	REF	REF
<b>Sex</b>		
Male	REF	REF
Female	<b>1.24</b>	0.01
<b>Ethnicity</b>		
White	REF	REF
Non-white	<b>0.52</b>	0.02
<b>Family type</b>		
Lives alone	<b>1.38</b>	0.01
Partner only	1.12	0.29
Children, no partner	<b>1.69</b>	0.00
Partner and children	REF	REF
Other	1.22	0.33
<b>No. of children</b>		
0	REF	REF
1	1.15	0.31
2	1.02	0.87
3	1.26	0.08
4 or more	<b>1.43</b>	0.01
<b>No. of siblings</b>		
0	REF	REF
1	0.87	0.18
2	0.93	0.50
3	1.05	0.72
4 or more	0.94	0.61
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	<b>1.74</b>	0.01
A level or equiv	1.54	0.06
O level or equiv	<b>1.70</b>	0.01
CSE or equiv	<b>2.18</b>	0.00
Other	<b>2.12</b>	0.00
No qualification	<b>2.99</b>	0.00

<b>Risk factors for exclusion on the civic activities dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Main activity</b>		
Retired	0.79	0.11
Employed	REF	REF
Self-employed	1.00	1.00
Unemployed	<b>1.93</b>	0.03
Sick or disabled	0.85	0.36
Look after home	0.87	0.37
Semi retired	1.57	0.24
<b>Health</b>		
Excellent	0.94	0.63
Very good	0.88	0.19
Good	REF	REF
Fair	1.08	0.43
Poor	1.16	0.31
<b>Fallen in past two years</b>		
No	REF	REF
Yes	1.16	0.31
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	1.06	0.50
4+ symptoms (potential for mental health problems)	1.19	0.21
<b>Depression (CESD scale)</b>		
Depressed	<b>1.41</b>	0.00
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	0.91	0.28
No	REF	REF
<b>Equivalised total household income</b>		
Lowest quintile	1.03	0.80
Second quintile	1.03	0.80
Third quintile	REF	REF
Fourth quintile	0.87	0.24
Highest quintile	0.78	0.06
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	0.91	0.44
2nd quintile	1.06	0.60
3rd quintile	REF	REF
4th quintile	0.95	0.64
Most deprived	1.11	0.39
<b>Urban/rural</b>		
City	1.2	0.12
Town	REF	REF
Village	1.17	0.33
Hamlet	1.15	0.51

<b>Risk factors for exclusion on the civic activities dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Government Office Region</b>		
North East	0.93	0.66
North West	<b>0.75</b>	0.04
Yorkshire&Humbr	1.15	0.31
East Midlands	0.96	0.76
West Midlands	REF	REF
East of England	0.93	0.60
London	0.92	0.58
South East	1.01	0.95
South West	0.79	0.12
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	0.87	0.67
<b>Use of car or van</b>		
Yes	0.83	0.08
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	1.19	0.40
Private pension	<b>0.69</b>	0.02
State pension	0.83	0.24
Benefits	1.05	0.78
Assets	0.67	0.09
Other	0.79	0.69
<b>Frequency of using public transport</b>		
A lot	1.16	0.27
Quite often	0.86	0.31
Sometimes	REF	REF
Rarely	1.12	0.32
Never	<b>1.77</b>	0.00
<b>Physical activity</b>		
Regular vigorous activity	0.86	0.19
Regular moderate activity	0.87	0.31
Some moderate activity	REF	REF
Some mild activity	0.99	0.87
No activity	1.26	0.10
<b>Tenure</b>		
Owner	REF	REF
Buyer	0.96	0.70
Private renter/part-renter	1.16	0.16
Social renter/part-renter	<b>1.73</b>	0.00
Rent free	0.91	0.79
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	1.26	0.05
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	1.04	0.77



Risk factors for exclusion on the civic activities dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Excluded on civic activities</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Excluded on basic services</b>		
No	REF	REF
Yes	<b>1.53</b>	0.00
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	<b>1.39</b>	0.00
<b>Excluded on financial products</b>		
No	REF	REF
Yes	<b>1.50</b>	0.00
<b>Excluded on material goods</b>		
No	REF	REF
Yes	<b>1.39</b>	0.02

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

Risk factors for exclusion on the basic services dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	1.10	0.58
70-79 years	<b>1.54</b>	0.03
80+ years	<b>3.33</b>	0.00
<b>Sex</b>		
Male	REF	REF
Female	1.18	0.09
<b>Ethnicity</b>		
White	REF	REF
Non-white	1.65	0.06
<b>Family type</b>		
Lives alone	1.40	0.05
Partner only	0.85	0.28
Children, no partner	1.39	0.16
Partner and children	REF	REF
Other	1.12	0.68
<b>No. of children</b>		
0	REF	REF
1	0.98	0.90
2	0.74	0.04
3	0.76	0.07
4 or more	0.76	0.09

Risk factors for exclusion on the basic services dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>No. of siblings</b>		
0	REF	REF
1	0.91	0.40
2	0.99	0.96
3	0.99	0.94
<b>4 or more</b>	<b>1.01</b>	<b>0.96</b>
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	0.98	0.92
A level or equiv	1.34	0.26
O level or equiv	0.98	0.93
CSE or equiv	1.03	0.91
Other	0.96	0.86
No qualification	1.13	0.54
<b>Main activity</b>		
Retired	1.37	0.16
Employed	REF	REF
Self-employed	0.91	0.81
Unemployed	1.24	0.65
Sick or disabled	<b>2.75</b>	0.00
Look after home	1.50	0.09
<b>Semi retired</b>		
<b>Health</b>		
Excellent	0.75	0.16
Very good	1.04	0.77
Good	REF	REF
Fair	<b>1.54</b>	0.00
Poor	<b>2.15</b>	0.00
<b>Fall in past 2 yrs</b>		
No	1.17	0.14
Yes	REF	REF
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	1.17	0.14
4+ symptoms (potential for mental health problems)	<b>3.54</b>	0.00
<b>Depression (CESD scale)</b>		
Depressed	<b>1.34</b>	0.01
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	1.14	0.23
No	REF	REF
<b>Equivalent total household income</b>		
Lowest quintile	<b>0.70</b>	0.01
Second quintile	0.88	0.31
Third quintile	REF	REF
Fourth quintile	0.89	0.43
Highest quintile	0.91	0.62

Risk factors for exclusion on the basic services dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	0.98	0.87
2nd quintile	0.85	0.22
3rd quintile	REF	REF
4th quintile	0.93	0.62
Most deprived	0.80	0.13
<b>Urban/rural</b>		
City	REF	REF
Town	1.14	0.35
Village	<b>1.48</b>	0.02
Hamlet	1.46	0.10
<b>Government Office Region</b>		
North East	1.13	0.55
North West	0.83	0.27
Yorkshire&Humbr	1.11	0.55
East Midlands	<b>1.53</b>	0.01
West Midlands	REF	REF
East of England	0.72	0.08
London	0.83	0.34
South East	0.89	0.48
South West	1.11	0.55
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	1.27	0.45
<b>Use of car or van</b>		
Yes	<b>0.44</b>	0.00
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	0.87	0.70
Private pension	0.80	0.32
State pension	1.04	0.86
Benefits	1.20	0.40
Assets	0.98	0.94
Other	1.36	0.67
<b>Frequency of using public transport</b>		
A lot	0.83	0.28
Quite often	0.84	0.34
Sometimes	REF	REF
Rarely	1.10	0.51
Never	<b>1.91</b>	0.00
<b>Physical activity</b>		
Regular vigorous activity	1.24	0.21
Regular moderate activity	0.96	0.84
Some moderate activity	REF	REF
Some mild activity	<b>1.48</b>	0.00
No activity	<b>2.68</b>	0.00

Risk factors for exclusion on the basic services dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Tenure</b>		
Owner	REF	REF
Buyer	1.09	0.53
Private renter/part-renter	1.16	0.22
Social renter/part-renter	1.06	0.82
Rent free	0.52	0.17
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	1.08	0.54
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	<b>1.88</b>	0.00
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	<b>1.46</b>	0.00
<b>Excluded on basic services</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	1.08	0.57
<b>Excluded on financial products</b>		
No	REF	REF
Yes	1.28	0.05
<b>Excluded on material goods</b>		
No	REF	REF
Yes	1.08	0.56

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

Risk factors for exclusion on the neighbourhood exclusion dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	1.16	0.17
70-79 years	1.11	0.45
80+ years	0.85	0.34
<b>Sex</b>		
Male	REF	REF
Female	0.98	0.75
<b>Ethnicity</b>		
White	REF	REF
Non-white	0.76	0.20

Risk factors for exclusion on the neighbourhood exclusion dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>No. of children</b>		
0	REF	REF
1	0.92	0.53
2	0.89	0.31
3	0.93	0.54
4 or more	0.94	0.61
<b>No. of siblings</b>		
0	REF	REF
1	1.14	0.17
2	1.15	0.18
3	1.20	0.13
4 or more	<b>1.25</b>	0.04
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	1.29	0.13
A level or equiv	1.19	0.38
O level or equiv	1.20	0.24
CSE or equiv	<b>1.58</b>	0.02
Other	1.28	0.17
No qualification	<b>1.51</b>	0.01
<b>Main activity</b>		
Retired	0.80	0.12
Employed	REF	REF
Self-employed	0.75	0.17
Unemployed	1.42	0.19
Sick or disabled	0.71	0.06
Look after home	0.78	0.12
Semi retired	1.07	0.87
<b>Health</b>		
Excellent	0.80	0.07
Very good	0.95	0.60
Good	REF	REF
Fair	1.03	0.78
Poor	0.85	0.25
<b>Fallen in past two years</b>		
No	REF	REF
Yes	0.85	0.25
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	<b>1.24</b>	0.01
4+ symptoms (potential for mental health problems)	<b>2.23</b>	0.00
<b>Depression (CESD scale)</b>		
Depressed	<b>1.38</b>	0.00
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	1.00	0.96
No	REF	REF

<b>Risk factors for exclusion on the neighbourhood exclusion dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Equivalised total household income</b>		
Lowest quintile	1.13	0.23
Second quintile	1.00	0.98
Third quintile	REF	REF
Fourth quintile	0.75	0.01
Highest quintile	0.78	0.05
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	REF	REF
2nd quintile	1.01	0.92
3rd quintile	1.19	0.13
4th quintile	<b>1.48</b>	0.00
Most deprived	<b>1.82</b>	0.00
<b>Urban/rural</b>		
City	REF	REF
Town	0.95	0.66
Village	<b>0.71</b>	0.01
Hamlet	0.81	0.31
<b>Government Office Region</b>		
North East	0.75	0.08
North West	0.93	0.59
Yorkshire&Humbr	1.09	0.51
East Midlands	0.87	0.36
West Midlands	REF	REF
East of England	1.08	0.60
London	<b>1.37</b>	0.03
South East	1.14	0.31
South West	1.02	0.87
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	1.35	0.25
<b>Use of car or van</b>		
Yes	0.91	0.33
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	0.92	0.70
Private pension	1.11	0.51
State pension	1.01	0.94
Benefits	1.36	0.05
Assets	1.09	0.67
Other	1.01	0.99
<b>Frequency of using public transport</b>		
A lot	1.07	0.54
Quite often	0.99	0.91
Sometimes	REF	REF
Rarely	1.04	0.73
Never	<b>1.22</b>	0.04

Risk factors for exclusion on the neighbourhood exclusion dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Physical activity</b>		
Regular vigorous activity	0.95	0.67
Regular moderate activity	0.98	0.88
Some moderate activity	REF	REF
Some mild activity	<b>1.19</b>	0.04
No activity	1.07	0.61
<b>Tenure</b>		
Owner	REF	REF
Buyer	0.96	0.68
Private renter/part-renter	1.38	0.00
Social renter/part-renter	1.23	0.24
Rent free	1.34	0.37
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	<b>1.42</b>	0.00
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	<b>1.36</b>	0.01
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	<b>1.37</b>	0.00
<b>Excluded on basic services</b>		
No	REF	REF
Yes	1.08	0.53
<b>Neighbourhood exclusion</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Excluded on financial products</b>		
No	REF	REF
Yes	0.95	0.65
<b>Excluded on material goods</b>		
No	REF	REF
Yes	1.06	0.67

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

Risk factors for exclusion on the financial products dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	<b>0.73</b>	0.03
70-79 years	0.71	0.05
80+ years	0.85	0.42
<b>Sex</b>		
Male	REF	REF
Female	<b>1.39</b>	0.00
<b>Ethnicity</b>		
White	REF	REF
Non-white	<b>2.54</b>	0.00
<b>Family type</b>		
Lives alone	1.34	0.07
Partner only	1.19	0.24
Children, no partner	<b>1.75</b>	0.00
Partner and children	REF	REF
Other	1.44	0.14
<b>No. of children</b>		
0	REF	REF
1	1.20	0.28
2	1.31	0.07
3	<b>1.37</b>	0.04
4 or more	<b>1.63</b>	0.00
<b>No. of siblings</b>		
0	0.88	0.33
1	<b>0.73</b>	0.01
2	REF	REF
3	1.13	0.40
4 or more	1.04	0.78
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	1.02	0.93
A level or equiv	1.07	0.82
O level or equiv	1.35	0.23
CSE or equiv	1.73	0.06
Other	1.65	0.05
No qualification	<b>1.99</b>	0.00
<b>Main activity</b>		
Retired	1.16	0.45
Employed	REF	REF
Self-employed	1.63	0.10
Unemployed	1.57	0.15
Sick or disabled	1.29	0.22
Look after home	<b>1.56</b>	0.03
Semi retired	1.26	0.76



<b>Risk factors for exclusion on the financial products dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Health</b>		
Excellent	0.91	0.60
Very good	1.00	0.97
Good	REF	REF
Fair	<b>1.27</b>	0.03
Poor	1.38	0.05
<b>Fallen in past two years</b>		
No	REF	REF
Yes	1.38	0.05
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	1.23	0.05
1-3 symptoms (few signs of mental health problems)	REF	REF
4+ symptoms (potential for mental health problems)	<b>1.41</b>	0.02
<b>Depression (CESD scale)</b>		
Depressed	<b>1.25</b>	0.03
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	0.95	0.64
No	REF	REF
<b>Equivalised total household income</b>		
Lowest quintile	<b>3.76</b>	0.00
Second quintile	<b>2.86</b>	0.00
Third quintile	<b>1.78</b>	0.01
Fourth quintile	1.49	0.07
Highest quintile	REF	REF
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	REF	REF
2nd quintile	1.03	0.84
3rd quintile	1.10	0.55
4th quintile	1.06	0.73
Most deprived	1.29	0.13
<b>Urban/rural</b>		
City	REF	REF
Town	0.82	0.17
Village	0.85	0.35
Hamlet	1.04	0.89
<b>Government Office Region</b>		
North East	0.72	0.11
North West	0.99	0.96
Yorkshire&Humbr	0.88	0.45
East Midlands	0.96	0.83
West Midlands	REF	REF
East of England	0.86	0.39
London	1.19	0.31
South East	0.62	0.01
South West	0.78	0.18

<b>Risk factors for exclusion on the financial products dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	<b>2.05</b>	0.01
<b>Use of car or van</b>		
Yes	0.87	0.21
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	1.78	0.05
Private pension	0.86	0.54
State pension	1.39	0.13
Benefits	<b>3.20</b>	0.00
Assets	0.75	0.45
Other	2.46	0.10
<b>Frequency of using public transport</b>		
A lot	0.86	0.28
Quite often	0.76	0.06
Sometimes	0.97	0.79
Rarely	<b>0.69</b>	0.00
Never	REF	REF
<b>Physical activity</b>		
Regular vigorous activity	1.20	0.22
Regular moderate activity	1.05	0.77
Some moderate activity	REF	REF
Some mild activity	1.10	0.38
No activity	<b>1.42</b>	0.03
<b>Tenure</b>		
Owner	REF	REF
Buyer	1.00	0.98
Private renter/part-renter	<b>2.77</b>	0.00
Social renter/part-renter	<b>2.13</b>	0.00
Rent free	0.66	0.42
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	1.10	0.45
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	0.92	0.60
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	<b>1.53</b>	0.00
<b>Excluded on basic services</b>		
No	REF	REF
Yes	1.20	0.16
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	0.95	0.64

Risk factors for exclusion on the financial products dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Excluded on financial products</b>		
No	N/A	N/A
Yes	N/A	N/A
<b>Excluded on material goods</b>		
No	REF	REF
Yes	1.76	0.00

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

Risk factors for exclusion on the material goods dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Age group</b>		
50-59 years	REF	REF
60-69 years	1.10	0.53
70-79 years	<b>2.11</b>	0.00
80+ years	<b>4.08</b>	0.00
<b>Sex</b>		
Male	REF	REF
Female	<b>0.74</b>	0.00
<b>Ethnicity</b>		
White	REF	REF
Non-white	0.92	0.76
<b>Family type</b>		
Lives alone	<b>4.89</b>	0.00
Partner only	<b>2.22</b>	0.00
Children, no partner	<b>2.34</b>	0.00
Partner and children	REF	REF
Other	<b>2.28</b>	0.01
<b>No. of children</b>		
0	REF	REF
1	<b>0.46</b>	0.00
2	<b>0.34</b>	0.00
3	<b>0.27</b>	0.00
4 or more	<b>0.24</b>	0.00
<b>No. of siblings</b>		
0	REF	REF
1	0.97	0.75
2	0.82	0.11
3	0.91	0.56
4 or more	0.87	0.32

Risk factors for exclusion on the material goods dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Education</b>		
Degree or equiv	REF	REF
Higher ed or equiv	<b>0.51</b>	0.00
A level or equiv	1.09	0.67
O level or equiv	0.82	0.28
CSE or equiv	0.68	0.09
Other	0.74	0.15
No qualification	<b>0.71</b>	0.04
<b>Main activity</b>		
Retired	1.06	0.82
Employed	REF	REF
Self-employed	1.40	0.29
Unemployed	1.97	0.07
Sick or disabled	1.16	0.62
Look after home	1.29	0.34
Semi retired	1.25	0.72
<b>Health</b>		
Excellent	0.80	0.17
Very good	0.97	0.75
Good	REF	REF
Fair	0.85	0.18
Poor	0.84	0.33
<b>Fallen in past two years</b>		
No	REF	REF
Yes	0.84	0.33
<b>Psychosocial well being (GHQ12)</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	0.97	0.74
4+ symptoms (potential for mental health problems)	1.13	0.45
<b>Depression (CESD scale)</b>		
Depressed	0.93	0.49
Not depressed	REF	REF
<b>Care for sick or disabled adult, including partner</b>		
Yes	0.97	0.77
No	REF	REF
<b>Equivalised total household income</b>		
Lowest quintile	<b>1.55</b>	0.00
Second quintile	1.05	0.73
Third quintile	REF	REF
Fourth quintile	0.97	0.86
Highest quintile	0.83	0.31
<b>Index of Multiple Deprivation 2004</b>		
Least deprived	REF	REF
2nd quintile	0.98	0.91
3rd quintile	0.90	0.44
4th quintile	1.20	0.20
Most deprived	<b>1.40</b>	0.04

<b>Risk factors for exclusion on the material goods dimension, logistic regression analysis</b>		
<b>Risk factors for exclusion</b>	<b>Odds ratio</b>	<b>Sig</b>
<b>Urban/rural</b>		
City	REF	REF
Town	0.79	0.11
Village	1.08	0.65
Hamlet	1.37	0.13
<b>Government Office Region</b>		
North East	<b>0.59</b>	0.02
North West	1.03	0.87
Yorkshire&Humbr	1.17	0.38
East Midlands	0.84	0.37
West Midlands	REF	REF
East of England	<b>1.21</b>	0.27
London	<b>1.45</b>	0.04
South East	1.00	0.99
South West	1.04	0.82
<b>Has telephone (landline or mobile)</b>		
Yes	REF	REF
No	<b>7.43</b>	0.00
<b>Use of car or van</b>		
Yes	<b>0.61</b>	0.00
No	REF	REF
<b>Main source of income</b>		
Employment	REF	REF
Self-employment	0.83	0.60
Private pension	0.71	0.16
State pension	1.24	0.37
Benefits	0.96	0.88
Assets	1.09	0.76
Other	1.30	0.69
<b>Frequency of using public transport</b>		
A lot	0.87	0.33
Quite often	0.98	0.89
Sometimes	0.93	0.57
Rarely	1.04	0.74
Never	REF	REF
<b>Physical activity</b>		
Regular vigorous activity	0.95	0.73
Regular moderate activity	0.93	0.64
Some moderate activity	REF	REF
Some mild activity	1.04	0.67
No activity	1.22	0.20
<b>Tenure</b>		
Owner	REF	REF
Buyer	<b>0.69</b>	0.02
Private renter/part-renter	<b>1.53</b>	0.00
Social renter/part-renter	<b>2.62</b>	0.00
Rent free	1.19	0.62

Risk factors for exclusion on the material goods dimension, logistic regression analysis		
Risk factors for exclusion	Odds ratio	Sig
<b>Excluded on social relationships</b>		
No	REF	REF
Yes	<b>1.40</b>	0.01
<b>Excluded on cultural activities</b>		
No	REF	REF
Yes	0.74	0.14
<b>Excluded on civic activities</b>		
No	REF	REF
Yes	<b>1.34</b>	0.04
<b>Excluded on basic services</b>		
No	REF	REF
Yes	1.07	0.64
<b>Neighbourhood exclusion</b>		
No	REF	REF
Yes	1.05	0.70
<b>Excluded on financial products</b>		
No	REF	REF
Yes	<b>1.77</b>	0.00
<b>Excluded on material goods</b>		
No	N/A	N/A
Yes	N/A	N/A

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient. For example, taking the social relationships indicator, the odds of 80+ year olds experiencing exclusion was 1.71 times higher (also statistically significant) than for 50-59 year olds (the reference category), holding all other socio-demographic and economic characteristics in the model constant.

# APPENDIX C

## Exploring Risk Factors for Multiple Exclusion

The tables below present a step-wise logistic regression analysis of socio-demographic and economic risk factors associated with the experience of multiple exclusion, defined as exclusion on three or more of the seven dimensions of exclusion.

The estimates reported in these tables are the ratio of the odds (the 'odds ratio') of the characteristic variable category to the reference category for that variable. The definition of odds is similar but significantly different to that of probability. This is best explained in the form of an example. If 200 individuals out of a population of 1000 experienced exclusion, the probability of being excluded is 0.2. The odds in favour of being excluded relative to not being excluded are calculated as the ratio of these two mutually exclusive events. The odds in favour of being excluded relative to not being excluded, is therefore  $0.2/0.8=0.25$ .

For example, if the outcome variable is 'experiences exclusion'/'experiences no exclusion', where 'experiences exclusion' is deemed our 'success' event, the ratio of the expected number of those who 'experience exclusion' to the expected number of those who 'experience no exclusion' is of interest. As a consequence, odds ratios higher (lower) than 1 imply that the characteristic was associated with an increased (decreased) probability of experiencing exclusion.

The magnitude of the Wald statistic is used to determine the relative strength of each explanatory variable in the analysis. The Wald statistic is used to test the significance of explanatory variables in a logistic regression model. The Wald statistic is a measure of the difference in the outcome variable between the levels of a categorical variable. This is equivalent to the magnitude from zero of the parameter estimates in the model. If, for a particular categorical variable, the Wald statistic is significantly greater than zero, then we would conclude that the parameters associated with these variables are not zero, i.e. that the value of the outcome variable is significantly different across the categories. In which case, the categorical variable would be retained in the model. If the Wald statistic is not significantly greater than zero, then the categorical variable is omitted from the model.

Risk factors for multiple exclusion (exclusion on three or more dimensions), logistic regression analysis		
Risk factors for exclusion [Wald statistic]	Odds ratio	Sig
<b>Age group [8.72]</b>		
50-59 years	REF	REF
60-69 years	0.75	0.10
70-79 years	0.90	0.61
80+ years	<b>1.67</b>	0.03
<b>Sex [0.00]</b>		
Male	REF	REF
Female	1.00	0.99
<b>Ethnicity [0.68]</b>		
White	REF	REF
Non-white	1.26	0.41
<b>Household type [7.31]</b>		
Lives alone	<b>2.19</b>	0.00
Lives with partner only	1.24	0.29
Lives with children, not partner	<b>2.01</b>	0.01
Lives with partner and children	REF	REF
Other	<b>2.13</b>	0.01
<b>No. of children [16.44]</b>		
0	REF	REF
1	<b>0.41</b>	0.00
2	<b>0.34</b>	0.00
3	<b>0.35</b>	0.00
4 or more	<b>0.41</b>	0.00
<b>Education [1.62]</b>		
Degree or equiv	REF	REF
Higher ed or equiv	0.77	0.42
A level or equiv	0.97	0.92
O level or equiv	0.95	0.86
CSE or equiv	1.28	0.46
Other	1.33	0.33
No qualification	1.34	0.25
<b>Main activity [2.46]</b>		
Retired	<b>0.59</b>	0.02
Employed	REF	REF
Self-employed	0.44	0.06
Unemployed	1.16	0.69
Sick or disabled	0.71	0.16
Looking after home	0.80	0.38
Semi-retired	2.48	0.17
<b>Health [20.70]</b>		
Excellent	0.79	0.33
Very good	0.83	0.24
Good	REF	REF
Fair	<b>1.32</b>	0.04
Poor	1.37	0.07
<b>Psychosocial well being (GHQ12) [31.72]</b>		
No symptoms	REF	REF
1-3 symptoms (few signs of mental health problems)	<b>1.66</b>	0.00
4+ symptoms (potential for mental health problems)	<b>3.41</b>	0.00



Risk factors for multiple exclusion (exclusion on three or more dimensions), logistic regression analysis		
Risk factors for exclusion [Wald statistic]	Odds ratio	Sig
<b>Depression (CESD scale) [21.75]</b>		
Depressed	<b>1.75</b>	0.00
Not depressed	REF	REF
<b>Equivalised total household income [3.06]</b>		
Lowest quintile	<b>2.31</b>	0.00
Second quintile	<b>1.77</b>	0.03
Third quintile	<b>1.71</b>	0.04
Fourth quintile	1.51	0.11
Highest quintile	REF	REF
<b>Urban/rural classification [3.2]</b>		
City	<b>1.60</b>	0.01
Town	REF	REF
Village	1.07	0.79
Hamlet	1.19	0.64
<b>Has telephone (landline or mobile) [6.73]</b>		
Yes	REF	REF
No	<b>2.03</b>	0.01
<b>Has use of car or van [29.50]</b>		
Yes	<b>0.50</b>	0.00
No	REF	REF
<b>Main source of income [3.97]</b>		
Employment	REF	REF
Self-employment	1.40	0.48
Private pension	1.53	0.09
State pension	<b>1.71</b>	0.03
Benefits	<b>2.58</b>	0.00
Assets	0.71	0.43
Other	3.41	0.07
<b>Frequency of use of public transport [8.96]</b>		
A lot	1.25	0.20
Quite often	0.70	0.10
Sometimes	REF	REF
Rarely	1.20	0.28
Never	<b>1.94</b>	0.00
<b>Physical activity [2.84]</b>		
Regular vigorous activity	1.32	0.14
Regular moderate activity	0.83	0.47
Some moderate activity	REF	REF
Some mild activity	1.15	0.30
No activity	<b>1.62</b>	0.01
<b>Tenure [17.37]</b>		
Owner	REF	REF
Buyer	<b>0.68</b>	0.04
Private renter/part-renter	<b>2.07</b>	0.00
Social renter/part-renter	<b>2.49</b>	0.00
Rent free	0.22	0.06

Notes: Odds ratios higher (lower) than 1 imply that the socio-demographic and economic characteristic is associated with an increased (decreased) odds of experiencing the event (exclusion) compared to the reference category (REF). Bold text indicates a statistically significant ( $p < 0.05$ ) coefficient.