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The social, psychological and behavioural consequences of ageism -
implications for research and policy

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Thesis submitted in partial fulfilment of the requirement for the Degree of Doctor of Philosophy in the
Faculty of Social Sciences at the University of Kent, Canterbury, May, 2012

Memorandum

The research for this thesis was conducted at the School of Psychology, University of Kent, while the author was a full-time student receiving funding from the ESRC.

The theoretical and empirical work presented within the thesis is the independent work of the author. Intellectual debts are acknowledged within the text and referenced. Studies 1, 2, 5, 6 and 11 present secondary data analyses on existing data sets that were either made available by Age UK for the use in this thesis or are publically available, such as the European Social Survey (ESS) data. Studies 3, 4, 7, 8 and 9 present experimental work, and Study 10 is an observational study. Studies that present secondary data analysis on existing data sets, i.e. data that was not collected by the author, still present original analyses and test theoretical ideas compiled by the author. Experimental work presented in Studies 3, 4, 7, 8 and 9 and the observational study test the author's own theoretical and empirical developments and were conducted with limited practical and technical assistance from others. The author has not been awarded a degree by this, or any other university for the work included in the thesis.

Acknowledgments

For family, friends and old people.

This thesis is the result of a collaborative studentship between the Economic Social Research Council (ESRC) and Age UK. Age UK is a national voluntary organisation that aims to improve all aspects of later life. The thesis contributes to this vision by providing a solid evidence base on a particular aspect of ageing that is damaging to older people, namely, ageism. I would like to thank both funders for making the thesis possible. In particular I would like to thank Age UK for their support in the research projects, but also for contributing to my own personal development, furthering my understanding of policy, and the applied aspects of research. I would particularly like to thank Su Ray for help coordinating some of the research, and for creating opportunities to participate in and around Age UK events.

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Abstract

This thesis explores the social, psychological and behavioral consequences of ageism. Ageism is the most experienced form of prejudice in the UK, however, compared to other forms of prejudice, such as racism and sexism, it is relatively under researched. The studies presented in this thesis use a range of research methods to extend and expand upon our understanding of ageism. It does this in three ways. First, it provides an overview of the psychological components of ageism by exploring people's attitudes to age and older people. Second, it provides an insight into the prevalence of ageism in society and individual's experiences of age discrimination. Lastly, it explores the consequences of attitudes to age and experiences of ageism. Experimental research investigated the impact of age stereotypes on older people in three very relevant domains; cognitive ability, physical functioning and in evaluations of fear of crime. The research revealed that negative age stereotypes that portray older people as incompetent have a detrimental impact on older adult's cognitive and physical ability. Multilevel modeling of the 2008-9 European Social Survey showed that experiences of ageism have a detrimental impact on well-being. Real world observational data provides a demonstration of how people aged over 60 are particularly vulnerable to age discrimination. The research also highlights the importance of positive attitudes to age; one study showed how older adult's cognitive performance can be enhanced, another study demonstrated that older people are able to maintain well-being in later life in countries that perceive people over 70 be higher status. The findings of the empirical studies have important theoretical, practical and policy applications which are discussed. The practical and policy implications are related specifically to Age UK's vision for improving later life. They suggest that tackling ageism and strategies for successful ageing should be applied at the psychological and societal level.

Chapter One.**General Introduction****Abstract**

This chapter introduces the topics explored in this thesis and provides the political and societal context for research into ageism. It provides an introduction to ageism and age by exploring the importance of age and the meaning of age to individuals and society. It describes how 'age' is socially constructed and interconnected with psychological, social and cultural processes, which may lead people to be vulnerable to age discrimination. It provides a background to Age UK, the UK's largest charity representing the needs of older adults and summarises the challenges ageing populations present to the UK. Age UK's Agenda for Later Life is introduced which provides the policy background for the issues explored and discussed in this thesis; these are summarised in relation to two core themes, age discrimination and fear of crime. The aims of the thesis and the organisation of thesis are laid out.

Ageism is the most prevalent form of discrimination, but is it an inevitable part of ageing? A person's age refers to their trajectory through life or the duration of life. However, age can have a meaning beyond the unavoidable biological process of ageing because it is interconnected with psychological, social and cultural processes. This thesis looks at how these aspects of age may lead people to be vulnerable to age discrimination. It explores the social, psychological and behavioural consequences of ageism and summarises these in relation to policy and future research.

Psychological processes refer to those that help an individual make sense of themselves, others and the social world they live. As the individual moves through life, information, events and experiences are processed and culminate in shaping development. Psychological processes are embedded in social relationships and these relationships are constrained or supported by culture or the setting of a society. For instance, social relationships with relevant others (e.g. family and friends) are intertwined with institutional settings within a society and the immediate environment, such as schools in the educational system or the workplace. These institutions are often structured according to age and may lend themselves to age discrimination.

The interaction between these elements as each individual ages in place and time, means that the meaning of age and our expectations about old age are likely to vary between individuals as well as across historical contexts and cultural backgrounds. The life course may be influenced by opportunities and constraints of the State and the markets that interact with it (e.g. Mayer & Muller, 1986; Mayer & Schoepflin, 1989). For example, legal ages reflect the social consensus of what is or what is not acceptable behaviour at a given age. Therefore, considering legal age limits can provide some insight into how societies socially construct meaning around age and expectations surrounding the behaviour of people of a certain age.

Regulations that govern markets, such as the age that defines entry and exit into the labour market, as well as those that define the progression of careers, also play a crucial role in defining life stages. For instance, retirement age or the entitlement to social security or pension are often used as criteria defining transition into 'old age', but again these can differ between countries.

As Hagestad and Neugarten (1985, p35) summarise, every society is characterised by an age system that segments the life course into recognised stages of life, which can take several forms. “The periods of life are defined; people are channelled into positions and roles according to age criteria; and privileges, rights and obligations are based on culturally shared age definitions. Finally, populations are divided into age groups whose interactions are socially structured and regulated” (see also Settersten & Mayer, 1997). This demonstrates the importance of age to individuals and society. However, it remains unclear what criteria determine the boundaries that define age groups, for instance at which age a person is considered to be ‘old’? Indeed, what are the consequences of having ‘age criteria’?

Definitions of age from the Oxford dictionary refer to age as ‘the state of being old’, ‘to appear old or older’, ‘behave in a manner appropriate to someone of one’s age and not someone younger’ and ‘old enough to be able or expected to do something’. Although useful definitions they are somewhat ambiguous. What does it mean to appear older? What does age-appropriate behaviour consist of? How do we know when someone has reached a state of being old? This thesis explores some of these issues by investigating how old age is represented and how the representation of age contributes to ageism in society. Generally speaking, associations with old age are more negative than positive (Nelson, 2002). The implication of this, in relation to prevalence of ageism is explored and discussed. Ageism against older people is even more concerning in light of ageing populations and increasing longevity. Children born in 2011 can expect to live to on average to 92 years, but what are the implications of increasing longevity for expectations surrounding age, ageing and older people?

This year already provides some exceptional, myth busting examples of older people. In the UK, 2012 will probably be best known as the year of the diamond jubilee, the London Olympics and the 50th anniversary of the Rolling Stones. At the age of 85, 2012 sees Her Majesty the Queen, head of state of the UK and 15 other Commonwealth nations begin her 61st year on the throne. At the age of 71 a Japanese man is set to be the oldest Olympian in this year’s games after qualifying a place in Japan’s equestrian team and the Rolling Stones, with an average age of 67, celebrate 50 years as a

rock band and are rumoured to return to the stage, five years after their comeback tour to mark the occasion. These are just three examples of people that, considering their age, may be changing our perceptions of older people, old age and our expectations surrounding what is achievable in later life. But what makes these examples exceptional? Why is it hard to imagine a 65 year old rock star, imagine continuing to work until 85 or be a competing athlete at 71? By exploring people's attitudes to age, this thesis attempts to answer some of these questions.

Issues surrounding population ageing have been gaining attention and momentum in the UK and internationally. In the UK, 2012 sees part of the 2010 Equality Act that outlaws age discrimination come into force. It is also the European Year of Active Ageing and Solidarity between Generations. It is the tenth anniversary and review of the Madrid International Plan of Ageing, which aims to give governments standards and guidance in setting up policies that support the needs of older people. The World Health Organisation made 'Ageing and Health' the theme of World Health Day this year, and the United Nations (UN) have established the 'open-ended working group on Ageing', a group tasked with looking at how the rights of older people could be strengthened. At the heart of the issues surrounding later life in the UK and internationally through their sister organisation Help Age International is Age UK.

1.1 Age UK and the Challenges of Ageing

"Age UK has a vision of a world in which older people flourish. We aim to improve later life for everyone through our information and advice, campaigns, products, training and research."

- Age UK

This thesis is the result of a collaborative studentship between ESRC and Age UK. Age UK is the combined force of Age Concern and Help the Aged. These two charities merged in 2009 and began trading under the name Age UK in 2010. The Age UK Group is a national voluntary organisation; a federation made up of about 330 local Age UKs and Age Concerns. The local Age UKs and Age Concerns provide vital services to older people within the community, they are independently registered charities connected to the central federation and work towards the same

fundamental aim to improve later life. Together, Age UK represents more than 14 million people in the UK who have reached later life, but they also aim to improve aspects of ageing from one generation to the next.

Age UK celebrates ageing and aims to improve opportunities and quality of life by fighting and challenging disadvantage and unfairness. They do this through campaigning, public policy development, research, information provision, advocacy, training and grant-making. They work at regional, national, European and international levels. This studentship directly contributes to the research aspect of Age UK's vision and aims to provide a further understanding of ageism; the processes that contribute to ageism and the experiences and consequences of ageism for individuals and society. The topics explored in this thesis are especially timely given increasing longevity and the increasing proportion of older people as the baby boomer generation reaches retirement age.

1.1.1 Living Longer

The population is ageing in the UK and globally. In the UK, life expectancy, the average number of years a person is expected to live, has steadily increased between 1985 and 2010 and is projected to continue to increase after 2010, to 2035 (Office for National Statistics (ONS), 2011). The latest projections for cohort life expectancy, suggest that males born in 2011 could expect to live to 90.3 years and females 93.8 years on average. The median age of the population is also projected to increase, rising from 39.7 in 2010 to 42.2 years by 2035. Alongside population ageing, it is the oldest age groups that are projected to expand the most. The UK population aged 85 and over is set to double in the next 25 years, from 1.4 million in 2010 to 3.5 million by 2035. The number of people aged 90 and above is set to triple by 2035, while the number of centenarians is expected to undergo an eight fold increase from 13,000 in 2010 to 110,000 in 2035 (ONS, 2011). Globally the population aged 60 and over is expected to reach nearly 2 billion by 2050, by then 32 countries will have more than 10 million people over 60 (United Nations, 2010).

There are a number of explanations for increasing life expectancy; not only does it represent considerable advances in medicine, technology and treatment of disease, but also life style choices,

such as nutrition, exercise and not smoking, these are also key predictors of longevity (Poulain, 2011). There has been a considerable interest in researching these individual factors that predict longevity and health in later life from a biomedical perspective (see Kirkwood, 1999; Finch & Kirkwood, 2000 for review). However, there remains considerable debate about the practical, economic and policy implications of population ageing (Serra, Watson, Sinclair & Kneale, 2011), such as who is responsible for providing for ageing populations in terms of health and social care, housing and pension provision. In the UK, Age UK is at the heart of this debate, they campaign to improve and protect policies that serve the needs of older people. One key document that summaries Age UK's political aspirations is the Agenda for Later Life.

1.1.2 The Agenda for Later Life 2012

Every year, Age UK reflects on the impact of public policy on later life in their Agenda for Later Life. This document examines the policy context of ageing in the UK; it outlines key issues facing central and local government in preparing for an ageing society, and examines these in relation to the issues that matter to people in later life. It identifies gaps in policy and highlights areas for change to reflect the needs of individuals and communities. The Agenda for Later Life 2012 identified three key areas that represent significant challenges of an ageing population for Britain. These are the deficit reduction, the economic cost of ageing and public service reform.

Deficit reduction. Since The Coalition Government came to power a number of austerity measures have been proposed and implemented in order to ensure economic recovery. Older people are not immune to these austerity measures. They have been affected by rises in the cost of living, low interest rates and as the largest users of public services, older people are at considerable risk of losing vital support and support services through public service reform. For instance, older people may be seriously affected by efficiency targets for the National Health Service (NHS) to save £20 billion. This has put the NHS under serious pressure with cuts often falling in areas upon which older people rely.

The economic cost of ageing. The economic challenge of ageing was recently highlighted in 2011, when the Office of Budget Responsibility's (OBRs) estimated the cost of the population for the UK. The OBR calculated public spending to rise from 36.3% to 41.7% of the UK's Gross Domestic Product (GDP) between 2015 and 2060, assuming no changes in policy. While the economic costs of population ageing are debated, relatively little attention is given to the impact of negative headlines and rhetoric associated with ageing populations as costly and problematic, and how they reinforce negative attitudes to age and older people. Even less attention is given to the study of attitudes to age, ageing and older people from a social psychological perspective. One reason for this is the existence of ageist attitudes regarding older people, even within the scientific community, meaning that issues surrounding older people appear to be neglected and under researched (Nelson, 2002).

Public service reform. The Coalition Government has taken a number of steps to roll back state intervention in public services and introduce an agenda of individual choice and personal control. Three policy initiatives have allowed this move from a 'one size fits all' approach to health care to a more personalised approach; these are the Localism Act 2011, the Open Public Services White Paper and the personalisation agenda. The Localism Act devolves power from central government to local authorities. The idea is to give communities and local authorities more power and control over the services they run. However, this Act is not without risks as even local authorities are plagued by austerity measures.

The aim of the Open Public Services White Paper is to open up the public services to the public, voluntary and private sectors, while the personalisation agenda is putting more emphasis on expanding concepts such as personal budgets, which are keen to put older people at the heart of managing their care arrangements. Age UK note that these moves offer both risks and opportunities for older people. First, older people are often not well-served by private markets and secondly, considerable support and advocacy may be needed to empower older consumers to benefit from personalisation and managing their own budgets.

The deficit reduction, the economic cost of ageing and public service reform are three areas of Government programmes that concern Age UK because they are interconnected with issues that concern ageing populations. Against this political backdrop, The Agenda for Later Life sets out Age UK's priorities for action for the Government which support their vision to improve later life. These relate to eight key areas. These are introduced below and are summarised in relation to aspects of the thesis;

- Active and equal citizens
- Preventing poverty
- Competition and choice for older consumers
- Essential services
- Health and healthcare
- Dignity in care and support
- Lifetime housing and lifetime neighbourhoods
- Global ageing

Active and equal citizens. This refers to the notion that people in later life should have equal opportunity to participate in the economy and society in whatever way they want. This includes access to work, learning, leisure and civic participation. Age UK believe that older people's fundamental right to autonomy, dignity, respect, fairness and equality should be respected.

As the numbers of older people increase and many more people enjoy good health at older ages, our traditional concepts of later life are being challenged. But are new concepts of active ageing fully recognised? Two key policy developments are providing older people with more opportunities to contribute to society. The phasing out of the default retirement age means that older workers enjoy the same rights as everyone else and gives people more choice over retirement issues. However, there remain significant and systematic barriers to older people's participation in society and prevent them from enjoying these opportunities, in the form of ageist attitudes that inform how older people are

viewed and treated. Despite the 1998 Human Rights Act and the 2010 Equality Act, many older people continue to experience discrimination, prejudice, neglect and human abuses.

Barriers to participation in society are addressed directly in Study 1, which provides an insight into the prevalence of ageist attitudes held in the UK and experiences of age discrimination. Other studies address this issues indirectly, for instance, Study 11 explores the impact of age discrimination on well-being and explores the role of ageist attitudes in society in this relationship.

Preventing poverty. The vision here is simple; older people should have sufficient income from state and private sources to live comfortably and participate fully in society. According to Age UK 1.8 million pensioners live in poverty and people are not saving enough to secure a decent income in later life. There are two policy developments that will influence pensioner poverty; reforming state pensions and increasing state pension ages. The Government propose a single-tier State Pension system to replace the current complicated system. Under these proposals the £140 per week pension would be paid to all those who reach state pension age, who have 30 years of paid or credited contributions after around 2016. The Government pledges to protect State Pensions built up at the time of the transition to the new system. However, changes have been proposed to increase State Pension ages in response to population ageing. The 2011 Pensions Act speeds up the equalisation of State Pension age at 65 and increases state pension age for men and women to 66 by October 2020. This is proposed to rise again to 67 between April 2026 and April 2028.

Under the deficit reduction program the government are also reforming welfare in an aim to save £18 billion a year by 2014-15. Welfare reforms include a range of benefits (e.g. housing benefit, employment and support allowance) but there are two that might potentially disadvantage some older people depending on their situation. These are reforms to universal credit and council tax benefit. Encouraging enough people to save for retirement is also an area of concern for Age UK and the current government. Although the impact of poverty is not directly accessed in the studies in this thesis, the psychological mechanisms which may prevent older people from having a sufficient income through employment, are addressed and discussed.

Competition and choice for older consumers. The vision here is that marketplaces should work for older people. They should offer a choice of goods and services which meet the needs of older consumers. The Government's Empowering and Protecting Consumers publication is one recent move towards this goal. It states that the prime objective of consumer policy should be to empower consumers to make wise decisions when purchasing goods and services. However, Age UK and the report itself acknowledge that empowerment alone is not enough. While older consumers will have the same needs as consumers of any age, there are several issues which consumers face that are exacerbated for older people. These are; restricted access and age discrimination, poor design, lack of access to information and advice, complexity of markets (e.g. energy and financial) and poor selling practices (e.g. scams). Despite the fact that older people make up a growing proportion of the UK's consumers, it seems that the competitive market does not work effectively because of these issues. Changing attitudes is a core aspect to enable older people to effectively participate in competitive markets. Ageist attitudes and age based assumptions can mean that older people may be denied access to services because people assume they do not want or need them, they may be patronised, ignored or treated as though they lack intelligence.

Many of these issues are touched upon throughout the thesis. Study 2 looks at the age-based expectations people have of younger and older people in specific task domains, while Study 3, 4 and to some extent 8 looks at how expectations can guide performance and responses of older adults. Moreover, Study 9 has specific implications for commercial markets and marketing organisations by looking at the impacts of stereotyping of older people in images used by two real charities that represent older people.

Essential services. This area covers the essential services that enable older people to stay well, independent, active and connected to others. These involve energy services, water services, communication technologies and banking services. The services should be affordable and able to meet the needs of older consumers.

Health, health care and dignity in care and support. Health and social care is one of the largest and most important public service domains for older people. Age UK maintain that older people should have the opportunity and support to be able to maintain health and well-being through equal access to prevention, treatment and rehabilitation. Public services reforms to the NHS are likely to have major implications for the health and well-being of older people. Here the focus is on staying well and independent, healthy living in later life, addressing health inequalities, age discrimination in health and social care and treating public service users with dignity and respect.

Well-being appears to be coming to forefront of policy. From April 2013 there will be health and well-being boards in each local authority. These well-being boards will have the responsibility for carrying out the well-being needs assessments, coordinating strategies and public health policies that maximise well-being. For older people this renewed focus on well-being means that local authorities have the responsibility to provide support that allow older people to maintain independent living and healthy in later life. However, there are large inequalities in health in later life; some older people experience much poorer health than others. From April this year (2012) a legal duty came into force for public bodies to reduce health inequalities. Health inequalities are caused by many factors. Research has shown gender and ethnicity differences in mortality and morbidity, however, little attention is given to understanding how attitudes to age may contribute to inequalities.

Age UK are strong advocates of being treated with dignity and respect in later life. The 2011 Care of Quality Commission reported numerous cases where older patients were not treated with dignity or respect, often being denied assistance to basics of life (including food and water). In response Age UK has helped establish the Dignity in Care Commission, due to report in 2012.

Removing age discrimination in health and social care is a major challenge. Although the Equality Act 2010 will make age discrimination illegal in the NHS, there is no single or straightforward solution to tackling the root of ageism when decisions based on age are so heavily entrenched in society. Negative attitudes to age are likely to affect people in many ways. Doctors may disproportionately be risk-adverse in caring for older patients based on their age. Structural barriers in

the NHS may also disproportionately affect older people, furthermore, patients' own attitudes may lead them to feel that ill-health is an inevitable part of ageing and therefore, they may be less likely to take preventative treatments.

Chapter 2 provides an overview of ageism in health and social care. A couple of studies in the thesis have implications for health and social care, Study 10 provides direct evidence of how judgements based on age can lead to age discrimination and exclusion of older people, while Study 4 shows that medical, health care settings are settings where negative age stereotypes can potentially have detrimental impacts on older people.

Lifetime housing and lifetime neighbourhoods. This area reflects the wants and needs of the older population to age in place. The vision is that older people should be able to live in suitable housing, with age-friendly neighbourhoods for as long as they want. Additional support and adaptations should be available to enable this. There are several aspects to consider to enable older people to age in place, these include, housing strategy for life-long homes, lifetime neighbourhoods which include the physical environment as well as connection to essential services within communities. The Localism Act will give more freedom to local authorities to run local services that meet the needs of their ageing populations. However, issues surrounding transport, crime and policing remain concerns.

From November 2012 responsibility for policing will be passed from the Home Office to local forces and new police commissioners. The idea is that there will be fewer targets imposed by central government, instead local bodies will consult and engage with the communities and agree to tackle local priorities. Crime is a major concern for older people. Moreover, fear of crime can reduce well-being, result in feelings of isolation and decrease involvement with the community. Isolation and exclusion is particularly damaging to older people and is associated with poor physical and mental health. Social isolation reduces the likelihood that older people come into contact with support networks, provided by individuals or organisations, which can provide assistance. Chapter 10 covers

aspects relating to older people's fear of crime, which can contribute to isolation and reduce participation in society.

Global ageing. This aspect covers Age UK's pledge to help older people affected by crisis and disasters in the UK and abroad.

Two core themes emerge from the review of Age UK's priority areas that are relevant to the work in this thesis. The first is the focus on ageism, age discrimination and changing negative attitudes to age that can have harmful consequences for older adults. Ageist attitudes affect older people in a number of these priority areas; they prevent older people being able to actively engage by restricting access to labour markets, health care treatments and commercial markets, they prevent older people being treated equally and fairly with dignity and respect. Therefore, Age UK highlight the need to change ageist attitudes that are harmful not only to older people but to society as whole.

A second issue to emerge is tackling fear of crime. Fear of crime can cause loneliness, isolation and anxiety in older adults, which prevent older people from actively engaging with the community and wider society and have a direct impact on well-being and quality of life. In this way, fear of crime has similar outcomes to age discrimination and is therefore a relevant topic to explore in this thesis. Furthermore, much of the work addressed in this thesis is based on the consequences of age stereotypes which form the basis of ageist attitudes and age discrimination. This approach is applied to fear of crime, in order to extend research on the consequences of age stereotypes to a novel area.

1.2 Aims of the Thesis

Experiences of ageism significantly impact on older people. Ageism can restrict opportunities and resources, and undermine older people's needs. However, compared to other forms of prejudice, ageism is relatively under researched and there remains some important unanswered questions. There is a lack of empirical evidence that demonstrates how age discrimination or decisions and judgements based on age lead to ageism and the exclusion of older people in society. At the individual level, there is little research on how prejudices against older people are manifested and what attitudes people hold

about age, ageing and older people. Moreover, little research explores the consequences these attitudes, expectations and assumptions about age have for those holding the attitudes and those who are the targets of the attitude. The work in this thesis aims to build upon and expand existing research in these areas. Specifically, it aims to provide an overview of the components of ageism and attitudes to age and then explore experimentally the consequences of these attitudes and their influence on older people's ability to perform certain tasks or respond in a certain way. These are investigated in three very relevant domains for older people; cognitive ability, physical ability and fear of crime. The idea is to provide new evidence for how age based expectations influence older adults psychologically and behaviourally, and to expand on the existing theoretical framework behind these effects.

A second aim of the thesis is to explore experiences of ageism and provide direct evidence of age discrimination. The thesis aims to do this in two ways, in three studies. Two studies use existing survey data while one study uses observational evidence. Study 1 explores the prevalence of ageism in the UK. Study 11 uses survey data to explore the impact of experiences of ageism on well-being across 28 countries that took part in the European Social Survey. Study 10 uses real-world data to provide direct observational evidence of ageism in practice. The objectives of these studies are to provide valuable evidence for the existence of ageism, and to add to the existing theoretical knowledge on the processes of age discrimination and the consequences of ageism on well-being.

One applied element of the thesis is investigated in Study 9, which explores how marketing materials used by the two charities, Age Concern and Help the Aged influence decisions to give money to either charity. The aim here is to provide an insight into how people's evaluation of images of older people can influence charitable giving in order to see what kind of images maximise donations.

The thesis also explores the meaning of age and societal norms of ageing, explore the expectations and assumptions that surround age, ageing and older people and then investigate consequences of these attitudes to age for individuals and society. The aim is also to examine how

ageist attitudes are formed, explore how they manifest in society and investigate the consequences of ageism and the implications at the individual, social and political level.

The studies presented in the thesis use a range of research methods to explore these aims. Studies 1, 2, 5, 6 and 11 use existing data sets that were either made available by Age UK for the use in this thesis or are publically available, such as the European Social Survey (ESS) data while Studies 3, 4, 7, 8 and 9 present experimental work, and Study 10 is an observational study. Because the studies vary in nature, the introduction to each study varies accordingly. See Section 6.6 for an overview of the nature of the studies and the key hypothesis each study addresses.

1.3 Organisation of the Thesis

This thesis is made up of three parts; the theoretical part, the empirical part and the discussion. In the theoretical part, Chapters 2 to 5 relate to ageism and provide an overview of ageism in society, they describe why ageism is considered a unique form of prejudice, explain the psychological basis of ageism and explore the consequences of ageist stereotypes. Chapter 6 explores the psychological basis of fear of crime. The empirical part, Chapters 7 to 13, present eleven studies investigating a range of issues around ageism and fear of crime. The discussion part, Chapter 14, considers the interpretation of the studies in theoretical terms but also in relation to Age UK's policy concerns and the ageing agenda. Here is a more detailed overview and summary of the content covered in each of the chapters.

Chapter 2 provides an overview of the prevalence of ageism in society. It explores three areas where ageism seems to have a substantial impact in society, these are the media, in employment and in health and social care. It explains how ageism can manifest directly, through social interactions or indirectly, through the structure and organisation of society. Chapter 3 goes on to explore aspects of ageism that make it a unique form of prejudice, including age group membership, bias towards youth and the seemingly wide social acceptance of ageism. Together these chapters provide an insight into the existence of ageism in society.

Chapter 4 provides an overview of the psychological basis of ageism and explores the components that contribute to the formation of ageism. These include; the categorisation of people into age groups, the importance of 'age' to individuals, the perceived threat older people pose to society (e.g. in terms of cost), fear associated with getting older and how people view members of different age groups (e.g. stereotypes). Chapter 5 reviews the existing research on the consequences of age stereotypes, both for those who hold the stereotype and those who are the target of the stereotype (e.g. older people). Together these chapters provide insight into the processes of ageism and how they can affect individuals and society.

The second issue explored in this thesis relevant to Age UK is fear of crime. Chapter 6 introduces the psychological basis of fear of crime. It specifically explains how research addressing gender differences in fear of crime responses might be applied to older people. At the end of this chapter a summary section concludes the theoretical elements in relation to the empirical part.

Chapters 7 through to 12 describe a series of empirical investigations of the consequences of ageism and age stereotypes. Chapter 7 introduces core aspects of attitudes to age in the UK. Study 1 uses the 'Attitudes to Age Module' from the 2008-2009 European Social Survey and presents a series of analyses investigating age and gender differences in attitudes to age. The aim is to provide an insight into experiences of ageism and how strongly people hold particular attitudes to age, such as stereotypes of older people. It also provides an insight into people's assumptions and expectations about age and ageing. Chapter 8 investigates the effects of both positive and negative age stereotypes on older people. Study 2 establishes specific domains that older people are expected to perform better and worse in compared to younger people. On the bases of this, Study 3, an experiment – using a stereotype threat paradigm, investigates the effect of these positive and negative (stereotypical) expectancies on older people's performance in these task domains. Chapter 9 provides an extension of stereotype threat effects on older adults. It investigates the idea that older people can be threatened on tests of physical ability as opposed to mental ability, which is the only domain older people have been tested in previously.

Chapter 10 presents Studies 5 through 8 which investigate particular aspects of fear of crime. Study 5 uses Age UK survey data to investigate older adults' (aged 50 and over) fear of crime and the extent to which older adults believe they are more likely to be victims of crime. Study 6 investigates fear of crime in the 2008-2009 European Social Survey. It provides a more robust analysis of age and gender differences in fear of crime responses. Study 7 investigates age based assumptions and expectations in fear of crime. The aim of this study is to show that people expect experiences of fear of crime to differ according to people's age. Together, these studies explore stereotypes surrounding older people's fear of crime and establish a consensus that older people are expected to be more fearful of crime compared to other age groups. Study 8 in this chapter investigates the extent to which age and gender expectations (stereotypes) might guide older people's evaluations of their fear of crime. This study along with the previous studies in this chapter, aim to extend research exploring gender differences in fear of crime responses to explain observed age differences in fear of crime.

Study 9 in Chapter 11 is an applied study investigating how images of older people influence people's willingness to donate to charity. It uses real marketing materials from the two charities that merged to form Age UK in order to explore 'real' differences in the amount of donations received by each charity before they merged. Chapter 12 presents a second study that uses 'real' materials, but this time to provide evidence for age discrimination (Study 10). This is a replication and extension of previous research that investigates age discrimination in the TV game show *The Weakest Link*. The final empirical chapter, Chapter 13 presents Study 12. This study presents a multilevel analysis of the 2008-2009 European Social Survey to investigate the impact of experiences of age discrimination on well-being. It goes on to investigate whether societal attitudes of people over 70 influence the relationship between age and well-being.

Finally, in Chapter 14, the empirical chapters are reviewed in relation to their theoretical contribution and in relation to policy. The policy implications are discussed, with specific reference to how the thesis contributes to Age UK's policy priorities. The discussion addresses the limitations and goes on to make suggestions for future research.

Chapter Two.**Ageism in Society****Abstract**

Ageism is the stereotyping of and discrimination against someone based on their age. This section explores the different ways ageism manifests within society and summarises the existing evidence for ageism in three areas; the media, employment and in health and social care. The review shows that age discrimination is more likely to exist when there is an opportunity to favour one person over another, or when there is an opportunity to restrict or deny access to resources. It also exists where there is an opportunity to depict older people in a negative way. The implications of ageism in society are discussed.

Since the term 'ageism' was first introduced in 1969, relatively few studies have researched how people recognise and give meaning to their experiences of ageism, despite the fact that ageism has been repeatedly reported to be the most experienced form of prejudice (see Abrams et al., 2009; Abrams, Russell, Vauclair & Swift, 2011; Age UK, 2011; Eurobarometer, 2008). Indeed, age discrimination is the most experienced form of discrimination in Europe for every age group. Recently it was found that 35% of respondents questioned in the European Social Survey had experienced unfair treatment based on age, compared to 25% who had experienced unfair treatment based on gender, and 17% based on race or ethnicity (Age UK, 2011). This chapter reviews the evidence for the existence of ageism in three areas of society; the media, employment and in health and social care, the implications are summarised and discussed.

2.1 Ageism in the Media

The media are often a source of discrimination and have been criticised for perpetuating negative images and stereotypes of older people. Television has been specifically identified as an influential source of negative age stereotypes (Davis & Davis, 1985). Research in this area are interested in determining the extent older people are depicted negatively in the media, and the extent ageist behaviour is played out on screen (Montepare & Zebrowits, 2002; Bishop & Krause, 1981), while other research has looked at the consequences of being exposed to negative images on TV (Donlon, Ashman, & Levy, 2005).

Studies investigating images of ageing in the media consistently show that older people are under-represented and are depicted more negatively than other age groups (see Vesperi, 2003 for review). Gerbner and Ozyegin, (1997) found that only 2% of prime time television characters in America are aged 65 and over. Moreover, older characters are more likely to display physical or mental incompetence for comic effect than any other age group (Montepare & Zebrowits, 2002). One study that looked at the portrayal of older people in children's cartoons found that although old age and older people do not appear frequently, when they do appear they are depicted negatively (Bishop & Krause, 1981). However, media images are not all negative. Bell (1992) studied five shows that positively featured older characters in major roles (e.g. *Murder She Wrote*, *Golden Girls*). Although,

some argue that these positive images of ageing are unrealistic, further distorting the overall representation of older people (Davis & Davis, 1985).

Older adults may be particularly vulnerable to negative age stereotypes depicted on television, because they tend to spend much more of their leisure time watching television (Davis & Davis, 1985), replacing lost social contacts (Donlon et al., 2005; Rubin, 1986). Indeed, Donlon et al., (2005) found that the more an older people are exposed to these negative portrayals of age, the more negatively they perceived images of ageing to be. However, Donlon et al., (2005) designed an intervention to encourage older adults to think critically about the ageism present in each program they are watching. The intervention group which consisted of individuals aged 60 to 92 developed a greater awareness of how elders are portrayed and even expressed an intention to watch less television in the future.

Advertising is a second avenue in which older people are underrepresented despite growing recognition of the 'grey market' (sometimes referred to as the 'grey pound'). A content analysis of 278 commercials aired on US channels in prime-time hours in 1994, found that 15% included people who appeared to be aged 65 and over, a huge underrepresentation compared to the U.S population. Of these 42 commercials, 15 featured older adults alone, 21 showed older adults with adults and youths, and only 6 showed older people interacting directly with youths (without other adults present) (Tupper, 1995 cited in Vesperi, 2003). A further analysis which assessed 778 commercials (Roy & Harwood, 1997) supported this finding of underrepresentation. It is worth noting that Tupper's analysis does not support common assumptions about age-stereotyped products. The majority of the adverts featured older adults in professional, corporate or retail settings, while only 2% depicted them in health care settings in accordance with age-based assumptions of ill-health in later life. This perhaps suggests that advertisers (in the US) have simply side stepped the challenge of developing age-integrated marketing campaigns.

One reason why products are not directly presented by older characters is because some evidence suggests that older people do not relate positively to product categories that reflect their

chronological age (Bradley & Longino, 2001). Some argue that simply increasing the number of older age characters in adverts may not have the intended effect of reaching particular age groups because of the disparity between people's chronological age, and their subjective age. In other words, many people perceive themselves to be younger than their chronological age, and therefore more likely to identify with younger models (Bradley & Longino, 2001). Negative age attitudes appear to be at the core of the problem as people try to psychologically distance themselves from internalised negative associations of what it means to be a certain age, in terms of how people look, how they should behave and their needs.

Research has also investigated the behaviour of people on TV shows. Previously TV game shows have been used to investigate aspects of human interaction (e.g. communication, Thornborrow & Morris, 2004) and behaviours including, risk taking (Gertner, 1993), and cooperation (Belot, Bhaskas & van de Ven, 2008; Post, van den Assem, Baltussen, & Thaler, 2008). For instance, game shows have also been used to investigate how attractiveness influences decision making and interpersonal interactions (Belot et al., 2008). They have even been used to test the presence of discrimination (Antonovics, Arcidiacono, & Walsh, 2005; Levitt, 2004). Levitt, an economist, used voting decisions in a TV game show to explore the presence of preference based discrimination and information based discrimination. Preference based discrimination refers to the idea that people discriminate because they do not like the group an individual belongs to. Information based discrimination refers to discrimination based on the inferences people make about others, for example, they discriminate because they perceive the individuals in the group to be less qualified. Although Levitt's analysis was focused on race and gender discrimination, it revealed potential evidence of discrimination against older people.

In an analysis of voting behaviour from 161 episodes of the TV game show *The Weakest Link*, of which 7% of contestants were aged 50 and over (mean age 32 years), Levitt found that contestants aged over 50 attract a 30 – 40% increase in votes compared to the 'average' contestant. In addition, Levitt's analysis revealed that both younger and older players were more likely to vote against older competitors. However, these findings should be interpreted with caution as the analysis

only showed that people over 50 were significantly more likely to receive votes at specific time point in the show (in the middle rounds of the show), and not consistently throughout. Furthermore, as the study acknowledges, the estimate for predicting the extent to which older players vote for other older players is not reliable because there were only a small number of cases where older players had the opportunity to face other older players. Despite this limitation the study demonstrates that TV shows can be used as a medium for observing inter-personal behaviour, such as discrimination.

In sum, the majority of the studies investigating images of older people in the media conclude that older characters, older people and old age are underrepresented in the media and when issues surrounding age or older people do appear, they are often framed negatively or unrealistically. TV game shows provide an opportunity to observe how decision making processes may inadvertently result in discrimination, this is further explored in Chapter 12, where Study 10 attempts to replicate and extend Levitt's (2004) analysis of ageism in *The Weakest Link*.

2.2 Ageism in Employment

Within the last year, the prevalence of ageism in the UK media has been highlighted by the successful, high profile employment tribunal against the British Broadcasting Corporation (BBC). In this case, Miriam O'Reilly, a 54 year old presenter of a popular rural affairs show, won her case of unfair dismissal on the basis of age, against the BBC. This is not the first time the BBC has been accused of being ageist. In 2009, Arlene Phillips aged 66 was sacked from the judging panel of a popular UK TV show and was replaced by a younger celebrity aged 30 years. Increasing recognition of age discrimination and the severity of its consequences in the UK is also demonstrated by a 30% increase in the number of age discrimination claims accepted by employment tribunals from April 2010 to March 2011 (Ministry of Justice, 2011). This amounts to an additional 6,800 cases. During the same period the average award for an age discrimination claim has risen by nearly £20,000 (Ministry of Justice, 2011). This section discusses ageism in employment and some of the causes of age discrimination, such as stereotyping.

There is evidence that older workers are negatively stereotyped, and this is likely to contribute to age discrimination. In addition to the general stereotype denoting incompetence in later life (Fiske et al., 2002), it is often assumed that older workers are less energetic, motivated, creative, committed to their careers, productive and technologically savvy compared to younger people (Benedick, Jackson & Romero, 1996). Older workers are assumed to be less trainable (Maurer, 2001) and are judged less favourably compared to their younger counterparts (Lawrence, 1988).

Studies have shown that younger and older employees are evaluated differently by their colleagues, even when they are put in the same hypothetical situation (Shore, Cleveland & Goldberg 2003). The researchers found that older workers were perceived to be more rigid and resistant to change and were therefore given less feedback and opportunity to change and improve performance if their standard of work suffered. Older workers were also seen as less interested in keeping up with technology and less likely to request training. Finally when an older worker's skills were no longer needed, they were less likely to be invested in and given costly training opportunities (Shore et al., 2003).

Within organisations there seems to be an assumption that job performance or a person's ability to perform their job declines with age (Prenda & Stahl, 2001), despite little empirical evidence to support this notion. Although there are age-related changes in certain abilities, including sensory functioning, strength, endurance and cognitive processes, these abilities decline gradually and in the very late stages of life. In fact, most older adults remain healthy and functionally capable until very late in life (Czaja, 1995). Furthermore, there is evidence that older workers are positively stereotyped, and are seen as more capable, reliable, stable and dependable (Tillsley, 1990; Warr & Pennington, 1993). Moreover, there is evidence that job experience is a better predictor of job performance than age (Czaja, 1995; Ng & Feldman, 2008). Yet, despite this it seems the negative attitudes prevail and are a barrier to older job seekers.

Evidence also suggests that age biases in hiring decisions exist. Older job seekers (aged 55 and over) are likely to spend twice as long in unemployment compared to those aged 25 through 34

(Benedick, 1983). One study conducted in America (Bendick, Brown, & Wall, 1999) set out to test discrimination against older workers at the application stage. Two individuals, one aged 57 and one aged 32 applied for 102 entry level administration and management roles in and around Washington D.C. Despite being equally qualified, the older applicant received significantly less favourable responses from potential employers. The majority of these responses were received even before qualifications could be presented, demonstrating the subtle nature of age preferences with the almost automatic dismissal of older job seekers although, employees never explicitly stated negativity towards the older job seekers.

Opportunities for older workers are restricted by occupation or industry. Downsizing and restructuring are popular organisational strategies for improving firm performance (Cascio, 2002). An emphasis on cost reduction often results in older workers being targeted in downsizing because they present a greater cost to the organisation (Shore et al., 2003). The age composition of the working environment can create career-related age norms. These are norms or expectations surrounding the career level people should have achieved by a given age. The notion of working at the bottom of the ladder and working your way up is one that still resonates today. Therefore, being older than others at the same job level can have negative consequences that you are “behind schedule” in your career development. In addition, career-related age norms may contribute to job-related stereotypes. Job related stereotypes stem from the idea that particular jobs are better for particular people. In terms of age, it is the idea that older workers are more suited to old-type jobs, while younger workers are more suited to young-type jobs. Both career-related age norms and job related stereotypes operate in determining hiring decisions and may restrict opportunities for both age groups (Chiu, Chan, Snape, & Redman, 2001; Snape & Redman, 2006).

Similarly to racism and sexism, evidence of ageism can also be observed in wage differences as an indicator of how valued the employer is. There is some evidence that while the wages of younger workers tend to increase with increasing experience, those of older workers tend to decline (Wanner & McDonald, 1983).

The labour market provides many opportunities for comparisons against other workers that are not beneficial or favourable for older workers, when based on age. These age-based social comparisons influence how individuals evaluate their experiences of work, the type of work people apply for, career decisions and employers' decisions about their employees. The age of the employee relative to the manager and other co-workers has been shown to influence decisions including supervisor evaluations, training and development opportunities (Shore et al., 2003). There is evidence that career-related age norms and job-related stereotypes operate both inside the working environment and outside of an organisation. These can work at both the individual and organisation level. In sum, there is evidence that older workers may experience discriminatory treatment in employment at a number of levels; entry into the organisation or labour market, experiences within organisations and at exiting the organisation or labour market.

2.3 Ageism in Health and Social Care

“a patient’s lifestyle, culture, beliefs, race, colour, gender, sexuality, age, social status, or perceived economic worth should not prejudice the treatment you provide or arrange”

- General Medical Council (2006)

This year has also seen ageism in health and social care highlighted by national media which has exposed cases of patients being denied treatment or good quality health care because of ageist attitudes (Care Quality Commission, 2011; MacMillan, 2012). Ageism in health and social care can take many forms and can occur at different levels. For instance it can be directly experienced when a person is treated less favourably because of their age. Or it can be experienced indirectly when care is offered in a particular way that disadvantages one age group. Therefore, ageism can result from interactions between individuals or can result from institutional policies and legislation. Whatever form it takes, ageism and negative attitudes to age can affect both patients and practitioners. It can influence the choices patients make and the treatment options they are presented with. For example, if patients perceive age related decline and deterioration is inevitable they may feel powerless in avoiding it and less likely to take preventative treatments.

Common stereotypes depict old age as a time of poor health and physical and mental functioning, or a regression back to a childlike state (Levy et al., 2000). These stereotypical views of the ageing process have led to several myths about ageing. One of these is the belief that to be old is to be ill, sick and dependent. In reality, there is extensive empirical evidence that older people are able to carry out daily living tasks independently until very advanced ages (Serra, Watson, Sinclair & Kneale, 2011).

There is evidence that older people can experience negative attitudes from health and social care workers, both in residential settings and in their own homes (Lee-Treweek, 1994). At the most extreme level, older people are at risk of various forms of abuse, older people suffering from dementia are especially vulnerable (Means & Langan, 1996). Older people are sometimes viewed negatively by general practitioners because they are perceived to generate a disproportionate amount of work (Kings Fund, 2000). Reyes-Ortiz (1997) suggested that many physicians have a negative or stereotypical view of their older patients as “depressing, senile, untreatable, or rigid” (p. 831). Or as ‘incompetent, passive and dependent’ (Kings Fund, 2000). Such ageist attitudes may result in poor communication with patients, resulting in older people not being consulted appropriately on health care decisions, and also contribute to inappropriate and infantilising behaviours. In addition, there is a more general attitude that working with older people is not seen to be an attractive or desirable career (Nelson, 2002).

Paradoxically, even people with positive attitudes towards older people often communicate with older people in a negative way using patronising language. Two types of patronising language have been identified by researchers; overaccommodation and baby talk. In overaccommodation younger people become overly polite, speak louder, slower and exaggerate their intonation and often repeat their sentences (Giles, Fox, Harwood & Williams, 1994). Baby talk has also become known as elder speak, it is the infantilizing communication that uses a simplified speech, such as, using a high pitch and exaggerated intonation (Caporael & Culbertson, 1986), which is most widely recognised as the talk people use with babies. This talk is commonly used by nursing staff and is patronising to older people. It can affect the extent to which older patients are cooperative or resistant to care (Williams,

Herman, Gajweski & Wilson, 2009). Williams et al., (2009) videotaped 80 care episodes of 20 residents with dementia. The care episodes were coded for staff communication as normal or elder speak, the residents subsequent behaviour was also coded as either cooperative or resistive to care. The data revealed that resistance to care was significantly more likely to occur with elder speak compared to normal talk. Furthermore, baby talk is ageist and insulting because it promotes a dependency relationship.

Research suggests that infantilization inadvertently contributes to older adults dependence by placing them in a passive, dependent role which is then reinforced by themselves and others around them (Grant, 1996; Nelson, 2005). One consequence of overaccommodation talk is that targets are perceived to be older than they are, in that they appear to look, talk, move, think and sound older to other (independent raters) compared to older adults were not targets of overaccommodation (Giles et al., 1994; Giles, Fox & Smith, 1993). Both types of speech are associated with the stereotype that older people have hearing problems, decline in cognitive functioning and therefore need slower, simplified communication.

Negative stereotypes and perceptions of older people may even lead to below standard treatments and follow up care (Adelman, Greene & Ory, 2000). For example, Hillerbrand & Shaw, (1990) showed that older people are less likely to be referred for psychiatric assessments compared to younger people who presented with the same symptoms. Research suggests that younger people may not value older people's quality of life as much as older people do themselves and see older people as less deserving of limited health care resources (Kings Fund, 2000). Moreover, health problems in the older population may be characterised as normal aspect of ageing leading to low expectations surrounding what is achievable in interventions (Macmillan, 2012). For instance, Levenson (1981) argued that the medical profession trains doctors to treat patients with an age bias, putting little value on geriatric medicine. It seems there is an implicit assumption that illness is a natural part of the ageing processes and is therefore, unstoppable. This may mean that older people may not be offered the same treatment as someone younger but with similar symptoms. For instance, there is evidence that health and lifestyle advice is not offered to older people, despite the fact that many older people

are unaware their lifestyles are unhealthy (Little, 1990; Kings Fund, 2000). This may be because there is an assumption that older adults are less able to change habits or are 'stuck in their ways'.

At the institutional and legislation level there remains debate surrounding whether age limits on health care services are age discriminatory or justified. In the UK there are age restrictions surrounding some health interventions such as screening for cervical or breast cancer. Age limits are supposed to be scientifically justified in relation to increased risk, some argue that other individual factors, such as an individual's level of health, are better predictors of risk than age (Macmillan, 2012). Furthermore, age limits may have some unintentional consequences on attitudes to risk, for example, thinking you are not at risk because you are a certain age. In many situations using age as a proxy for risk is 'justified', for example, knowing that cancers are more common in people aged 70 and over should increase cancer screening in this population. In this sense it is worth noting that age discrimination is not necessarily unfair. Indeed, positive discrimination is a well-established strategy to address particular inequalities in health. For instance, in the UK people over 60 are entitled to free prescriptions and eyesight tests. However, problems may occur when age is 'unjustifiably' used in decision making process. For instance, it may be weighted above and beyond other factors which may take longer for a doctor to access such as, individual fitness, or assumptions are made about patients based on their age and associated negative age stereotypes.

In medical and health care settings older adults may frequently encounter situations in which they feel they may be judged in terms of their age, or confirm negative age stereotypes because age is a salient factor in many doctor-patient interactions. It is often an important qualifier for assessing risk to treatment and determining levels of care and need. Subtle age cues also exist as health care professionals are likely to be younger than the retired patients they are treating. Moreover, there is often a degree of age segregation in hospitals, with specific wards for children and elderly patients in geriatric wards. These factors may raise the possibility for social comparisons and the salience of age-related stereotypes, which may be damaging to older people's cognitive and physical functioning (Kahana & Kahana, 1970, see also Chapter 8, Study 3 for effects of age stereotypes on older adult's

cognitive performance and Chapter 9, Study 4 for effects of age stereotypes on older adult's physical performance).

Hospital environments are often age-segregated. Yet the effects of this age-segregation are not well understood. From social identity theory (SIT: Tajfel and Turner 1979) and categorisation theory (Turner, Hogg, Oakes, Reicher & Wetherell, 1987) we can determine that segregated environments are likely to enhance the perceived differences between groups. In this case, as individuals are likely to be suffering from some kind of infirmity, age-segregation of wards may further enhance perceptions of old age and sickness. One study, by Kahana and Kahana, (1970) investigated the effects of age-segregated hospital environments on the cognitive functioning of 55 male patients admitted to a psychiatric hospital. Patients were aged between 60 and 93 years old and were randomly assigned to one of three different treatment wards: same age group (age homogeneous), mixed age groups (age heterogeneous) and the intensive therapy ward. The study showed that patients in both the therapy ward and age-integrated wards showed increased responsiveness to the environment and less cognitive impairment after 3 weeks compared to when they first arrived. In contrast those in the age-segregated wards, declined or remained unchanged. The study suggests that when restricted from contact with other age groups, patients may establish maladaptive behaviour as a norm. Furthermore, age-integrated environments may provide more stimulation than age-segregated wards.

Discrimination in health and social care is difficult to assess at both the individual and structural level. At the individual patient level, ageist decision making may be very subtle, surrounding the general lack of priority for older people's services, and therefore hard to recognise. At the structural level, many argue that data is not available to assess ageism, because the NHS tends to monitor performance on geographical inequalities rather than social, racial or intergenerational inequalities. In addition discrimination is sometimes difficult to separate from other issues around, gender, poverty, ethnicity and the way people with disabilities or long term illness are treated. Despite this, several reviews have provided evidence of age discrimination in health and social care services in recent years (Centre for Policy on Ageing (CPA), 2009; Macmillan, 2012; Kings Fund,

2000). A review carried out by the Kings Fund London (2000) into age discrimination in health and social care provided evidence that across a range of services and areas, older people are often denied treatment. These include cardiac surgery, cancer care, accident and emergency and end stage renal failure.

2.4 Direct and Indirect Discrimination

The evidence for age discrimination can be separated into two forms. Ageism can be experienced directly, though inter-personal interaction or indirectly. Indirect discrimination occurs when individuals with different needs are inadvertently treated the same. For example, take access to a doctor's surgery. To get to reception you have to walk up three steps to the main entrance. On the surface this is equal access, because everyone has to walk up the three steps to get to reception, however, this equal treatment disadvantages those who have difficulty walking up steps or use a wheel chair. In this way providing everyone with the same access, inadvertently excludes those who cannot walk up the steps (CPA, 2009). Indirect discrimination is usually a result of policies at the structural level or the basic organisational of society which fail to consider individual differences in needs. These policies are based on notions of equality and fairness that on the surface seem logical and reasonable but actually disadvantage particular social groups. Within health and social care, indirect discrimination occurs when care is offered in a particular way that disadvantages one age group. Older people maybe disadvantaged because policies or practices may disproportionately affect them.

2.5 Summary

Age discrimination occurs when people are treated unfavourably because of their age. Age discrimination is more likely to exist when there is an opportunity to favour one person over another, or when there is an opportunity to restrict or deny access to resources, such as in employment or in health and social care. It also exists where there is an opportunity to depict people in a negative way, such as in the media. In reviewing the evidence for age discrimination a number of themes emerge. First, age is most meaningful when considered in context, such that an employee's age or a patient's age can be compared against multiple social references. Second, there are consequences of age

comparisons that take place, they influence opportunities for individuals and decisions that affect them. Finally, age discrimination in the media, employment and in health and social care are complex and the consequences of combined forces at the individual level and the structural, organisational level of society. In other words, there are processes that take place at the inside and outside of organisations that lead to age discrimination.

Chapter Three. Ageism: A Unique form of Prejudice**Abstract**

This chapter explores why ageism is often considered a unique form of prejudice. It explores three aspects of ageism; age group membership, out-group favouritism and the seemingly wide social acceptance of ageist attitudes. The review shows how the continuous categorisation of age and transient nature of age groups mean that ageism is the only form of prejudice directed towards a social group (old age), that people will one day belong to. It explores how the cultural orientation towards youth contributes to older people preferring younger (out-group) members and how ageist attitudes may go unnoticed, because they are heavily embedded within society. The implications for dealing and managing ageism in society are discussed.

3.1 Age Group Membership

Ageism, just like other forms of prejudice is a bias which devalues individuals on the basis of their perceived group membership (Abrams, 2010). By definition, ageism can be experienced by anyone at any age. Anyone can be a victim of ageism at some point in their life because age is a continuous categorisation and a moveable boundary, therefore age group memberships such as young, middle aged and old do not have fixed category boundaries. As we get older, we move from one age group to the next, this means that during the life course our affiliation to different age groups changes, as do our relationships with others of different ages. Eventually all age groups will become 'in-groups' (a group we belong to) (Nelson, 2002), therefore ageism directed towards older people can be seen as a prejudice towards a group that one day, we hope to belong to (Nelson, 2005).

From a social identity perspective, categorisations define psychologically which social groups people belong to and therefore can become part of their self-concept (Tajfel & Turner, 1979). Ageing and the transition between age group memberships is therefore particularly interesting. The social identity approach contends that the motivation to maintain a positive social identity can result in prejudiced attitudes directed towards members of out-groups (see Abrams & Hogg, 1988). For instance, young adults (aged 18 to 35 years) tend to see bigger differences between the competence of younger and older people, evaluating younger people to be much more competent in order to maintain a positive social identity (Kite et al., 2005). However, Packer and Chasteen (2006) contend that it is not clear how this motivation to maintain a positive social identity impacts on prejudice in the context of transitional groups. There are two conflicting theories. On the one hand, people may be averse to joining low status groups and may express prejudice as a means of distancing themselves and positively distinguishing themselves from the low status group (Snyder & Meine, 1994; Martens et al., 2004). On the other hand, because older adults represent a future social identity group, to which young people want to belong (they want to live into old age) then, they may be motivated not to derogate the group too much and even be motivated to maintain positive representation of older people (Packer & Chasteen, 2006). The Stereotype Content Model (SCM; Fiske, Cuddy, Glick and

Xu, 2002; Cuddy & Fiske, 2002) contends that this motivation to maintain a positive image of older people can be seen in the positive evaluation of older people as warm and friendly.

3.2 Out-group Favouritism

One of the consequences of categorisation, i.e. seeing both the self and others as members of particular groups, is that individuals within groups tend to show a preference for in-group members (members of the same groups) over out-group members (members of different groups). This effect is known as in-group favouritism or in-group bias (Brewer, 1979). In addition, in accordance with social identity theory (SIT: Tajfel and Turner 1979) individuals should favour and evaluate themselves and other in-group members more positively than out-groups (Abrams & Hogg, 1988). However, there is considerable evidence that older people show preference for younger age groups, out-group members, showing out-group favouritism. A meta-analysis conducted by Kite and colleagues in 2005, assessed 232 studies investigating preferences towards younger and older people. Results showed a significant bias against older people in five domains; evaluation (affect), age-related stereotypes, behaviour or behavioural intentions, competence and attractiveness, with older adults to be evaluated more negatively compared to younger people. Furthermore, older people (aged 55 years and over) showed a tendency to evaluate younger people more positively than they evaluate themselves. One explanation for this finding, which is contrary to social identity theory, is the possibility that for older adults, valuing younger age groups does not produce a negative comparison, because they themselves were once a member of that group.

Further evidence using implicit measures, such as the implicit association test (IAT) which measures attitudes below the level of conscious awareness, shows that older people seem to be the only group that hold implicit negative attitudes towards themselves (Levy & Banaji, 2002). This evidence is contrary to studies where people show implicit preferences towards in-groups based on gender, ethnicity (Levy & Banaji, 2002) and nationality (Greenwald, McGhee & Schwartz, 1998). Although, it is worth noting that these studies are all based in the U.S and may not be generalisable. Contradictory to predictions of SIT, it seems that for older people, age is one social group where implicitly negative rather than positive attitudes are expressed. Acknowledging this, Levy and Banaji,

(2002) suggest that out-group favouritism can be understood in context where society has a long-term commitment and preference for younger age groups as better. This cultural orientation to favour youth and commitment to 'younger as better' brings us to our next point which suggests that, unlike other forms of prejudice, ageist attitudes are widely held and accepted in society.

3.3 Wide Social Acceptance

An important point noted by Levy and Banaji, (2002) and also recognised by Nelson, (2002) is that people are relatively free to express ageism against the elderly, somehow it seems 'justified'. In contrast to other social groups, there has been little change in public discourse or recognition of social disadvantage surrounding age (Age UK, 2012). There seems an implicit acceptance over the rights and responsibilities associated with age groups, or the lack of those associated with old age and stereotypes seem to play an important role in justifying age inequalities. Negative attitudes about age seem to be embedded at all levels of society. At the individual level ageism is expressed through behaviour and inter-personal interactions, some researchers have used the term 'interactive ageism' to describe this form of ageism (see Rodeheaver, 1990). It can consist of jokes about old people and growing older, derogatory comments and being patronised. At the societal level ageism can exist through policies and the structural organisation of society in relation to age (see Chapter 2). As the previous section shows, growing up in an inherently ageist society influences our attitudes towards our own age groups as we get older (Levy & Banaji, 2002). Furthermore, internalised negative age attitudes may lead people to express ageist attitudes towards members of their own age groups (Rodeheaver, 1990), and make older people more likely to accept discriminatory practices as a norm, and be less likely to challenge discriminatory behaviour.

3.4 Summary

Age group membership, out-group favouritism and the seemingly wide social acceptance of negative attitudes to age and older people are three aspects of ageism that make it a unique form of prejudice. The relative nature of age categorisation, the meaning of age relative to every context and the fact that negativity seems embedded in society, expressed by younger and older people themselves makes ageism an extremely complex form of prejudice. The multi-dimensional impact of ageism has

implications for how it should be managed in society. Traditional notions of equality may not work when dealing with ageism. Traditionally policy legislation has dealt with inequality along fixed dimensions (group memberships) by suggesting the inequality dimension should be transparent. Take sexism for example, where equality is realised when the person's sex is considered irrelevant to the situation. The same can be said for racism, when we ignore or look past people's ethnicity we hope to achieve this notion of equality, equal opportunity and equal treatment. However, with age we see a different story, a notion of 'agelessness' may not lead to the same 'equality' outcomes as other inequality dimensions.

Chapter 2 and Chapter 3 have explored the existence of ageism in society, how it manifests and what makes it different from other forms of prejudice. The next Chapter explores the psychological basis of ageism. It provides the theoretical review of the literature on the components of ageism and processes at the individual level that contributes to the existence of ageism.

Chapter Four.**Psychological Basis of Ageism****Abstract**

This chapter explores the psychological processes that contribute to the existence of ageism. Many of the aspects explored in this chapter have a strong theoretical basis in social psychology. These include, the way people organise the social world into groups – specifically age groups, how people define themselves and others as belonging to age groups and how people feel about the age they are and the age groups they belong to. Other components of ageism explored are how ageing might be perceived as a threat to the self and how the needs of ageing populations might be perceived as a threat to society. In detail the chapter reviews how older people are represented or stereotyped in society, and how the emotional evaluation associated with stereotypes results in prejudice.



Robert N Bulter first used the term ageism in 1969 to refer to the observation that the young and middle-aged people often have negative and uneasy feelings about older people and about growing old, becoming sick or disabled, becoming powerless and useless. This was the first time that prejudicial attitudes and negativity was associated with older people, old age and the ageing process. Since then a number of definitions of ageism have appeared in the literature, most notably Wilkinson and Ferraro, (2002) refined Bulter's definition by stating that:

Ageism is comprised of three distinguishable but interconnected aspects; 1) prejudicial attitudes towards older persons, and the ageing process, which includes attitudes held by older adults themselves; 2) discriminatory practices against older people; and 3) institutional practices and policies that perpetuate stereotypes of older adults, reduce their opportunity for life satisfaction and undermine their personal dignity (p. 339).

Despite this detailed definition of ageism, some authors and researchers simply focus on one or two aspects of ageism. For instance, some define ageism in terms of the emotional and behavioural components (discrimination) (Wilkinson & Ferraro, 2002); while others focus on the beliefs associated with older people (stereotypes) and the behavioural outcomes (McCann & Giles, 2002). In addition, prejudice is sometimes considered the intergroup attitude itself, and has therefore been described in terms of the tri-partite view of attitude formation. This suggests there are three basic components of attitudes, which comprise of the affective or emotive component, a cognitive component comprising of beliefs and stereotypes about age groups, and finally there is the behavioural component consisting of behaviours or behavioural intentions (Brown, 1995; Breckler, 1984; Eagly & Chaiken, 1993). The purpose of this section is to explore how prejudiced attitudes based on age form within individuals. It introduces components of ageism, these include; how individuals categorise the social world into groups (e.g. age groups), how people feel about the groups they belong to (e.g. identification with social groups), and how social groups are represented (e.g. stereotyped) and discusses how they contribute to ageism.

4.1 Age Categorisation

“It is better to be 70 years young than 40 years old”

- Oliver Wendell Holmes

The life course is segmented by age and is characterised by an age system at two levels. At the individual level people are categorised into age groups, at the structural level, institutions, organisations and policies can be age segregated. Both combine and interact to provide socially shared criteria for defining age groups and also provide meaning, expectations and representations of age groups. For example, the perceived onset of old age may occur when individuals reach a threshold, such as retirement age. Once this threshold is reached, individuals may be labelled ‘old’ or ‘elderly’, however, these labels may have particular meanings that de-value old age. This section explores the psychological basis of age categorisation and how it influences the way people see themselves and others. It will also explore the social norms that define age groups, and how age group labels are given meaning that can result in ageism.

Categorisation is an automatic, natural, cognitive process, which is useful and functional most of the time. It provides order and organisation to our social lives and saves us time and cognitive resources (Fiske & Taylor, 1991). A person’s age is one of the first things we notice about them and alongside their gender and race, it is one of the primary ways we categorise people. However, social categories, once in place can be embedded with meaning that denote status and power, and also form the basis of stereotyping processes and prejudice (Allport, 1954; Fiske & Neuberg, 1990).

Once categorisation occurs, people have a tendency to exaggerate the extent to which members of the same group are similar to one another, but different from other social groups. This is known as the accentuation effect (Tajfel & Wilkes, 1963). Its purpose is to establish and define social categories more clearly, providing the individual with a more organised social world. The problem is that this tendency leads to the homogenisation of age, i.e. the perception that old people are ‘all the same’ (Bytheway, 2005). This exaggerated perception of similarity may result in older people being

stereotyped, as people over generalise characteristics and traits about a social group (Allport, 1954) and are treated all the same, as people assume that older people's needs, likes and dislikes are the same.

Categorisation and stereotyping are heuristic processes; they create shortcuts for understanding others by providing representations, expectations and beliefs about group members (Fiske & Neuberg, 1990). These processes can inform the way we behave towards group members and decisions people make (Schneider, 2004). Although this can be beneficial to individuals and help make life predictable, generalised stereotypes also provide people with a set of assumptions and beliefs about group members that can be harmful when misapplied and when negative provide the basis of prejudicial attitudes (Stangor, Sullivan & Ford, 1991). Section 4.5 explores the contents of age stereotypes in more detail.

The process of categorisation is not only about categorising others, but it is also about categorising the self. By determining the social groups other people belong to, people simultaneously categorise themselves as an in-group member (member of the same social group) or an out-group member (member of a different social group). This process is known as self-categorisation (Turner, et al., 1987) and it also has implications for the way people perceive and treat others and the way people see themselves. For instance, people tend to favour members of their own group compared to members of others; they evaluate them more positively and are more likely to share resources with them (Tajfel & Turner, 1979). Research also suggests that we apply stereotypes of the groups we belong to (in-groups) to ourselves, in order to guide our own behaviour, a process labelled self-stereotyping (Turner et al., 1987). This can be particularly damaging when negative stereotypes, such as those associated with old age define own groups. Indeed, research shows that people conform to these stereotypes, even if they are negative and there is no gain to the individual (Steele, 1997). Therefore, just as stereotypes can harm or enhance members of out-groups, they can also enable or disable our own behaviour when applied to the self through a process of self-categorisation.

Before stereotypes can be applied, individuals have to be perceived as a member of social category or group. But it is important to note that categorisation does not only occur in interpersonal contexts between individuals, but other cues, such as those present in the social environment can activate relevant social identities. For instance, having separate bathroom facilities for males and females, using a student discount card or a pensioners discount card are all situations that provide additional categorisation cues and can trigger self-categorisation processes.

4.1.1 Cues for Age Categorisation

“You know when you’re old when ...you judge a pub by the number of seats”

Many of the social categories that are examined in social psychology are fixed, (e.g. race and sex), but age is continuous with ambiguous boundaries, which have to be decided. Consequently there are many different possible age boundaries that define age groups and there are likely to be a number of individual and contextual influences that determine how people judge another person’s age.

When categorising others, evidence suggests that people use a variety of different cues. Age can be judged by physical features, such as facial cues (Henss, 1991; Muscarella & Cunningham, 1996), and voice cues (Hummert, Mazloff & Henry, 1999) as well as movement, such as walking speed (Montepare & Zebrowitz-McArthur, 1988). However, these judgements are likely to be context dependent; dependent on the individual, the situation and the cultural context. Previous research has shown that one’s own age is an important factor in determining other’s age and age boundaries as people use their own age as a standard of comparison to anchor their judgements. For instance, as people get older they attempt to psychologically distance themselves from ‘old age’ by pushing up boundaries of old age (Abrams et al., 2009), and they often describe and perceive themselves to be younger than they are (Baslevant, 2010). The social role of the individual being judged can also be an important factor. An athlete is more likely to be described as ‘old’ at a much earlier age than other professions. Transitions into old age are also dependent on structural cues, such as entry into retirement.

The labels used to define age categories are also very important. It is also worth noting that terms such as 'old', 'elderly' or 'senior' may have different meanings to different people based on the context and cultural use. In Western society predominately negative stereotypes and low status are associated with 'old age' (Cuddy & Fiske, 2002), however, in Eastern cultures it is associated with high status, and respect for elders is heavily embedded within eastern philosophies (Levy & Langer, 1994). As Bytheway (2005) acknowledges, ageism only has an impact when descriptive words are defined and given meaning. For instance, there is a difference between being ascribed to 'being elderly' rather than 'being aged 60 and over'. One is an unambiguous statement of the criterion for inclusion based on the fact that individuals who belong in this group have all passed a 60th birthday, the other represents a homogenised group of old people, who are expected to possess similar characteristics in terms of the way they look (e.g. grey hair) and the way they behave (e.g. walk slowly). Yet, little research has investigated when and how labels such as young, middle aged and old are applied and who they are applied to. It is important to understand whether there is consensus over where the boundaries of old and young are positioned because it determines who is likely to be vulnerable to negative age stereotypes. Chapter 7 Study 1 investigates these issues of age categorisation.

4.1.2 Multiple Categorisation

Researchers are often interested in how belonging to many social groups combine to influence perceptions of themselves and attitudes towards others. For instance, belonging to more than one social group (e.g. British Asian), is thought to increase perspective taking, creativity, reduce prejudice and discrimination (Crisp & Hewstone, 2006; 2007 for review). Researchers are also interested in how attitudes and stereotypes may vary depending on the social groups the target belongs to and question the extent one category membership, such as age, dominates or combines with other primary categories, such as gender. This section explores how age and gender effect attitudes to age and also how age and gender of a target affects attitudes directed towards it.

The age of the attitude holder and the age of the target the attitude is directed towards is likely to have an impact on the attitude. Research shows that younger participants are more likely to rate

older targets more negatively than older participants rate older targets (Kite, Deaux & Miele, 1991). Younger participants are also more likely to see negative examples of older people as typical of older people, suggesting younger people are more likely to endorse negative age stereotypes (Hummert, Garstka, Shaner & Strahan, 1995; Chasteen, 2000). Research also suggests that, in general, attitudes towards older adults improve with age (Abrams, et al., 2009). Younger respondents are more likely to rate people over 70 as less competent and less moral than older respondents, and are more likely to think people over 70 are viewed with pity (Abrams et al., 2009). Together, these studies demonstrate that the perceiver's age is an important factor in perceptions of older people.

Cultural expectations also define how men and women should behave (Kite, 2001). Eagly and Wood (1999; Eagly, 1987) theorize how biological sex differences influence and underlie gender roles and the division of labour. Despite improvements in gender equality and women's increasing participation in the labour market, traditional gender roles still persist- with women continuing to bear more responsibility for domestic tasks and caring roles (Dixon & Wetherell, 2004). Investigating how age and gender differences combine is particularly important given that caring responsibilities are likely to change depending on age, gender and marital status (DelBono, Sala, & Hancock, 2009).

Brewer's (1981) division of the 'elderly' by gender created sub-categories of old age, which were evaluated differently depending on gender and social roles (see later section on old age stereotypes). One explanation of differences in evaluations of male and female targets is due to the emphasis on the attractiveness of females, which is compromised by the ageing process and therefore should lead to more attractiveness devaluation for females than males. For instance, several studies show that the attractiveness of women reduces much more quickly with age than for men (Henss, 1991; Mathes, Brennan, Haugen & Rice, 1985), this effect is stronger when attractiveness is evaluated by younger people (Deutsch, Zalenski & Clark, 1986).

Other studies have shown that women tend to lose their traditional stereotypic qualities more with age than men do (e.g. O'Connell & Rotter, 1979). For instance, women are perceived to be less feminine as they age, whereas men do not lose masculinity at the same rate (Deutsch, et al., 1986). It

seems then that cultural expectations around age and ageing, are also structured in terms of our cultural expectations that shape ideas about how men and women should behave. Therefore, not only may people evaluate men and women differently as they age, but men and women may have different expectations surrounding age and hold different attitudes to age. To date, little is known about how age and gender differences combine and relate to attitudes to age, therefore these are investigated in Chapter 7, Study 1.

4.1.3 Age Segregation and Contact

Categorisations along dimensions of age are closely linked to ageism by providing distinctions between the self and others or between 'us' and 'them' (Bytheway, 1995). This process of age categorisation and its connection to ageism is often emphasised as an individual level process, operating at the micro level of society. However, Hagestad and Uhlemberg, (2005) contend that this processes is embedded in wider social context because contemporary Western societies are structured according to age. The social structure of societies according to age, particularly age segregation and its influence on the structure of social networks can facilitate ageism in society. Hagestad and Uhlemberg, (2005) argue that the age structure of institutions (e.g. work organisations, education systems) and the spatial structure of age in the home, in neighbourhoods and in leisure spaces, prevents generations from actively engaging with society and can deny older people opportunities to interact with one another and develop cross-age relationships.

The age structure of social networks has particular implications for ageism. The extensive literature on intergroup contact (Pettigrew, 1998; Pettigrew & Tropp, 2006) demonstrates that positive experiences of contact between members of different groups forms the bases of positive attitudes and behaviours between group members, and can therefore, reduce prejudice between group members. Positive personal relationships, most notably friendships, across group boundaries produce more positive attitudes and feelings, and reduce negative stereotyping which are generalised to the out-group as whole. Research shows that older people with closer intergenerational contacts are less vulnerable to negative consequences of age stereotypes, discrimination and social exclusion (Abrams, Eller, & Bryant, 2006). Institutional and spatial age segregation in society may restrict the age range

of people to form social networks with, which in turn prevents opportunities to have meaningful age-cross interactions with others. Accordingly, intergenerational friendships are an important indicator of a group's risk to discrimination or social exclusion, and are explored in Study 1, Chapter 7.

4.2 Age as an Identity

So far this chapter has discussed how the organisation of the social world into categories and groups is beneficial by helping to organise the social world, but belonging to groups can be beneficial to individuals in another way- because they provide a sense of 'self'. According to social identity theory (SIT; Tajfel & Turner, 1985) our self-image and self-concept (how we define who we are) involves both personal and interpersonal aspects of identity (e.g. personality, values, social roles) and social identities are derived from groups an individual belongs to (Brewer & Gardner, 1996; Tajfel & Turner, 2001). Therefore, our self-image and related self-esteem are dependent on the groups we belong to and identify with. Being a member of a social group enables individuals to establish and maintain a satisfactory sense of self. The extent to which people identify with an age group is called age identification.

Social identification can be beneficial to individuals but can also have negative consequences. SIT states that individuals have a desire to belong to positively valued and distinct social groups. This motivation to acquire and maintain a positive identity can lead to derogation and discrimination against other groups. People make social comparisons between their own group and other groups in order to determine the extent to which their own group provides them with a distinct and positive social identity. Chapter 8, Study 3 investigates the effects of social comparisons on older adults performance. It specifically tests the extent to which older people's performance can be boosted by positive social comparison with younger people and hindered by a negative social comparison with younger people.

SIT stresses the importance of inclusion for well-being and predicts that exclusion or rejection in the form of prejudice can be harmful to individuals (Tajfel & Turner, 1985). Many suggest that experiencing prejudice damages the self-esteem of its targets. As Crocker and Major (1989) have

pointed out, those who recognise that their social group is evaluated negatively by others are likely to internalise that negative evaluation and have lower self-esteem. Accordingly, the self-esteem of stigmatised, devalued group members should be lower than dominant group members. However, Crocker and Major (1989) also observe that this is rarely the case. They suggest that members of stigmatised groups are able to maintain levels of self-esteem by attributing negative outcomes to prejudice, devaluing performance dimensions and using the in-group for comparisons and not the out-group.

SIT suggests that recognition of prejudice against one's in-group will lead to increased identification with the in-group, driven by a need to feel that they belong and gain some form of acceptance, and many studies have supported this using many different minority groups (e.g. Chavira & Phinney, 1991; Cozzarelli & Karafa, 1998; see Branscombe, Schmitt & Harvey for review 1999). In line with this, the rejection identification model was proposed by Branscombe et al., (1999), to explain how the well-being of stigmatised minority group members can be maintained. It suggest that attributions of prejudice positively influences identification to the minority group, and that identification has a positive impact on well-being. In this way, recognition of prejudice and exclusion from dominant groups can have an indirect, positive impact on well-being through enhanced identification and self-esteem with minority group membership.

In this way, social identification can protect minority and stigmatised group members from rejection from dominant, mainstream social groups. Without a minority group membership to provide self-esteem and fulfil the need to belong, attributions of prejudice would be harmful to individual's well-being. Further support for this model was found when comparing how younger adults (mean age 18.8 years) and older adults (mean age 75 years) respond to perceived age discrimination. In accordance with the rejection-identification model, the authors suggest that for older adults perceived age discrimination would be harmful to well-being, but that age group identification should partially alleviate the negative impact of age discrimination on well-being. This was confirmed for older adults only because their low status age group membership is permanent, but not for younger adults, whose low status is temporary. This demonstrates the buffering effect social identity and importantly for this

thesis, it demonstrates the importance of age identity has for older adults, in being able to partially protecting them from negative consequences of perceived age discrimination. Additional research has shown that age identification increases from mid- to later life, further suggesting that age group identification becomes more important to individuals in later life (Abrams et al., 2009).

4.3 Older People Perceived as a Threat

The segmentation of the life course into education, beginning a family, work and retirement has the potential to frame people's evaluations of groups in terms of their needs and influence perceptions of interdependence between different age groups (Hagestad & Uhlenburg, 2005). Perceived age-based differences in the needs of particular groups throughout the life course may lead people to feel that certain groups pose certain threats. When researching inter-ethnic prejudice, Stephen and Stephen (2000) suggested social groups pose three types of threat, realistic threat, symbolic threat and economic threat. Realistic threat refers to concerns about safety, security and health. Symbolic threat refers to a threat to people's cultural values and way of life and finally there is the threat social groups pose to the economy. Theories of prejudice and stereotyping suggest that perceptions of threat can inform prejudice and contribute to intergroup anxiety and tensions between social groups (Riek, Ania & Gaertner, 2006).

Recent survey findings show that older people are perceived as posing greater economic threat than either material or symbolic threat. Nearly a quarter of respondents believed that people over 70 take out more from the economy than they have put in. This finding was qualified by respondents age, such that younger respondents (those who perceived the old age stereotype more strongly) perceived people over 70 as posing more threat economically, materially and symbolically than did older respondents (Abrams et al., 2009). It seems logical to assume that perceptions of economic threat and interdependence between generations could impact upon support for government policy and strategies set to deal with ageing populations, therefore, this aspect of threat is investigated further in Study 1, Chapter 7.

4.4 Fear of Ageing

Ageism has been described as a form of prejudice against our feared future selves (Nelson, 2005) because ageing can threaten feelings of our own mortality. Terror Management Theory (TMT; Greenberg, Pyszczynski & Solomon, 1986; Solomon, Greenberg & Pyszczynski, 1991) provides a unique insight into the development of ageist attitudes and behaviours. TMT suggests that thoughts of our own mortality can be threatening to the human psyche, in order to defend against this threat and buffer the anxiety caused by mortality salience, society and culture imposes order and meaning on to the world. Self-esteem becomes a fundamental buffer helping people to deny threats of mortality. The TMT perspective on ageism proposes that because older people serve as reminders of death, individuals may adopt ageist attitudes and behaviours in order to psychologically distance themselves from threats posed by 'growing old' (Marten, Goldenberg & Greenberg, 2005). Therefore, TMT contends that mortality concerns do play a role in negative attitudes towards older adults, these negative attitudes have been shown to stem from concerns about the similarity between the ageing and the aged (Martens, Greenberg, Schimel & Landau, 2004). It may be a factor in why people avoid contact, exclude or isolate older adults.

4.5 Old Age Stereotypes

Research on stereotypes and the stereotyping processes is well established in social psychology. To date, research has studied stereotypes about several different social categories, including, gender, different ethnic, national groups and older people. It is important to understand stereotypes about social groups, because they convey what people think about others and how people might think about themselves (Strangor, 2000). The expression of stereotypes can often translate into negativity and hostility between groups in society, and have a direct bearing on prejudice and discrimination (Stangor, Sullivan & Ford, 1991). Social psychological research shows that prejudice can take different forms depending on how the groups are stereotyped. This section introduces stereotypes in more detail and how they inform expressions of prejudice.

The term 'stereotype' was acquired from its origins in printing by Lippman (1922) to refer to the way the same mental images of categories or types of people can be reproduced in our minds.

Accordingly stereotypes were first defined as ‘pictures in our heads’ (Lippman, 1922 pg.4). Since then, many authors have formulated definitions and characterised the concepts of stereotypes and stereotyping. Already in this thesis stereotypes have been referred to as ‘generalisations of group characteristics (Allport, 1954), or the ‘contents of categories’ (Gaertner & Dovidio, 1986). However, for this review we adopt the general definition by Garcia- Marques and Garcia- Marques (2003) that stereotypes are:

“Cognitive representations about human groups and social categories, frequently socially shared. These representations are frequently linked with value or strong emotional associations that, when they are negative, define prejudice” (p.11).

The next two sections explores this definition in relation to age stereotypes. The term ‘age stereotype’ can be used to refer to stereotypes about any age group. However, unless otherwise specified for this thesis, age stereotypes refer to the cognitive and evaluative associations with old age and older people. The next section looks at the content of age stereotypes, in other words how older people are ‘represented’ in the minds of perceivers. Then it looks at the evaluative, value and emotional dimensions associated with representations of older people, which are linked to prejudice. Finally, the idea that stereotypes are frequently socially shared is addressed.

4.5.1 Cognitive Contents of Age Stereotypes

Many contemporary researchers contend that stereotypes are cognitive representations about human groups or social categories (Dovidio, Brigham, Johnson & Gaertner, 1996; Hilton & von Hippel, 1996). Schneider (2004) summarises stereotypes as knowledge structures, organised in memory or the associations between several different types of attributes and traits of a category. Because stereotypes are organised in memory they can influence attention and the way information is encoded, stored and retrieved. For instance, once formed stereotypes tend to bias perception towards stereotype-consistent information, which is more easily encoded, (Cohen, 1981) and re-called (Gaertner & McLaughlin, (1983).

It is important to note that stereotypes can refer to wide range of social categories that vary in perceived entitativity and group size. Entitativity, sometimes known as the 'groupiness' of a group, is the degree to which individuals are perceived as belonging to a unified group. It is often, but not always, associated with the size of a particular group. Broad social groups, such as age, gender and nationality are low in entitativity, whereas smaller groups, such as a family, may be perceived as high in entitativity (Schneider, 2004). Even very large groups, such as older people, may be stereotyped on a few key attributes. The attributes that form the basis of stereotypes can comprise of many different types. The stereotype of older people include traits (e.g. grumpy), physical features (e.g. grey hair, wrinkles) behaviours (e.g. walks slowly), and social roles (e.g. grandparent).

Studies examining old age stereotypes contend the following traits are negatively associated with old age and older people; complaining, grumpy, confused, stubborn, senile, cranky, dependent, depressed, feeble, vulnerable. Physically older people are seen as brittle, fragile, inflexible, rigid and sedentary. They are expected to be forgetful, sick, tired, incompetent, incapable, slow and lonely. It is important to note that old age is characterised by both negative and positive attributes. Research contends the following traits are positively associated with old age and old people; kind, friendly, warm, patient, loving, wise, sociable, moral, generous, experienced, knowledgeable, independent and understanding. Some are seen as physically active and alert, and are perceived to be well accomplished, dignified, distinguished, be insightful, interesting, knowledgeable and successful (Baltes & Staudinger, 1993; Bargh, Chen & Burrows, 1996; Fiske, Cuddy, Glick and Xu, 2002; Hess, Hinson & Statham, 2004; Hummert et al., 1994; Levy, 1996).

The idea that old age has positive and negative connotations is not a new one. In fact Brewer, Dull and Lui (1981) suggest that there is not one single image or prototype associated with old age or older people, in fact the representation of the category elderly includes many sub-categories that vary in positivity and negativity depending on their perceived role in society. In their study, Brewer et al., (1981) defined a priori three subcategories of old people: the grandmother, representing a family-oriented older woman; the 'elder statesman' representing the image of a respected, high status and distinguished conservative elderly man and the senior citizen, representing the isolated, inactive

elderly person likely to be in residential care home. College students were asked to sort photographs, traits and statements representing each sub-group into categories that could be grouped together. As expected, participants were able to sort the photos and associate relevant traits consistent with each sub-group. This demonstrates that these are meaningful sub-categories of a larger super-ordinate category of 'elderly'. Each sub-category has associated distinctive physical, personality and behavioural characteristics, which can be evaluated positively or negatively.

Additional work by Hummert et al., (1994) has also found strong support for the mixed representation of older adults. In addition, they found age differences in the amount of stereotypes generated to describe older adults. Young, middle-aged and old adults were asked to generate traits descriptive of old people. Generally, older participants were able to generate more complex stereotypes than younger participants. However, seven shared stereotypes emerged from all three age groups; four were negative (severely impaired, shrew, despondent and recluse) and three were positive (conservative, golden ager and grandfather). In line with previous research showing that the most negative stereotypes of older people tend to be seen as characteristic of the very old (over 80 years) than of younger older people (Hummert, 1990), a further study revealed that sub-groups perceived to be older, were also viewed more negatively (Hummert, Garstka & Shaner, 1997).

In sum both positive and negative attributes define old age. These attributes are a mixture of traits, behaviours, physical features and social roles. It seems that age is associated with different traits, depending on the context, such as the setting where the older person is observed or the role they have (e.g. at work, looking after family), as well as the domain of evaluation (e.g. memory, performance). This demonstrates that age stereotypes are context dependent. The next section explores the implications of the evaluative and value dimensions attached to stereotype characteristics and how they relate to prejudice.

4.5.2 Evaluative Dimensions of Age Stereotypes

Several researchers have acknowledged that stereotypes have descriptive and evaluative dimensions (Eagly & Mladinic, 1989; Esses, Haddock & Zanna, 1993). The addition of the

evaluative or 'affective' component has consequences for the expression of prejudice. Earlier prejudice was described as the 'bias that devalues people because of their perceived group membership' (Abrams, 2010). It is important to reiterate at this point that prejudice has been conceptualised in many different ways. For instance, Fiske (1998) describes stereotypes as the beliefs we have about people based upon a category membership, whereas prejudice is a set of affective reactions towards a group and its individual group members. Other researchers assume that prejudice itself is the intergroup attitude and conceptualise it under the tripartite view of attitude formation. Effectively, this suggests that prejudice is constructed by three components; beliefs (stereotypes), feelings (affect) and behaviour (discrimination) (Brown, 1995; Breckler, 1984). Although these conceptions feel relatively distinct, they are actually interconnected and quite hard to differentiate (Dovidio et al., 1996). For instance, the activation of a social category leads to the activation of stereotypes, where both cognitive information and affective information, such as preferences, evaluations, moods and emotions can be retrieved (Fiske & Pavelchak, 1986; Fiske & Taylor, 1991).

Although there are some issues regarding the relationship between the different concepts, many contend that it is the negative valence associated with stereotypic traits that form the basis of prejudice (Garcia-Marques & Garcia-Marques, 2003). However, positive and negative evaluations can combine to inform different forms of prejudice. For example, research on sexism has shown that it has distinct components characterised by traditional 'hostile' negative attitudes, but also by 'benevolent' attitudes, which are characterised by less negative, sometimes positive ideals, such as, women should be valued, cherished or put on a pedestal. This idea informs a more general theory of how groups are stereotyped, known as the stereotype content model (SCM; Fiske, Cuddy, Glick and Xu, 2002).

The SCM argues that stereotypes about groups (all social groups, not just older adults) are evaluated along two dimensions of competence and warmth which are influenced by perceptions of the group's relative status and potential to compete with the in-group over resources. Groups that are viewed as high in competence but low in warmth are more likely to be viewed with envy and dislike, which is likely to be expressed directly in the form of hostility. Groups evaluated in this way are

likely to be seen as direct competition for resources, such as jobs, one example are foreign migrants. Groups that are perceived as high in warmth but low in competence are often viewed with pity, which is likely to lead to more benevolent or patronising form of prejudice. Groups evaluated in this way are less likely to be seen as competition, or a threat to resources. Evaluations of high warmth and competence are usually reserved for the in-group.

Older people are predominately evaluated as ‘dodderly but dear’, this is a stereotype with mixed content, falling high on one dimension but low on another. They are evaluated ‘benevolently’ as warm (positive) but incompetent (negative) because elderly people are seen as powerless, relatively low status and not competing for mainstream resources (Fiske et al., 2002). Sub-categories of older people can also be evaluated along these dimensions of competence and warmth. According to Cuddy and Fiske, (2002) the grandmother most closely mirrors the incompetence and warm categorisation reflected in feelings of pity because grandmothers are considered nurturing but ineffectual. The senior citizen lacks both competence and warmth due to perceived laziness, whilst the elder statesmen are seen as competent but cold reflecting feelings of respect. This demonstrates that although generally older people are evaluated as ‘dodderly but dear’, contextual information provided by social roles can influence evaluations of older people.

So, what’s the general consensus? Are old age stereotypes positive or negative?

The belief that competence declines with age appears widespread in Western society, despite the fact that research has failed to establish linear links between ageing and declining health and capability (Abrams, Hogg & Marques, 2005; Bowling, 2005; Blanchard-fields, Chen & Norris, 1997; Sidell, 1995). Evidence from the UK demonstrates this stereotype is prevalent when considering people over 70, especially when contextualised against evaluations of people under the age of 30 (Abrams et al., 2009; 2011). Kite and Johnson (1988) investigated the combined effect of 43 studies investigating attitudes towards older and younger adults in a meta-analysis, and found that attitudes towards older adults were more negative than those towards younger adults. A follow up meta-analysis, conducted in 2005, of 232 studies demonstrated that older adults are perceived as less

competent, evaluated less favourably and treated more negatively than younger adults (Kite, Stockdale, Whitley, & Johnson, 2005). Even 'younger' older people are seen in a more positive light than 'older' older adults (Kite et al., 2005). Moreover, a meta-analysis investigating the strength of positive and negative age stereotypes on a range of outcomes, found the effect of negative age stereotypes to be 3 times larger than the effect of positive age stereotypes (Meisner, 2012). This suggests that perhaps negative age stereotypes are more salient. It seems then, that in Western countries, the general consensus is that negative age stereotypes prevail over positive (Bulter, 1980; Kite & Johnson, 1988; Kite et al., 2005).

The evidence reviewed suggests that representations of old people are relatively mixed. Evidence shows there are both negative and positive traits surrounding old people, these connect to different typologies and sub-categories of old people. Most notably the SCM provides a framework that encompasses these findings and suggests that the content of stereotypes fall along evaluative dimensions of competence and warmth. This research from Cuddy and Fiske (2002) supports earlier research (Brewer et al., 1981; Hummert, 1990; Kite & Johnson, 1988) demonstrating that people have multiple, often contradictory views of older people. However, the SCM shows how the positive and negative stereotype dimensions relate to one another by arguing that sub-groups of older adults are associated with different evaluations of competence and warmth predicted by perceptions of status and competition. In sum, stereotypes not only involve the associations between social categories and characteristics, they are also linked with value dimension, together these inform the type of prejudice expressed.

4.5.3 The Function of Age Stereotypes

Stereotypes have several functions at different levels (e.g. Hilton & von Hippel, 1996; Jost & Hamilton, 2005; Schneider, 2004). This section explores these functions at three levels, for individuals, groups and for wider society. For individuals, stereotypes serve a heuristic function. They are cognitive shortcuts for individuals, reflecting people's need to organise, remember and retrieve information about others (Brislin, 1993). As Allport (1954) observed, one way people organise the social world is to categorise themselves and others into groups. This categorisation forms the basis of

stereotyping processes, resulting in generalisations about groups, through the tendency to perceive out-groups members as more similar and 'homogeneous' than in-group members (Ostrom & Sedikides, 1992). This homogeneity effect has been explained by several factors, such as in-group members having more contact with other in-group members and therefore more diverse range of experiences to process, store and recall (Park, Judd & Ryan, 1991). However, it is also thought to serve the function of enhancing group cohesion and increasing solidarity between in-group members (Brown, 2000).

Aside from the heuristic function of stereotypes of maximising cognitive efficiency, Allport (1954) also noted that stereotypes have a 'justifying' function serving to psychologically justify both the acceptance and rejection of individuals or groups and justifying differences in social status and social inequalities. Building on this idea, system justification theory proposed by Jost and colleagues (SJT: Jost & Hamilton, 2005; Jost & Thompson, 2000; for review see Jost, Banaji & Nosek, 2004) suggests that people have a psychological need to legitimise social systems, which divide people along lines of status, power, prestige and economic privilege, in order to see these social systems as good and fair. Quite simply people feel more comfortable believing that high status people have done something to earn their status, similarly people tend to believe that those who are less fortunate have deserved their fate (Lerner, 1980). People are also motivated to uphold the status quo even at a sacrifice to individual or collective esteem (Jost & Thompson, 2000). According to SJT stereotypes function as a way of explaining status differences. Both favourable and unfavourable stereotypes tend to legitimise social hierarchical systems (Jost & Hamilton, 2005). Research shows that younger and middle aged adults are more motivated to endorse negative age stereotypes to justify behaviours and practices that allow younger people to profit (Levy, 2009). Furthermore, research shows that people who do discriminate often use stereotypes to justify their behaviour (Rutland & Brown, 2001). In this way, individuals not only maintain the social status of groups but also cultural values embedded within a society.

System justification needs are also acknowledged by the SCM. For instance, dominant groups viewed as higher status are perceived to be more competent. However, cooperative subordinate

groups, such as older people, are perceived to be more warm. This mixed stereotype content maintains the advantage of the more dominant privileged group.

In sum, stereotypes seem to have three main roles that serve individuals, groups and wider society. The cognitive function of stereotypes allow individuals to navigate the complex social world, they provide a shared sense of meaning and reality and they also have a justification function which serves to maintain the existing social, political and economic structures within a given society.

4.6 Summary

Being part of a society renders individuals a shared knowledge of cultural stereotypes associated with different age groups. In this way, stereotypes help consolidate a view of reality and support existing social systems. There is high consensus that there are positive and negative aspects to the old age stereotype. These aspects are associated accordingly with the different roles we perceive exist for older people. The SCM captures the idea that we often see older people in a negative, but favourable manner by demonstrating that groups are evaluated on dimensions of competence and warmth depending on their relative status and competition for resources. Our feelings towards older people are often mixed and involve negative evaluations of competence (incompetence) and positive evaluations of warmth (friendliness). Although there are positive aspects of old age, our attitudes towards old age and older adults are more negative than our attitudes towards younger people.

Chapter 7 Study 1 investigates some of the core aspects of people's attitudes to age in the UK which include perceptions of older adults (over 70) as competent and warm. It explores how people categorise old people, in order to establish who might be vulnerable to age stereotypes and provides background into the extent to which people experience age discrimination. Study 2, in Chapter 8, investigates stereotypes about older adults in more detail by exploring specific domains of competence associated with older adults. Chapter 10 investigates perceptions of older adults as fearful of crime is introduced in the next section on the consequences of age stereotypes. The next section

explores research that investigates the impact of age stereotypes and shows how stereotypes have an important regulatory role, guiding the way people perceive and behave towards one another.

Chapter Five. Consequences of Age Stereotypes for Individuals**Abstract**

This chapter reviews the literature on the consequences of stereotypes for individuals. Given the broad scope of these topics, the review will focus on research using age stereotypes. The first part reviews the main theories and approaches regarding the effects of stereotypes on targets, these are stereotype priming and stereotype threat. Research investigating the impact of age discrimination on well-being is also explored. The second part reviews the impact of age stereotypes on non-targets, e.g. those for whom the stereotype is not relevant to the self. This section reviews longitudinal research demonstrating detrimental impacts of negative age stereotypes on people as they age, it also introduces the idea that older people may benefit from social comparisons based on positive age stereotypes.

Unlike stereotypes that define other social groups, age stereotypes have the potential to be self-relevant for everyone who lives long enough. Therefore, it is important to understand the consequences of age stereotypes and their effects. Research into the effects of stereotypes generally addresses two fundamental questions; how stereotypes affect the targets of stereotypes, in other words the consequences of self-relevant stereotypes (e.g. Steele & Aronson, 1995; Ambady, Paik, Steele, Owen-Smith & Mitchell, 2004), and how stereotypes effect our perceptions of others (e.g. their influence on impression formation Gaertner & Dovidio, 1986), and behaviour towards members of other groups (e.g. discrimination).

According to Swim and Strangor (1998), consequences of stereotypes for targets (for whom the stereotype is relevant to the self) are relatively under researched. Little attention is paid to self-stereotyping processes, and how, once learnt, self-relevant stereotypes influence individuals. The focus tends to be on how stereotypes inform prejudice behaviours towards others. Therefore, the majority of research seems to be on those who hold the prejudice or stigmatizing attitudes, rather than the stereotyped or stigmatized themselves (e.g. Jones et al., 1984; Swim & Strangor, 1998). This chapter reviews the consequences of age stereotypes for targets and non-targets.

5.1 Consequences of Age Stereotypes for Targets

“Act your age, not your shoe size”

This section explores self-stereotyping processes in relation to age and how self-relevant age stereotypes influence individuals within three domains; social, psychological and behavioural consequences. Self-stereotyping is the application of stereotypes about a particular social group the individual belongs to, to the self. Within self-categorisation theory (Turner, Hogg, Oakes, Reicher, & Wetherell, 1987), self-stereotyping involves perceiving oneself as a member of a group and consequently behaving in line with the activated social identity and stereotypical or group normative behaviour (e.g. Hardie & McMurray, 1992; Lorenzi-Cioldi, 1991; Simon & Hamilton, 1994; Turner et al., 1987; see, Biernat, Vescio & Green, 1996).

Self-stereotyping is assumed to occur on any dimension believed to be associated with the categorisation (Hogg & Abrams, 1988). In order for self-stereotyping to occur, people have to learn and be aware of the stereotypes associated to the self. Stereotypes are usually acquired through process of internalisation, this is the incorporation of societal views, in this case stereotypes, into the self-concept. First, people become aware of age stereotypes, either through social context (e.g. culture, family) or the environment (e.g. media images, policies). Research on age stereotypes suggests that people tend to endorse beliefs about older people when they are young, then with age, people come to believe these stereotypes are true about themselves (e.g. Levy, 2009). Indeed, the level of agreement to the self-stereotype statement 'as people get older they become less competent' increases with age, with 20% of those aged between 35 and 44 agreeing with the statement compared to 43% of those aged 75 (Ray, Sharpe, & Abrams, 2006). Older people themselves view ill health and old age as strongly linked (Blanchard-Fields, Chen & Norris, 1997; Sidell, 1995). This demonstrates that older people are able to identify and endorse age stereotypes.

This section reviews research from two contemporary approaches investigating the impact of these stereotypes on older people. The stereotype priming approach and the stereotype threat approach have contributed to understanding the processes involved in stereotype activation and on numerous outcomes. With regards to stereotype priming, emphasis is given to research by Levy and colleagues, which specifically explores effects of activating self-relevant old age stereotypes (i.e. self-stereotyping). The research shows how activated stereotypes can guide responses and behaviours. This approach is often described as the 'cold' information processing approach as the activation of the stereotype is usually implicit, below the level of conscious awareness, and therefore, the effects are described as 'automatic'. Bargh (1989; 1994) defined an automatic effect as having the following features: First, it is unintentional and uncontrollable. Second, it occurs outside of conscious awareness and lastly, it is efficient in the sense that it uses little cognitive effort or resources. In this way, stereotype priming reflects cold cognitive processes and the research is a powerful demonstration of self-stereotyping effects operating below the level of conscious awareness. Next the stereotype threat approach is reviewed. This is described as the 'warmer' approach to activating stereotypes, because it

involves motivational processes and goals (Schwartz, 1998; Sorrentino & Higgins, 1986; Fiske & Taylor, 1991; see Wheeler & Petty, 2001 for review).

5.1.1 Stereotype Priming

Studies that explore the automatic effects of stereotypes use a priming technique. These studies examine the effects of temporarily activating stereotypes on a range of outcomes and dependent measures. Specifically stereotype priming refers to the “incidental activation of knowledge structures, such as trait concepts and stereotypes, by the current situational context” (Bargh & Barndollar, 1996, p.230). The idea is that priming a social category leads to stereotype activation. Stereotype activation is operationalised as the increased accessibility of attributes or traits that are believed to characterise a social group (Wheeler & Petty, 2001).

A number of priming techniques have been developed within the socio-cognitive field, for instance, there is conceptual priming, mindset priming or sequential priming. Priming has also been developed at different levels of awareness (e.g., subliminal priming and supraliminal priming (see Bargh & Chartrand, 2000, for review). Typically researchers exploring the contents of stereotypes present a participant with a category label or characteristic associated with the stereotype, this can be a verbal label, or can be represented visually with an image (Hummert, Garstka, & Shaner, 1997). These are presented subliminally to a participant usually on a computer. After the stimulus, participants are presented with descriptive words, which participants have to react to. The idea is that participants will react quicker to words which are related to the stereotype or category label being primed, because they are associated in memory and therefore activated by the prime (Dijksterhuis & Bargh, 2001). This type of research has shown that priming stereotypes or social categories increases participant’s access to its contents (e.g. Banaji & Hardin, 1996; Dijksterhuis & van Kippenberg, 1996; Dovidio, Evans & Tyler, 1986).

To date relatively few studies have examined implicit activation of self- stereotypes effects on older adults. Those that have studied the activation of age stereotypes have investigated behavioural outcomes in four research domains; a) memory and cognitive performance (i.e. free word recall,

visual-spatial, learned, and delayed recall, auditory recall, match-pairing and meta-memory) (Hess et al., 2003; Levy, 1996; Stein, Blanchard-Fields & Hertzog, 2002), b) the physical functioning (i.e. motor skills, as well as characteristics of handwriting Hausdorff, Levy & Wei, 1999; Levy, 2000), c) physiological domain (i.e. blood pressure, skin conductance and heart rate Levy, Hausdorff, Hencke, & Wei, 2000); and d) health behaviours and decision making e.g. Levy, Ashman & Dror (1999-2000). The research in each of these domains is explored in turn.

Age stereotypes, memory and cognitive performance. Exposure to age stereotypes influences older adult's memory performance (Levy, 1996). In this study older participants (mean age of 73 years) were subliminally exposed to either 12 negative or 12 positive age stereotypes traits that describe older adults. The study explored changes in older adult's performance on five different memory tests which were administered before and after the priming phase. In line with the stereotype that memory ability declines with age, those exposed to the negative prime showed a decrease in memory performance, while those exposed to the positive prime showed an increase in memory performance (Levy, 1996). A second study by Levy (1996) showed that this was an implicit self-stereotyping effect by demonstrating that the positive and negative age primes did not have an effect on younger participants (mean age 26 years) for whom the age stereotypes are not self-relevant.

In an extension of this work Stein et al., (2002) subliminally primed 60 younger (mean age 20 years) and 60 older adults (mean age 70 years) with positive age, negative age or neutral primes. In support of Levy's (1996) results, the study showed that negative age stereotypes undermined older participant's performance in a memory task when participants were completely unaware of the primes. Again, there was no effect of the age primes on the younger participants. However, contrary to Levy's findings, priming a positive age stereotype did not increase memory performance.

These studies suggest some important boundary conditions on stereotype priming, such as the role of self-relevance, in the sense that the primes did not work on younger participants for whom the stereotype was not relevant, and awareness. In Stein et al., (2002) the effect of the negative prime was only present when participants who had recognised a prime were excluded, this was some 40% of

older adults in the positive prime condition, 55% in the negative and 65% in the neutral prime condition. Nevertheless, the studies show that implicitly activating age stereotypes can influence memory performance.

Following the work of Levy (1996) and Stein et al., (2002), Hess, Hinson & Statham, (2004) investigated the moderating role of age and awareness on the impact of positive and negative age primes on memory performance, but this time varying the priming technique. In two studies using two different priming techniques, the authors show that age difference in memory were greatest following implicit negative primes, with older adults performing worse than younger adults. Again the effect of prime valance (positive or negative) on memory performance was only present for older adults, and not for younger participants.

In study one the priming procedure followed that of Bargh's (1996) scrambled sentence task, whereby participants have to make a meaningful sentence out of 5 randomly ordered words. There were 30 sets of 5 words, in the negative stereotype activation condition 20 sets of the words contained a word reflecting negative stereotypes about ageing (e.g. confused, dependent, incompetent, and lonely). In the positive stereotype activation condition 20 sets of the words contained a word corresponding to positive views about ageing (e.g. active, experience, knowledgeable, wise, distinguished). The remaining 10 sets of words had no semantic association to age. Awareness was manipulated by highlighting the words associated with age in yellow.

In study two the priming procedure followed that of Levy (1996) and Stein et al., (2002) where participants are exposed to positive or negative age primes embedded within a lexical decision task, which requires participants to recognise strings of letters as 'words' or 'non-words'. In the unaware condition the age primes were presented below the level of recognition, as identified for each participant in a pre-test. In the aware condition the age primes were presented so participants were able to consciously perceive the stimuli. In a subtle extension of Levy's (1996) and Stein's et al., (2002) procedure, the subsequent memory test was deliberately labelled as a test diagnostic of memory ability. The idea was to see whether this subtle labelling manipulation strengthens age

differences in memory performance in accordance with stereotype threat theory, which is a more explicit activation of stereotypes and social identity (Steele, 1997, see next section 5.1.2 for review of stereotype threat).

In accordance with the first experiment, older adults performed worse after implicit exposure to negative primes compared to positive primes. In the implicit prime condition, older adults memory performance differed from younger participants after exposure to negative primes, with older adults performance significantly lower than younger adults. In the 'awareness' condition, a main effect of age group emerged with older participants performing considerably worse than younger participants. For younger participants there was no effect of awareness or prime valance, recall performance remained stable throughout conditions. This demonstrates that age stereotypes impact negatively on older people's cognitive and memory performance while younger participants are not affected. Together these studies demonstrate that older adults are disadvantaged in memory and cognitive performance tasks after implicit exposure to negative age stereotypes.

Age stereotypes and physical functioning. Exposure to age stereotypes influences physical functioning in older adults. Hausdorff et al., (1999) tested the hypothesis that age-associated decline in physical functioning, particularly walking, is influenced by ageism and negative age-stereotypes. The authors argue that reinforcing positive age stereotypes through subliminal exposure can temporarily reverse these changes and improve speed and decrease dependency on walking aids. Significant increases in walking speed and the time spent with one foot in the air during walking (also known as percent swing time or stride length) were observed for participants who were subliminally exposed to positive age stereotypes. Those exposed to the negative age-stereotypes showed no change.

In another study, Levy (2000) examined whether age stereotypes can influence older adults handwriting, another motor skill thought to operate automatically. Handwriting samples were collected from older adults (mean age 71 years) before and after they were randomly assigned to either a positive or negative age stereotype prime condition. The handwriting of those exposed to the

negative age primes was deemed to be significantly older and more 'deteriorated', 'senile' and 'shaky' than the handwriting of those exposed to the positive age prime.

Together, these studies provide evidence for a perception-behavioural link that is an association between a social category with physical behaviours and actions (Bargh, Chen & Burrows, 1996). Importantly, this suggests that ageing stereotypes can have a physical impact on older people, although evidence is scarce. The section on consequences of age stereotypes on non-targets looks at further evidence for how age stereotypes may negatively impact on the behaviour of those for whom the stereotype is not self-relevant (i.e. younger people).

Physiological response to age stereotypes. Exposure to negative age stereotypes is stressful, whereas exposure to positive age stereotype can buffer against stress. In this study by Levy et al., (2000) older adults were subliminally exposed to either negative or positive ageing stereotypes before being presented with mathematic and verbal challenges. Those presented with negative ageing stereotypes had heightened cardiovascular responses, a response associated with stress, compared to those who were exposed to the positive ageing stereotypes. This demonstrates the capacity for age stereotypes to impact upon already stressful situations, such as a test situation. Negative age stereotypes intensify the cardiovascular response to stress and appear to act as direct stressors, whereas positive age stereotypes seem to buffer against stressful situations by reducing the cardiovascular response. The authors argue they can reduce the cardiovascular response to stress. However, this study has some limitations. The effect of the positive and negative stereotype on participant's cardiovascular response is hard to determine without a base line condition or a control group where no stereotype is activated. Next we present evidence that implicit priming can also influence older adult's decision making.

Age stereotypes, health behaviour and decision making. In one of their most notable studies, Levy et al., (1999-2000) investigated whether stereotypes of ageing might affect decisions the elderly make about when they die. Thirty two older adults aged between 61 and 85 were recruited alongside 32 younger adults aged between 18 and 35. Participants were either primed with positive

age-related words or negative age-related words, and then completed the Will to Live questionnaire. The Will to Live questionnaire comprises of six scenarios that depict participants as having a hypothetical life threatening disease and involve cost and benefit ratios of having treatment. Participants answered the extent to which they would be accepting of the treatment on a 1-7 Likert scale. Following this participants were asked to describe the first five words or phrases that came to mind when thinking of an old person.

The results demonstrated the priming intervention only influenced the old but not the young participants' Will to Live scores. For the older participants, those primed with the positive age stereotypes were more likely, or willing to seek preventative treatment than those primed with the negative age stereotypes. These results were consistent regardless of whether participants were religious, as religiosity did not differ between conditions, and regardless of the older person's views on ageing. The analyses also controlled for level of education and self-rated health (the latter two were entered as covariates). This research shows that subliminal priming of positive age stereotypes can influence participant's decisions about whether to seek life prolonging treatment.

However, the fact that there is no control condition in this study makes it unclear whether exposure to negative age primes reduced Will to Live scores, or whether exposure to positive age stereotypes improved willingness to engage in preventative treatments. The authors argue that due to the prevailing negativity of the age stereotype, the effect is driven by exposure to the positive age stereotypes boosting Will to Live, effectively suggesting the negative stereotype condition is the 'norm', equivalent to normal everyday situations. Despite this, what is important about the study is that it shows that Will to Live, a personal decision, is also influenced by stereotypes that exist within society.

Together the studies reviewed under the stereotype priming approach show that implicit priming of age stereotypes has effects on outcomes in four important domains for older adults including, memory and cognitive performance, physical functioning, physiological responses and decisions about health behaviours. Many of the studies reviewed did not find effects of activating age

stereotypes on younger participants. It is worth noting that these studies contradict research demonstrating effects of stereotypes that are not relevant to the self (e.g. Bargh, Chen & Burrows, 1996, Dijksterhuis, Aarts, Bargh, & van Kippenberg, 2000; Dijksterhuis, Spears, & Lepinasse, 2001) which are discussed in section 5.2.

5.1.2 Stereotype Threat

The stereotype threat approach with its emphasis on feelings and motivational states that accompany stereotype activation is known as a ‘warmer’ approach to stereotype activation (Wheeler & Petty, 2001). This approach is reviewed to investigate the feelings and motivational states of stereotype activation on older adults and to expand on the consequences of age stereotypes on older people. Stereotype threat effects are reviewed in two domains; memory and cognitive performance and physical functioning.

Stereotype threat theory states that when people are put into a situation where they risk confirming a negative stereotype about their group, they inadvertently underperform or behave in line with the activated negative stereotype (Steele & Aronson, 1995; Steele, 1997; Steele, 2010). Steele and Aronson first used the term in 1995 to describe how Black college students’ performance on standardised tests could be compromised when their ethnic identity was emphasised prior to the testing situation.

Over the last decade, research has demonstrated that stereotype threat can be experienced by pretty much anyone who encounters a stereotype-based expectation of poor performance and then given the opportunity to confirm this in a relevant testing situation. For example, stereotype threat effects have been shown for women on math performance (Spencer, Steele, Quinn, 1999; Steele, Reisz, Williams, & Kawakami, 2007; Shih, Pittinsky & Ambady, 1999; Ambady, Shih, Kim, & Pittinsky, 2001), women and driving ability (Yeung & von Hippel, 2007), socio-economic background and intellectual ability (Croizet & Claire, 1998), ethnicity and athletic ability (Stone, Lynch, Sjomeling & Darley, 1999), and even on tests of social sensitivity, where men underperform compared to women (Koenig & Eagly, 2005). Because older people are characterised by negative age

stereotypes that infer low competence and poor memory ability (Cuddy, Norton & Fiske, 2005; Fiske, et al., 2002; Abrams et al., 2009), they are also susceptible to stereotype threat showing a deficits in performance (Abrams, Eller & Byrant, 2006; Abrams, Crisp, Marques, Fagg, Bedford, & Provias, 2008; Desrichard, & Köpetz, 2005; Hess et al., 2004).

Despite stereotype threat effects being shown in many different situations, there is mixed evidence for specific mechanisms that lead to underperformance and the consequent confirmation of the stereotype. Ambiguity over the mechanisms which lead stereotype threat to harm performance is likely to reflect the fact that stereotype threat produces a range of consequences in addition to underperformance. For instance, in their seminal work Steele and Aronson (1995) speculated that attention, anxiety, distraction, self-awareness and effort may contribute to poor performance in a stereotype threat situation. Since then, a plethora of research has investigated mechanisms of threat and has attempted to support some of these speculations.

Evidence for the mediating role of anxiety has been mixed. Steele (1997) suggests that stereotype threat evokes anxiety through a fear of being judged in terms of a negative stereotype or fear of confirming a negative stereotype. The idea is that anxiety can affect working memory leading to decrements in performance (Schmader & Johns, 2003). Some research has supported this notion (Osborn, 2001; Abrams et al., 2006; 2008), while others have not (e.g. Steele & Aronson, 1995; Spencer, Steele & Quinn, 1999; Keller & Dauenheimer, 2003).

In a similar vein to anxiety, stereotype threat has been shown to affect physiological responses, such as heart rate variability and blood pressure. In one study, Croizet, Despres, Gauzins, Huguet, Leyens & Meot (2004) showed that low heart rate variability, which is taken as an indicator of mental load, rises under stereotype threat conditions and accounted for some of the variation in poor performance. Furthermore, Blascovich, Spencer, Quinn and Steele, (2001) found that the blood pressure of threatened African American participants increased quicker and remained higher compared to non-threatened White participants and non-threatened African American participants. In line with Croizet et al., (2004), the increase in blood pressure partially accounted for the decrease in

performance under stereotype threat. These studies also demonstrate that threat situations are somewhat stressful.

Other mechanisms that have been investigated in relation to stereotype threat are negative thought processes, such as increased stereotype-related thinking which leads to decreased performance through distraction and decrease in motivation (Cadinu, Maass, Rosabianca, & Kiesner, 2005; Keller & Dauenheimer, 2003). Reduced effort, self-control and attention have also been shown to play a role in reducing performance levels (Stone, 2002; Inzlicht, McKay & Aronson, 2006). However, some studies have suggested that stereotype threat may actually increase effort and attention (e.g. Oswald & Harvey, 2000-2001) although this does not necessary lead to better performance (c.f. the choking under pressure effect, Baumeister & Showers, 1986; Rosenthal & Crisp, 2007; Beilock & Carr, 2005).

Aside from the damaging effects on performance, research has shown that stereotype threat can also lead to disengagement and disidentification with the task domain being tested. It can produce an increase in self-handicapping strategies, whereby participants under stereotype threat are more likely to produce a priori excuses for possible failures (Steele & Aronson, 1995; Stone, 2002), and increase internal attributions of blame (i.e. blaming the self), both of which can reinforce negative stereotypes (Koch, Muller & Sieverding, 2008). Research has even shown that stereotype threat can alter individuals aspirations of achievement and career paths (Steele, James & Barnett, 2002), which may contribute to gendered domain subjects (e.g. men dominate hard sciences, engineering and maths subjects at university) (Smith & Hung, 2008).

Stereotype threat, memory and cognitive performance. Stereotype threat research on older adults has mainly focused on the impact of activating the incompetence aspect of the stereotype in relation to memory performance (Desrichard & Köpetz, 2005; Hess, Hinson & Stratham, 2004; Hess & Hinson, 2006; Hess, Emery & Queen, 2009; Rahhal, Hasher & Colcombe, 2001; Kang & Chasteen, 2009) or memory and cognitive performance (Abrams et al., 2006; 2008).

Rahhal et al., (2001) demonstrated the importance of task instructions and their influence on a memory test, which can put older people at a disadvantage. In two studies, when the task instructions emphasised the memory component of a task, older adults (age range 60-75 years) underperformed compared to younger adults (age range 17-24), but there were no age differences when the task instructions did not emphasise memory. Although not specifically framed in terms of stereotype threat, the results are consistent with the notion that members of negatively stereotyped groups (older people) can in certain situations (e.g. those that activate negative stereotypes) decrease performance. In a testing situation where the negative stereotype is not activated performance is equal across age groups, but it can be unequal when the stereotype is activated such that older adults are put at a disadvantage when the task instructions emphasise age.

Additional research into effects of age stereotypes on memory by Hess and colleagues is situated somewhere between the stereotype priming and stereotype threat approach, by combining methods of stereotype activation. In one study, making participants subtly aware of the prime, by showing priming words at the level of conscious perception, eliminated the effects associated with the negative prime on memory performance. In contrast, when an explicit link between the age stereotype and task domain was present, memory performance was again, negatively affected (Hess et al., 2004). In support of Rahhal et al., (2001) this suggests that highlighting a test as diagnostic of memory can exaggerate age differences in memory performance, leaving older people at a distinct disadvantage.

A further study by Hess and Hinson (2006) tests how the presentation of positive and negative stereotype information about ageing can influence adult's performance on a memory test. In this study, participants aged between 24 and 86 years either read a newspaper article that contained positive (or contradictory) views on ageing and memory or negative (stereotypical) views. They were then told they would be taking a memory test. Consistent with previous research, results showed that age stereotypes had little effect on younger participants. Researchers found that the detrimental impact of negative age stereotypes to be strongest for the older participants, although no effect of 'threat' per se was found (e.g. a difference between positive and negative stereotype condition was not

found for older participants aged 68). However, the researchers did find the stereotype manipulation to have an impact on beliefs and concerns about memory and interestingly, independently of age, this had a stronger impact on performance than the stereotype manipulation. For older adults, those whose beliefs in memory performance became more negative following the stereotype manipulation performed more poorly on the memory test.

In three studies by Abrams et al., (2006; 2008) stereotype threat was elicited through an intergroup comparison. In this situation older participants were told that their performance will be compared to the performance of younger participants taking part in the research. The categorisation of the participants as 'older' activates older people's social identity and an expectation of underperformance through age-related stereotypes that denote older people as comparatively incompetent compared to younger people. Consequently those who experience the threat manipulation perform worse on cognitive tasks that include recall, comprehension and verbal ability, compared to those whose social identity is not activated prior to the testing situation. In these studies this relationship is partially mediated by feelings of anxiety, which is heightened by the apparent risk of confirming the negative stereotype about their group. Consequently, those who experience the threat manipulation perform worse on math tasks compared to those whose do not.

A further two studies replicated the threat finding and extended it by showing that the threat effect on older adults is moderated by intergroup attitudes. Participants who had more positive experiences with young people, and therefore more positive attitudes about younger people were unaffected by the stereotype threat manipulation. Their levels of anxiety and performance on the tasks did not significantly differ from the control group. This highlights the importance of intergenerational contact to reduce threatening comparisons driven by stereotypic expectancies. Expanding on this, and reinforcing the idea that positive contact can reduce threatening comparison standards, Abrams et al., (2008) also established that imagined intergenerational contact can reduce stereotype threat effects on maths performance, again by reducing the amount of anxiety experienced.

Thus far stereotype threat research on older adults has focused solely on its impact on memory and cognitive performance. However, the evidence reviewed previously suggests that there is more than one aspect associated with the stereotype that competence declines with age. Stereotypes of physical incapability, frailty, weakness, sickness and dependency also plague society's perceptions of older people. Therefore, 'incompetence' may refer to physical capabilities as well as cognitive capacity. The question remains as to whether stereotypes concerning aspects of physical incompetence have a detrimental effect upon tasks that measure physical capability under the stereotype threat paradigm. This would have implications for older employee's undergoing physical as well as mental tests of competence, as well as health care and medical examinations. The next section reviews this possibility which is empirically tested by Study 4 in Chapter 9.

Stereotype threat and physical performance. The idea that stereotype threat can impact upon physical tasks is not a new one, but has not been tested on older adults physical performance before. Stereotype threat effects have been shown for White and Black undergraduate students in sports ability, whereby students completed a task involving golf skills (Stone et al., 1999). When the task was framed as a measure of natural sports ability, White participants underperformed in comparison to Black participants. However, when the task was framed as a measure of athletic intelligence, Black participants experienced threat and consequently underperformed in comparison to White participants. A second study, which solely focused on White participants, revealed the experience of threat is moderated by the value an individual places on the task domain. The situation was not threatening for the participants who indicated that athletic performance was not an important aspect of their self-worth and did not value doing well in the task domain. This study confirms that stereotype threat effects can negatively impact physical performance when a stereotype of poor performance implicates a valued social identity (Stone et al., 1999).

Medical and health care settings could be potentially threatening situations for older adults, where health stereotypes and age stereotypes regarding aspects of physical incompetence could be heightened. Research by Auman, Bosworth & Hess (2005) has demonstrated the impact of health stereotypes in such situations by using an interview technique to manipulate stereotype threat. The

interviews were designed to mimic closely the questions patients (hypertensive middle aged and older men) might be expected to answer prior to a medical check-up. The patients were assigned to either a threat or no threat condition. Participants in the threat condition experienced a medical interview; a series of five questions designed to heighten their awareness of the medical situation, their medical condition and categorization of the self as 'patient' (interview technique was based on Shih et al., 1999). Sickness, loss of control and dependence were aspects of the negative health stereotype that were activated. Participants in the no threat condition experienced a 'leisure interview' where five questions asked about favourite leisure activities. These were designed to highlight positive aspects of participant's abilities and competence in personally relevant areas.

Results showed that individuals in the threat condition, where social identity as a patient was salient, experienced higher levels of stress measured by blood pressure and skin conductance. This relationship was moderated by the level of investment the patient had in independent living. The stereotype threat effect was present for older men with high levels of investment in independent living, but also for middle aged men with low level investment in independent living. This demonstrates again that investment in the stereotyped domain is an important factor in determining the impact of stereotype threat. The results support previous findings that anxiety and physiological arousal are associated with the stereotype threat situation. It also supports the notion that contextual factors can activate stereotypes which then subsequently cause a physiological response in an applied setting, such as a medical check-up.

Taken together, there is evidence that stereotype threat effects can be observed on measures of physical ability (as shown by Stone et al., 1999). Yet, these have not been directly observed on behavioural measures such as those used in the implicit priming studies, like the handwriting task used in Levy et al., (2000). The research reviewed suggests that the implicit activation of negative age stereotypes and subtle activation of health stereotypes under stereotype threat conditions can cause heightened physiological responses indicative of higher levels of stress and anxiety in older adults (Levy et al., 2000; Auman et al., 2005). Given that old age is characterised by negative stereotypes regarding physical competence, dependence and sickness and being slow, it seems

reasonable to consider that these stereotypes might also have other detrimental impacts on older adult's physical functioning. This idea is tested in Study 4, Chapter 9 to provide a theoretical extension of stereotype threat effects on older adult's hand grip.

5.2 Age Discrimination, Health, Well-being and Successful Ageing

Observational and experimental studies have shown that self-perceptions of age and attitudes to age can significantly impact on the ageing process and how people respond to disease. More positive self-perceptions of age as associated with faster recovery from disease and trauma (Levy & Myers, 2005; Levy, Slade, May, & Caracciolo, 2006), better functional health (Levy, Slade & Kasl, 2002) and longevity (Levy, Slade, Kunkel & Kasl, 2002). Furthermore, negative age stereotypes may influence expectations surrounding well-being in later life, as older adults have lower expectations about their well-being in the future compared to middle aged and younger adults (Ryff, 1991).

Research has indicated that being a member of a low status group or a group that is the target of prejudice and discrimination in society can also have a detrimental impact on well-being (Garstka, Schmitt, Branscombe, & Hummert, 2004; Pascoe & Smart Richman, 2009). Age discrimination can lead to feelings of uselessness, powerlessness and lower self-esteem (Shore & Goldberg, 2002), which can impact negativity on well-being. Moreover, there is increasing recognition that people's health and longevity are affected substantially by their well-being, i.e. their satisfaction with life and happiness. A comprehensive review of evidence from economically developed nations, concluded that differences in well-being can account for as much as 10 years difference in life expectancy (Diener & Chan, 2011).

Despite the existence of negative age stereotypes and beliefs surrounding age-related decline in cognitive and physical functioning, many older adults manage to live positive and fulfilling lives. This is known as the paradox of well-being. The paradox of well-being specifically refers to the potentially counterintuitive finding that well-being may not necessarily decline with age, despite age-related changes to objective circumstances, such as a decrease in income (Krauss-Whitbourne & Sneed, 2002; Kunzmann, Little, & Smith, 2000; Mroczek & Kolarz, 1998). Theories of successful

ageing shifted focus away from causes of decline and impairment in later life to the paradox of well-being, in order to explain what it is that makes some people 'age' better than others and how well-being can be maintained in later life.

A great deal of research has shown that the subjective well-being (SWB) of individual is affected by both the objective circumstances of the individual and the country in which they live (Diener & Suh, 1998; Diener, Suh, Lucas & Smith, 1999). Furthermore, age differences in SWB are complex. Early research showed that SWB is influenced by objective conditions (e.g. income and health) which tend to decline with age and therefore lead SWB to decline with age (Diener, 1984; Wilson, 1967). Other research showed that older people are able to maintain well-being in later life despite age-related changes in circumstances (the paradox of well-being), while some suggest that SWB is influenced by people's ability to regulate emotions, which improves with age (Carstensen, 1995; Lawton, 1996).

It may be that these mixed findings depend on which aspect of SWB is being investigated, or on which explanatory variables are being researched or controlled for in the analysis. Early research indicated that with age, life satisfaction and happiness declined (Diener, 1984; Wilson, 1967), while later evidence indicated that it may increase or remain stable (Herzog & Rogers, 1981; Horley & Lavery, 1995; Diener & Suh, 1998). Inglehart's (1990) analysis of the Eurobarometer (surveys from 1980 to 1986) and World Values Survey I found that the oldest age group (those aged 65 years and over) had the highest adjusted levels of life satisfaction and happiness across the life span when individual differences in objective circumstances in income, education and marital status were controlled for.

The happiness or affective component of well-being is often broken down into separate measures of positive and negative affect. These have been shown to have distinct trends; while negative affect remained fairly stable across age groups, positive affect tends to decline (Diener & Suh, 1998). To date, no research has investigated whether this paradox exists across different European countries. Furthermore, individual differences, such as age, have typically been analyzed

separately from country level differences, such as societal attitudes to people over 70. Research is needed to explore how differences between individuals and countries might combine to influence people's ability to maintain well-being in later life. The focus of Study 11 in Chapter 13 is to investigate the extent experiences of age discrimination impact on well-being, controlling for country level differences. It also tests the combined effects of individual and country level differences on individual's evaluations of SWB (life satisfaction and happiness) across the life span in an attempt to explore whether societal attitudes to older adults impact on the relationship between age and well-being (i.e. The paradox of well-being).

5.3 Consequences of Age Stereotypes for Non-Targets

The previous section focuses on the consequences of activating self-relevant age stereotypes on older people. This section looks more closely at how age stereotypes influence non-targets, that is those who do not categorise themselves as old (e.g. younger, middle age people) and how these stereotypes about old age may influence people as they age.

The research reviewed previously suggests that stereotypes activated automatically can result in people acting in line with the stereotype, an effect known as behavioural assimilation. This has been shown for participants for whom the stereotype is self-relevant in aspects of cognition and behavioural action. However, studies also suggest that assimilation to stereotypes can occur even if the activated stereotype is not self-relevant, in other words the stereotype defines another social group (Bargh et al., 1996; Dijksterhuis & van Knippenberg, 1998).

One of the most widely cited accounts of this effect is a study by Bargh et al., (1996). Their influential paper demonstrated that implicit exposure to words associated with an elderly stereotype can subsequently slow down the walking speed of (young) participants leaving the laboratory. In this study, participants were informed that they were taking part in a language test, which involved a scrambled sentence priming task. In the elderly stereotype prime condition, 22 of the 30 sentences, contained one word semantically related to the elderly stereotype (e.g. worried, old, wise, and sentimental). In the neutral condition the prime words were replaced with neutral words. After this

task, participants were free to leave, not knowing that Bargh et al., (1996) would covertly time how long it took participants to walk from the laboratory to the end of the corridor. Results showed that those in the elderly prime condition took longer to walk the route than those in the neutral prime, despite the fact that speed or slowness were not directly primed. Not only does this demonstrate the strength of the association between the social category 'old' and the expectations on behaviour as 'slow', it established that people of any age can be susceptible to the damaging impact of negative stereotypes, even if they aren't directly relevant to the self.

This provides evidence for the auto-motive model of behaviour (Bargh, 1990), which states that behaviours may be executed without conscious awareness. It also states that some behaviours may be associated with goals or intentions through repeated exposure, which in turn can be associated with and therefore activated by aspects of the environment, social behaviour or other category cues such as stereotypes (see Bargh & Barndollar, 1996). It has been proposed that such a perception – behavioural link has an evolutionary advantage but also roots in more complex subconscious behaviour such as mimicry and imitation which smooth social interactions with others (see Banfield, Pendry, Mewse and Edwards, 2003; Chartrand & Bargh, 1999; Dijksterhuis & van Knippenberg, 1998).

Further support for the perception – behavioural link is provided by Banfield, Pendry, Mewse and Edwards (2003). Using the same scrambled sentence task on undergraduate students, Banfield et al., (2003) investigated the effects of an elderly prime on a reaching and grasping task. Although there was no significant effect of the elderly priming manipulation on participant's capability to perform the reach and grasp task itself, those exposed to the elderly prime took longer to complete the reach and grasp task sequence, thus assimilating the stereotype of elderly people as slow. Taken together these studies show that representational information such as stereotypes can be activated implicitly. This can subsequently influence behaviour or motor functioning in the ability to complete a sequenced task, even when the stereotype is not relevant to the self. Specifically, both studies show that activating age stereotypes can lead to behavioural assimilation (acting in line with the stereotype) in young participants. However, it is not known how long these effects last for or how likely it is these

situations occur in real life, therefore these studies may lack ecological validity. Moreover, the reliability of the Bargh's study has recently been called into question by researchers who argue the study cannot be replicated (Doyen, Klein, Pichon & Cleeremans, 2012).

5.3.1 Stereotype Lift and Stereotype Boost

The stereotype threat literature demonstrates that negative self-relevant stereotypes activated in context (e.g. a testing situation) can provide individuals with expectations on performance that can subsequently disrupt performance. In a similar vein, negative stereotypes about the performance of out-group members can provide non-target individuals (i.e. those who are in a testing domain but are not connected to the negative stereotype) with expectation of performance that have the potential to enhance, boost or lift performance. Non-targets show "stereotype lift" when a comparison is made with a group that is stereotypically inferior in the performance domain, for example, among men who compare with women in tests of math ability (see Marx & Stapel, 2006; Marx, Stapel & Muller, 2005; Walton & Cohen, 2003). Hess and Hinson (2006) showed that performance on a memory test was raised for participants in their mid-40's following exposure to negative age stereotype information about memory compared to those exposed to positive (counter stereotypical) information. These studies suggest group members can benefit when negative information about an out-group is highlighted.

Research has suggested that within the same individual highlighting a group identity that has high status and is positively associated with a performance domain can lead to "stereotype boost". This is when performance is enhanced on tasks consistent with the stereotype (Armenta, 2010; Shih, Ambady, Richardson, Fujita & Gray, 2002). For instance, Asian American women performed better on a math test when their (non-threatened) Asian identity was salient but performed worse when their (threatened) gender identity was emphasized (Shih et al., 1999). Although different social comparisons are involved in stereotype lift and boost, both effects suggests that a legitimate downwards social comparison can enhance performance among members of a stigmatized group. The legitimacy of the comparison comes from socially shared stereotypes that provide expectations surrounding the performance of group members.

Yet, none of the eight published studies of stereotype lift or stereotype boost have examined performance among older people. This is surprising because there are positive stereotypical attributes that are associated with old age and older people (Bargh et al., 1996; Hess et al., 2004; Hummert, Garstka, Shaner, & Strahan, 1994; Levy, 1996). For example, wisdom, knowledge and experience are perceived to increase with age (Baltes & Staudinger, 1993). However, it is not known whether older people's performance can be boosted by highlighting positive aspects of age stereotypes. Study 3 in Chapter 8 explores the possibility that social comparisons with younger people inevitably lead to stereotype threat, or whether there is also scope for stereotype boost effects.

Thus far the majority of research investigating the effect of age stereotypes that has been reviewed has been experimental. These studies show the effects of activating existing stereotype beliefs, but they are limited in showing how stereotypes are acquired and what effects stereotypes have at different stages of adulthood. For this, longitudinal research is needed to show how individuals' views and expectations about ageing, otherwise known as self-perceptions of ageing, influence individuals as they age. The next section reviews research on how self-perceptions of ageing and attitudes to age influence individuals as they age.

5.3.2 Attitudes to Age

People's attitudes towards the ageing process have also been shown to influence the expression of prejudice towards older people, functional health and longevity. Chasteen (2000) found that positive attitudes towards ageing were associated with more positive evaluations of older people. Indeed, Braithwaite, Lynd-Stevenson and Pigram (1993) found that negative attitudes about the ageing process were associated with increased prejudice towards older people. According to Palmore (1999) people exposed to negative age stereotypes are more likely to adopt negative views of ageing and act in accordance with them, which has detrimental impacts on an individual's self-image, confidence, self-esteem and abilities. Moreover, longitudinal research that follows the same individuals through an extended period of time has shown that functional health and survival are affected by attitudes to age.

Longitudinal research over a twenty year period has shown that older adults with more positive self-perceptions of ageing are more likely to practice preventative health measures compared to older adults with negative self-perceptions (Levy & Myers, 2004). Considering this finding, it is no surprise that older adults with positive attitudes towards age are more likely to have better functional health (Levy, Slade & Kasl, 2002), and longevity (Levy, Slade, Kunkel & Kasl, 2002).

Levy, Slade & Kasl, (2002) and Levy, Slade, Kunkel & Kasl, (2002) used data from the Ohio Longitudinal Study of Ageing and Retirement (OLSAR) that spans 20 years. It includes over 400 participants aged 50 and over. The first study found individuals with more positive self-perceptions of ageing, as measured at the beginning of the study in 1975, subsequently reported better functional health from 1977 to 1995. This relationship remained after controlling for baseline measures of age, functional health, gender, loneliness, race, subjective health (self-perceived health) and socio-economic status. It is thought that self-perceptions of ageing can influence functional health in three ways; behaviourally, through acting healthier; biologically, through autoimmune responses (e.g. to stress) or psychologically, through the way people think and feel. This study examined a psychological variable, perceived control, defined as the belief that one has control over achieving desired outcomes as a potential mediator. Indeed, the relationship between self-perceptions of ageing and functional health was found to be partially mediated by perceived control. More positive self-perceptions of ageing were associated with more perceived control, which were in turn related to better functional health.

In a second study Levy, Slade, Kunkel & Kasl, (2002) quantified the advantage of more positive self-perception of ageing by showing that individuals who held these beliefs, were on average more likely to live 7.5 years longer compared to individuals who endorsed more negative perceptions. This advantage remained after controlling for age, functional health, gender, loneliness, race, subjective health and socio-economic status. The relationship was found to be partially mediated by will to live, whereby more positive self-perceptions of ageing are associated with increased will to live and longevity.

5.4 Summary

In general the studies reviewed in this section demonstrate that activating age stereotypes or the relevant social identity, using a range of methods, influences older adults on a number of outcomes. Studies using implicit priming techniques demonstrate the strength of association between a social category and its contents – or stereotype, and the ability to influence outcomes below conscious awareness. However, the impact of positive age stereotypes should be considered with caution here. Although it appears that positive age stereotypes improve outcomes for older adults and negative age stereotypes worsen outcomes, some studies fail to include a baseline measure or a control condition where no stereotype is activated. Without this, it is actually hard to determine the impact of age stereotypes. In many of Levy's studies, the authors do not necessarily claim that participants are conforming to negative stereotypic expectations, this is based on the assumption that negative age stereotypes prevail over positive age stereotypes in society and therefore, the effects of negative age stereotypes are simply reflect 'normal' standards of behaviour. Instead they propose priming positive age stereotypes can be an intervention, buffering against stressful situations, improving physical functioning, memory and increasing willingness to engage in preventative treatments.

The impact of negative age stereotypes is demonstrated more clearly by the studies by Abrams et al., (2006; 2008) which investigate the impact of stereotype threat on older adult's memory and cognitive performance. These studies show that those who experience the threat manipulation underperform, compared to a control condition in where participants do not experience threat (those whose social identity is not activated prior to the testing situation).

The review of the stereotypes threat research opens up the theoretical possibility that threatening social comparisons with younger people might also impact upon older adult's physical performance, an alternative performance domain where older adults are negatively stereotyped; in which underperformance has considerable consequences for older adults.

The significance of the consequences of age stereotypes on non-targets can be summarised in relation to Levy's (2009) stereotype embodiment processes. Stereotype embodiment is the idea that stereotypes are acquired from the surrounding culture, internalised and then become relevant to the self as people age. How people see themselves in relation to their age can influence physical and functional health. The theory has four components which have been covered in this chapter; a) stereotypes become internalised across the life span, b) stereotypes can operate subconsciously, c) they gain salience from self-relevance and they d) utilise multiple pathways.

Chapter Six.**Fear of Crime and Age****Abstract**

Fear of crime is widely recognised as a significant social and political problem. It is a key issue for older people and therefore Age UK. This section reviews the psychological basis of fear of crime and introduces the idea that stereotypes can influence expressions of fear of crime and the perceived vulnerability of victimisation for individuals and their social group. These ideas are applied to older adults and raise the question whether age stereotypes have the potential to influence older adults' evaluations of fear of crime.

The perception of crime, worry and fear of victimisation can have profound consequences on older people's quality of life (Age UK, 2002). Fear of crime can change and modify people's behaviour. In some circumstances, this is quite legitimate and can lead to engagement in crime prevention strategies (e.g. locking doors and windows). However, for many older people it can have a more severe impact, resulting in exclusion or disengagement from the community and wider society (Age UK, 2002). Fear of crime can be debilitating and isolating as older people who feel unsafe prefer to stay in rather than go out. Because of fear and worry about crime, older people can lose contact with friends, organisations and stop taking part in normal everyday activities and participating fully in their community, all of which are linked to aspects well-being.

6.1 Perceived Risk and Vulnerability

Numerous studies have sought to explain why some people worry more than others about being a victim of crime (see Hale, 1996; Vanderveen, 2007 and Farrall, Jackson & Gray, 2007 for review). In general, fear of crime is associated with evaluations of perceived incidence of crime and risk for victimisation. These in turn, are determined by evaluations of personal vulnerability and people's perception of the social and physical environment. Perceptions of the environment are related to public concerns about neighbourhoods, public disorder and social cohesion (Farraro, 1995; Perkins & Taylor, 1996; Jackson, 2004), which in turn provide information about risk (Farraro, 1995). For instance, young people hanging around, graffiti, or perceptions of poor community spirit all provide information about risk, and can generate a sense of insecurity and distrust in the environment which translate in to fear of crime (Jackson, Farrall & Gray, 2007).

Personal vulnerability or perceived susceptibility to crime is defined as a perception of the likelihood crime will occur, the amount of control over the situation and the perceived severity of the consequence of the crime (Hale, 1996; Vanderveen, 2007; Farral et al., 2007). It is 'the feeling that one or one's social group are likely to be victims of crime, the feeling that crime could have especially serious consequences and the feeling of little control over the event' (Jackson, 2009 pg. 4). Hale, (1996) argues that differences in perceived vulnerability go some way to explain why some groups, such as women, the elderly and the poor may be expected to fear crime more than others.

There is strong evidence that females tend to report higher levels of fear of becoming a victim of personal crime than males, despite higher victimisation rates among males (Warr, 1984; 1985; Box, Hale & Andrews, 1998; Farraro, 1995). This discrepancy between experienced fear and experience of crime is termed the victimisation-fear paradox (Smith & Torstensson, 1997). Some studies have shown this paradox exists in relation to age, where older people's fear seems disproportionate to the levels of victimisation (Hale 1996). The British Crime Survey consistently shows that adults aged 60 and over are less likely to become a victim of crime than other age groups (Age UK, 2002). Despite low victimisation rates, older people consistently report higher levels of fear and worry about crime and safety issues (Age UK, 2012).

Research on fear of crime has focused on why specific groups, such as females and older people worry more frequently about crime even though they are less likely to fall victim to crime (Hale 1996). One survey study of residents in London assessed the idea that gender and age differences in fear of crime are due to differences in perceptions of victimisation (for both the self and the social group) and differences in perceptions of control over the event and subsequent impacts and consequences for the individual. The study found that these two aspects of vulnerability, which differ by gender and age groups, are associated with evaluations of fear through perceptions of risk and susceptibility (Killias, 1990). In this way, gender and age are considered 'markers of vulnerability' to fear (Killias, 1990; Hale, 1996).

Expanding on this notion, a further study by Jackson (2009) tested whether age and gender effects can be explained by perceptions of victimisation. The study found females to worry more than males because they feel less capable of physically defending themselves, they have lower perceived self-efficacy (they are perceived to be lower competence) and they perceive themselves and their social group more likely to become victims, these perceptions contribute to high levels of fear (Jackson, 2009). However, although similar stereotypes exist about older people, the study found that younger people worried more frequently about particular types of crime than older people and that differences in vulnerability could not explain this association.

The majority of research has investigated gender differences in fear of crime in terms of perceived vulnerability and sensitivity to consequences of crime. However, one possible explanation refers to the possibility of deceptive responding in fear of crime. Some research argues that gender differences in fear of crime may be partly due to men suppressing expression of fear, due to the fact that stereotypically males are expected to be less emotionally vulnerable, therefore they may be less willing to express concern, fear or anxiety. Conversely, women may exaggerate fear in line with stereotypical expectation that women should be more fearful than men (Sutton & Farrall, 2005; 2008; Sutton, Robinson, & Farrall, 2011). Sutton et al., (2005; 2008; 2011) suggests that the fear of crime and gender stereotypes combine to perpetuate the subordination of women in society. The next section reviews the theoretical background in more detail and attempts to extend these ideas in relation to age, to explain why older people may feel increased risk and vulnerability to crime.

6.2 Fear of Crime and Social Control

In a series of studies, Sutton and colleagues have demonstrated that gender differences in fear of crime may in part be explained by a motivation to conform to gender stereotypes that signify women as more fearful than men. The research suggests that both men and women are susceptible to this gender stereotype and down play or exaggerate fear of crime levels respectively (Sutton, et al., 2011). Acting in line with this stereotype can be explained in terms of impression management (Goffman, 1959), an increased motivation to respond in a socially desirable and acceptable way to avoid backlash that accompanies deviations from gender norms (Sutton & Farrall, 2005). It may also serve a 'social justification' function by reinforcing benevolent sexism and subordination of women (Jost, et al., 2004).

Fear of crime has been connected with issues of social stability, moral consensus and informal control processes that underpin social order in neighbourhoods and wider society (Girling, Loader, & Sparks, 2000; Jackson, 2006). From a sociological and feminist perspective, there is one argument that fear of crime, particularly in relation to sexual assault and rape, serves to perpetuate subordination of women in society by restricting women's freedoms and maintaining a reliance on men for protection (Brownmiller, 1975). Indeed, empirical evidence has supported the idea that women's

greater levels of fear are associated with heightened perceptions of vulnerability in relation to increased risk to sexual assault (Ferraro, 1995, 1996). Fear of crime is thought to disempower women in two ways, by deterring women from activities perceived to increase the risk of victimisation, such as walking home alone at night. It may also causes women to internalise ideologies and prejudices that are detrimental to their gender group, for example, by reinforcing benevolent sexist roles that women need protection by men. Crucially, gender stereotypes and gender norms may contribute to fear of crime as a form of social control, by providing socially desirable ways to respond and deal with fear of crime that serve to maintain social order, in this case a male hierarchy.

6.3 Stereotypes, Social desirability and Fear of Crime

Gender stereotypes may facilitate disempowerment of women by conveying and exaggerating notions of vulnerability. As mentioned earlier, females worry more about crime than males because they perceive themselves to be less physically able to defend themselves, they have lower perceived self-efficacy and they perceive themselves and the group they belong to, to be at an increased risk of victimisation. Yet, it is possible that these perceptions of vulnerability may be exaggerated or informed by gender stereotypes that denote women as less capable and weaker than men. Conversely, in accordance with traditional notions of masculinity that prevent males from expressing fear, anxiety or emotional vulnerability, males may be motivated to downplay levels of fear. Ascribing to these gender norms may be beneficial to individuals. Those ascribing to gender norms may be more likely to gain approval from others, whilst deviating from gender norms may result in derogation or backlash from others. In this way, gender stereotypes and gender norms seem to provide socially desirable ways to behave and individuals may be motivated (either consciously or unconsciously) to report high or low levels of fear in order to present themselves in a certain way (Sutton & Farrall, 2008).

Considered under the umbrella of impression management (Goffman, 1959), the social desirability bias is the observation that people are motivated to gain approval from others and therefore strive to portray themselves in a likable, positive way and avoid being seen as a deviant (Leary & Baumeister, 2000). In two studies Sutton and colleagues investigated the extent to which



people distort fear of crime responses in line with social desirability motives informed by gender stereotypes. In their first study Sutton and Farrall (2005) correlated participants scores on a lie scale (Barrett and Eysenck, 1992), which tests the extent participants provide socially desirable responses, with fear of crime responses. They revealed that men who scored highly on lie scales reported significantly lower levels of fear of crime, demonstrating a connection between the motivation to be seen in a social desirable way and expressions of fear.

In a follow up study Sutton et al., (2011) randomly assigned men and women to one of two conditions that framed a fear of crime questionnaire differently. In one condition, participants read a set of 'honest' instructions which told participants to provide totally honest and accurate responses to the fear of crime questions that followed. In the other condition, participants read 'fake good' instructions which told respondents to provide answers that 'cast them in a favourable light'. These kind of instructions are often used to validate response scales, where you expect the framing instructions to have no impact on responses. Sutton et al., (2011) observed the instructional sets did effect responses on the fear of crime items. Under the 'fake good' instructions men minimised their fears, while women exaggerated their fears relative to those reported by men and women under the 'be honest' instructions. Men are expected to experience lower levels of fear because emotional vulnerability is inconsistent with traditional stereotypical notions of masculinity (Bem, 1981, Goodey, 1997). Accordingly, men downplay levels of fear of crime. In contrast, women are expected to experience higher levels of fear because expressing fear is line with a norm that women ought to be fearful and protected (Sutton & Farrall, 2008). Together these studies demonstrate that gender stereotypes denoting women as more fearful than men inform deceptive responding in fear of crime surveys.

6.4 Application to Older Adults

Previous research has suggested personal vulnerability, investment in independence, perceived disorder (Perkins & Taylor, 1996), satisfaction with the community (Toseland & Rasch 1978), physical health and awareness of crime (McKee & Milner, 2000) significantly impact on

evaluations of older people's fear of crime. Yet, research to date has not investigated the possibility that age stereotypes and norms may play a role guiding evaluations of fear and worry about crime.

There are several reasons why age stereotypes and norms may influence fear of crime responses of older adults. Many of these aspects may be drawn from the research exploring gender differences in fear of crime. First, fear of crime as a form of social control and maintaining social order may be applied to age groups as well as gender. Society is segregated by age, with different age groups afforded particular rights, responsibilities and social status. There is considerable empirical evidence that older people are considered low status (Fiske et al., 2002). Therefore, because age hierarchies exist, there is a need to maintain them, and one way to maintain social order and power between age groups could be through fear of crime.

Moreover, fear of crime may disempower older people in similar ways to how it disempowers women. For instance, older people may also be deterred from activities perceived to increase the risk of victimisation, such as being out after dark or using public transport. Furthermore, just as women may internalise benevolent sexist ideologies and prejudices that are detrimental to their gender group, older people may also internalise ageist ideologies that portray older people as low status and vulnerable.

In line with SJT (Jost et al., 2004) stereotypes serve a justifying function to maintain social hierarchies. This applies to age stereotypes as well as gender stereotypes. In relation to age, stereotypes that denote older people as incapable and incompetent may affect older people's evaluations of vulnerability to crime in a similar way to that of gender stereotypes. Indeed, there is some evidence to suggest that there are societal perceptions that older people are more afraid of crime, and that older people self-stereotype. They are aware that they are perceived to be 'easy targets' for some types of crime because of frailty and perceived defencelessness of elderly people. Despite this, little or no research has investigated whether these perceptions influence older people's responses and evaluations of fear and worry about crime.

So far, several parallels between the research addressing gender differences in fear of crime may be applied in order to explain age differences in fear of crime and the victimisation paradox. However, there are some differences to consider. Sutton and colleagues suggest that males and females may be consciously or unconsciously motivated to behave in line with gender norms in their expression of fear. Self-presentational concerns may in part, explain the gender difference in expressions of fear. However, it is unclear whether a similar rationale can be applied for age because it is not clear what older people gain from expressing fear in line with an age stereotype. While males and females may gain approval by acting in accordance with traditional gender roles, it is unclear how older people who express or suppress fear would be evaluated.

It is also worth noting that, although not directly explored in this thesis, the expression of fear of crime from older adults towards younger people may be considered an expression of prejudice. Evidence suggests that older people express specific fears about youth oriented crimes, such as anti-social behaviour and they often feel victimised or threatened by groups of younger people (Age UK, 2002). Expressions of older people's fear or threat of younger people could be the result of distrust between generations, which are extenuated by age group categorisation processes that enhance perceived differences between age groups and generations. Moreover, expressions of fear from older people towards younger people may result in tougher or tighter sanctions on younger people's behaviour.

6.5 Summary

Although fear of crime is not directly related to ageism per se, it is explored in this thesis because it has important implications for older adults and relates to aspects of Age UK's vision for improving later life. This chapter explored the psychological basis of fear of crime and how perceived risk and vulnerability to crime influence evaluations of fear of crime. It also explores the function of fear of crime in society to control social spaces and restrict individual's freedom. Through exploring these issues, research that suggests gender stereotypes may go some way to explain gender differences in fear of crime evaluations is introduced. This idea is applied to older adults. The link between age stereotypes and perceived risk, vulnerability and evaluation of consequences of crime is considered.

The justifying function of gender stereotypes in relation to fear of crime is applied in relation to age stereotypes and fear of crime. The idea is that fear of crime, as a form of social control may contribute to the exclusion of older adults and reinforce underlying age segregations with society. It is suggested that stereotypes and their justifying function may contribute towards maintaining social order and age hierarchies. These ideas are explored further in Chapter 10.

6.6 Conclusions of Chapters 1 to 6

Chapters 1 – 6 provide the theoretical part of this thesis. Chapter 1 introduced the topics explored in this thesis. It set the aims of the thesis against the policy work of Age UK and provided the political and societal content for research into ageism. Chapter 2 illustrated the societal problem of ageism by exploring evidence for the existence of ageist attitudes and practices in the media, in employment and in health and social care. Chapter 3 explored three aspects of ageism that make it a unique form of prejudice in relation to how ageism should be dealt with in society. Chapter 4 provided a detailed overview of the psychological basis of ageism and ageist attitudes, while Chapter 5 explored in more detail the consequences of age stereotypes. Chapter 6 introduced the psychological basis of fear of crime, which is the second topic of this thesis also of interest to older people and Age UK. A number of important issues were raised in the theoretical chapters which will be explored in the empirical chapters. These are summarised in terms of the meaning of age, age categorisation and age stereotypes; evidence and consequences of age discrimination and fear of crime.

The meaning of age, age categorisation & effects of stereotypes. Chapter 1 explored how the meaning of age is socially constructed and interconnected with psychological, social and cultural processes. In order to explore how these processes contribute to the meaning of age, researchers explore what it means to belong to a certain age group, this could be in terms of the individual or in relation to how individuals are seen by others. At the psychological level, it remains unclear what criteria determine the boundaries that define age groups, such as 'young' and 'old'. At the social level there may be more or less age segregation or more or less age related policies. Chapter 4 explained how age categorisation and the segmentation of age through the life course is a key component of

prejudice. Chapter 5 reviewed evidence that age categorisation, in the form of being categorised as 'old', has some damaging consequences for older adults.

Accordingly, Study 1 outlines societal attitudes to age in the context of the UK, providing an insight into how age boundaries are defined and explores people's evaluations of people (targets) over 70. Study 2 provides an insight into the societal expectations surrounding the specific competencies that are associated with people of different ages, while Study 3 and 4 experimentally test the consequences of age expectations on older people.

Evidence and consequences of age discrimination. Chapter 2 reviewed the evidence on the existence of ageism in society and demonstrated that ageism is a considerable societal problem with negative consequences for individuals and for society. However, there appears little direct observational evidence demonstrating the existence of ageism in society. Study 10 addresses this issue, while Study 11 explores the consequences of age discrimination and explores the extent to which negative societal attitudes about people over 70 influences successful ageing.

Fear of crime. The majority of the work investigating the consequences of age stereotypes has typically focused on stereotypes that undermine the competence and ability of older people. Yet little research has addressed how age stereotypes guide older adult's evaluations and perceptions of themselves as fearful of crime. Research investigating gender differences in fear of crime has shown that gender stereotypes can guide people's responses and influence behaviour in line with what is deemed socially acceptable or socially desirable (Sutton & Farrall 2008). Building on research in this area, part of this thesis explores whether age and gender stereotypes guide responses of older adults in relation to the expression of fear of crime. To date, little, if any research has attempted to explain age difference in fear of crime responses in terms of age stereotypes. Chapter 10 contains four studies that aim to provide an initial investigation in to this area.

In sum, the empirical part of the thesis has three general aims;

- 1) To provide an overview of the components of ageism and explore experimentally how the consequences of these attitudes influence older people. This will extend theoretical

research on consequences of stereotypes in general and more specifically in relation to age stereotypes on older people.

- 2) To explore the prevalence and consequences of ageism, the aim is to provide direct evidence of age discrimination in the UK and explore the impact of age discrimination on individuals.
- 3) To begin an initial investigation into the impact of age stereotypes in fear of crime, a previously un-researched area that has wide implications for older adult's quality of life.

Presented in Table 6.1 below is an overview of the studies, with a summary of their nature and the research questions being addressed.

Table 1 *Overview of Empirical Studies*

Study	Study type	Research question / Aims of the research
1	Secondary data analysis of ESS, UK only data	The aims of this study are to provide a background into attitudes to age in the UK and explore age and gender differences in attitudes to age.
2	Secondary data analysis of Age UK data	This study investigates the competencies associated with people of different ages.
3	Experimental	The two main aims of this study are to explore whether positive age stereotypes can enhance older people's performance, and whether negative age stereotypes damage older people's performance in positively stereotyped domains.
4	Experimental	This study aims to extend stereotype threat research by looking at its effects on older people's physical performance, a research domain not previously tested with older adults.

Cont.

Study	Study type	Research question / Aims of the research
5	Secondary data analysis of Age UK data	To provide an insight into age and gender differences in fear of crime responses, and test the impact of perceived vulnerability on evaluations of fear.
6	Secondary data analysis of ESS, UK only data	This study aims to build on the previous study (5) by providing a more robust analysis of the effects of age and gender in fear of crime, by controlling for a number of other factors.
7	Experimental	This study aims to provide an insight into the societal expectations surrounding the extent to which people of different ages are expected to be fearful of crime.
8	Experimental	This study tests the extent to which age and gender stereotypes that provide an expectation about how fearful of crime people should be actually influence fear of crime responses.
9	Experimental	This study investigated the extent to which images used by two different charities (that both represented older people) influence willingness to donate money to each charity.
10	Observational	This study aims to provide direct evidence for age discrimination using observational data, and to explore the processes that lead to discriminatory decisions.
11	Secondary data analysis of ESS	The two general aims of this study are to investigate the impact of age discrimination on well-being, and to investigate the impact on societal level attitudes to age, on the well-being, especially on older people's well-being.

Chapter Seven.**Societal Attitudes to Age****Abstract**

In comparison with other forms of prejudice, such as racism and sexism, there is very little research on people's experiences of ageism or their attitudes towards ageing and older people. A Google scholar search, conducted in May, 2012, for articles on racism, sexism and ageism demonstrates; articles containing the key term 'racism' yielded 672,000 hits, 'sexism' 123,000 hits, while 'ageism' only resulted in 27,000 hits. This section introduces key components of attitudes to age, and analyses these in the context of the UK. The aim is to understand attitudes to age in the UK, but also to assess the impact of respondent's age and gender on attitudes to age and experiences of ageism. The research demonstrates considerable age and gender differences in attitudes to age, most notably as people get older their own attitudes towards older people become more favourable. Gender differences in attitudes to age may reflect different strategies for successful ageing.

Study 1. Age and Gender Differences in Attitudes to Age in the UK: An Analysis of the 2008-2009 European Social Survey

Previous social psychological research and survey evidence has established that there are some important individual differences in people's attitudes towards age. Using multiple regression methods, Abrams et al., (2009) tested how age, gender and other demographic indicators, such as ethnicity, working status, marital status, social class and type of residence predicted attitudes to age. The analyses showed that age and gender were prominent predictors of several attitudinal measures. However, the analysis did not test the combine effects of age and gender by exploring the possibility of age by gender interactions, which are tested in this study.

Based on social psychological theories such as, social identity theory, self-categorisation theory, stereotype content model, intergroup threat theory and intergroup contact theory (which are introduced in Chapter 4), this study will explore seven aspects of attitudes to age and ageism. These relate to; how people categorise others as young and old, the societal stereotypes of people aged over 70, how people associate status to different age groups, expressions of prejudice, experience of age prejudice against oneself, the extent to which people perceive those aged over 70 be a threat and intergenerational relationships. Each of these concepts are summarised briefly before reviewing previous research that addresses the importance of age and gender differences in attitudes to age.

Age Categorisation

Age categorisation is the process of identifying and classifying others as belong to a certain age group. How people categorise others according to age is relevant to age discrimination because ageism can arise in relation to specific age points, age ranges or through the use of category labels such as 'young' and 'old'. Determining when specific age points and labels that define age groups are used can provide insight into how stereotypes are applied and who they apply to. Once categorisation occurs people may apply ageist stereotypes to others, resulting in prejudice or discrimination, but also to themselves. When applied to the self (self-stereotyping), stereotypes may restrict people's willingness to pursue or take part in particular roles or aspects of society as people deem themselves

as 'too young' or 'too old'. The process of categorising the self and others into age groups has important implications for how people define those groups and how people feel and behave in relation to them. Therefore, it is important to know how people define category labels such as 'young' and 'old' and how they differ by age and gender.

Age and gender differences in age categorisation. Previous research has shown that respondents own age influences categorisation of others and when they apply labels such as 'young' and 'old' (Abrams et al., 2009; 2011; Unsworth, McKee & Mulligan, 2001). Unlike other categories, age is continuous and fluid, therefore the boundaries used to define age groups are also fluid, moveable and susceptible to change according to individuals' own circumstances or situation, influenced by their own age. The age of the respondent influences age categorisation processes, such as perceptions of when youth ends and old age begins as people use their own age as a standard for comparison, or an anchor on which to judge others. Therefore, it is predicted that the use of category labels such as young and old are likely to be relative to the individual's age applying the labels.

It is expected that gender differences should occur in age categorisation, however the directionality of the effect can be contested. Gender differences have also been found in the application of age category labels, with women perceiving youth to last longer and old age to begin later than men (Abrams et al., 2009). This gender difference may reflect differences in longevity; because women are more likely to live longer (ONS, 2011), they may extend youth and middle age accordingly. However, an alternative theory based on biological sex differences in fertility would contend that women should perceive youth to end earlier than men. Youth or being young is often associated with the period of being reproductive and fertile. Since females tend to stop being fertile much earlier than males, they may perceive youth to end earlier than males, and old age to begin earlier. In support of this, previous research has found that women are thought to reach middle age, the so-called 'prime of life' and old age earlier than men (Drevenstedt, 1976; Kogan, 1979; Zepelin, Sills & Heath, 1986).

Stereotypes of People Over 70

It is also important to understand what representations or stereotypes people have of these age categories. Societal stereotypes are socially shared beliefs about the characteristics of members of a social group. These beliefs can be based on specific traits, appearances, or behaviours. Stereotypes describe groups but they can also have evaluative dimensions that influence how we feel about the group, and therefore how we behave towards them. Stereotypes as beliefs about group members are also used to justify differences between social categories and provide a subjective basis for treating members of different groups differently. In this research the stereotypes of people over 70 was assessed by The Stereotype Content Model (SCM; Fiske et al., 2002), which holds that stereotypes of social groups can be organised according to two underlying dimensions of competence and warmth. Chapter 5 outlines some of the negative consequences of age-stereotypes; therefore it is important to know how strongly these beliefs are held in the UK, and whether they differ according to the age and gender of the respondent.

The combination of evaluations of competence and warmth produce different emotional reactions to members of particular social groups that inform the type of prejudice they are likely to encounter. Older people are stereotyped positively as warm and friendly, but also negatively as less competent. This mixed stereotype content results in a paternalistic form of prejudice where older people are more likely to be pitied and patronised (Cuddy et al., 2005).

Age and gender differences in age stereotypes. Unlike stereotypes applied to other social groups, ageist stereotypes have the potential to be applied to the self as people age themselves and move through age groups. Therefore, respondents' own age is likely to influence perceptions of people over 70 depending on whether people are closer or further away from the age group being evaluated. According to SCM, younger age groups may try and positively differentiate themselves from older age groups by evaluating older people as less competent. Furthermore, as people age themselves they become less reluctant to negatively stereotype a group they are becoming closer to belonging to. Therefore, in line with previous research that has shown that younger age groups are

more likely to view those over 70 as incapable (Abrams et al., 2009), an effect of age is expected, such that younger respondents hold age stereotypes more strongly.

Evidence has shown that both the gender of the target being evaluated and the gender of the respondent doing the evaluating influences stereotypical perceptions. For instance, Hummert et al., (1997) found that people are more likely to negatively stereotype women compared to men. Research has also shown that women are more likely to think those over 70 are viewed with pity, while men are more likely to think that those over 70 are friendly and envied in society (Abrams et al., 2009). Therefore, it is expected that stereotypes of people over 70 may vary by gender. Understanding the content of stereotypes afforded to people over 70, by different age groups and by gender, should provide an insight to the consensus of the stereotype and vulnerability to being stereotyped.

It is important to note that the stereotype dimension of 'warmth' is operationalised by asking people how friendly older people are seen to be, as friendliness tends to ensue warmth. People are not asked to evaluate how warm they perceive older people to be as this is perceived to be a less tangible evaluation in comparison to asking people to evaluate older people's friendliness (Fiske, et al., 2002).

Perceived Status of Age Groups

Different age groups are associated with different social roles, status, power and social responsibility. The perceived status of a social group is one aspect that can influence the stereotypes associated with social groups (Fiske et al., 2002). Previous research has shown that middle age groups are afforded high status in society, followed by younger and older age groups (Garstka et al., 2004), and it is the youngest and oldest age groups that are most negatively stereotyped. Status also reflects perceptions of power groups are perceived to hold within a society, with high status groups considered more powerful and authoritative. Understanding how people attribute status to different age groups is important because it provides an insight into the different power relationships between age groups and can be used to legitimise these relationships. Societal stereotypes and perceptions of status, may combine to form, inform or legitimise attitudes towards social groups.

Age and gender differences in perceptions of status. Evidence from SCM shows groups with higher status are typically seen as higher in competence-related traits, while those lower in status are seen as less competent. Studies with student samples show that younger people typically view older people as having low status and being low in competence (Cuddy et al., 2005). Furthermore, in accordance with social identity theory which states that people are driven to maintain positive social identity, people are more likely to afford more status to the groups they belong to. Therefore, age differences are expected in attributing status to people over 70, it is expected that with age people will afford more status to those over 70.

Gender differences may arise in perceptions of status because gender groups are themselves associated with high and low status in society. In most settings, women are considered lower status and possess less power than men do. Using the self as an anchor on which to judge the status of others, women may afford less status to others in comparison to men. It is important to understand how age and gender interact on perceptions of status, in order to know whether there is consensus between genders over the status afforded to different age groups.

Expressions of Prejudice

Research has often assessed people's attitudes by directly asking them how they feel about other social groups. However, unlike other social categories which have defined boundaries, everyone can expect to become a member of older age groups. In light of the transitional nature of age groups people may be motivated not to express direct hostility towards a social group they will belong to one day. They may even over-compensate with overtly positive evaluations in order to reduce identity threats associated with getting older.

Furthermore, there can be quite strong social inhibitions against expressing prejudice directly, therefore alternative measures, such as 'social distance' are used to assess indirect expressions of prejudice. Social distance is an expression of how comfortable people would be having unavoidable relationships with a member of a different social group. This is particularly important because avoiding relationships can result in social exclusion, isolation or even discrimination.

Age and gender differences in expressions of prejudice. Although people may be cautious about admitting prejudice against a social group we should still find people are more positive about the groups they belong to. Therefore, in accordance with previous research by Abrams et al., (2009) it is expected that older respondents express more favourable attitudes about their own age group than younger respondents.

Gender differences in positivity expressed towards people over 70 may be a reflection of different social roles. Evidence suggests that females provide the majority of social care needs (DRC, EOC & Carers UK, 2006). With females cast in the traditional caretaking and domestic roles, this is likely to increase the level of contact females have with people over 70, which in turn may influence feelings of positivity towards that group.

Experiences of Ageism

It is important to consider not only people's expressions of ageism, but also their experiences of being a target of age discrimination. Negative age based discrimination is the behavioural denial or right to something based on the classification of a person as a member of an age group (Nelson, 2002). This can provide us with an indication about which age groups, or specific age points people experience ageism and therefore, which age groups may be more or less vulnerable to ageism.

Age and gender differences in experiences of age discrimination. It is important to understand the extent to which age discrimination is experienced throughout the life-course, and whether it is experienced more or less by specific age groups in order to see whether particular age groups are more or less vulnerable. Previous research suggests that younger people report experiencing more ageism (Abrams et al., 2009), therefore it is expected that experiences of age discrimination will differ by age.

It is also important to explore gender differences in experiences of ageism to assess whether gender may make someone more or less vulnerable to ageism. In this case, we are interested in whether older women are more likely to experience ageism, as evidence suggests that older women are more negatively stereotyped (Hummert et al., 1997) which may make them more vulnerable.

Perceived Threat of People Over 70

Intergroup threat theory contends that different social groups may pose various types of challenges or threats to in-groups or to society as a whole (Stephan & Stephan, 2000). Previous research from the UK shows that people over 70 pose less of a realistic or symbolic threat, but more of an economic threat (Abrams et al., 2009). These attitudes and beliefs may have particular implications for the support of policy issues surrounding the economy, sharing of resources or the withdrawal of services.

Age and gender differences in perceived threat. The extent to which people of different ages endorse these views provides some insight into which threats are relevant to particular age groups. The perceived threat of older people relies on evaluations of the interdependence between different age groups, which may vary as a function of respondents own situation or life stage. For instance, perceived aged based differences in employment opportunities or needs for welfare and health care may provide a basis for economic conflict, resentment and prejudice. In accordance with previous research we should expect perceived threat to be greatest among younger respondents (Abrams et al., 2009).

Gender differences may appear in perceptions of perceived economic threat as traditional gender roles see males more involved in labour markets which may influence evaluations of how older people contribute to the economy. Accordingly, genders may differ in their perceptions of what constitutes contributing to the economy. Males may only see this in terms of employment and involvement in labour markets, while females may have more of an open view of what constitutes contributing to the economy as they are more likely to have more 'roles' within society.

Intergenerational Relationships

According to Intergroup contact theory (Pettigrew, 1998; Pettigrew & Tropp, 2006), experiences of positive contact between members of social groups can form the basis of positive attitudes and behaviour. Having friendships with members of different age groups generalise to more positive attitudes and less negative stereotyping of members of age groups. Furthermore, an important

indicator of a group's risk of discrimination or social exclusion is the extent to which its members are in regular positive contact with others (Schneider, 2004). Moreover, maintaining intergenerational relationships is particularly important in later life where studies consistently show the importance of social relationships to health, well-being and quality of life (see Victor, Scambler, Bond, Bowling, 2001 for review).

Age and gender differences in intergenerational relationships. Socio-emotional selectivity theory (Krauss et al., 2002) suggests that older people are able to control potentially negative experiences by isolating themselves from relationships that highlight their relative lack of capacity, in order to help maintain positive emotional states. Therefore, we would expect that respondents are more likely to have friends of their own age groups. However, research also suggests age and gender differences in maintaining friendships. People over 65 are at an increased risk of isolation; with a higher proportion of people in this age group more likely to have no friends compared to other age groups. Furthermore, it is men in this age category who are at an increased risk of isolation with 24% of men over 65 having no friends compared to 12% of women (Hartup & Stevens, 1999). This shows that intergenerational relationships may be particularly important for older people, specifically older males, who may be at an increased risk of social isolation and exclusion.

Method

The research for this study was conducted using the 2008-09 European Social Survey (Norwegian Social Science Data Services, 2008). The data set used for this analysis was released in March 2010. Although it contained representative data from 32 countries, we are only interested in describing attitudes to age in the UK in order to provide the relevant context for the rest of the thesis. The UK sample consists of 2352 respondents aged between 15 and 123 ($M_{\text{age}} = 49.15$; $SD = 18.58$). The respondent aged 123 (Participant # 211915) was considered an outlier, and respondent's age was winsorised to 96, the age of the second eldest respondent ($M_{\text{age}} = 49.14$; $SD = 18.54$). The survey was conducted using computer based personal interviews in 2008 or 2009.

This study presents analysis from 24 measures from the 'Age Attitudes and Experiences of Ageism Module'. It exams how people's age and gender affect responses on these items which relate to the following 7 issues; how people categorise others as young and old, societal stereotypes of people aged over 70, how people associate status to different age groups in society, expressions of prejudice, experience of age prejudice against oneself, the extent to which people perceive those aged over 70 be a threat and intergenerational relationships.

Dependent Measures

Table 1.1 *Items and Response Scales from the 'Age Attitudes and Experiences of Ageism' Module of the ESS*

ESS	Item	Response
Age categorisation		
E1	At what age do you think people generally stop being described as young	(Actual estimated age)
E2	At what age do you think people generally start being described as old	(Actual estimated age)
Stereotypes		
	Think about those aged over 70. Please tell me how likely it is that most people in the UK view those over 70 ...	0 = 'not at all likely be viewed that way' to 4 = 'very likely to be viewed that way'
E19	... as friendly	
E20	... as competent	
E21	... as having high moral standards	
E22	... with respect	
E29	... with envy	
E30	... with pity	
E31	... with admiration	

Cont.

ESS	Item	Response
E32	... with contempt	
Perceived status of age groups		
I'm now going to ask you some questions about the social status that people in different age groups have in society. By social status I mean prestige, social standing or position in society; I do not mean participation in social groups or activities. I'm interested in ...		
E5	How you think most people view the status of people in their 20s	0 = 'extremely low status' to 10 = 'extremely high status'
E6	How you think most people view the status of people in their 40s	0 = 'extremely low status' to 10 = 'extremely high status'
E7	How most people view the status of people over 70s	0 = 'extremely low status' to 10 = 'extremely high status'
Expressions of prejudice towards people over 70		
E34	Overall how negative or positive do you feel towards people over 70	0 = 'extremely negative' to 10 = 'extremely positive'
E23	How acceptable or unacceptable you think most people would find it if a suitably qualified 30 year old was appointed as their boss	0 = 'completely unacceptable' to 10 = 'completely acceptable'.
E24	How acceptable or unacceptable you think most people would find it if a suitably qualified 70 year old was appointed as their boss	0 = 'completely unacceptable' to 10 = 'completely acceptable'.
Perceived threat		
E12	People over 70 place a burden on the health service these days	0 = 'no burden' to 10 = 'a great burden'

Cont.

ESS	Item	Response
E14	People over 70's contribution to the economy these days	0 = 'contribute very little economically' to 10 = 'contribute a great deal economically'
E9	How worried are you that employers might prefer to give jobs to people in their 20s rather than to people in their 40s or older	0 = 'not at all worried' to 10 = 'extremely worried'
Personal experience of ageism		
E35	How often past year treated with prejudice because of age	0 = 'never' to 4 = 'very often'
E38	How often past year felt lack of respect because of age	0 = 'never' to 4 = 'very often'
E39	How often in the past year you have been treated badly because of your age	0 = 'never' to 4 = 'very often'
computed	Total experiences of ageism	0 = 'not experienced ageism' to 1 = 'experienced at least one form of ageism' (>0)
Intergenerational relationships		
E40	How many friends you have, other than family, aged under 30	1 = 'none', 2 = '1', 3 = '2-5', 4 = '6-9', 5 = '10 or more'
E42	How many friends you have, other than family, aged over 70	1 = 'none', 2 = '1', 3 = '2-5', 4 = '6-9', 5 = '10 or more'

Analytic Strategy

Analysis of variance (either multivariate or univariate) was used to assess and compare differences between age groups, gender and the age by gender interaction on the items. Wilks' Lambda statistics are reported for multivariate tests. Where appropriate a mixed model ANOVA was used. In

accordance with previous research investigating age differences in attitude to age measures, respondents age was grouped into five categories. These were chosen on the bases of the relevance to other datasets, literature and policy issues in the UK context. The age categories are 15 to 24, 25 to 49, 50 to 64, 65 to 79 and 80 years and over, see Table 1.2 for sample break-down of gender by age groups.

Table 1.2 *Numbers of Respondents by Age Group and Gender*

	Age group					Total
	15-24	25-49	50-64	65-79	80+	
Female	129	567	279	209	76	1260
Male	93	458	258	193	62	1064
Total	222	1025	537	402	138	2324

Results and Discussion

Age Categorisation

The Multivariate Analysis of Variance (MANOVA) on the two items assessing the end of youth and the beginning of old age revealed significant multivariate effects of age $F(8, 4338) = 53.739, p < .001, \eta^2 = .09$ and gender $F(2, 2168) = 22.066, p < .001, \eta^2 = .02$, but no interaction. On average, people stop being described as young at 35.81 years ($SD = 12.04$) and they start being described as old at 59.43 years ($SD = 11.41$).

The effect of respondent's age on the perceived end of youth $F(1, 2169) = 94.323, p < .001, \eta^2 = .148$, showed that with age, respondents estimated the end of youth to be later. Similarly, the onset of old age also increased with respondents age $F(1, 2169) = 44.972, p < .001, \eta^2 = .077$, see Table 1.3 for means and standard deviations.

The effect of gender showed that women estimated the end of youth to be later ($M_{age} = 36.79; SD = 12.5$) than men ($M_{age} = 34.65; SD = 11.39; F(1, 2169) = 18.522, p < .001, \eta^2 = .008$), and

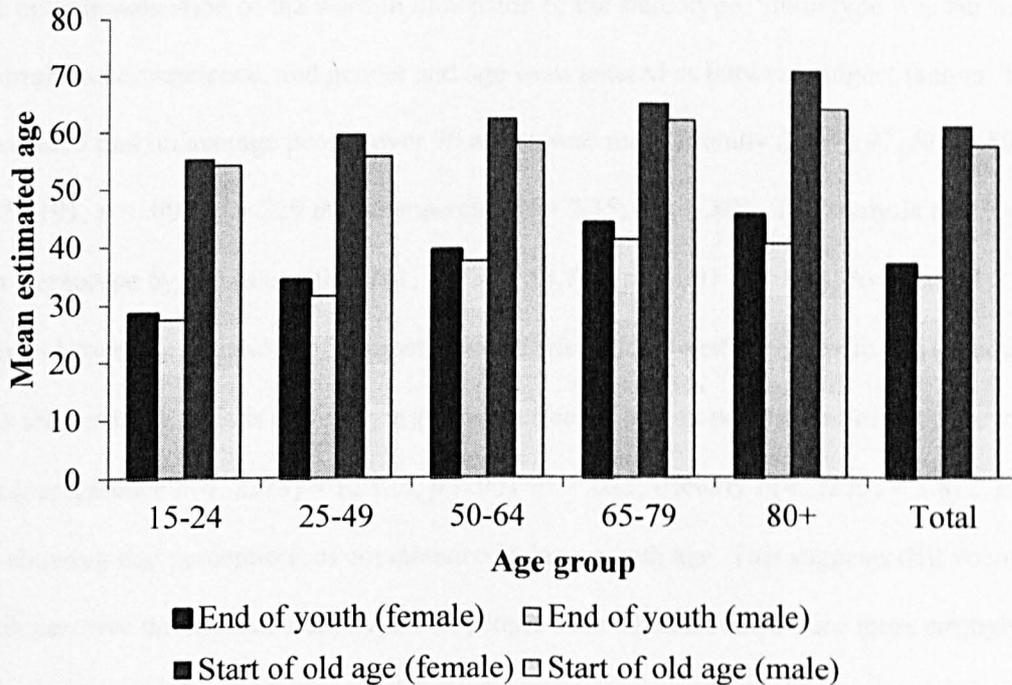
that women estimated the onset of old age to be later ($M_{age} = 61.03$; $SD = 11.61$) compared to men ($M_{age} = 57.54$; $SD = 10.88$; $F(1, 2169) = 37.416$, $p < .001$ $\eta^2 = .017$) (see Figure 1.1).

Table 1.3 Means and Standard Deviations in Parenthesis for the Estimated End of Youth and Start of Old Age by Respondent's Age Group

	Age group				
	15-24	25-49	50-64	65-79	80+
End of youth	28.02 (10.54) ^a	32.90 (9.78) ^b	38.38 (11.35) ^c	42.52 (13.02) ^d	43.11 (15.10) ^d
Start of old age	54.69 (11.83) ^a	57.69 (11.25) ^b	60.12 (11.34) ^c	63.45(9.09) ^d	67.65 (10.72) ^e

Note: Numbers with different superscript letters differ significantly $p < .05$

Figure 1.1 The Estimated End of Youth and Start of Old Age by Respondent's Gender and Age Group.



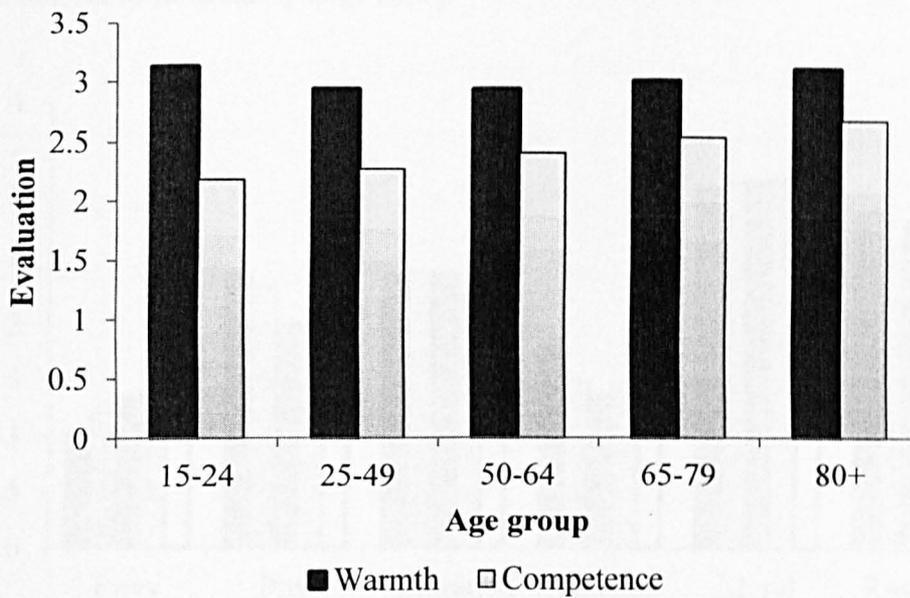
In the UK, on average people are considered to be young until the age of 35 and are considered old at 59. Respondents own age affected how these labels are used, with estimates of the end of youth and onset of old age increased with age. This finding is in line with the social cognitive

literature demonstrating that people may resist joining older age groups because of their perceived lower status. This pushing up of age boundaries may reflect a psychological need to distance themselves from older age groups and protect the self from threats to identity related to getting older and joining a lower status age group (Packer & Chasteen, 2006).

In accordance with Abrams et al., (2009) women showed a tendency to estimate the end of youth and onset of old age to be later than men. This may be a reflection of gender differences in longevity; women being more likely to live longer defer their perception of old age accordingly. It could also be a demonstration that women have an enhanced motivation to psychologically distance themselves from old age, perhaps because of the 'double hit' to women's status as they age.

Stereotypes of People Over 70

Perceptions of warmth and competence. A mixed model analysis of variance was conducted on the items assessing views of people over 70 as friendly and competent. The friendly item is the operationalisation of the warmth dimension of the stereotype. Stereotype was the within factor: warmth and competence, and gender and age were entered as between subject factors. The analysis revealed that on average people over 70 are viewed more friendly ($M = 2.97$; $SD = .80$; $F(1, 2275) = 676.191$, $p < .001$ $\eta^2 = .229$) than competent ($M = 2.35$; $SD = .89$). The analysis also revealed significant stereotype by age interaction $F(1, 2275) = 13.754$, $p < .001$ $\eta^2 = .024$. As Figure 1.2 shows, the difference between evaluations of competence and friendliness get smaller with age (although all differences are $p < .001$). This is driven by a stronger effect of age on perceptions of people over 70 as competent (competence $F(4, 2275) = 12.975$, $p < .001$ $\eta^2 = .022$; friendly $F(4, 2275) = 3.812$, $p = .004$ $\eta^2 = .007$) showing that perceptions of competence increases with age. This suggests that younger respondents perceive the societal stereotype that people over 70 lack competence more strongly. There was no stereotype by gender interaction or stereotype x age x gender interaction.

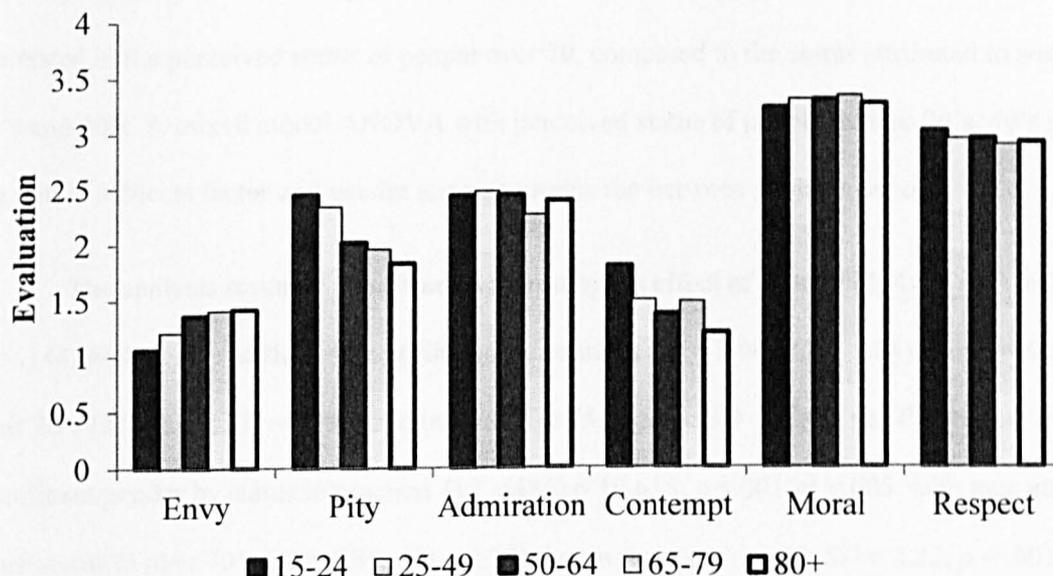
Figure 1.2 *Perceptions of People Over 70 as Warm and Competent by Respondent's Age Group*

Emotional reactions to people over 70 (emotional stereotype content). The

MANOVA on the four items assessing the emotional reactions to people over 70 revealed significant multivariate effects of age $F(16, 6911) = 11.098, p < .001, \eta^2 = .019$ and gender $F(4, 2262) = 3.375, p < .009, \eta^2 = .006$, but no age by gender interaction. There was a significant effect of gender on perceptions that people over 70 are viewed with envy, such that men perceived people over 70 are viewed with more envy ($M = 1.36; SD = 1.06$) compared to women ($M = 1.19; SD = 1.03$). Significant effects of age were found for envy, pity, admiration and contempt. With the exception of admiration, generally perceptions of people over 70 became more favourable with age, such that perceptions of envy increase with age, while pity and contempt decrease with age. Results show that younger respondents were more likely to view those over 70 with pity, contempt and less envy compared to older respondents.

Viewed as moral and with respect. The MANOVA on two items assessing whether people over 70 are viewed as having high moral standards and are viewed with respect. Analysis revealed that perceptions of morality and respect did not significantly differ by gender or age group. On average, people over 70 are viewed as having high moral standards ($M = 3.3; SD = .676$), and are viewed with little respect ($M = 2.95; SD = .894$), see Figure 1.3.

Figure 1.3 *Emotional Reactions to People Over70, and Extent People Over 70 are Viewed as Moral and with Respect by Respondent's Age Group*



In accordance with SCM people over 70 are considered to be more friendly (warm) than competent. In line with expectations, larger differences between perceptions of friendliness and competence were found between younger respondents suggesting that they hold age stereotypes more strongly than older age groups. The results are in line with previous research findings which suggest that the operationalisation of the warmth dimension of the stereotype by asking participants how friendly they perceive people over 70 to be seems to be fairly reliable.

Generally perceptions of people over 70 became more favourable with age; perceptions of competence, friendliness and envy increase with age while pity and contempt decreased with age. Consistent with Abrams et al., (2009) men viewed people over 70 with more envy, but no other gender differences were found. This suggests that men and women hold the same societal stereotypes and views regarding older people's competence, and are therefore, equally vulnerable to this stereotype. The evaluation of envy towards older adults from men mirrors gender differences in the status afforded to older adults.

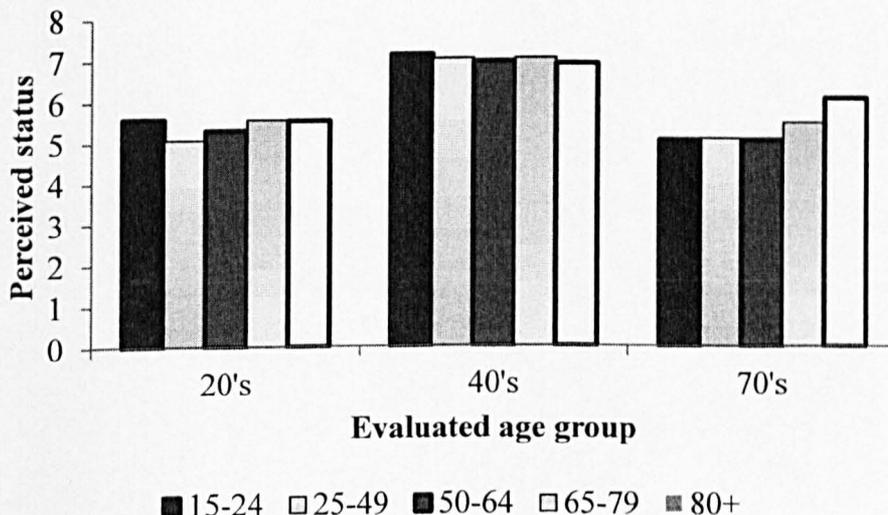
Perceived Status of Age Groups

Status is attributed to social groups to define their position in society, therefore it is relative to and only meaningful when compared with the status of other age groups. Therefore, this analysis is interested in the perceived status of people over 70, compared to the status attributed to people in their 20's and 40's. A mixed model ANOVA with perceived status of people in their 20's, 40's and 70's as the within subjects factor and gender and age groups the between subjects factor.

The analysis revealed significant within subjects effect of status $F(2, 4484) = 376.84, p < .001$ $\eta^2 = .144$, with people in their 40's attributed more status ($M = 7.04; SD = 1.34$) compared to those in their 20's ($M = 5.28; SD = 1.84$) and in their 70's ($M = 5.18; SD = 2.31$), see Figure 1.4. There was a significant gender by status interaction $F(2, 4484) = 10.615, p < .001$ $\eta^2 = .005$, with men attributing more status to over 70's ($M = 5.39; SD = 2.28$) than women ($M = 5.00; SD = 2.32, p = .001$).

There was also a significant age by status interaction $F(8, 4484) = 5.213, p < .001$ $\eta^2 = .009$, with age differences in attributing status to those in their 20's $F(4, 2242) = 8.117, p < .001$ $\eta^2 = .014$ and 70's $F(4, 2242) = 7.492, p < .001$ $\eta^2 = .013$, meaning that the high status attributed to those in their 40's was consensual across age groups. Pairwise comparisons revealed that the oldest age group attribute significantly more status to those over 70, compared to other age groups. Those aged 25-49 attributed significantly less status to those in their 20's compared to other age groups.

Figure 1.4 *Perceived Status of People in their 20's, 40's and 70's by Respondent's Age Group*



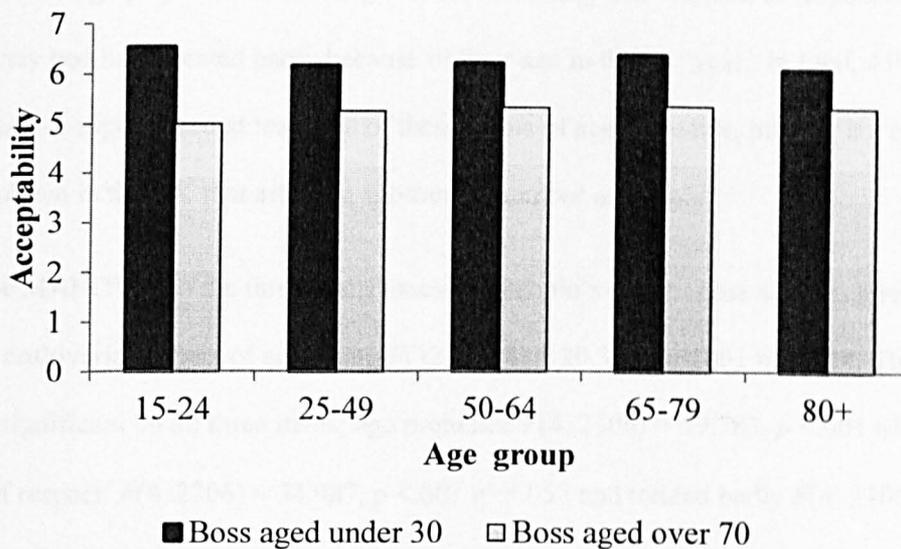
People in their 40s were regarded as high status, with those over 70 and those in their 20s attributed less status. Notably the status attributed to people over 70 increased with age, although the status of people over 70 does not reach the same level of high status attributed to those in their 40s. Moreover, there was a tendency for men to attribute more status to people over 70 compared to women. Gender differences in perceived status suggest that men may see older people as more of a legitimate source of authority and power than women. This may be reflection of the labour market where high status, dominant positions are predominately held by older men.

Expression of Prejudice

On average, respondents are more positive towards people over 70 than negative ($M = 7.38$; $SD = 1.64$), significantly above the mid-point of the scale $t(2322) = 69.903$, $p < .001$. The ANOVA only revealed significant main effect of gender on expression of direct prejudice towards people over 70, $F(1, 2295) = 18.838$, $p < .001$ $\eta^2 = .008$, such that women were more positive ($M = 7.52$; $SD = 1.61$) than men ($M = 7.22$; $SD = 1.66$).

A mixed model ANOVA on the acceptability of a boss aged under 30 and over 70 as a within subjects factor, revealed that a boss aged under 30 was considered more acceptable ($M = 6.23$; $SD = 2.1$) than a boss aged over 70 ($M = 5.24$; $SD = 2.9$; $F(1, 2244) = 201.415$, $p < .001$ $\eta^2 = .082$). There was a significant boss age by age group interaction $F(1, 2244) = 2.801$, $p = .025$ $\eta^2 = .005$, showing that the preference difference for a boss aged under 30 compared to a boss aged over 70 decreases with age, see Figure 1.5 (next page).

Figure 1.5 *Perceived Acceptability of Having a Boss Aged Under 30 or Over 70 by Respondent's Age Group*



There was a general tendency to express positivity towards people over 70, not negativity, perhaps reflecting people's reluctance to directly express any prejudice. Contrary to predictions, age groups were equally positive about people over 70. Although there was a tendency for women to be more positive about people over 70 than men. This finding, when taken together with gender differences in status afforded to people over 70, could be an indication of gender differences in strategies for successful ageing. According to the social cognitive literature, ageing represents certain threats to identity, yet because getting older is an inevitable process people are also motivated to maintain a certain level of positivity to older people. The findings suggest that men may do this by affording more status to older people, while women express more positivity to older people.

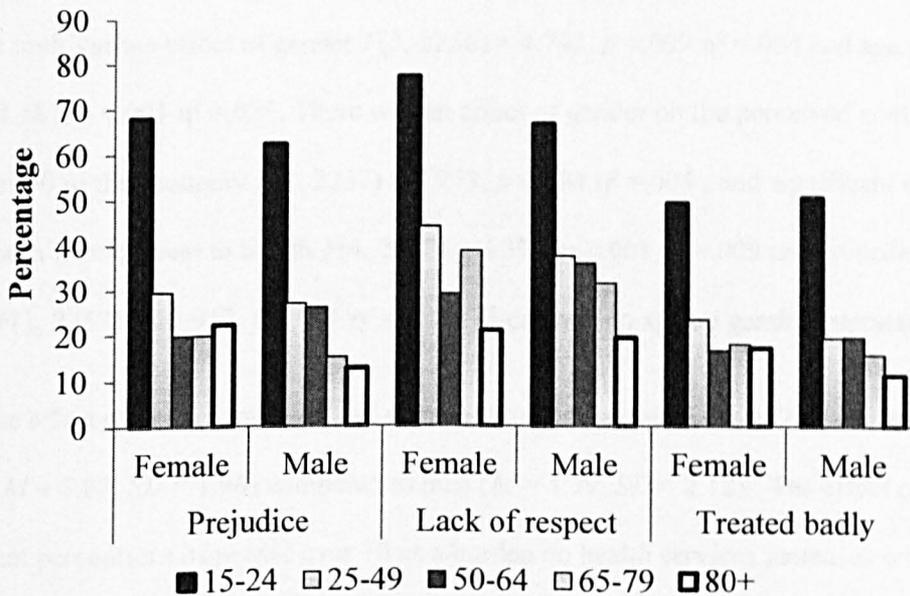
Conversely, no gender differences in indirect expressions of prejudice were found. Having a boss aged under 30 was considered more acceptable than having a boss over 70. However, the preference for a boss aged under 30 over a boss aged 70 and over, tended to decrease with age, suggesting that with age difference in preference decreases.

Experiences of Ageism

Three items assessed respondent’s experience of ageism, 28% of respondents reported they had experienced age prejudice in the last year, 40% said they had felt lack of respect because of age, 22% said they had been treated badly because of their age in the last year. In total, 45% of respondents had experienced at least one of these forms of age prejudice, making it a considerable societal problem in the UK that affects a substantial number of people.

The MANOVA on the three items assessing people’s experiences of ageism revealed a significant multivariate effect of age group $F(12, 6918) = 20.363, p < .001 \eta^2 = .034$. The effect of age group was significant on all three items; age prejudice $F(4, 2306) = 49.783, p < .001 \eta^2 = .079$, treated with lack of respect $F(4, 2306) = 34.987, p < .001 \eta^2 = .057$ and treated badly $F(4, 2306) = 29.786, p < .001 \eta^2 = .040$, showing that experiences of ageism decrease with age (see Figure 1.6). There was no effect of gender or age by gender interactions on the three items.

Figure 1.6 *Experiences of Ageism by Respondent’s Gender and Age Group*



Younger age groups reported experiencing more age prejudice, lack of respect and being treated badly, but there were no gender differences. There are two reasons for the extreme age differences in experiences of ageism, as suggested by Abrams et al., (2009). First, younger

respondents may be more sensitised to equality issues. This may be why younger respondents report experiencing more of all forms of discrimination except for those related to disability. Second, it seems plausible that ageism is experienced by younger and older respondents differently. Younger respondents might be experiencing a direct and hostile form of age prejudice which is easily detectable. Older respondents might be experiencing a more patronising but less directly confrontational form of age prejudice in terms of negative assumptions about their health or abilities.

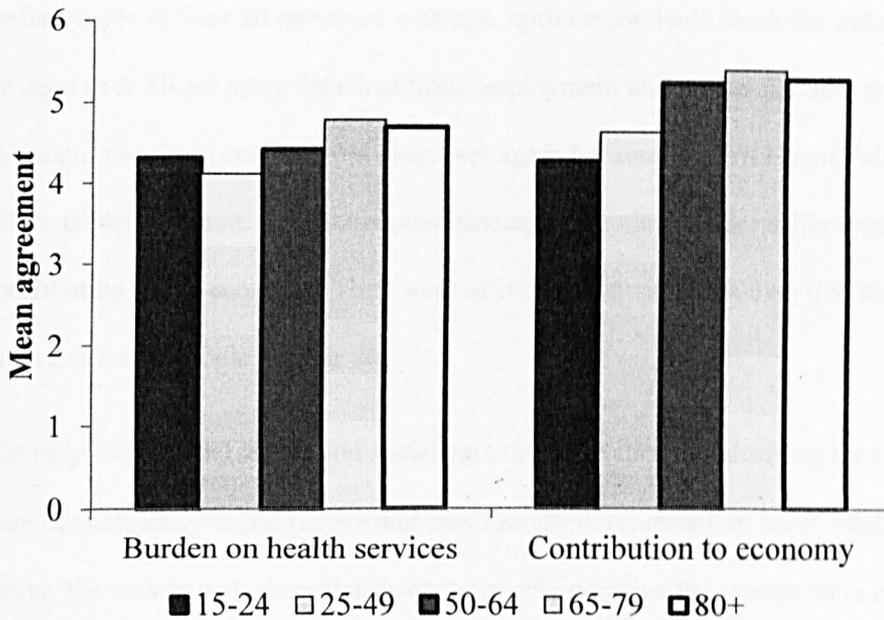
There were no gender differences in experiences of ageism, suggesting that women are no more vulnerable to age discrimination than men. This may be surprising given that evidence suggests older women are more negatively stereotyped than older men, although this may be reflection of gender based stereotyping and not age. In order to explore experiences of older men and women, it may be more meaningful to explore experience of sexism, and the combined experiences of sexism and ageism.

Perceived Threat of People Over 70

The MANOVA on the two items assessing the perceived threat of people over 70, revealed significant multivariate effect of gender $F(2, 2256) = 4.745, p < .009 \eta^2 = .004$ and age group $F(8, 4512) = 14.181, p < .001 \eta^2 = .025$. There was an effect of gender on the perceived contribution of people over 70 to the economy $F(1, 2257) = 8.273, p = .004 \eta^2 = .004$, and significant effects of age group on both items; threat to health $F(4, 2257) = 5.391, p < .001 \eta^2 = .009$ and contribution to the economy $F(1, 2257) = 19.917, p < .001 \eta^2 = .034$. There was no age by gender interaction.

The effect of gender revealed that women thought that people over 70 contributed more to the economy ($M = 5.03; SD = 1.96$) compared to men ($M = 4.79; SD = 2.12$). The effect of age group revealed that perceptions of people over 70 as a burden on health services increases with age, with respondents aged between 65 and 79 viewing others over 70 as a greater burden. Interestingly the perceptions of people over 70's contribution to the economy also increased with age, with the youngest two age groups differing significantly from the three older age groups, see Figure 1.7 (next page).

Figure 1.7. *Perceived Threat of People Over 70 by Respondent's Age Group*



The ANOVA assessing the extent people are threatened by younger people in the labour market, revealed that women were more likely to worry ($M = 5.44$; $SD = 2.44$) that employers prefer people in their 20s than men ($M = 5.26$; $SD = 2.59$), $F(1, 2274) = 5.437, p = .020 \eta^2 = .002$. This worry increased with age until respondents reached the 80 plus age group $F(1, 2274) = 10.836, p < .001 \eta^2 = .019$, means are shown in Table 1.4.

Table 1.4 *Means and Standard Deviations in Parenthesis for the extent people Worry that Employers Prefer People in their 20's, by Respondent's Age Group*

		Age group				
		16-24	25-49	50-64	65-79	80+
		4.67(2.44) ^a	5.33(2.47) ^b	5.75(2.48) ^c	5.74(2.47) ^c	4.91(2.89) ^{ab}

Note: Numbers with different superscript letters differ significantly $p < .05$

The perceived threat of people over 70 was assessed in terms of their burden on health services and their contribution to the economy, while one item assessed the extent to which younger age groups were a threat to older people in the labour market. Significant effects of age were found on

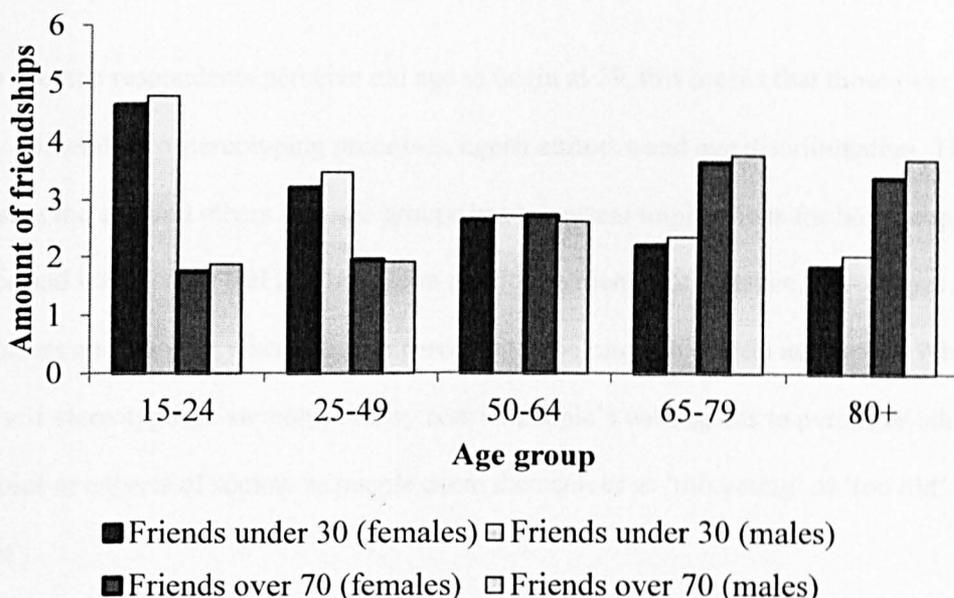
all three items. With age, respondents perceived people over 70 to be a greater burden on the health service, but they also perceived people over 70 to contribute more to the economy. Worry that employers prefer people in their 20 increases with age, until respondents reach the oldest age group. Perhaps those aged over 80 are more detached from employment and labour markets and therefore, worry about younger people in employment decreases again because it is irrelevant. Women perceive people over 70 to contribute more to the economy, perhaps reflecting gender differences in what constitutes contributing to the economy. They were also more worried than men that employers would show a preference towards people in their 20.

Within employment and health and social care there are strong underlying tones implying that older people are economically unproductive and they therefore, represent an unaffordable burden on society. However, the survey data show that younger people perceive those over 70 to contribute less to the economy, it is older people who are more likely to agree that people over 70 are a burden to the health and care services. This may reflect increasing recognition that with age, older people are perceived to be increasing demands on health care services or it may reflect actual age differences in use of health care services.

Intergenerational Relationships

The analysis revealed a significant effect of gender on the number of friends under 30, with men being more likely to have 2 to 5 friends under 30 ($M = 3.12$; $SD = 1.55$), while women have at least one ($M = 2.97$; $SD = 1.54$; $F(1, 2307) = 5.388$, $p = .020$ $\eta^2 = .002$). There were significant effects of age group on both the number of friends under 30, $F(4, 22) = 150.206$, $p < .001$ $\eta^2 = .207$, and the number of friends aged 70 and over $F(1, 2307) = 186.782$, $p < .001$ $\eta^2 = .245$, with people being more likely to have friends belonging to their own age groups, see Figure 1.8 (next page).

Figure 1.8 *Friendships with People Under 30 and Over 70 by Respondent's Gender and Age Group*



In accordance with the socio-emotive theory, respondents were more likely to have friends their own age. There was a gender difference in the number of friendships people have with others under 30. On average men were likely to have 2 to 5 friends under the age of 30, while women were more likely to have at least one.

General Discussion

This Study introduces key components of people's attitudes to age, and analyses these in the context of the UK. Taken together, the research shows that people's attitudes to age and evaluations of older people are mixed; they consist of both positive and negative components. For instance, people over 70 were perceived to be more friendly (warm) than competent. They were also viewed negatively with pity, but positively with admiration, respect and seen as moral. People over 70 are seen negatively as having relatively low status in comparison to those in their 40's, contributing little to the economy and a burden on health care services, but people express more positivity towards people over 70. Furthermore, the research shows that there is some discrepancy between people's expressions of prejudice and experiences of ageism. For instance, 28% of respondents in the UK sample have experienced age based prejudice, 40% have said they have been treated with lack of

respect and 22% said they have been treated badly because of their age, while very few respondents were willing to express direct negative feelings towards people over 70.

On average respondents perceive old age to begin at 59, this means that those over 59 may be particularly vulnerable to stereotyping processes, ageist attitudes and age discrimination. The process of categorising the self and others into age groups has important implications for how people define those groups and how people feel and behave in relation to them. For instance, stereotypes may be applied to others and the self, when they are perceived to belong to a certain age group. When applied to the self (self-stereotyping), stereotypes may restrict people's willingness to pursue or take part in particular roles or aspects of society as people deem themselves as 'too young' or 'too old' or 'too incompetent'.

As people get older they perceive old age to begin later. This pushing up of age boundaries may reflect a psychological need for people to distance themselves from older age groups in order to protect the self from identity threats related to getting older and joining a lower status age group (Packer & Chasteen, 2006). Moreover, the data confirmed that people over 70 are considered to be lower status than those in their 40's, but with age the perceived status of those over 70 increases. Suggesting that as people psychologically get closer to old age their attitudes towards older people become more favourable.

The data shows that men and women differ on certain aspects of attitudes to age, which may reflect a gender difference in strategies for successful ageing. Gender differences in perceived status of people over 70 and gender differences in age categorisation may reflect a stronger tendency for women to distance themselves from older age than men. It seems that men perceive older people as a more legitimate source of authority by viewing them as higher status than women, and therefore, show fewer tendencies to psychologically distance themselves from old age by pushing up boundaries that define old age.

According to the SCM, societal stereotypes and perceptions of status may combine to form, inform or legitimise attitudes towards social groups. Therefore differences in perceived status should

also be associated with perceptions of competence, with lower status groups afforded less competence. However, despite gender differences in perceived status there were no gender differences in the perceived competence of people over 70.

This Study provides evidence that people's attitudes towards age differ depending on the age of person expressing the attitude. Age differences confirm theoretical predictions that people are more positive about the groups they are 'psychologically' closer to, moving towards. All, but one evaluation (threat to health care) became more positive with age. Although, the perception that older people were more likely to view other older people as a burden on health care could be an indication of self-stereotyping to health stereotypes or recognition of the 'inevitability' that health declines with age. In sum, perceptions of old age vary according to one's own age and gender, therefore, people's vulnerability may vary accordingly and be dependent not only on the age of the target but also on the age and gender of the perceiver or person holding the attitude.

**Chapter Eight. Effects of Positive and Negative Age Stereotypes on Older Adults
Cognitive Performance**

Abstract

There are two studies in this chapter, which contribute to a paper, Swift, H.J., Abrams, D., & Marques, S. (2012) Threat or boost? Social comparisons affects older people's performance differently depending on task domain, *Journal of Gerontology Series B: Psychological Science*. The aim is to investigate whether social comparison with younger people can result in either a stereotype-based threat or boost in older people's performance. The first study (Study 2) used nationally representative data to establish domains of performance in which older people are either stereotypically disadvantaged or advantaged relative to younger people. The second study (Study 3) was an experiment to test how a potentially threatening versus control versus enhancing comparison with younger people would affect performance in negatively and positively stereotyped task domains. As predicted, compared with the control condition, stereotype threat caused performance decrements in both task domains. This effect was partially mediated by anxiety. The enhancing social comparison boosted performance, but only on a crossword task, a task on which older people's abilities are favourably stereotyped. The research demonstrates that a threatening comparison can result in underperformance by older people both in negatively and positively self-stereotyped task domains. It also demonstrates that social comparison with younger people can enhance older people's performance in a positively stereotyped task domain. The implications for creating circumstances likely to enable older people to achieve their full potential are discussed.

Study 2. Perceptions of Older People's Competence in Task Domains

Study 1 introduced some basic descriptive and emotive components that form the stereotype dimensions that can be used to classify social groups. It shows that older people are predominately seen as warm but also incompetent. Competence beliefs surrounding older adults may stem from other negative beliefs surrounding memory failures in later life. However, although the belief that people over 70 are incompetent is widespread, there are also positive stereotypes that wisdom and experience increase with age, making older people a legitimate source of knowledge and advice (Blanchard-Fields, 2007). In order for these positive stereotypes surrounding older adults to exist there might be some specific related tasks that older adults are deemed competent in.

The purpose of this study is to investigate further the specific stereotypes about the domains of competencies of older adults. The aim of this study is to establish consensual stereotypes about older people's competence in different task domains. It explores societal age stereotypes of various task domains to locate tasks that older people are deemed stereotypically inferior or even superior in, to inform Study 3.

Method

We analysed data from an omnibus survey of a nationally representative random stratified sample of 2113 respondents aged 16 to 95 in the UK. The survey was conducted by a major market research organization (TNS) using computer-aided personal interviews. Respondents were to consider a list of domains of competence: having a healthy diet, solving a crossword, looking after children, managing staff, driving, using the internet to buy something, taking direction from a supervisor, making financial decisions, taking enough exercise, being polite, learning new skills, settling arguments, being creative and understanding other people's view points (Ray, Sharp & Abrams 2006). They were then asked to think about whether performance in each domain would be better by most 25 year olds, most 75 year olds, or both would perform equally well.

Results

Because the focus of our experimental studies is the impact of societal stereotypes among people aged 60 and above, we analysed the responses of all participants aged 60 and above ($N = 636$, $M_{\text{age}} = 72.15$, $SD = 7.1$). In all domains Chi-square tests revealed clear and significant differences in stereotypes of age-related competence. As shown in Table 2.1 on the next page, a typical 25 year-old was judged to be significantly better at looking after children, driving, being creative, taking enough exercise, learning new skills, and using the internet. Age groups were reported to be equally as good at taking directions from a supervisor. Respondents judged that a typical 75 year-old would be more likely to be polite, to be able to settle arguments, to understand other people, be good at managing staff, to make good financial decisions and to have a healthy diet.

Importantly for the present research, a typical 75 year old was much more likely to be judged to be better at solving crossword puzzles, $\chi^2(2, N = 636) = 236.90, p < .001$. Fifty nine percent judged that people over 75 would perform better on crossword puzzles, whereas only 9% judged that a 25 year-old would be better. This indicates a strong stereotypical advantage and almost no disadvantage for older people in this domain. Analysis using the entire sample showed this perception was consensual. Fifty nine percent judged that a typical 75 year-old would be superior at solving crossword puzzles $\chi^2(2, N = 2113) = 795.1, p < .001$.

Table 2.1 *Percentage of Respondents who Perceive Competencies to be Greatest among 25 Year Olds or 75 Year Olds*

	25 year olds	No difference	75 year olds	$\chi^2(2, N = 636)$	<i>p</i>
Being polite	3.30	28.93	67.77	402.01	<.001
Settling arguments	3.93	33.49	62.58	328.14	<.001
Understanding others' viewpoints	7.08	31.45	61.48	283.37	<.001
Solving crossword puzzles	9.59	31.13	59.28	236.9	<.001
Making financial decisions	13.84	31.45	54.72	160.4	<.001
Healthy diet	19.34	37.42	43.24	59.27	<.001
Managing staff	21.38	42.61	36.01	45.03	<.001
Taking direction from a supervisor	29.87	39.47	30.66	10.82	.004
Looking after children	35.69	37.11	27.20	10.95	.004
Driving	39.94	36.48	23.58	28.34	<.001
Being creative	43.55	42.30	14.15	105.46	<.001
Taking enough exercise	57.86	31.60	10.53	214.54	<.001
Learning new skills	72.48	21.70	5.82	462.75	<.001
Using the internet to buy something	84.75	14.31	0.94	773.61	<.001

Note: Participant sample aged 60 and over.

Discussion

The public stereotypes observed in this study are highly consistent with previous experimental research showing low expectations of older people's performance on general cognitive tasks (Prohaska, Parham, Teitelman, 1984; Singer, 1986), and that older people have a particular competence in more social domains such as interpersonal problem solving (Blanchard-Fields, 2007). Importantly, we established a specific task domain in which there is a clear societal consensus that older people have *greater* competence than younger people.

Study 3. Threat or Boost? Social Comparison Affects Older People's Performance Differently Depending on Task Domain

This research examines the impact of positive and negative stereotypical expectations on older people's cognitive performance. This study tested the impact of a potentially threatening social comparison and a potentially enhancing social comparison on older people's performance in task domains in which they are stereotypically inferior or superior to younger people. As well as differentiating the impact of threat and enhancement (boost) in these two task domains, the experiment also investigated anxiety as a potential mediator.

For stereotype threat to occur, the target must believe that stereotypes about the group are socially pervasive (Steele, 2010). Previous research on the impact of stereotypes on older people's performance has generally employed generic descriptive stereotypes (e.g. by priming with traits such as 'enlightened' 'wise', Levy, 1996). These trait based stereotypes do not necessarily tap specific task domains or competencies that are stereotypical of older people. For example, mathematical, cognitive and memory skills are domains in which older people are stereotypically assumed to be less competent than younger people (Abrams et al., 2006; 2008; Hess et al., 2004). However, a requirement for the present research is to test the impact of stereotype expectations on a task that would represent a positive stereotypic dimension for older rather than younger people. The inferior tasks were based on previous studies showing that cognitive performance is affected by stereotype threat (e.g. Abrams et al., 2006; 2008). The crossword puzzle was chosen as a superior performance domain because Study 2 demonstrated that there is a consensually positive stereotype of older people's ability to perform well on this task and also because it provides a quantifiable performance measure.

According to social identity theory (Tajfel & Turner, 1979), if it is not possible to find a lower status comparison group, groups may sustain their identity by using 'social creativity' strategies. This means they seek socially legitimate dimensions (stereotypic differences) on which their group is positively distinct from the higher status group. Thus, despite the consensually lower status of older people, underpinned by stereotypes that older people are less competent or capable than younger

people, we propose that older people may be able to focus on particular stereotype dimensions (e.g. experience and wisdom) that make them positively distinctive compared with younger people. Therefore, focusing on these positively distinct stereotypical attributes can be a basis for boosting older people's performance.

Stereotype lift research has focused on specific domains in which the comparison group is assumed to be weaker (Walton & Cohen, 2003). There is a dearth of research that disentangles task domain effects from social comparison effects, for example by investigating effects of different comparisons on the performance on the same task, or testing more than one performance domain within the same testing session. One study (Marx et al., 2005) found that a positive social comparison (information about a fellow group member's ability to do well) only enhanced performance when the information was specific to the domain being tested (math rather than athletics). This suggests that only stereotypic comparisons that are relevant to a specific performance domain can enhance performance in that domain. Further, Levy & Leifheit-Limson (2009) found that positive age primes relating to physical and cognitive domains had stronger effects in performance domains that matched the stereotype content. Based on Marx et al's and Levy & Leifheit-Limson's findings, we predict that an enhancing (i.e. downward) social comparison might especially boost performance on a specific task on which there is also a stereotypic advantage, compared to a control condition.

Method

Design and Participants

One hundred and twenty five participants were recruited from various Age UK day centres in the South East of England. Five participants were excluded from the analysis due to incomplete data. The remaining 120 participants ranged in age from 61 to 95 years, averaging 76.16 ($SD = 8.30$). Forty nine were male (40.8%) and the remaining 71 were female (59.2%). The majority of participants were retired (90%) and lived independently in their own home (80%). All were in good mental and physical health, the average age participants at which left full time education was 15 years ($SD = 1.4$).

Participants were assigned randomly to one of three conditions (control, threat and boost) in a between subjects design. Their performance was measured in both a positive task domain (crossword) task and a negative task domain (mathematical and cognitive). Additional measures were a manipulation check of threat concern, and a measure of self-reported test-related anxiety.

Procedure

Participants were invited to take part in the research project described as a lifestyles survey which would involve some everyday problem solving and answering some questions about their feelings, attitudes and beliefs. They were tested in a private location individually by a 23 year old female experimenter who informed participants that their responses were confidential and that they were free to withdraw from the study at any time. To ensure consistency, further instructions were given via audio- recording.

In the *threat condition*, negative comparison with younger people was made salient (as in Abrams et al., 2006; 2008). Participants were informed that; “It is widely assumed that intellectual performance such as math performance and spatial skills decline with age, so the purpose of this study is to see whether older people do perform more poorly on intellectual tasks than younger people. Both older and younger people will be taking part in this research”.

In the *control condition*, in line with previous research, there was no reference to younger or older people and participants were merely informed that; “The purpose of this study is to see how people differ in their responses on different tasks. Different types of people will be taking part in this research”.

In the *boost condition* there was a positive social comparison that favoured older people: “It is widely assumed that experience and wisdom increases with age so that people become better at solving all kinds of everyday practical problems. The purpose of this study is to see whether older people do solve problems more effectively than younger people. Both older and younger people will be taking part in this research”.

After completing the dependent measures and manipulation check, participants were asked if they had any suspicions or questions and were fully debriefed verbally and in writing.

Measures

Manipulation check. Following Marx and Stapel (2006), two items were used to measure threat concern, i.e., the accessibility of thoughts that participants would be judged in terms of their age. These were, 'Were you worried that your ability to perform well on the test was affected by your age?', and, 'Were you worried that if you performed poorly on the test, the researcher would attribute your poor performance to your age?' The response scale ranged from 1, *not at all* to 7, *very much*. We computed a mean score (Cronbach's $\alpha = .82$), higher numbers reflecting more threat concern.

Crossword performance. The crossword was selected from a national newspaper and was of moderate difficulty. All clues were definitions, anagrams or clues to factual answers. There were no cryptic clues. Participants were given three minutes to complete as much of a crossword as they could. The time limit was imposed to ensure variability in task performance without impinging on time required for subsequent tasks. Scores could range from 0 to 29 correct answers.

Cognitive performance. Cognitive performance was measured using problem tasks derived from previous research (Abrams et al., 2006) and included four tasks, each of which required working memory. A logic puzzle required participants to work out the number of family members present at a family re-union. A second task asked participants 'if, without writing them down, you were to spell out the numbers in full (one, two, three etc), how far would you have to go until you found the letter 'A'?' A third task required participants to match two shapes, amongst a number of other similar rotated shapes. Finally, participants completed a number sequence task. Factor analysis confirmed that performance on these four measures formed a single factor, explaining 42% of the variance, with an eigenvalue = 1.68. All communalities were $> .31$ and factor loadings were all greater than $.56$. Factor scores were used as the dependent measure.

Anxiety. Participants completed Abrams et al's (2006; 2008) measure of test-related anxiety, in which they rated the extent that they felt under-pressure, tense, nervous, jittery, confident, uneasy,

calm, afraid of not doing well and uncomfortable whilst solving the tasks on a 7-point scale (1 = *not at all* to 7 = *very much*). After reverse scoring the calm and confidence items, this forms a reliable scale (Cronbach's $\alpha = .87$).

Results

Preliminary analyses revealed that participants' age did not vary significantly by condition $F(2, 117) = .812, p = .446, \eta^2 = .014$ ($M_{\text{threat}} = 77.5, SD = 8.9; M_{\text{control}} = 75.5, SD = 7.8; M_{\text{boost}} = 75.4; SD = 8.2$). Participants' education level and gender also did not vary as a function of condition. Bivariate relationships among the variables are shown in Table 3.1. Age was significantly negatively related to the performance measures and therefore it was treated as a covariate in all subsequent analyses in line with procedures in previous research (cf. Levy & Leifheit-Limson, 2009).

Table 3.1 Means, Standard Deviations and Correlations Among Variables

Variable	2.	3.	4.	5.	<i>M.</i>	<i>SD.</i>
1. Age	-.443 ^{***}	-.411 ^{***}	.149	.068	76.16	8.3
2. Crossword		.405 ^{***}	-.390 ^{***}	-.313 ^{**}	13.43	8.29
3. Cognitive (standardized)			-.384 ^{***}	-.325 ^{***}	0.00	1.00
4. Anxiety				.532 ^{***}	2.69	1.19
5. Threat concern					2.91	1.84

Note: * $p < .05$, ** $p < .01$, *** $p < .001$

Manipulation Check

Analysis of covariance (ANCOVA) revealed a significant effect of condition $F(2, 116) = 3.39, p = .037, \eta^2 = .055$. As expected threat concern was greatest in the threat condition ($M = 3.46; SD = 1.9$), followed by the control condition ($M = 2.86; SD = 1.89$), and lowest in the boost condition ($M = 2.40; SD = 1.59$). However, pairwise comparisons revealed that the threat and boost condition differed significantly, $t(116) = 2.60, p = .011, d = .48$. Age was not a significant covariate ($p = .638$).

Test Performance

There were significant effects of condition both on crossword performance, $F(2, 116) = 11.79, p < .001 \eta^2 = .169$, and on cognitive performance, $F(2, 116) = 15.72, p < .001 \eta^2 = .213$. Age was a significant covariate for crossword performance $F(1, 116) = 27.98, p < .001 \eta^2 = .194$ and for cognitive performance $F(1, 116) = 22.89, p < .001 \eta^2 = .165$ (separate ANCOVAs on the four constituent measures revealed a significant effect of condition on all).

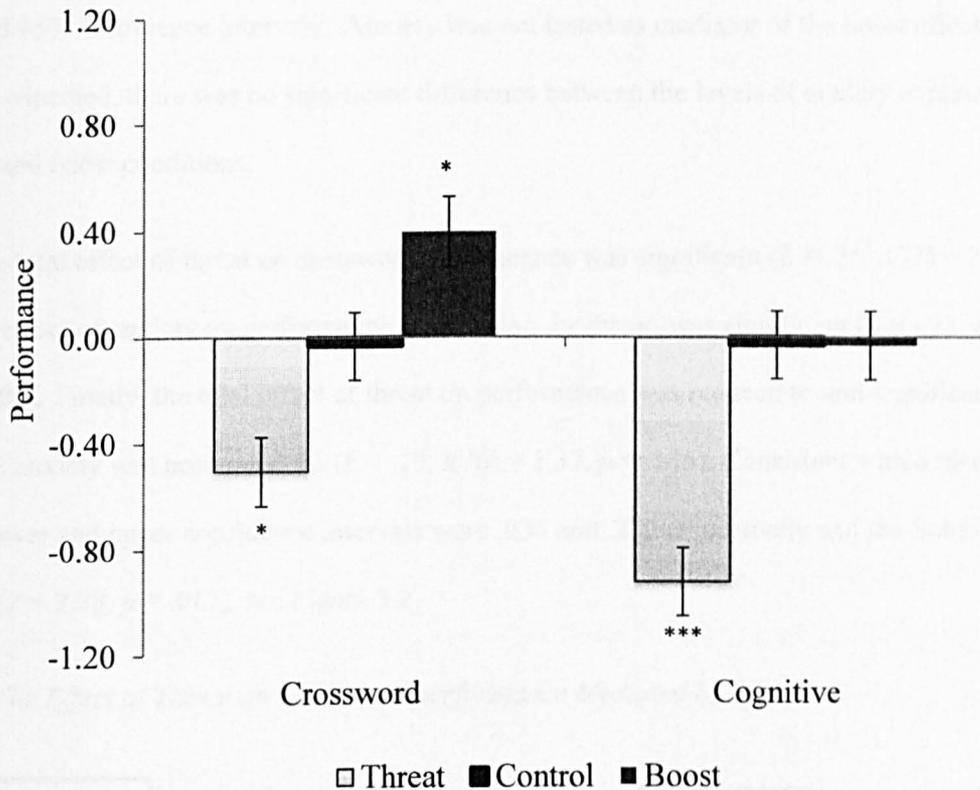
For both tasks, we hypothesized that threat should impair performance significantly relative to the control condition. Pairwise comparisons revealed that participants in the threat condition underperformed compared to the control condition on both the crossword ($M_{\text{threat}} = -.50, SD = .88; M_{\text{control}} = -.03, SD = .91; t(116) = -2.53, p = .013 d = -0.47$) and cognitive task performance ($M_{\text{threat}} = -.93, SD = .92; M_{\text{control}} = -.03, SD = .91, t(116) = -4.88, p < .001 d = -0.91$). Performance also differed between the threat and boost conditions for the crossword ($M_{\text{boost}} = .40, SD = .96; t(116) = -4.85, p < .001 d = -0.90$) and cognitive tasks ($M_{\text{boost}} = -.03, SD = .84; t(116) = -4.86, p < .001 d = -0.90$).

We hypothesized that boost should only arise if the task domain is associated with a stereotypic advantage. Participants in the boost condition performed better on the crossword task than did those in the control condition $t(116) = -2.33, p = .021 d = -0.43$. However, as shown in Figure 3.1, there was no significant difference in the cognitive performance of participants in the boost and control conditions.

It might be the case that appraisal of performance on the first task influences performance on the subsequent tasks (Inzlicht & Kang, 2010). Therefore the following analyses were conducted to ensure that the effects of condition on the two task domains are distinct. To disambiguate the unique effects of condition in the two task domains two ANCOVAs were performed on each performance measure with the other as an additional covariate (along with age). Crossword performance was significantly affected by condition, $F(2, 115) = 7.67, p < .001 \eta^2 = .118$, and the control and boost conditions still differed significantly $t(115) = -2.35, p = .021 d = -0.44$. Cognitive performance was also significantly affected by condition, $F(2, 115) = 11.34, p < .001 \eta^2 = .165$, and the control and

threat conditions still differed significantly $t(115) = -4.44, p < .001, d = -0.81$. These analyses demonstrate that the threat and boost conditions had distinctive effects depending on the performance domain, resulting in a significant boost effect for the crossword performance and significant threat effect on the cognitive performance.

Figure 3.1 *The Effect of Condition on Standardised Cognitive and Crossword Performance Measures*



Note: * = $p < .05$, *** = $p < .001$

Anxiety

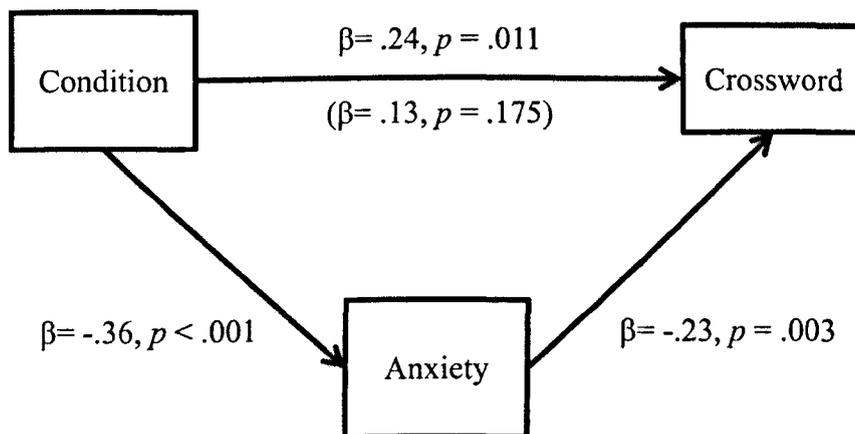
A one way ANCOVA revealed a significant effect of condition on anxiety, $F(2, 116) = 11.41, p < .001, \eta^2 = .164$. As would be expected by stereotype threat theory and our predictions, significantly more anxiety was experienced in the threat condition ($M = 3.36, SD = 1.35$) than in the control ($M = 2.42, SD = .88; t(116) = 3.85, p < .001, d = 0.72$) and boost conditions ($M = 2.28, SD = .99; t(116) = 4.39, p < .001, d = 0.82$). There was no significant difference between the control and boost condition ($p = .586$). Age was a non significant covariate in this analysis ($p = .232$).

Mediation Analyses

Given that more anxiety was experienced in the threat compared to the control condition and that anxiety is significantly negatively related to both performance measures it was appropriate to test for mediation. We followed the bootstrapping procedure outlined by Preacher and Hayes (2008) to test the mediating role of anxiety on both performance measures using threat versus control as the independent variable. Age was entered as a covariate. The procedure specified 5000 bootstrap samples and 95% confidence intervals. Anxiety was not tested as mediator of the boost effect because, as expected, there was no significant difference between the levels of anxiety experienced in the control and boost conditions.

The total effect of threat on crossword performance was significant ($\beta = .24, t(77) = 2.6, p = .011$). The effect of anxiety on performance, controlling for threat, was significant ($\beta = -.23, t(76) = 3.02, p = .003$). Finally, the total effect of threat on performance was reduced to non significance after the effect of anxiety was accounted for ($\beta = .13, t(76) = 1.37, p = .175$). Consistent with a mediation effect the lower and upper confidence intervals were .036 and .229 respectively and the Sobel test was significant ($Z = 2.38, p = .017$), see Figure 3.2.

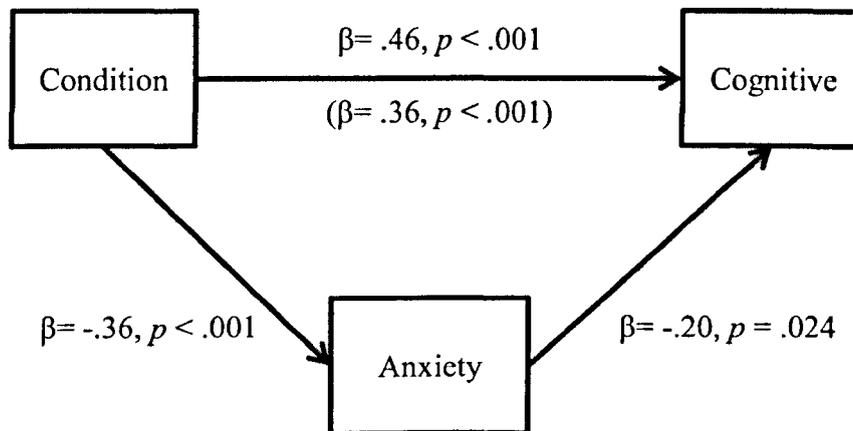
Figure 3.2 *The Effect of Threat on Crossword performance Mediated by Anxiety*



The total effect of threat on cognitive performance was also significant ($\beta = .46, t(77) = 4.66, p < .001$). The effect of anxiety controlling for threat was significant ($\beta = -.20, t(76) = 2.31, p = .024$), and the total effect of threat was reduced but remained significant after anxiety was accounted for ($\beta =$

.36, $t(76) = 3.55, p < .001$). Consistent with a mediation effect the lower and upper confidence intervals were .017 and .202 respectively and the Sobel test was significant ($Z = 2.01, p = .044$). Thus, the mediation tests show that anxiety statistically mediates the effect of threat on performance in both the cognitive and crossword domains, see Figure 3.3.

Figure 3.3 *The Effect of Threat on Crossword Performance Mediated by Anxiety*



Discussion

Old age is implicitly associated with negative traits and these negative aging stereotypes can have a significant impact on older people's cognitive performance (Levy, 1996, Levy, 2000). However, relatively little is known about the role of age based social comparisons and stereotypes in relation to the improvement of older people's performance. For the first time, this research investigated the impact not only of potentially threatening but also of potentially enhancing social comparisons on older people's performance in two types of task domain with the same testing session.

In line with stereotype threat theory a threatening social comparison would lead to decrements in cognitive performance and that this effect was mediated by anxiety. When facing a negative comparison that invokes the overall lower status of older people, older people underperform. Moreover, this underperformance is partially attributable to anxiety experienced during the testing phase in the threat situation, consistent with previous research (Abrams et al., 2006; 2008). This suggests that when older people face the prospect of being judged negatively in terms of their age they become anxious, which in turn interferes with performance.

Schmader and Johns, (2003) and Ben-Zeev et al., (2005) showed that arousal and anxiety caused by gender-based threat can disrupt performance in non-stereotyped domains. Consistent with that evidence, in the present research stereotype threat impaired performance even on a task that potentially offered a stereotypical advantage to older people. It seems that a negative social comparison that highlights a group's overall lower status is sufficient to produce anxiety related underperformance among older people even when the task domain favours them. This shows that the harmful scope of negative age stereotypes extends beyond just the dimension that is directly related to the stereotypes (cf. Meisner, 2012).

Based on social identity theory and stereotype lift research, we proposed that an enhancing social comparison could have a boosting effect, but only if the task related to a specific domain in which a stereotype confers a psychological advantage.

The evidence confirms the boost predictions and provides evidence that the same testing situation can reveal distinct effects of threat and boost, depending on which domain is being tested. Specifically, although participants were susceptible to threat on both tasks, importantly this research demonstrates for the first time that positive stereotypes can boost performance of older adults, deemed to be members of a low status group. Moreover, in line with Marx et al., (2005) and Levy and Leifheit-Limson (2009) we showed that this is a circumscribed effect. Study 2 established the existence of a strong societal stereotype that older people are better at crosswords. Consistent with our reasoning based on social identity theory, within the same individuals, the boost manipulation, which makes salient a positive age stereotype, improved performance only on the positively stereotyped task. It seems then that positive social comparisons may not have a boosting effect in general, but instead this depends on there being a match between a stereotypically favourable dimension and a status enhancing social comparison, as predicted by social identity theory.

Limitations

The finding that the boost manipulation did not affect performance on the cognitive tasks could be attributed to an order effect. The boost manipulation could simply have influenced the

crossword task but worn off prior to cognitive tasks. However, for this explanation to be persuasive, we would have observed the reverse pattern in the threat condition, namely that the effect of threat would have been weaker on the cognitive tasks. However, the threat effect was actually stronger on the cognitive tasks even though these followed the crossword. Moreover, even after controlling for crossword performance, there was still a significant effect of threat on cognitive performance demonstrating unique effects of threat and boost.

Whereas stereotype threat effects were partially mediated by anxiety (Steele & Aronson, 1995), it remains to be established what may mediate performance boost. One possibility is that boost effects only arise when anxiety is at a resting or baseline level. In that case, other types of emotional and motivational variables such as self-efficacy and confidence may become important. For instance, Rahhal et al., (2001) showed that self-efficacy beliefs about performance can be affected by how a task is framed. When older and younger adults were asked to rate how well their age group would perform on a 'test of memory', older adults predicted their performance to be significantly worse than younger adults did. But when asked about a 'test of knowledge', there was no significant difference in how older adults and younger adults rated their age group's ability. In light of this, it would be interesting to explore the role that these variables play in the explanation of positive self-stereotyping effects.

General Discussion

This research demonstrates how stereotype threat harms older people's task performance, mediated by anxiety. Importantly the research also shows that positive aging stereotypes can be a vehicle for performance boost. The research establishes new questions and evidence for stereotype threat research in general and for older people's ability to perform well in the context of social comparisons with younger people in particular. For stereotype threat research, a new theoretical avenue is to explore how status threat, stereotypic dimension, and task domains may combine to produce threat or boost effects. An intriguing problem is to discover mediators of boost effects. For example, changes in perceptions of the self, the group, or more positive self-stereotyping could be involved.

An important implication for older people is that there may be two routes for optimizing their performance in test situations or situations involving comparisons with younger people. One is to directly tackle the anxiety that arises from threat so that there is less interference with performance. The other is to identify positive expectations in conjunction with stereotypically positive task domains. Over time and across situations, these two approaches might produce a virtuous cycle that enables older people to reach and show their full potential rather than underperforming in the face of threat.



Chapter Nine. Extending the Stereotype Threat Paradigm**Abstract**

Much of the research investigating stereotype threat on older adults has addressed its impact on memory or cognitive performance. Study 4 presented in this chapter aims to extend the stereotype threat paradigm by investigating whether stereotypes threat can impact on older adults physical performance. Physical performance was measured using a hand-grip task, a widely used diagnostic measure of individual's capability that hasn't previously be used in stereotype threat research. A version of this study was published in a paper Swift, H.J., Lamont, R.A., & Abrams, D. (2012) Are They Half as Strong as They Used to Be? An Experiment Testing Whether Age-Related Social Comparisons Impair Older People's Hand Grip Strength and Persistence, *British Medical Journal Open*.

Study 4. Stereotype Threat Effects on Older Adults Physical Performance

An experiment investigated the impact of stereotype threat on older people's physical performance. Participants ($N = 55$, $M_{\text{age}} = 82.25$ years) experienced low or high stereotype threat (through comparison with younger people) and completed a measure of grip strength and grip persistence using a hand dynamometer. In line with stereotype threat theory, threat impaired physical performance relative to no threat by over 33%, even after adjusting for arthritis and population age and gender norms. These findings demonstrate an important new realm of impact of stereotype threat and new evidence of the potential impact of stereotypes on older people. The implications are discussed in relation to competency tests and clinical assessments of older people's capability in terms of work, health and everyday life.

Physical and mental decline is often seen as an inevitable part of ageing (Timiras, 2002; Salthouse, 1996). However, expectation of decline may be based, at least in part, on negative stereotypes (Abrams, Russell, Vauclaire, & Swift, 2012; Cuddy, Norton, & Fiske, 2005) and media images of ageing which often dwell on issues such as degenerative disease, illness, and dependency in later life (Wilkinson & Ferraro, 2002). Physical decline may be made even more salient by comparison with younger people, whose idealized media presentations convey super fitness and strength (Murnen, Smolak, Mills, & Good, 2003). We contend that such comparisons, which may be prevalent in situations in which older people are clinically evaluated, can ironically result in behavioural confirmation of their own physical decline.

In medical and health care settings, older adults may frequently encounter situations in which they feel they may be judged in terms of their age, or confirm negative age stereotypes. For instance, age is a salient factor in many doctor-patient interactions; age thresholds may often be used as relevant cues or eligibility criteria for assessing an individual's need for treatment or care. Subtle age cues also exist as health care professionals are likely to be younger than the retired patients they are treating. Moreover, there is often a degree of age segregation in hospitals, with specific wards for children and elderly patients in geriatric wards. These factors may raise the possibility for social

comparisons and the salience of age-related stereotypes, which may be damaging to older people's cognitive and physical functioning (Kahana & Kahana, 1970).

Detrimental impacts of unconscious negative age stereotypes have been assessed on a number of behavioural and functional outcomes (Meisner, 2012), including older people's memory performance (Levy, 1996; Stein, Blanchard-Fields, & Hertzog, 2002), handwriting (Levy, 2000), time to complete action sequences (Banfield, Pendry, Mewse, & Edwards, 2003) and physiological responses to stress (Auman, Bosworth, & Hess, 2005; Levy, Hausdorff, Hencke & Wei, 2000). Importantly, subtle but more explicit and ecologically relevant, influences can affect older people's cognitive performance via social comparisons.

Previous research has shown that older people's (aged 58 and over) cognitive ability and performance on mathematical tasks can be impaired if they are told prior to the testing situation that their performance will be compared with younger people (Abrams et al., 2006; 2008). This age-related social comparison raises awareness of negative stereotypes of ageing regarding the relative incompetence of older people in comparison with younger people, which leads to behavioural confirmation of age stereotypes and a deficit in cognitive performance. These and other studies (Hess, Auman, Colcombe, & Rahhal 2003) establish that the threat of being stereotyped negatively can have adverse effects on the cognitive and memory performance of older people. This has particular relevance for understanding, diagnosing and treating diseases, with evidence to suggest that negative age stereotypes may have significant harmful effects on people with Alzheimer's disease (Scholl & Sabat, 2008). However, the aim of the present research is to move beyond tests of relatively complex cognitive ability to see whether social comparison can affect basic physical capacity. Unlike cognitive ability, physical ability can be observed directly and is manifest when people engage in everyday tasks. Negative stereotypes of ageing assume inevitable physical decline, reflected by incapability, frailty, weakness, sickness, helplessness and dependency (Hummert, 1990). Therefore it seems probable that situations which involve social comparison with younger people have the potential to trigger behavioural confirmation of physical decline among older people. We hypothesised that age-

based social comparison would affect physical performance even in a task that requires little or no skill.

Hand Grip Dynamometry

To test this idea, the present study investigates the impact of a social comparison with younger people on older people's hand grip strength and persistence, a measure of physical capability. Although grip strength requires little or no skill, it is an index of a person's ability to do many everyday activities, ranging from opening a door to writing, carrying bags and opening jars and cans. Importantly, grip strength dynamometry is a widely used diagnostic measure of individual disability/capability, muscle strength and functionality, because it serves as a simple and reliable indicator of an individual's strength and persistence (Bohannon, Peolsson, Massy-Westropp, Desrosiers, & Bear-Lehman, 2006).

Hand grip declines by up to 50% between the ages of 25-29 and 75+ (Bohannon et al., 2006), and much of this decline happens after the age of 50 (Mathieowetz, Kashman, Volland, Weber, Dowe, & Rogers 1985). Hand grip strength has been shown to be an important predictor of disability in later life (Taekema, Gussekloo, Maier, Westendorp, & Craen, 2010; Rantanen, Guralnik, Foley, Masaki, Leveille, Curb & White, 1999). A meta-analysis of 13 studies (with a total N = 44, 636) found that high grip strength was associated with lower subsequent mortality, controlling for age, gender, and body weight (also apparent in a meta-analysis of a further 14 studies, N = 53, 476) (Cooper, Kuh & Hardy, 2010). Given the substantive importance of hand grip strength as a clinical indicator, it is important to know whether it can be influenced by psychosocial factors.

We contend that stereotype threat which involves a social comparison with younger people prior to the testing situation should impair older people's physical performance on the hand dynamometer (representing hand grip strength). Moreover, because the ageing stereotype implies reductions in both strength and stamina, we expect participants in the comparison condition to be less persistent, as measured by how long participants can hold the hand dynamometer at their maximum level.

Method

Design and Participants

Managers of fifteen Age UK centres and senior's lunches in the South-East of England were contacted to arrange visits to conduct the study. Eleven agreed, and fifty six participants (36 female) took part from Participants were aged between 67 and 98 years ($M = 82.25$, $SD = 7.21$). All participants considered themselves mentally and physically well at the time of the study. The majority of participant's lived independently in their own home.

Materials and Procedure

Potential participants were approached at social activities organised by the different centres. Testing was conducted individually by three female experimenters in their mid-20s. Volunteers were tested in sequence though not all could be tested in cases when they had to leave prior to a testing session becoming available. No testing sessions were unfilled. In order to avoid participants becoming aware of the study design and hypotheses prior to participation, all testing was restricted to one morning in any one centre. In practice this allowed testing of no more than seven participants. Participants were tested in a private area and were randomly assigned to condition by flip of a coin. Condition was evenly assigned across both gender and testing location ($p = .86$, $.96$, respectively). Procedures complied with British Psychological Society Ethical Guidelines and were approved by the School of Psychology Ethics Panel. Participants gave informed consent and were free to withdraw from the study at any time. All were fully debriefed in writing at the end.

The threat condition procedure followed previous research (Abrams et al., 2008), informing participants that, "the purpose of this research is to see whether older people perform differently on various tasks and the ways in which they deal with the world in comparison with young people. Both older and young people will be taking part in this research". In the control condition made participants were merely informed that; "The purpose of this research is to see how people deal with the world and how they perform on various tasks". The hand dynamometer grip strength task, measuring grip strength in kilograms, was completed three times with a 30 second recovery period

between trials. Participants were instructed to “please squeeze this handle as hard as you can, for as long as you can”. The maximum strength-level and time (from start to finish) were recorded on each trial. Participants’ age, gender, residence (own home vs. other), and education level were recorded and, because arthritis can affect grip strength (Fraser, Vallow, Preston & Cooper, 1999), they were asked whether they, “suffer from arthritis in the hands” (responding, ‘Yes, severely’, ‘Yes, mildly’, ‘Yes, very slightly’ or ‘No, not at all’).

Results

After removing a single outlier (3 SD from mean on all trials), average scores were computed for both hand-grip persistence and strength across the three trials. The three grip strength scores correlated highly, and formed a reliable measure (Cronbach’s $\alpha = .96$) as did the persistence times (Cronbach’s $\alpha = .91$). Strength and persistence were quite highly correlated; $r(53) = .51, p < .001$. Participants who reported more arthritis had significantly lower grip strength, $r(53) = .30, p = .02$. Strength and persistence were not significantly related to age, gender, educational level or residence.

Threat and Physical Performance

We hypothesized that threat should lead to impaired physical performance. The effect of condition on strength was significant, $F(1,53) = 4.51, p = .038 \eta^2 = .078$. Because arthritis also affected strength we used it as a covariate. The ANCOVA on strength confirmed that there was a significant effect of arthritis, $F(1,52) = 6.08, p = .017 \eta^2 = .105$, but importantly there remained a significant effect of threat on grip strength $F(1,52) = 5.21, p = .027 \eta^2 = .091$ (see Figure 4.1 next page). Analyses of grip persistence revealed similar effects. Figure 4.2 shows the significant effect of condition, $F(1,53) = 4.23, p = .045 \eta^2 = .074$. When arthritis was included as a covariate, there was no significant effect of arthritis, $F(1,52) = 2.52, p = .12 \eta^2 = .046$, but the effect of threat remained significant, $F(1,52) = 4.52, p = .038 \eta^2 = .08$.

Figure 4.1 *Hand-Grip Persistence as a Function of Condition with Self-Reported Arthritis a Covariate*

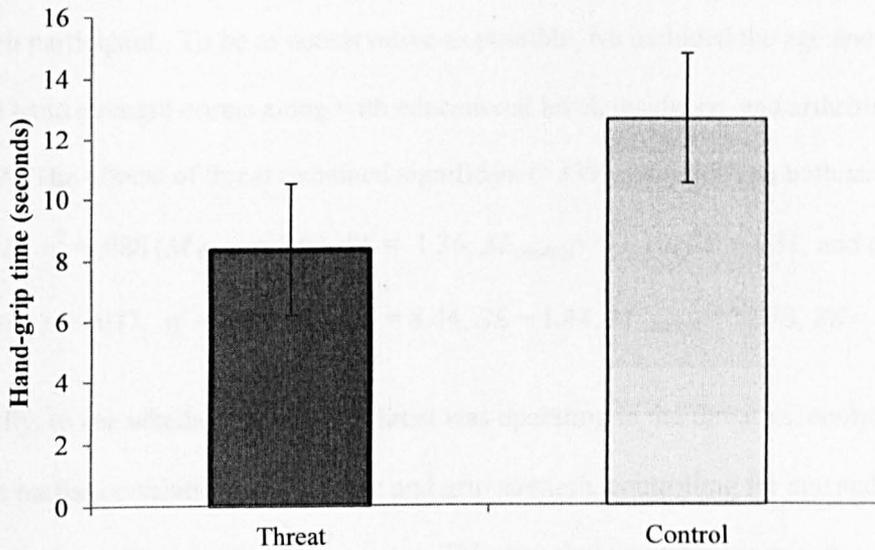
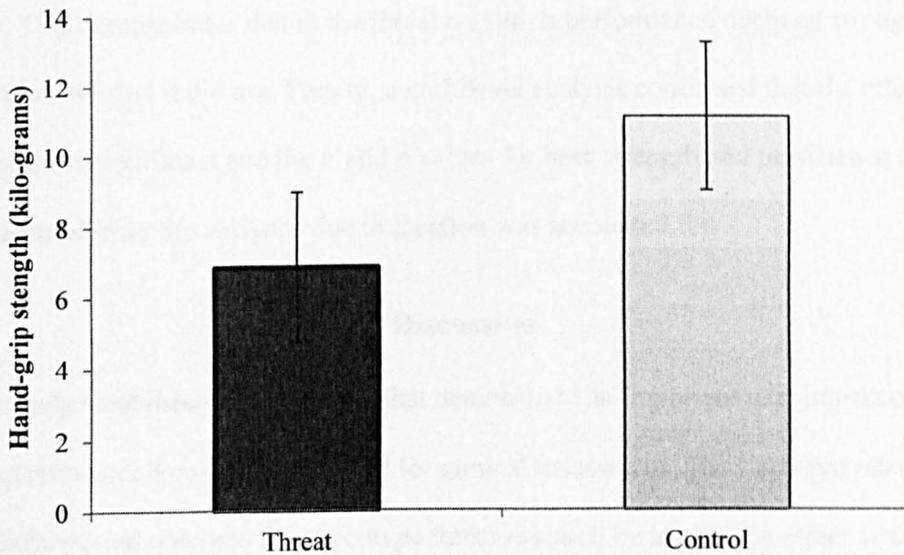


Figure 4.2 *Physical Strength as a Function of Condition with Self-Reported Arthritis a Covariate*



Controlling for Demographic Variables and Norms

National (Bohannon et al., 2006) and international (Anderson-Ransberg, Petersen, Frederiksen, Mackenbach, & Christensen, 2009) age and gender norms for hand-grip strength show

that men have higher strength and that strength declines between the ages of 50 and 90. Because the participants in this study did not represent a random sample of the population, it seemed appropriate to determine whether threat affected their performance after adjusting for the national age and gender norm for each participant. To be as conservative as possible, we included the age and gender international hand strength norms along with educational level, residence, and arthritis as covariates in an ANCOVA. The effects of threat remained significant (>33% reduction) on both strength $F(1,48) = 4.65, p = .036, \eta^2 = .088$ ($M_{\text{threat}} = 7.03, SE = 1.36; M_{\text{control}} = 11.10, SE = 1.31$, and persistence $F(1,48) = 4.61, p = .037, \eta^2 = .088, (M_{\text{threat}} = 8.44, SE = 1.44; M_{\text{control}} = 12.75, SE = 1.39)$.

Finally, to see whether age-related threat was operating in the threat vs. control condition, we inspected the partial correlation between age and grip strength, controlling for age and gender strength norms, education, residence, and arthritis scores. This revealed that whereas grip strength was significantly negatively related to age in the threat condition, $r(20) = -.47, p = .027$, it was unrelated to age in the control condition, $r(22) = .14, p = .50$. These two correlations differed significantly, $Z = 1.97, p < .05$. This demonstrates that in the threat condition performance declined strongly with age. In the no threat condition it did not. Finally, a multilevel analysis confirmed that the effects of condition remained significant and the F and p values for both strength and persistence remained essentially identical after the variance due to location was accounted for.

Discussion

This study establishes new findings that demonstrate an important new impact of stereotype threat that has relevance for older people and for clinical assessment. The study provides a new domain and behavioural outcome for stereotype threat research by testing the effect of threat on a very basic measure of physical capability, also establishing a new application of stereotype threat theory to older people. It shows that stereotype threat through social comparisons can affect performance on an objective measure of strength that is used in the clinical assessment of older people. Consistent with stereotype threat theory (Steele, 2010), both strength and persistence on the hand-grip task were significantly worse as a result of stereotype threat. Moreover, even after controlling for other potentially contributory variables, this difference remained significant. Finally, threat affected grip

strength more strongly as a function of age, in line with the assumption that age-related threat was the source of the effect.

Previous demonstrations of stereotype threat on physical performance have used tasks requiring concentration, coordination, and precision (Beilock, Jellison, Rydell, McConnell & Carr, 2006; Chalabaev et al., 2008; Stone et al., 1999) . Arguably, these skills are required for sporting prowess but may not be required for good everyday functioning. In contrast, the physical task used in the present study involves strength and perseverance need for everyday capability. By demonstrating the negative effects of stereotype threat upon hand-grip performance, the present research extends the scope of stereotype threat research to the performance of routine activity in everyday life.

Most stereotype threat research focuses on gender or ethnicity. An important contribution of the present research is to demonstrate how *age* based comparisons can invoke stereotype threat that affects the physical competence of older people. An intergroup comparison with younger people creates a threatening stereotypic expectancy that leads to underperformance and less persistence on the hand-grip task. Given that age-based comparisons are frequent, if not endemic, in everyday life (Abrams et al., 2011) this suggests that many older people may often find themselves facing stereotype threat, and many may also be responding to everyday physical tasks sub-optimally.

We are aware that the present study has limitations. One of these is that we have not assessed the impact of some potential moderators. A typical moderator in stereotype threat research is domain identification. However, this seems more relevant for highly skilled or complex tasks and activities than routine physical performance. A further potential moderator is intergroup contact, both real and imagined (Abrams et al., 2008). Other potential moderators may include factors that decrease threat-related anxiety or facilitate general confidence. In line with previous stereotype threat research, the present study did not directly measure participants' age stereotypes. This reflects the methodological requirement to ensure that participants are not explicitly primed with stereotype content. However, from international data on older people's age stereotypes we can be confident that people of all ages are aware of negative stereotypes of older people's competence and capability (Abrams et al., 2011).

The findings raise a particular concern for older people who are likely to undergo clinical evaluations or competency tests, either for medical, employment or insurance purposes. Previous research has shown the potential negative effects that stereotypes can have on levels of dependency in later life (Coudin & Alexopolous, 2010). One damaging consequence of an assessment that implicitly or explicitly uses ‘when you were younger’, or an age threshold (e.g., ‘now that you are over 65’) as a reference point, may be that it actively induces stereotype threat and causes older people to present as less physically able than they really are. In turn, stereotype threat could foster a cycle of increasing dependency and withdrawal from physical tasks. Even among individuals who regard themselves as physically fit, stereotype threat associated with older people’s general physical decline may have adverse effects. For example, in the present research threat affected participants regardless of whether they experienced arthritis. Stereotype threat research indicates that stereotype threat can actually have stronger effects on those who identify highly with a performance domain because for them the threat is more psychologically consequential (Stone et al., 1999). Future research is needed to establish whether some circumstances, or individual differences enable older individuals to resist stereotype threat in the physical domain, and why this might be. For example, it would be useful to know whether social integration and support (e.g. Heidrich & Ryff, 1993), and varying levels of day to day engagement with younger people (Abrams et al., 2008) may moderate effects of stereotype threat on older people’s physical ability.

Chapter Ten.**Fear of Crime****Abstract**

In four studies this chapter explores the extent to which age and gender stereotypes influence fear of crime responses in older adults. The first study (Study 5) investigates age and gender differences in fear of crime and the extent to which older people perceive themselves to be vulnerable to crime. The second study (Study 6) uses items from the ESS to extend the first study by exploring age and gender differences in fear of crime responses, whilst controlling for other factors that influence fear of crime and are confounded with age such as, subjective health, urbanisation and past experiences of crime. These two studies demonstrate that older adults express more fear of crime and perceived themselves more likely to be victims of crime. Gender differences also emerge in fear of crime responses but not always in the predicted direction. Older men perceived themselves to be more vulnerable to crime. Younger men worried more than women about burglary and violent crime, but women were more afraid of being out alone at night. The third study (Study 7) explores whether there are age-related expectations in fear of crime responses, in order to confirm whether older adults are perceived to be more fearful of crime. The final study, an experiment (Study 8), explores the extent to which older adults expression of fear are influenced by age and gender stereotypes. The results are discussed in relation to whether age stereotypes have the potential to influence evaluations of fear of crime.

Previous research has shown that gender differences in fear of crime responses may be partly due to gender stereotypes that guide expression of fear by providing socially desirable ways for men and women to respond (Sutton et al., 2011). It suggests that people may be motivated to portray themselves in a particular way and therefore may not respond to fear of crime surveys in a totally honest way. The aim of this chapter is to explore the extent older people may be motivated to distort fear of crime responses in an attempt to explain why there are age differences in fear of crime responses. Following the line of reasoning that suggests gender stereotypes contribute to deceptive responding in fear of crime surveys, this chapter explores the extent to which age stereotypes may be able to explain age differences in fear of crime responses. A second aim is to expand on research testing gender differences by exploring these in a sample of older adults. The four studies in this chapter begin to apply ideas surrounding gender and fear of crime to age.

Deceptive Responding in Fear of Crime: The Case of Age

Evidence suggests that women in general report higher levels of fear than men despite being less likely to become victims of crime (Hale, 1996; Sutton & Farrall, 2005). This discrepancy has been labelled the 'risk-fear' or 'victimisation-fear' paradox (see Smith & Torstensson, 1997). This paradox also arises in relation to age differences in fear of crime responses. Across a wide range of surveys, older people, in general, report higher levels of fear than younger people (see Hale, 1996 for review). In contrast to this age difference, older people are no more likely to be victims of crime than any other age group (Hale, 1996). One possible explanation for this paradox is that, similar to gender differences, older people engage in deceptive responding.

Deceptive responding refers to the idea that people may be motivated (consciously or unconsciously) to respond in a particular way in order to present themselves in a particular way. Under the umbrella of impression management (Goffman, 1959) evidence suggests that people desire the approval of others and want to be liked. This desire results in a social desirability bias whereby people may distort answers in order to give a desirable impression of themselves to others (Leary & Baumeister, 2000). In relation to gender, men are expected to report lower levels of fear, because emotional vulnerability is not in line with stereotypical notions of masculinity (Bem, 1981; Goodey,

1997; Sutton & Farrall, 2005; 2008). Consistent with this idea, Sutton et al., (2011) show that men downplay and suppress the fear of crime. For women, expressions of fear may be consistent with traditional notions of femininity and may even be rewarded in certain contexts (Brownmiller, 1975). Accordingly Sutton et al., (2011) show that women up-play and exaggerate expressions of fear when told to portray themselves in a socially desirable way. This research shows that gender differences in fear of crime responses may be partly driven by deceptive responding in line with gender stereotypes that women are more fearful than men (Sutton & Farrall, 2008). Accordingly, men and women have separate motivations to respond to fear of crime surveys that contribute to gender differences and partially explain the victimisation-paradox.

The purpose of this chapter is to explore whether age-stereotypes play a similar role in influencing evaluations and expressions of fear in older adults. To date, little or no research has investigated whether age stereotypes influence older people's responses and evaluations of fear and worry about crime. The first two studies explore the victimisation-paradox in two large scale data sets, in order to confirm age differences in fear of crime responses with older adults expressing more fear and worry about crime. The third study (Study 7) explores whether there are age-based expectations in fear of crime, in order to provide evidence that older people are stereotyped as being more fearful of crime than younger people. The final study attempts to replicate Sutton et al., (2011) on a sample of older adults to explore the extent gender and age stereotypes influence fear of crime responses.

Study 5. Fear of Crime and Self-stereotyping in Age UK Survey Data: Analysis of Age and Gender Differences

In 2002, Help the Aged conducted a review of the research and literature on older people and fear of crime to understand what contributes to fear of crime. It found that fear of crime is multifaceted; age, gender, ethnicity, health, physical ability, housing tenure, residential location, life experiences and lifestyle all have an impact on fear of crime (Help the Aged, 2002). Fear of crime is higher among people who were female, aged over 60, living in an urban area, in poor health, aware of disorder in the neighbourhood, had experienced crime or knew someone that had been a victim of crime.

Based on this review, Age UK set out to explore the levels of fear of crime among older people in the UK. They put together a survey to investigate several aspects of fear of crime, these included;

- Perceptions of crime in their neighbourhood;
- Experiences of anti-social behaviour and street crime;
- Awareness and perceived effectiveness of crime prevention initiatives;
- Perceptions of vulnerability and finally,
- The impact of fear of crime

The findings from over 1,500 respondents aged 50 years and over (Age UK, 2002) revealed that many older people were concerned about the level of safety and security of the area they lived in. One quarter of respondents (25%) thought that crime was a 'big problem' where they lived. The findings of the survey also support the notion that crime can prevent older people from participating in activities outside the home. For instance, respondents were asked to indicate whether or not fear of street crime has affected their lives by changing the way they participated in an important set of activities, such as taking part in community or social activities after dark, taking exercise outside, seeing friends and family and using public transport. Respondents reported that they restrict activities in two main areas; participation in community or social activities after dark and use of public transport, 47% of respondents aged 75 and over said they no longer take part in social activities after dark and 36% said they only use public transport during the day. Importantly for the present research, age is an important factor in fear of crime. The oldest old, those aged 75 and over, are particularly affected by fear, and opt to spend more time at home where they feel safer. Furthermore, the likelihood of experiencing isolation or loneliness as a result of fear of crime increased with age- with 21% of those aged 75 and over agreeing compared to 10% of those aged 50 to 60 years old.

Perceptions of being vulnerable to and being a victim of crime also seem to increase with age. The Age UK survey findings show that a higher percentage of those aged over 75 believed that increasing age increased the likelihood of victimisation (79%) compared to those aged 61-75 (70%)

and those aged between 50 and 60 (62%). The report shows distinct age effects on feelings of safety when walking alone during the day and at night, with feelings of safety decreasing with age. Gender differences on feelings of safety, particularly at night, were also observed, 56% of older women said they never went out alone at night compared with 28% of men.

The survey findings provide initial descriptive evidence of age and gender differences in fear of crime and the impacts it has on daily living by showing differences in the frequencies of experiences. However, the age and gender differences were not tested statistically. Furthermore, the report does not take into consideration that fear of crime is multifaceted with many contributory factors, such as past experiences of crime and urbanisation. The purpose of this study is provide a more in-depth analyses of the data collected by Age UK by statistically testing age and gender differences in the perceived vulnerability to crime and expressions of fear of crime. Specifically the present analysis examines whether age, gender and type of area people live in impact on the extent to which people perceived that, with age, people become more vulnerable to street crime and are more likely to be victimised, and on evaluations of safety during the day and at night. Importantly, these are investigated whilst controlling for legitimate sources of fear and vulnerability, such as previous experiences of crime.

By investigating age and gender differences in perceived vulnerability to crime, this study also contributes to the overall aim of the chapter which is to establish whether there are shared beliefs or stereotypes surrounding age and fear of crime. It is argued that age and gender differences in the perceived vulnerability to crime could also be an indication of the extent to which people self-stereotype and endorse the belief that victimisation increases with age. Evidence suggests that older people and women are no more likely to be victims of crime than other age groups and men, suggesting the expression of fear are disproportionate to the level of victimisation. For gender, previous studies have shown that there is an expectation for women to express more fear and vulnerability than men. The aim of this study, together with Study 7 is to explore whether there are age expectations in expressions of fear and perceived vulnerability, which show that older people are expected to express more fear and vulnerability to crime.

In sum, it is expected that fear of crime will increase with age, such that older people feel less safe with age. It is expected that women will feel less safe than men, accordingly, women and older people should feel more vulnerable to crime and should be more likely to perceive themselves as victims. In general, experiences of crime should be related to feelings of safety. However, in accordance with the victimisation-fear paradox, it is expected that older people and women should express more fear, or feel less safe despite being less likely to experience crime.

Method

Participants

The survey was distributed to older people through local Age UK centres across England in October and November 2002. Nearly 4, 000 respondents self-completed and returned the questionnaire, of which a sample of 1754 were analysed to obtain geographical representativeness of responses. The majority of the participants were White British (96%), owned their own home (65.7%) rented (16.5%) or lived in sheltered housing (12.25%). Most of the respondents lived on their own (59.4%) or with a partner or spouse (34.6%) the rest lived with family or friends (6%). Forty four percent of respondents lived in a suburban, semi –rural area, then urban (32%) and 18.5% lived in a rural area. Respondents age was recorded as a categorical variable (see Table 5.1 on next page), this was re-coded into three age groups that match as closely as possible the age group categorisations used in Study 1 and in the next study (Study 6), which use the ESS data set. The age group categorisations used to match the ESS data are 50-65, 66-80 and 80 years and over .

Table 5.1 *Numbers of Respondents by Age Group and Gender*

		Age groups			
		50-65	66-80	81+	Total
Females	n	207	687	370	1264
	%	16.38	54.35	29.27	100
Males	n	89	292	109	490
	%	18.16	59.59	22.24	100

Dependent Measures

Items from the Age UK survey that are analysed in this study are presented in Table 5.2. The four items measuring different past experiences of crime were computed into one variable representing whether or not respondents had experienced at least one type of crime, the four items were reasonably reliable, Cronbach’s $\alpha = .512$. Over all just under half of respondents (46.9%) had experienced at least one of these types of crime, with 22.3% aware of friend or neighbour being mugged or assaulted, 35.6% feeling threatened walking by groups of young people, 18.1% have been verbally abused or harassed and 2.1% have been mugged or assaulted.

Table 5.2 *Items and Response Scales from Age UK’s 2002 Fear of Crime Survey*

Age UK	Item	Response
Fear of crime		
22	Do you agree or disagree with the following statement: “As you get older you are more likely to become a victim of street crime”	1 = ‘strongly disagree’ to 5 = ‘strongly agree’
24	How safe do you feel walking alone during the day	1 = ‘never go out alone’, 2 = ‘very unsafe’ 3 = ‘a bit unsafe’ 4 = ‘fairly safe’ and 5 = ‘very safe’

Cont.

Age UK	Item	Response
25	How safe do you feel walking alone at night	1 = 'never go out alone', 2 = 'very unsafe' 3 = 'a bit unsafe' 4 = 'fairly safe' and 5 = 'very safe'
Experience of crime or antisocial behaviour		
6	In the last year, are you aware of a friend or neighbour who has been mugged or assaulted in the street	0 = 'no' or 1 = 'yes'
7	In the last year, have you felt threatened when walking past groups of young people in the street	0 = 'no' or 1 = 'yes'
8	In the last year, have you been verbally abused or harassed on the street. For example, by people asking you for money.	0 = 'no' or 1 = 'yes'
9	In the last year, have you been mugged or assaulted in the street	0 = 'no' or 1 = 'yes'
computed	Total experience of crime,	0 = 'no' 1 = 'had at least one of these experiences'
Other information about respondents		
33	Age group	1 = '50-65' 2 = '66-80' 3 = '80 +'
32	Gender	1 = 'male' 2 = 'female'
37	How would you describe the area that you live in	1 = 'urban', 2 = 'Suburban / semi-rural', 3 = 'rural'

Results

Preliminary analysis investigated the relationships between the variables of interest (see Table 5.3 over page). Results showed that age was significantly and positively correlated with perceived vulnerability, and was significantly negatively correlated with feeling safe during the day and at night.

It was also significantly negatively correlated with three of the experiences of crime and antisocial behaviour items, such that with age people were less likely to know a neighbour who has experienced crime, feel threatened by young people or report being verbally abused or harassed. Gender was also significantly associated with feeling safe during the day and night, with females more likely to feel unsafe. Females were also less likely to report experiences of verbal abuse and harassment.

Importantly, as well as respondent's age, agreement with perceived vulnerability or the self-stereotype statement ("As you get older you are more likely to become a victim of street crime"), was significantly associated with the area respondents lived in, feeling safe during the day and night and experiences of crime. Furthermore, evaluations of safety were also significantly negatively correlated with experiences of crime items, such that experiences of crime reduced feelings of safety.

This preliminary analysis demonstrates that experiences of crime legitimately impact on evaluations of victimisation and fear of crime. Therefore these experiences should be controlled for in the analysis testing for effects of age and gender.

Table 5.3 Means, Standard Deviations and Correlations Among Variables

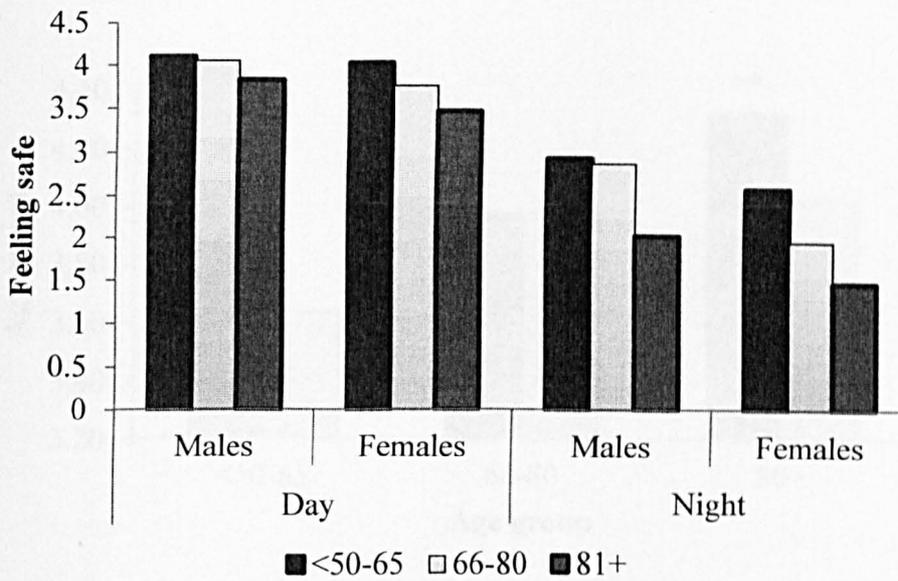
	2.	3.	4.	5.	6.	7.	8.	9.	10.	<i>M</i>	<i>SD</i>
1. Age	.055**	-.002	.116***	-.167***	-.283***	-.047*	-.110***	-.174***	.010	-	-
2. Gender (f)		.050*	-.045	-.125***	-.275***	.029	-.018	-.062*	-.005	-	-
3. Area (rural)			-.055*	.091***	.058*	-.116***	-.074**	-.072**	-.036	-	-
4. Vulnerability				-.246***	-.284***	.148***	.235***	.110***	.064**	3.98	0.92
5. Safe during day					.435***	-.153***	-.148***	-.096***	-.073**	3.78	1.06
6. Safe at night						-.108***	-.151***	-.024	-.059*	2.12	1.25
7. Neighbour experience crime							.275***	.252***	.128***	0.22	0.42
8. Threatened by young people								.334***	.117***	0.36	0.48
9. Verbally abused/harassed									.156***	0.18	0.38
10. Mugged / assaulted										0.02	0.15

Note: Significant associations between variables are indicated * = $p < .05$, ** = $p < .01$, *** = $p < .001$, *M* and *SD* given for continuous variables

Feelings of Safety during the Day and at Night

A mixed model ANCOVA tested the effect of respondent's age group, gender and area type on feelings of safety during the day and night. Feeling safe during the day and night were treated as a within subjects factor in order to test whether feelings of safety differ by day or night, which they did $F(1, 1615) = 975.077, p < .001 \eta^2 = .376$. In accordance with previous research, people feel safer during the day ($M_{\text{day}} = 3.91; SE = .03, M_{\text{night}} = 2.32; SE = .04$). There was a significant safety by age group interaction $F(2, 1684) = 13.37, p < .001 \eta^2 = .016$, a significant safety by gender interaction $F(1, 1684) = 14.106, p < .001 \eta^2 = .009$ and a significant safety by age group by gender interaction $F(1, 1684) = 5.32, p = .005 \eta^2 = .007$. There was a significant between subjects effect of area type $F(2, 1615) = 4.649, p = .01 \eta^2 = .006$, showing that generally respondents in urban areas feel less safe ($M = 3; SE = .05$) than those in suburban areas ($M = 3.11; SE = .04$) and those in rural areas feeling more safe ($M = 3.23; SE = .07$).

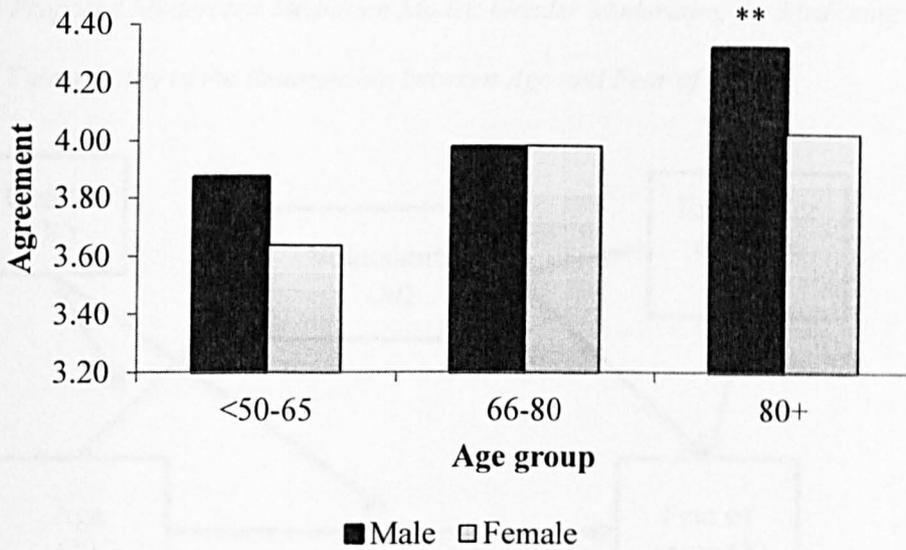
Simple main effects analysis on the safety by age interaction showed that the effect of age group was larger for feelings of safety at night, with feelings of safety at night decreasing more with age $p < .001 \eta^2 = .056$ than feelings of safety during the day $p < .001 \eta^2 = .016$, see Figure 5.1 on the next page. For the safety by gender interaction the effect of gender revealed that the difference between evaluations of safety during the day and at night was greater for women because they felt less safe at night (mean difference 1.753 $p < .001 \eta^2 = .553$). For the safety by age group by gender interaction the effect of age was larger for females evaluating safety at night, $p < .001 \eta^2 = .066$.

Figure 5.1 *Feelings of Safety at Day and Night by Respondent's Gender and Age Group.*

Perceived Vulnerability

A univariate analysis of covariance (ANCOVA) tested effect of respondent's age group, gender and area type on the belief that you are more likely to be victim of crime as you get older. Experience of crime was entered as a covariate. The analysis revealed significant effect of age group $F(2, 1642) = 12.728, p < .001 \eta^2 = .015$, with agreement with the statement increasing with age ($M_{\text{under 65's}} = 3.75; SE = .06, M_{66-80} = 3.98; SE = .03, M_{80+} = 4.17; SE = .05$). There was a significant effect of gender $F(1, 1642) = 8.554, p = .003 \eta^2 = .005$, with men endorsing the belief more strongly ($M = 4.06; SE = .05$) than females ($M = 3.89; SE = .03$). There was also a significant age group by gender interaction $F(2, 1642) = 3.425, p = .033 \eta^2 = .004$, qualified by a significant effect of gender for the oldest age group ($p = .007$, see Figure 5.2 on the next page). Experience of crime was a significant covariate in the analysis $F(1, 1642) = 94.421, p < .001 \eta^2 = .054$. There was no effect of area type.

Figure 5.2 Level of Agreement to the Statement “As you get older you are more likely to become a victim of crime” by Respondent’s Gender and Age Group.



Note: Significant gender differences indicated ** = $p < .01$.

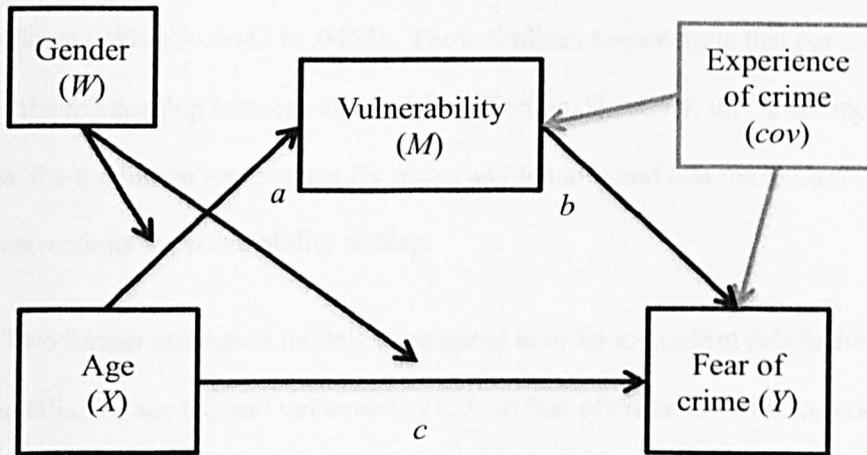
Does Vulnerability Mediate Fear of Crime?

Given that the preliminary correlation analysis shows that age and perceived vulnerability significantly correlate with both fear of crime measures, it seems important to test empirically whether perceived vulnerability to crime mediates the relationship between age and fear of crime. Moreover, given the significant age group by gender interactions for fear of crime and perceived vulnerability it seems this relationship could be moderated by gender. Therefore, a moderated mediation model was conducted to test whether vulnerability to crime mediated the relationship between age and fear of crime. Given the significant age group by gender interactions in the previous analyses, gender was tested as a moderator of the age to vulnerability pathway and the age to fear of crime pathway. For these analyses a mean score of fear was used from the feeling safe during the day and during the night items, the items had fairly good reliability, Cronbach’s $\alpha = .60$.

Using Hayes (2012) Process procedure in SPSS, a moderated mediation model tested whether vulnerability to crime (M) mediated the relationship between age (X) and fear of crime (Y), with gender a proposed moderator (W) of the pathway a , between age and perceived vulnerability, and

for pathway *c*, between age and fear of crime, previous experience of crime was entered as a covariate, see Figure 5.3. All models requested 1000 bootstrap samples.

Figure 5.3 *Proposed Moderated Mediation Model: Gender Moderating the Mediating Role of Perceived Vulnerability in the Relationship between Age and Fear of Crime.*



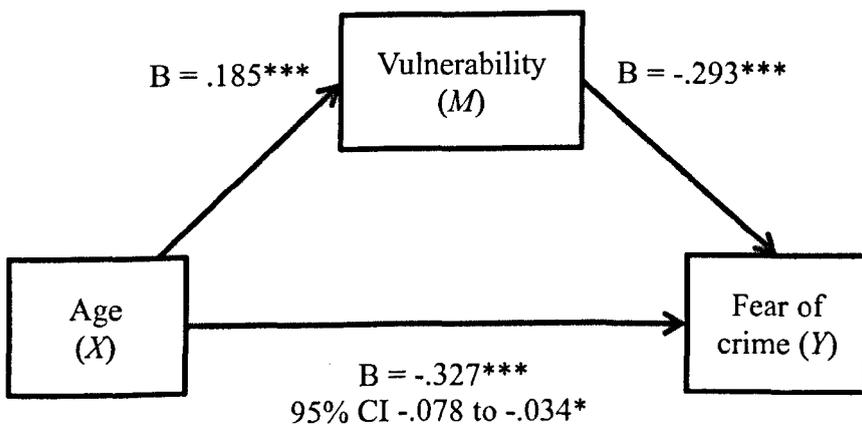
Note: Hayes (2012) Process Model 8

The first model which tested the effects of age, gender and the age by gender interaction on the mediator variable, perceived vulnerability was significant $F(4, 1699) = 31.094, p < .001 R^2 = .0682$. However, unlike the previous analysis that tested age and gender effects on perceived vulnerability this analysis showed there was no effect of age, gender or the age by gender interaction on perceived vulnerability. Only the covariate, previous experience of crime was significant $B = .4298, t(1699) = 9.954, p < .001$. The second model tested the effect of age, gender and the age by gender interaction on the fear of crime item, feel safe walking alone during the day and night. The overall model was significant $F(5, 1698) = 91.457, p < .001 R^2 = .2122$. The analysis revealed a significant effect of the mediator, self-perceived vulnerability $B = -.293, t(1698) = -12.196, p < .001$, a marginal effect of gender $B = -.306, t(1698) = -1.923, p = .055$, but no effect of age and no age by gender interaction. The covariate previous experience of crime was also significant $B = -.212, t(1698) = -4.821, p < .001$.

The direct effect of age on fear of crime was significant for males $B = -.248, t(1698) = -3.893, p < .001$, and females $B = -.355, t(1698) = -9.277, p < .001$. Consistent with mediation effects the indirect effect of age on fear of crime (effect of age on fear of crime through the mediator) was also significant for males, the lower and upper confidence intervals (CI) were $-.0995$ to $-.0170$ respectively, and for females $-.0787$ to $-.0327$. The indirect effect of the age by gender interaction was not significant (95% CI $-.0443$ to $.0454$). These findings demonstrate that perceived vulnerability mediates the relationship between age and fear of crime. However, this is not moderated by gender given that the mediation was present for males and females and that the analysis shows no age by gender interactions for vulnerability or fear.

Two further mediation models were tested in order to confirm this finding. The first model tested the effect of age (X) and vulnerability (M) on fear of crime (Y) with experience of crime and gender entered as covariates. The effect of age on perceived vulnerability was significant $B = .185, t(1700) = 5.595, p < .001$. The effect of age on fear of crime was significant $B = -.327, t(1699) = -9.909, p < .001$ as was the effect of vulnerability $B = -.293, t(1699) = -12.195, p < .001$. The covariates, previous experience of crime and gender were also significant $p < .001$. The indirect effect was significant with 95% CI $-.078$ to $-.034$. The mediation model is presented in Figure 5.4.

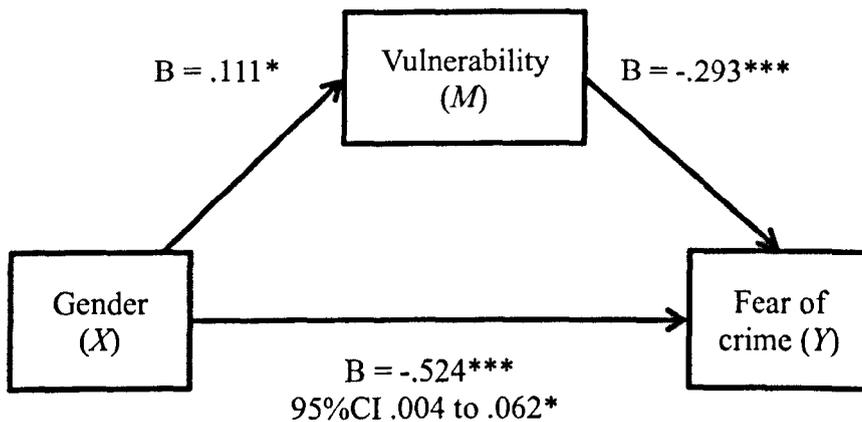
Figure 5.4 *The Mediating Role of Perceived Vulnerability in the Relationship between Age and Fear of Crime*



Note: Respondent’s gender and previous experience of crime were significant covariates in this mediation model. Significance levels indicated * = $p < .05$, *** = $p < .001$. This is Hayes (2012) Process Model 4.

The second model tested the effect of gender (X) and vulnerability (M) on fear of crime (Y) with experience of crime and age as covariates. The effect of gender on perceived vulnerability $B = .111$, $t(1700) = -2.305$, $p = .021$ and fear of crime were significant $B = -.524$, $t(1699) = -11.027$, $p < .001$ as was the effect of vulnerability $B = -.293$, $t(1699) = -12.195$, $p < .001$. The covariates, previous experience of crime and age were significant also significant $p < .001$. The indirect effect was significant with 95% CI .004 to .062, see Figure 5.5. Together these analyses demonstrate that the effect of gender and age on evaluations of feeling safe is mediated by self-perceived vulnerability.

Figure 5.5 *The Mediating Role of Perceived Vulnerability in the Relationship between Gender and Fear of Crime*



Note: Respondent’s age and previous experience of crime were significant covariates in this mediation model. Significance levels indicated * = $p < .05$, *** = $p < .001$

Discussion

The purpose of this study was two-fold. The first aim was to statistically test age and gender differences in fear of crime responses, in order to provide evidence for the victimisation-fear paradox. The second aim was to establish age and gender differences in perceived vulnerability to crime as

indication of the extent to which people self-stereotype and endorse the belief that victimisation increases with age.

In general experiences of crime reduced feelings of safety. However, preliminary results provide some indication of the victimisation-fear paradox for older people and for women. The preliminary analysis showed that feelings of safety decrease with age as do experiences of crime. A similar pattern of results emerge for gender, women report feeling less safe yet they also have fewer experiences of verbal abuse and harassment.

The main analysis shows that in general people feel safer during the day than at night, that feelings of safety decrease with age and that women feel less safe than men about going out at night. The effect of age and gender were greater for evaluations of safety at night, there were larger decreases in feeling of safety at night between age groups and larger differences between genders, with women feeling more unsafe with age. In line with previous research there was also an effect of urbanisation, with respondents in urban areas feeling less safe. These findings control for experiences of crime. Therefore, despite differences in experiences of crime age and gender difference in expression of fear remain, such that older women feel the most unsafe at night.

Gender differences in feelings of safety at night are in line with theories that women are more vulnerable to particular kinds of crime, such as rape and sexual assault, which are assumed to be more likely to happen at night. Moreover, it supports Brownmiller's (1975) idea that the fear of these types of crime are used to subjugate women by restricting women's freedoms at night.

The second analysis explored perceived vulnerability to victimisation. Previous research suggests that expression of fear of crime is significantly related to perceived vulnerability to crime, such that the more people perceive themselves to be likely victims of crime, the more unsafe they feel. Indeed, the preliminary analysis confirmed this relationship. In accordance with the analysis demonstrating age and gender differences in fear of crime, it was expected that perceived vulnerability to crime would also be influenced by age and gender. As older people felt more unsafe,

and women felt more unsafe during the night, it was expected that perceived vulnerability to crime would increase with age and that women would feel more vulnerable than men.

The analysis confirmed that older people perceive themselves more likely to be a victim with age, as the level of agreement increased with age. However, the observed gender differences was not in line with expectations. The analysis showed that men were more likely to agree that vulnerability to crime increases with age than females. Despite a significant association between perceived vulnerability and fear of crime in the preliminary analysis, the observed gender differences in perceived vulnerability to crime do not mirror expressions of fear of crime as expected. Importantly for this chapter the analysis confirms that perceived vulnerability to crime does increase with age. As people get older they are more likely to endorse the belief that vulnerability to crime increases with age, despite evidence that suggest that older people are no more likely to become victims of crime than any other age group.

There are some limitations to the analysis conducted in the study. Previous research suggests that an individual's level of health is also an important factor in evaluations of perceived victimisation to crime. Poor health is associated with feeling weaker, more vulnerable and feeling less able to defend one's self. Because levels of health may be confounded with age, it is important to establish the effect of age on expressions of fear and worry whilst controlling for level of health, as poor health may inflate age differences in fear of crime. There was no assessment of health in the Age UK data and therefore it could not be controlled for in the analysis. Study 6 explores age and gender differences further whilst controlling for experiences of crime, urbanisation and subjective health. It also does this by using a larger data set which includes a larger age range of respondents.

Study 6. Fear of Crime in the 2008-2009 European Social Survey: Analysis of Age and Gender Differences

The European Social Survey (ESS) data offers more opportunity to explore age and gender differences whilst controlling for other influences on fear of crime. Previous research has suggested experiences of crime, level of health and the type of area people live in are important predictors of fear of crime. For instance, people who have experienced crime are more likely to be fearful of crime, worry about crime and feel more unsafe. Those who have poorer subjective health express more fear and worry because they fear they may not be able to cope or survive an attack, whereas those in more urban areas are more likely to fear crime because there is a higher crime rate in urban areas. The previous study also confirmed that experiences of crime and urbanisation have an impact on feelings of safety. The purpose of this study is to extend findings from Study 5, by investigating age and gender controlling for subjective health, urbanisation and experiences of crime. It extends the findings from Study 5 by including a wider age range of respondents (e.g. not just people over 50). It also explores differences on a larger set of dependent measures that assess fear of crime and the impact of fear on quality of life, thereby providing a bigger picture and a more robust analysis.

As Study 5, age and gender differences are expected in evaluations of fear of crime, such that fear of crime increases with age and that women express more fear than males. In accordance with these age and gender differences, fear and worry about crime should have a greater impact on the quality of life of older people and women.

Method

This study analyses data for the UK from the 2008-9 European Social Survey (ESS) used in Study 1, see Study 1 for further information on participants, data and sampling. It presents analysis on a select few items that relate to experiences of crime, fear about crime and how worry about crime impacts on quality of life.

Dependent Measures

Four items in the ESS assessed respondent's fear of crime and two items assess how much worry about particular crimes impacts on quality of life. A summary of the items and responses are provided in Table 6.1.

Table 6.1 *Items and Response Scales from the ESS*

ESS	Item	Response
Victim of crime		
C5	Have you or a member of your household been the victim of a burglary or assault in the last 5 years	1 = 'yes', 2 = 'no'
Fear and worry about crime		
C6	How safe do you – or would you – feel walking alone in this area after dark? Do you – or would you feel	1 = 'very safe', 2 = 'safe', 3 = 'unsafe', or 4 = 'very unsafe'.
C7	How often, if at all, do you worry about your home being burgled	1 = 'most of the time' to 4 = 'never'.
C9	How often, if at all, do you worry about becoming a victim of violent crime	1 = 'most of the time' to 4 = 'never'.
E8	How worried are you by the level of crime committed by people in their 20s these days?	0 = 'not at all worried' to 10 = 'extremely worried'
Worry about crime impact on quality of life (QoL)		
C8	Does this worry about your home being burgled have a...	1 = 'serious effect on the quality of life' 2 = 'some effect', 3 = 'no real effect on the quality of your life'

Cont.

ESS	Item	Response
C10	Does this worry about becoming a victim of violent crime have a...	1 = 'serious effect on the quality of life' 2 = 'some effect', 3 = 'no real effect on the quality of your life'
Other information about respondents		
C15	How is your health in general.. would you say it is	1 = 'very good' to 5 = 'very bad'
F5	Which phase best describes the area in where you live	1 = 'a big city', 2 = 'the suburbs or outskirts of a big city', 3 = 'a town or a small city', 4 = 'a country village' or 5 = 'a farm or home in the countryside'

Results

Preliminary analysis investigated the relationships between the variables of interest. The correlation analysis revealed that age, gender, subjective health, area and experiences of crime were significantly related to the majority of the dependent variables (see Table 6.2). Age was associated with feeling more unsafe after dark and more worry about crime. Being female was associated with feeling more unsafe and more worry about crime. Poorer subjective health was associated with less worry. Contrary to Study 5, urbanisation was associated with feeling safer and less worry. In other words, those living in more rural areas felt more unsafe and more worry. Being a victim of crime was positively associated with worry and was associated with feeling more unsafe after dark.

In line with previous research and Study 5, respondent's age was significantly related to experiences of crime $r(2320) = .177, p < .001$, such that with age respondents were less likely to be a victim of crime. Respondent's age was also significantly related to self-perceived or subjective health $r(2320) = .17, p < .001$, and urbanisation $r(2317) = .089, p < .001$. However, gender was not significantly related to experiences of crime, subjective health or urbanisation.

The preliminary analysis shows a number of significant relationships between variables which confirms use of Analysis of Covariance (ANCOVA) to test the effects of age and gender on the six items evaluating four aspects of fear of crime, controlling for experiences of crime, respondents evaluation of their health and the type of area they live in.

Table 6.2 *Correlations between Variables*

	Age	Gender (females)	Subjective health (poorer)	Area (urban to rural)	Victim of crime (1=yes, 2=no)
Feeling unsafe after dark	.063**	-.274***	.19***	-.143***	-.09***
Worry about burglary	.089***	.057**	-.075***	0.042	.174***
Burglary impact QoL	.078**	0.033	-.151***	.078**	.151***
Worry victimisation	.142***	.071**	-.089***	.134***	.174***
Victimisation impact QoL	.061*	0.05	-.171***	.128***	.123***
Worry about crime committed by 20s year olds	.12***	-.05*	.119***	-0.003	-.022***

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Feel Safe after Dark

The ANCOVA revealed an effect of age group $F(4, 2295) = 7.539, p < .001 \eta^2 = .013$, with the youngest and two eldest age groups feeling more unsafe than the middle two age groups (see Table 6.3 on the next page), suggestive of a curvilinear effect of age. In line with Study 5 and previous research there was also a significant effect of gender $F(1, 2295) = 124.933, p < .001 \eta^2 = .052$, with women feeling more unsafe ($M = 2.5; SE = .03$) than men ($M = 2.03; SE = .03$). There was no age group by gender interaction. Being a victim of crime was a significant covariate in the analysis $F(1, 2295) = 16.549, p < .001 \eta^2 = .007$, as was subjective health $F(1, 2295) = 74.59, p < .001 \eta^2 = .031$, and the area the respondent lived in $F(1, 2295) = 47.393, p < .001 \eta^2 = .02$.

Table 6.3 Means and Standard Errors in Parenthesis for Feeling Unsafe After Dark

Age group				
15-24	25-49	50-64	65-79	80+
2.31 (.06) ^a	2.13 (.03) ^b	2.19 (.03) ^b	2.35 (.04) ^a	2.36 (.07) ^a

Note: Numbers with different superscript letters differ significantly $p < .05$. Means are adjusted for being a victim of crime, subjective health and area respondents live in

The curvilinear or quadratic effect of age on feeling safe after dark was tested using curve estimation, which models both the linear and curvilinear effects of age. The linear effect of age revealed a significant positive relationship between age and feeling unsafe after dark ($b = .063, p = .002$). However, the quadratic effect of age was also modelled as a significant predictor (age $b = -.415, p < .001$, age² $b = .487, p < .001$). The slight 'U' shape curve confirmed the tendency for younger and older age groups to report feeling more unsafe (as demonstrated in Table 6.3).

Worry about being a Victim of Crime

The MANCOVA revealed significant multivariate effect of age group $F(4, 2303) = 17.886, p < .001 \eta^2 = .012$ and a significant age group by gender interaction, $F(8, 4608) = 2.124, p = .03 \eta^2 = .004$. Being a victim of crime, subjective health and the area respondents live in were all significant covariates (victim of crime $F(2, 2303) = 35.268, p < .001 \eta^2 = .012$; subjective health, $F(2, 2303) = 13.645, p < .001 \eta^2 = .012$; and area $F(2, 2303) = 17.886, p < .001 \eta^2 = .015$).

The univariate tests revealed there was a significant effect of age group for worry about burglary $F(4, 2304) = 8.226, p < .001 \eta^2 = .014$ and being a victim of violent crime $F(4, 2304) = 8.902, p < .001 \eta^2 = .015$. In line with predictions there was a tendency for worry on both items to increase with age (see Table 6.4). Those over 80 were significantly more worried about burglary compared to all other age groups ($p < .001$). For worry about violent crime, the youngest two age groups were significantly less worried compared to all other age groups ($p < .05$), while those over 80 reported feeling significantly more worried than other age groups ($p < .001$).

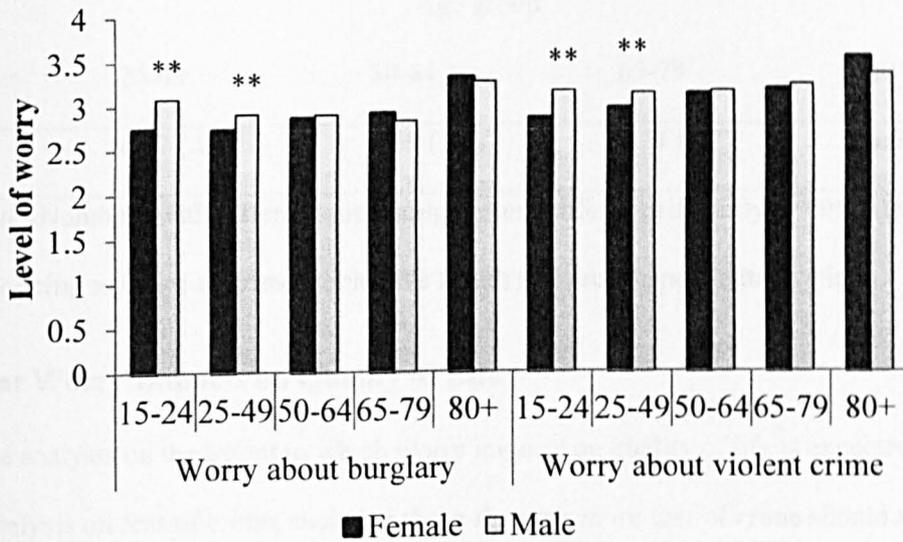
Table 6.4 Means and Standard Errors in Parenthesis for Worry about Crime

	Age group				
	15-24	25-49	50-64	65-79	80+
Worry about burglary	2.91 (.06) ^a	2.82 (.03) ^a	2.88 (.04) ^a	2.87 (.05) ^a	3.30 (.08) ^b
Worry about violent crime	3.02 (.06) ^a	3.06 (.03) ^a	3.15 (.04) ^b	3.22 (.04) ^b	3.46 (.07) ^c

Note: Numbers with different superscript letters differ significantly $p < .05$. Means are adjusted for being a victim of crime, subjective health and area respondents live in.

Contrary to expectations there was no main effect of gender. But there were significant age group by gender interactions for worry about burglary $F(4, 2304) = 2.787, p = .025 \eta^2 = .005$ and for worry about being a victim of violent crime $F(4, 2304) = 2.721, p = .028 \eta^2 = .005$. Simple main effects analyses revealed univariate effects of age group for males $F(4, 2304) = 2.882, p = .007 \eta^2 = .006$ and females $F(4, 2304) = 6.640, p < .001 \eta^2 = .014$ for worry about burglary, such that worry tends to increase with age (see Figure 6.1). For being a victim of violent crime there was only an effect of age group for females $F(4, 2304) = 8.721, p < .001 \eta^2 = .021$, with worry increasing with age. This suggests that for men, worry about violent crime does not increase with age. Simple main effects analysis for gender revealed significant differences between genders in the youngest two age groups. However, contrary to expectations the results show that females express less worry about burglary and violent crime than males (see Figure 6.1 on the next page).

Figure 6.1 *How Often People Worry About Being Victim of Burglary and Violent Crime by Respondent's Gender and Age Group*



Note: Significant differences between genders are indicated with ** = $p < .01$; Means are adjusted for experiences of crime, subjective health and area type.

Worry about Crime Committed by Younger People

The ANCOVA revealed an effect of age group $F(4, 2292) = 10.278, p < .001 \eta^2 = .018$. Generally worry about crime committed by people in their 20s increased with age, although those aged 65 to 79 were the most worried about crime committed by people in their 20's (see Table 6.5 on the next page). There was also a significant effect of gender $F(1, 2292) = 10.42, p = .001 \eta^2 = .005$, with women feeling more worried ($M = 6.82; SE = .09$) than men ($M = 6.41; SE = .1$). There was no age group by gender interaction. Subjective health was the only significant covariate $F(1, 2292) = 19.96, p < .001 \eta^2 = .009$.

Table 6.5 Means and Standard Errors in Parenthesis for Worry about Crime Committed by People in their 20s

Age group				
15-24	25-49	50-64	65-79	80+
6.24 (.17) ^a	6.32 (.08) ^a	6.69 (.11) ^b	7.21 (.12) ^c	6.59 (.21) ^{ab}

Note: Numbers with different superscript letters differ significantly $p < .05$. Means are adjusted for being a victim of crime, subjective health and area respondents live in.

Extent that Worry Impacts on Quality of Life

The analysis on the extent to which worry impacts on quality of life is expected to mirror the previous analysis on fear of crime, such that those showing more fear of crime should also show more debilitating effects of fear thereby, perceiving fear of crime to impact more on their quality of life. In accordance with the previous analysis it is expected that worry about crime should impact more on quality of life with age. However, the MANCOVA showed no significant effects of age group, gender and no interaction (grand mean worry for burglary on quality of life = 2.65; $SD = .54$ grand mean worry of violent crime on quality of life = 2.61; $SD = .57$). Covariates in the analysis were significant, self-reported health $F(2, 1197) = 19.302, p < .001 \eta^2 = .031$; experience of crime $F(4, 1197) = 9.974, p < .001 \eta^2 = .016$; living area $F(4, 1197) = 5.264, p = .005 \eta^2 = .009$. Therefore, despite the preliminary analysis showing significant relationships between respondent's age and worry about burglary and violent crime on quality of life, there was no effect once controlling for subjective health, neighbourhood area and being a victim of crime, which were also shown to have significant impact on the extent to which worry impacts on quality of life.

Discussion

This study aims to build upon the findings in Study 5 by providing a more robust analysis of age and gender differences in fear of crime responses. It does this in two ways; by extending the age range of participants included in the analysis and by controlling for subjective health as well as

neighbourhood area and experiences of crime, all of which impact on fear of crime and are confounded with age.

In accordance with Study 5 the findings show that the oldest age groups do feel more unsafe after dark. However, the effect of age does appear curvilinear as the youngest age group of respondents (aged between 15 and 24) felt just as unsafe as the eldest two age groups and more unsafe than the middle two age groups. There were also significant age differences for worry about burglary and being a victim of violent crime, with the eldest age group feeling significantly more worried than other age groups.

In line with Study 5, women felt more unsafe after dark than men. However, for worry about burglary and worry about violent crime gender differences only appeared in the youngest two age groups and was contrary to expectations, with men more worried than women. Also contrary to expectations there were no age and gender differences in the extent to which fear of crime impacted on respondents quality of life, despite the fact that preliminary analysis showed the impact of worry on quality of life to increase with age. This association seems confounded with health, neighbourhood area and experiences of crime.

In line with the reasoning that older people may be specifically worried and threatened by the crime committed by younger people, the results show that with age people become more worried about the crime committed by those in their 20s. This could be for various reasons, including the possibility that older people may be motivated to express fear against younger people in order to restrict younger people's freedoms.

In line with Study 5, this study demonstrates that there is a tendency for worry about crime to increase with age. The impact of worry about burglary and violent crime on quality of life on average does increase with age, but this association is not significant once controlling for other factors such as experiences of crime, subjective health and neighbourhood area. Unlike Study 5, not all gender differences were in line with expectations. Women felt more unsafe after dark and were more worried

about crime committed by those in their 20s. But it was younger men who worried more about burglary and violent crime.

General Discussion: Studies 5 and 6

The main aim of this chapter is to explore the extent age stereotypes explain age differences in fear of crime responses. Study 5 and 6 contribute to this aim by providing evidence that age differences exist in fear of crime surveys in two different large scale data sets. These studies provide evidence that the victimisation-fear paradox exists in relation to age, such that older people express more fear and worry about crime, despite being less likely to experience crime. Now that Study 5 and 6 have established age differences in fear of crime responses, the next two studies begin to explore whether age stereotypes can explain age differences in fear of crime responses.

The next part of the chapter is to explore whether age stereotypes exist that denote older people as more fearful of crime. Study 5 provides some indication that people may self-stereotype by demonstrating that the level of agreement that perceived vulnerability increases with age, does in fact increase with age. Study 7 aims to contribute to this by exploring people's expectations surrounding how people of different ages should feel about crime. In order to show there is a societal stereotype, research needs to demonstrate that people perceive there to be a difference in the fear of crime experienced by different age groups.

Study 7. Age - Expectations in Fear of Crime Responses

The main aim of this chapter is to explore whether age stereotypes can partly explain observed differences in fear of crime responses. Study 5 and 6 establish age differences in fear of crime, such that older people express more fear and worry about crime, despite being less likely to be a victim. These studies tell us about age differences in individual's evaluations, but they do not tell us or provide us with a sense of what and how people think that others feel and behave in relation to crime. The purpose of this study is to explore age stereotypes in relation to fear of crime, by seeing whether there are expectations regarding how people of certain of ages should feel about crime.

There is some evidence to suggest that there are societal perceptions that older people are more vulnerable, but there is little empirical evidence that suggests older people should be more afraid of crime (see review of Old Age Stereotypes in Section 4.5). Age stereotypes denoting cognitive and physical decline with age do seem to lend themselves to the idea that older people should also be more fearful of crime either because the consequences of crime would be more severe for older people or that they are less able to defend themselves or more susceptible to certain kinds of crime such as fraud or scams. In line with this, Age UK content that older people are more likely to be targets of specific crimes such as distraction burglary, because of frailty, perceived defenceless and vulnerability of elderly people (Age UK, 2002; Age UK 2012). Moreover, Study 5 provides some evidence that older people self-stereotype by agreeing with the statement that people are more likely to become victims of crime and therefore, they are perceived to be an 'easy target' with age. However, there is actually little evidence to suggest that older people are perceived to be more or less fearful than other age groups and what this means for older adults, in terms of how they are expected to behave. Therefore, the purpose of this study is to investigate age expectations in fear of crime in order to provide evidence that older people are expected to be more fearful of crime than other age groups.

This research follows the procedure of Sutton and Farrall's (2008) investigation of gender stereotypes in fear of crime, which provided evidence for the stereotype that women should be more fearful of crime than men. Participants were asked questions on fear of crime as if they were an

'average male' and the same questions as if they were an 'average female'. The study showed that both male and female respondents attributed much greater levels of fear to the average female than the average male. This demonstrates a shared consensus that women are more fearful than men.

This procedure was amended to investigate age-expectations in fear of crime responses. Instead of questioning participants about the 'average male' and 'average female', it asked participants to answer fear of crime items as if they were the 'average young person', 'average middle-aged person' and 'average old person'. It added to the procedure by asking participants the extent to which they think older people are viewed in relation to specific age stereotypes that refer to people over 70 as vulnerable, fearful and dependent.

Method

Participants

72 people aged between 18 and 77 years old completed a survey about fear of crime. The majority of people aged under 30 completed an online version of the survey which was distributed through university mailing lists to students at the University of Kent. The majority of people between 30 and 55 completed an online version of the survey which was distributed to staff at a Secondary school in the South East. People over the age of 55 were contacted through various Age UK day centres in the South East and were interviewed or self-completed a paper version of the questionnaire. A majority of the respondents were female (65.4%) and White British (71.6%). The majority of respondents described the area they lived in as suburban or semi-rural (43.8%), 32.6% described the area they live in as rural and 23.6% as urban.

Materials and Procedure

The questionnaire was adapted from Sutton and Farrall (2008) to assess what expectations people have surrounding others' experiences of fear of crime. Specifically we are interested in how people perceive different age groups (e.g. young, middle aged and older people) as fearful of a number of different crimes. In light of Study 5 and 6 which show stronger age differences in fear associated with being out after dark or walking along at night, an item assessing fear of being outside

after dark was added. Additional items also assessed fear of being conned, a crime which Age UK indicates older people may be specifically vulnerable to. Three items evaluating stereotypes of people over 70 as vulnerable, fearful and dependent were also added. The study used category labels such as 'young', 'middle-aged' and 'old' to define the age of the target being evaluated. To ensure consensus over targets being evaluated, respondents were asked to estimate the age of the target they considered.

Dependent Measures

Table 7.1 *Items and Response Scales Included in the Fear of Crime Survey*

Item	Response
Perceptions of younger, middle aged and older people as fearful of crime	
Think about the average young person's fear of crime. How much do you think [young/ middle aged/ old] people are afraid of ...	1 = 'not at all' to 5 = 'all the time'
Being robbed	
Being assaulted	
Being sexually assaulted	
Their property being vandalised	
Being burgled	
Being outside after dark	
Being conned	
Being a victim of crime generally	
Estimated age	
What is the average age of the ['younger/ middle age/ old people'] you considered	Estimated age

Cont.

Item	Response
Stereotypes	
Think about the average older / younger person ... To what extent do you think those over 70 / under 30 are viewed ...	0 = 'not at all likely be viewed that way' to 5 = 'very likely to be viewed that way'
As fearful	
As vulnerable	
As dependent	
Other information about respondents	
How would you describe the area that you live in	1 = 'urban', 2 = ' Suburban / semi - rural', 3 = 'rural'

Results

Preliminary Analysis

Because it is important to establish the perceptions of respondents of different ages, age was re-coded into three age categories to reflect 'young', 'middle-aged' and 'older'. Based on the European Social Survey (ESS) data presented in Study 1 which shows that on average old age is perceived to start at 59, respondents aged 59 and over were classed as the 'old' age category ($n = 24$; $M_{age} = 67.33$; $SD = 5.08$). The young age category was classified as those aged between 18 and 24 ($n = 37$; $M_{age} = 19.32$; $SD = 1.55$), leaving those aged 25-59 in the middle ($n = 25$; $M_{age} = 40.74$; $SD = 13.02$). Age 24 was chosen as a cut off point instead of the suggested age of 35 years, which is the average estimate of the end of youth from the ESS Study 1, because more younger people took part in the survey. A lower cut off allowed for a more evenly distributed sample in each age range.

Perceptions of Younger, Middle-aged and Older People as Fearful of Crime

Respondents were asked to think about the average young person's fear of crime and evaluate how much they thought young people are afraid of being robbed, being assaulted, being sexually

assaulted, their property being vandalised, being burgled, being outside after dark, being conned and being a victim of crime generally. They did this for young, middle age and older people. After completing questions for each age group they had to write down the age or average age of the person they were thinking of when they completed the questions.

The eight evaluations were entered into a mixed model analysis of variance (ANOVA), with target age the 3 x within subjects factor (young, middle aged and older) and respondent's age group a 3 x between subjects factor (young, middle and older age group). The analysis revealed significant multivariate within subjects effect of target age, Wilks lambda $F(16, 302) = 33.43, p < .001 \eta^2 = .639$, and target age by respondent's age interaction Wilks lambda $F(2, 558.46) = 2.007, p = .001 \eta^2 = .95$. The univariate tests show significant differences of target age on all types of crime, such that older targets were evaluated as more fearful and afraid for all types of crime (see Table 7.2).

Table 7.2 Means and Standard Deviations for Evaluations of Young, Middle-aged and Older People as Fearful of Different Types of Crimes

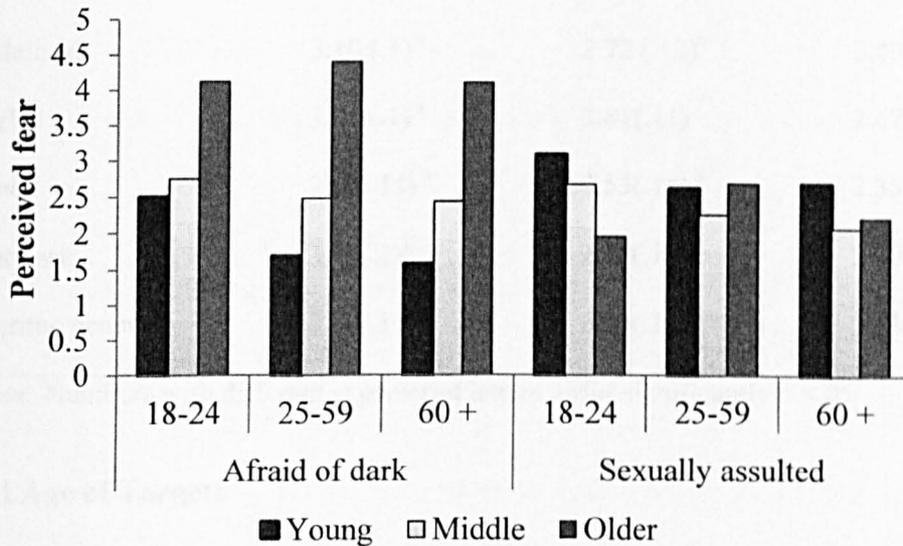
	Young	Middle-aged	Older	$F(2, 158)$	p	η^2
Being robbed	2.13 (0.97) ^a	2.60 (0.77) ^b	4.07 (0.78) ^c	146.845	.000	.650
Being assaulted	2.49 (0.95) ^a	2.46 (0.86) ^a	3.68 (0.90) ^b	54.563	.000	.409
Being sexually assaulted	2.83 (1.23) ^a	2.38 (0.91) ^b	2.23 (1.14) ^b	7.241	.001	.084
Being vandalised	1.88 (0.91) ^a	2.96 (0.90) ^b	3.65 (0.93) ^c	101.913	.000	.563
Being burgled	1.82 (0.83) ^a	2.96 (0.85) ^b	3.90 (0.86) ^c	150.345	.000	.656
Being conned	1.77 (0.89) ^a	2.59 (0.97) ^b	3.70 (1.14) ^c	98.478	.000	.555
Afraid after dark	2.01 (0.99) ^a	2.59 (0.82) ^b	4.20 (0.91) ^c	175.509	.000	.690
Victim of crime generally	2.12 (0.85) ^a	2.72 (0.89) ^b	3.95 (0.91) ^c	116.081	.000	.595

Note: Numbers with different superscript letters differ significantly $p < .05$

Target age by respondent's age interactions were only found on fear of being sexually assaulted $F(4, 158) = 4.39, p = .002 \eta^2 = .100$ and being afraid of being outside after dark $F(2, 158) = 4.31, p = .002 \eta^2 = .101$. Simple main effects tests show that for being outside after dark, age groups

differ in ascribing fear to younger targets $F(2, 79) = 9.57, p < .001 \eta^2 = .195$, with older respondents attributing less fear to young targets than the youngest respondents. For being afraid of sexual assault, age differences occurred for evaluating middle aged $F(2, 79) = 2.884, p = .029 \eta^2 = .086$ and older targets $F(2, 79) = 3.285, p = .043 \eta^2 = .077$, but not for evaluating young targets, see Figure 7.1.

Figure 7.1 *Perceived Fear of Young, Middle-aged and Older Targets by Respondent's Age Group*



There were significant between-subjects effects of respondent's age group on evaluations of being afraid of property being vandalised $F(2, 79) = 7.001, p = .002 \eta^2 = .151$, being burgled $F(2, 79) = 3.942, p = .023 \eta^2 = .091$, being conned $F(2, 79) = 6.725, p = .002 \eta^2 = .145$, being out after dark $F(2, 79) = 3.662, p = .030 \eta^2 = .085$ and generally being a victim of crime $F(2, 79) = 7.22, p = .001 \eta^2 = .155$. All of these effects were qualified by respondents aged 18 to 24 ascribing more fear compared to those aged between 25 and 59, and those over 60 see Table 7.3 on the next page.

Table 7.3 Means and Standard Errors for Fear of Crime Items by Respondent's Age Group

	Age group		
	18-24	25-59	60 plus
Being robbed	3.05 (.1)	2.93 (.12)	2.75 (.13)
Being assaulted	2.98 (.1)	2.79 (.12)	2.81(.13)
Being sexually assaulted	2.56(.13)	2.51(.15)	2.30 (.17)
Being vandalised	3.10 (.1) ^a	2.72 (.12) ^b	2.49(.14) ^b
Being burgled	3.08 (.1) ^a	2.81(.11)	2.67(.12) ^b
Being conned	2.98(.11) ^a	2.53(.14) ^b	2.35(.15) ^b
Afraid after dark	3.12(.1) ^a	2.85(.12)	2.70(.13) ^b
Victim of crime generally	3.20(.13) ^a	2.79(.15) ^b	2.63(.17) ^b

Note: Numbers with different superscript letters differ significantly $p < .05$

Estimated Age of Targets

A multivariate analysis of variance (MANOVA) was conducted to see whether estimates of young, middle and old age differed by age group. Estimates of youth and old age did not vary by respondents age group, however estimates of middle age did $F(2, 82) = 6.328, p = .003 \eta^2 = .134$. This confirms that there was some consensus over the estimate age of younger and older targets, but not over the estimated age of the middle-aged target. This is likely due to the fact that middle age is a more ambiguous age categorisation and it spans a wider age-range, resulting in more variation in estimated ages.

Table 7.4 *Estimated Age and Standard Deviations in Parenthesis of Young, Middle-aged and Older Targets by Respondents Age Group.*

	Respondents age group			
	18-24	25-59	60 plus	Total
Young age	17.78 (3.35)	19.22 (3.39)	18.90 (2.79)	18.52 (3.26)
Middle age	38.35 (5.53) ^a	41.96 (5.96) ^b	43.38 (5.26) ^b	40.74 (5.95)
Old age	70.68 (8.81)	70.07 (5.99)	69.52 (6.76)	70.20 (7.45)

Note: Numbers with different superscript letters differ significantly $p < .05$

Stereotypes

Three items assessed the extent to which people over 70 are viewed as fearful, vulnerable and dependent. These items were assessed in comparison with evaluations for people under 30. A mixed model ANOVA with target age a within subjects measure (2 levels: under 30, over 70) assessed on evaluations of fear, vulnerable and dependent, with respondents age group (x 3) the between subjects factor. Analysis revealed a significant multivariate effect of target age $F(3, 81) = 81.66, p < .001 \eta^2 = .714$. There was no multivariate effect of respondents age group or target age by age group interaction.

Univariate analyses show that the within subjects effects of target age was significant for all three items; evaluations as fearful $F(1, 83) = 81.66, p < .001 \eta^2 = .496$, vulnerable $F(1, 83) = 178.852, p < .001 \eta^2 = .683$ and dependent $F(1, 83) = 23.18, p < .001 \eta^2 = .218$. Those over 70 were evaluated to be more fearful ($M_{\text{over 70}} = 3.74; SD = 1.01$), compared to those aged 30 and under ($M_{\text{under 30}} = 2.16; SD = .893$), more vulnerable ($M_{\text{over 70}} = 4.14; SD = .86; M_{\text{under 30}} = 2.03; SD = .874$) and more dependent ($M_{\text{over 70}} = 3.44; SD = .97; M_{\text{under 30}} = 2.56; SD = 1.17$). There was a significant between-subjects effect of respondent's age group on vulnerability $F(1, 83) = 4.253, p = .017 \eta^2 = .093$, with younger respondents attributing significantly more vulnerability ($M = 3.27; SE = .08$) compared to middle age group ($M = 3.02; SE = .09, p = .042$) and older age groups ($M = 2.94; SE = .10, p = .008$).

Principle components analysis confirmed the three items evaluating people over 70 as vulnerable, fearful and dependent form one factor with eigenvalues $>.1$, explaining 60.68% of the variance, all communalities $>.481$ and factor scores $>.694$.

Discussion

In order to explore the role of age stereotypes in fear of crime responses it is imperative to provide evidence that age-based expectations regarding fear of crime exist. Based on a procedure by Sutton and Farrall (2008) which provided empirical evidence that women are expected to be more fearful of crime than men, this study aims to provide evidence for age based expectation in fear of crime responses. Seventy two people aged between 18 and 77 years old evaluated the fear of crime of young, middle-aged and old targets. The results show that the older target was deemed more fearful of all types of crime; being robbed, assaulted, vandalism, burglary, being conned, being afraid after dark and being a victim of crime generally, except for sexually assaulted, where younger respondents were deemed more fearful. The average age of the older target was around 70 years of age, this estimation did not differ by respondent's age, meaning there was consensus over the age of the older target. In comparison to younger targets aged under 30, respondents perceived those over 70 to be more fearful, more vulnerable and more dependent. There was no age group interaction demonstrating consensus in evaluations across age groups.

In sum, the findings confirm that older people (aged around 70 years) are expected to be more fearful of crime. Older targets were considered more fearful of all types of crimes except being sexually assaulted and were considered more fearful and vulnerable. The next study investigates whether age and gender stereotypes in fear of crime responses.

Study 8. Social Desirability and Fear of Crime in Older Adults

Observed gender differences in fear of crime have been partly explained by gender stereotypes that infer socially desirable responses for men and women in expressions of fear. The aim of this study is to provide a preliminary investigation into social desirability responding in fear of crime expressed by older adults in line with the broader aim of the chapter to investigate whether age stereotypes influence older adult's fear of crime. This research is investigating whether an instruction to respond in a socially desirable way vs an instruction to respond in an honest way influences older people's fear of crime responses.

Study 5 and 6 confirm there are age differences in fear of crime responses, while Study 7 confirms that people have age based expectations regarding fear of crime. This Study uses procedures employed by Sutton et al., (2011) which investigated gender differences in fear of crime responding to provide a preliminary investigation into whether older adults are also motivated to respond deceptively when reporting fear of crime. Importantly, it provides a simultaneous test of gender and age expectations, as gender and age expectations provide different hypothesis in relation to fear of crime responses.

Sutton et al., (2011) shows that the instructions given before filling out a survey can influence responses to items assessing fear of crime. Men and women were randomly assigned to one of two instructional sets before answering questions on fear of crime. In the 'honest' set of instructions, respondents were asked to provide totally honest and accurate responses to the fear of questions that followed. Under the 'fake good' instructions, respondents were asked to provide responses that cast them in a favourable light. Using this paradigm, this study explores the extent to which older people respond in line with gender and age stereotypes.

If older adults act in line with gender stereotypes, then as in the Sutton et al., (2011) study, there is expected to be a main effect of condition (instructional set) for males and females. The 'fake good' instruction is expected to cause men to minimise their fears relative to those under the 'honest' instructions. Women in the 'fake good' instructions should exaggerate fear of crime compared to

those under the 'honest' instructions. Here an instructional set by gender interaction should be present. In contrast, if older people act in line with age stereotypes, then gender differences within the 'fake good' instructional set should be reduced, as both men and women exaggerate fear of crime compared to the 'honest' condition. Accordingly, there would be a main effect of instructional set, with both males and females expressing more fear in the 'fake good' condition compared to those in the 'honest' condition. There would not be an instructional set by gender interaction.

If older people respond in line with age stereotypes then both males and females will express higher fear of crime in the 'fake good' condition compared to males and females in the 'honest' condition.

Method

Design and Participants

65 participants, aged between 61 and 92 ($M_{\text{age}} = 76.54$; $SD = 8.4$) were recruited to participate in the research from Age UK day centres and senior lunches in the South East of England. The majority of the participants were female ($n = 37$; 57%), all were White British and lived independently in their own home or rented accommodation. Thirty one per cent considered themselves to live in an urban area, another 41% considered themselves to live in a semi-rural or suburban area and 28% considered themselves to live in a rural area. 49% considered themselves to have a disability or on-going health problem, the remaining did not.

Materials and Procedure

The questionnaire contained the Social Desirability Scale -17 (SDS-17; Stober, 1999 see appendix A). The 17 item questionnaire assesses the extent to which people respond in socially desirable ways. It is confirmed to be a reliable and valid measure of social desirability for older as well as younger adults (aged 18 to 80 years).

Table 8.1 *Items and Response Scales*

Item	Response
Afraid of crime and thinking about crime	
How much are you afraid of .../ How often do you think about being a victim of these crimes ...	1 = 'not at all' to 5 = 'all the time'
Being robbed	
Being assaulted	
Being sexually assaulted	
Their property being vandalised	
Being burgled	
Being outside after dark	
Being conned	
Being a victim of crime generally	
Safety during the day and at night	
Are you afraid to go out into your neighbourhood after dark by yourself	1 = 'not at all' to 5 = 'all the time'
How safe do you feel or would you feel being out alone in your neighbourhood at night	
How safe do you feel or would you feel being out alone in your neighbourhood during the day	
I worry a great deal about my personal safety from crime and criminals	
I worry a great deal about the safety of my property from crime and criminals	



Cont.

Item	Response
Other information about respondents	
How would you describe the area that you live in	1 = 'urban', 2 = ' Suburban / semi - rural', 3 = 'rural'
Would you describe yourself to have a disability or on-going health problems	1 = 'yes', 2 = 'no'
Have you ever been a victim of crime	1 = 'yes', 2 = 'no'
Have you been a victim of crime, within the last year	1 = 'yes', 2 = 'no'

Procedure

Participants were approached by a female experimenter and asked whether they would be happy to give their views on crime. Once informed consent had been obtained, participants were given a questionnaire to fill out, which randomly assigned them to either the 'fake good' or 'honest' condition. Random assignment was ensured by randomising questionnaires. The level of assistance required to complete the questionnaire varied, resulting in some participants being interviewed and the experimenter recording responses. In both procedures participants were tested individually. Once the questionnaire has been assigned, the experimenter stressed the fake good or honest instructions to participants by reading out the instructional set to participants.

In accordance with Sutton et al., (2011), participants in the fake good condition were informed that "It's very important that you answer the following questions in a way that portrays you in the best possible light. That is, take into account how your answers would make you appear to others".

Participants in the honest condition were informed that “It’s very important that you answer the following questions in a way that is totally honest and accurate”. After the questionnaire or interview had been completed, participants were thanked and fully debriefed.

Results

Preliminary analysis revealed that age, gender, living area and health did not significantly differ by condition. Just over half of participants (54%) said they had been a victim of crime, but only 12% said they had been a victim of crime within the last year. Importantly being a victim of crime did not significantly differ between conditions.

Manipulation Check

The 17 items of the SDS-17, were coded 1 = ‘true’, 0 = ‘false’. Items 1, 4, 6, 7, 11, 15 and 17 are reversed coded. Consistent with Stober (2001), item 4 ‘I have tried illegal drugs (for example, marijuana, cocaine etc.’ had no variance and an item-total correlation of $<.001$, so was dropped from further analysis as all participants disagreed with this statement. The scale showed moderate reliability Cronbach’s $\alpha = .615$, scored ranged from 3 to 16 ($M = 11.25$, $SD = 2.57$). Due to the large variation in the scale, the summed score was tested for outliers. One case was found to be $3 \times SD$ s below the mean and was subsequently removed from further analysis. The effect of condition (the social desirability manipulation) on the summed SDS-17 score (range 8 to 16; $M = 11.43$, $SD = 2.17$) was tested in an ANOVA. The analysis showed a marginally significant effect of condition $F(1, 62) = 3.594$, $p = .063$ $\eta^2 = .055$, with those in the fake good condition showing more of a tendency to respond in a socially desirable manner ($M = 11.91$, $SD = 2.19$) than those in the honest condition ($M = 10.9$, $SD = 2.06$).

The fear of crime items assessed fear in relation to four crime types, including property safety, personal safety, being conned and feeling afraid being out after dark. The five items assessing property safety were reliable (Cronbach’s $\alpha = .918$) and computed into a mean score, as were the five items assessing personal safety (Cronbach’s $\alpha = .936$). The two items assessing fear of being conned

had a Cronbach's $\alpha = .983$. The item assessing feelings of safety after dark was reverse coded, before being computed into a mean score of fear after dark with the other three items (Cronbach's $\alpha = .847$).

Correlation analyses were conducted to determine whether age, gender, living area and self-reported health and victimisation were related to the dependent fear of crime measures, see Table 8.2.

Table 8.2 *Correlations among Variables*

	2.	3.	4.	5.	6.	7.	8.	9.
1. Age	.08	-.138	.01	.03	.224	.016	.053	.278*
2. Gender (female)		-.322**	.032	-.112	.494**	.404**	.291*	.517**
3. Area (rural)			.203	.078	-.263*	-.380**	-.200	-.383**
4. Health				.094	.058	-.317*	.028	-.027
5. Victim					-.330**	-.430**	-.208	-.241
6. Personal safety						.636**	.510**	.756**
7. Property safety							.535**	.527**
8. Conned								.363**
9. Fear of dark								

Note: * = $p < .05$, ** = $p < .01$, *** = $p < .001$

Social Desirability in Fear of Crime Responses

The analysis tested two hypotheses that age and gender stereotypes influence fear of crime responses by providing expectations surrounding the expression of fear. In accordance with Sutton et al., (2011) if gender stereotypes play a role in expression of fear then it is expected that the effect of gender should be larger in the fake good condition than the honest condition, with females reporting higher fear in the fake good condition compared to the honest condition and males reporting lower fear in the fake good condition compared to the honest condition. This would result in larger differences between female and male responses in the fake good condition compared to the honest condition and show that the fake good instructional set exaggerated gender differences in fear of crime responses. In contrast, if age expectations play a role in the expression of fear, then both males

and females should report higher fear of crime in the fake good condition compared to the honest condition, resulting in a main effect of condition, but importantly no condition by gender interaction.

The first analysis used MANOVA to test the effect of condition and gender on the four fear of crime items. The analysis revealed a significant multivariate effect of gender $F(4, 57) = 6.655, p < .001, \eta^2 = .318$ and a marginally significant condition by gender interaction $F(4, 57) = 2.310, p = .069, \eta^2 = .139$, but no main effect of condition. The univariate analysis revealed significant effect of gender on all fear of crime items with women expressing significantly more fear in relation to property crime, personal safety, being conned and fear of being out after dark see Table 8.3.

Table 8.3 Means, Standard Deviations in Parenthesis and Significance Tests for Differences between Genders

	Women	Men	$F(1, 60)$	p	η^2
Property safety	2.94 (.96)	2.1 (.94)	11.776	.001	.164
Personal safety	2.87 (.88)	1.83 (.96)	19.751	<.001	.248
Being conned	2.85 (.97)	2.2 (1.19)	5.357	.024	.082
Fear after dark	3.43 (.88)	2.19 (1.2)	23.472	<.001	.281

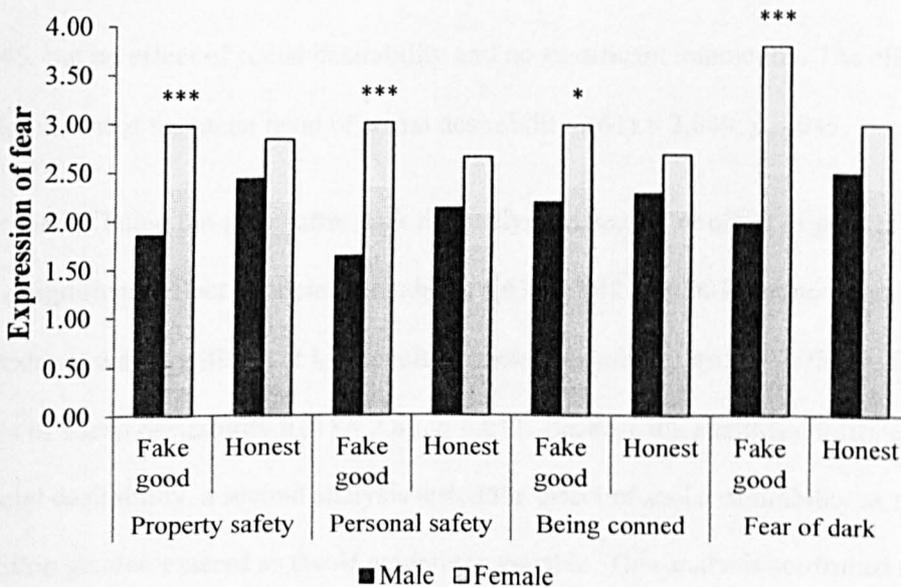
The effect of gender was qualified by a significant condition by gender interaction for property safety $F(1, 60) = 4.360, p = .041, \eta^2 = .068$, personal safety $F(1, 60) = 4.956, p = .03, \eta^2 = .076$ and fear of dark $F(1, 60) = 8.431, p = .005, \eta^2 = .123$. Simple main effects analyses revealed that the effect of gender was present in the fake good condition, with females reported higher fear for all types of crime than males, but not when participants were told to be honest (see Figure 8.1).

Planned contrasts tested whether the effect of gender in the fake good condition was due to women up-playing fear or by men down-playing fears compared to the honest condition. Comparisons revealed a significant difference between female's responses to being afraid after dark, with females reporting more fear in the fake good condition ($M = 3.83, SD = .66$) compared to the honest ($M = 2.96, SD = .89, p = .008$). There was a marginal difference between male responses for

property safety, with men in the fake good condition down-playing ($M = 1.8, SD = .77$) fears compared to men in the honest condition ($M = 2.45, SD = .99, p = .071$). No other comparisons were significant however, results suggests there was tendency for women to up-play and men to down-play fears, but these differences were not large enough to reach statistical significance (see Figure 8.1).

The robustness of the effect of gender and the interaction effect were tested in a second analysis, which covaried out any effect of age, living area, self-reported health and victimisation, as the correlation analyses revealed that they were associated with one or more of the dependent measures. The analyses revealed self-reported health $F(4, 53) = 3.665, p = .01 \eta^2 = .217$ and victimisation to be significant covariates $F(4, 53) = 2.802, p = .035 \eta^2 = .175$. Only the multivariate effect of gender remained significant $F(4, 53) = 4.54, p = .003 \eta^2 = .225$, the condition by gender interaction was not significant $p = .257$. Subsequent analysis without the non-significant covariates (age and area) showed a multivariate effect of gender $F(4, 55) = 6.517, p < .001 \eta^2 = .322$, but the condition by gender interaction was not significant $p = .134$. However, univariate tests revealed a significant condition by gender interaction for fear of dark $F(1, 58) = 6.536, p = .011 \eta^2 = .107$, and marginal interaction for personal safety $F(1, 58) = 2.684, p = .064 \eta^2 = .058$ and property safety $F(1, 58) = 2.913, p = .093 \eta^2 = .048$.

Figure 8.1 Expression of Fear by Condition and Gender



Note: Significant differences between male and female responses within fake good condition are indicated *** = $p < .001$, ** = $p < .01$, * = $p < .05$. Figure shows adjusted means for self-reported health and victimisation.

To confirm whether the condition by gender interaction is indeed due to a difference in social desirability, a social desirability by gender interaction was tested using Preacher and Hayes (2009) Modprobe method for testing interactions between ordinal and dichotomous variables. Individual's social desirability score was entered as *M* the moderator variable and gender was entered as *F* the focal predictor to test the effect of gender at different levels of social desirability. Variables in the analysis were mean centred and moderator values of social desirability were calculated at plus and minus one standard deviation from the mean. The interaction was tested on all four fear of crime items separately.

For personal safety the analysis revealed an effect of gender $t(61) = 21.21, p < .001$, but no effect of social desirability and no significant interaction. The effect of gender was significant at low levels of social desirability $t(61) = 3.51, p = .009$ and at higher levels of social desirability $t(61) = 2.42, p < .001$. For property safety the analysis revealed an effect of gender $t(61) = 21.25, p < .001$, but no effect of social desirability and no significant interaction. The effect of gender was significant at low levels of social desirability $t(61) = 2.53, p = .014$ and at higher levels of social desirability $t(61) = 2.18, p = .033$. Similarly, for fear of being conned the analysis revealed an effect of gender $t(61) = 2.05, p = .045$, but no effect of social desirability and no significant interaction. The effect of gender was only significant at the mean level of social desirability $t(61) = 2.049, p = .045$.

For fear of being out alone after dark the analysis revealed an effect of gender $t(61) = 4.48, p < .001$, and a significant effect of social desirability $t(61) = 3.12, p = .003$, but no interaction. The effect of gender at was significant at low levels of social desirability $t(61) = 3.73, p = .001$ and at higher levels of social desirability $t(61) = 2.63, p = .011$. Because the analysis confirmed a significant effect of social desirability, a second analysis tested the effect of social desirability as the *F* focal predictor within gender, entered as the *M* moderator variable. This analysis confirmed the effect of

gender and social desirability, in line with the previous analysis. The analysis also confirmed the effect of social desirability was present for females $t(61) = 2.60, p = .012$ but not males $t(61) = 1.88, p = .064$.

The analyses confirm the effect of gender on all fear of crime items. They do not confirm the gender by social desirability interaction. The only effect of social desirability was found for females when expressing their fear of being out after dark.

Discussion

This study investigated whether instructions to respond in a socially desirable way vs an instruction to respond in an honest way influenced older people's fear of crime responses. Based on procedures used by Sutton et al., (2011) this study tested both the presence of age and gender norms in fear of crime expressed by older adults. Study 7 demonstrates that there are age-related expectations in fear of crime responses, such that older adults are expected (by people of all ages) to express more fear of crime than other age groups. This Study aimed to expand on these findings by exploring the consequences of these expectations on older adults. It provides a preliminary test of age and gender expectation in fear of crime responses.

The findings support the view that gender expectations influence fear of crime responses by showing gender differences in fear of crime responses in the fake good condition. Within the fake good condition women consistently reported higher levels of fear compared to men. Moreover, the tendency for women to enhance levels of fear was confirmed for being afraid after dark and the tendency for men to down-play levels of fear was confirmed for property safety. Although, no other effects of condition were present for females and males, the tendency for females to enhance levels of fear and men to reduce levels of fear in the fake good condition was present (i.e. means were in the expected direction).

For age expectations to be present, the results would have shown a tendency for both males and females to report higher levels of fear of crime in the fake good condition compared to the honest condition. This would be in line the expectation that older adults, regardless of gender, should report

higher levels of fear when told to present themselves in a social desirable manor. The social desirability manipulation did not raise the expression of fear in male participants in accordance with an expectation of age, despite the findings from Study 7, which established there is an expectation that older people should be more fearful of crime. One reason for this finding is that gender norms in relation to fear of crime are more salient than age expectations. For older men it might be seen as more important to conform to gender norms than age-based expectations to re-affirm masculinity to others who may perceive it to decrease with age.

A second reason is that the social desirability manipulation does not correspond to age expectations. Sutton et al., (2011) argue that acting in line with gender norms is beneficial, but that it is beneficial to men and women in different ways. For men, down-playing fear preserves traditional notions of masculinity which are rewarded. For women, fear is associated with traditional notions of femininity which are rewarded. But it also serves a larger function to maintain sexist ideologies that are beneficial to males but damaging to women. Although it may appear that expressions of fear do not benefit women, research has shown that behaving in line with the social system and not against it, is rewarded. However, it is not clear what older adults gain from giving the impression to others that they are fearful. Therefore the question remains as to whether there is an impression management or social desirability motivation for older people to express fear of crime. In order to see whether there is age-related deceptive responding in fear of crime, further research is needed to understand what older individuals and other social groups gain from older adults expressing fear of crime.

Further research is needed to explore whether at the group level, older people expressing fear of crime serves a social justifying function in a similar way gender stereotypes do. Although it appears counter intuitive for women to express fear which can be damaging to themselves and their social group, the expression of fear is actually rewarded because it perpetuates the existing social system. Lynch and Sutton (2009) examined how women who do not appear fearful are evaluated compared to those who express fear. In three studies, they find that women who reported low fear of crime are derogated and perceived to have undesirable personality traits relative to those women who overtly expressed fear. This demonstrates that women who do not show fear and therefore do not

appear to be controlled by fear are subsequently derogated in a similar way to women to defy gender norms and expectations (e.g. Rudman & Fairchild, 2004).

Similar research that evaluates older targets that do and do not express fear of crime could be used to explore whether there is a social justifying function of fear of crime in older adults. If older adults who do not express fear, and therefore do not appear controlled by fear, are degraded more than those who do express fear, this would demonstrate whether older people are rewarded for behaving in line with a social system that suppresses their freedoms. Just as expressions of fear by women are rewarded, even though they are potentially damaging to their gender group, expressions of fear by older people may be rewarded because they maintain social 'age' structures and hierarchies.

A second avenue for further research would be to investigate how stereotypes of vulnerability may enhance the two factors that contribute to evaluations of fear; the perceived victimisation of older people and perceived seriousness of the consequences of crime.

General Discussion: Study 5, 6, 7 and 8

The aim of this chapter was to explore the extent to which age and gender stereotypes influence fear of crime responses in older adults. Study 5 and 6 provide evidence that age differences exist in fear of crime responses, with older people more fearful of crime, despite being less likely to experience crime. This is known as the victimisation-fear paradox. Study 7 demonstrates that there are age-related expectations in fear of crime responses, such that older adults are expected (by people of all ages) to express more fear of crime than other age groups. Study 8 investigated whether instructions to respond in a socially desirable way influenced older people's fear of crime responses in an attempt to see whether age and gender expectations may explain the victimisation-fear paradox. It provides a preliminary test of age and gender expectations in older adult's fear of crime. The findings did not support the role of age stereotypes in fear of crime. They also provide a conceptual replication of Sutton et al., (2011) by demonstrating that gender differences in fear of crime responses are exaggerated when people are asked to respond in a way that shows them in a favourable light.

Chapter Eleven. Stereotypical Representations of Older People and Giving to Charity

Abstract

This chapter presents an applied study investigating *real* differences in amount of money that two charities, Age Concern England (ACE) and Help the Aged (HTA) – now merged to form Age UK, raise in donations from individuals. Putting investment in marketing aside, this study uses the stereotype content model (SCM: Fiske, Cuddy, Glick & Xu, 2002) to explain the disparity in the amount of donations received by exploring differences in the way the charities represent themselves and the images of older people they used. In a between subjects design, 51 participants, ($M_{\text{age}} = 23$ years) evaluated the images used by either ACE or HTA and then chose which charity to donate money to. Reflecting the real observation the majority of participants (82.4%) chose to donate money to HTA, whose images were evaluated more negatively, depicted older people as more incompetent and less friendly and viewed with more pity in comparison to the ACE images. Participant's choice to donate to HTA was significantly predicted by pity elicited by HTA images. Therefore, evoking pity may be one strategy for maximising donations from individuals. However, these strategies may perpetuate negative stereotypes and images of older people that are potentially damaging. Implications for marketing and individual's attitudes to age are discussed.

Study 9. How Stereotypical Representations of Older People Influence Charitable Giving

These days most businesses or non-profit organisations have corporate images or logos, which are actively promoted to the public. The image of an organisation and the imagery it uses are very important. They have the purpose of conveying what the organisation is about, what it stands for and what services it provides. Many organisations pride themselves on their corporate image and for many it can mean the difference between success and failure. Imagery is even more important for non-profit organisations that rely heavily on donations from the public to support their cause. It is especially relevant when charities with similar causes are competing with one another. In this situation there is the added problem of making the corporate image distinctive from other similar organisations but maintaining the core message of what the charity stands for. Age Concern England (ACE) and Help the Aged (HTA) were two charities that faced such a problem before they formed one charity, Age UK, in 2010.

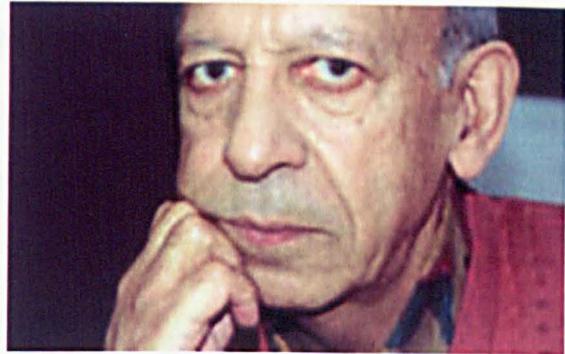
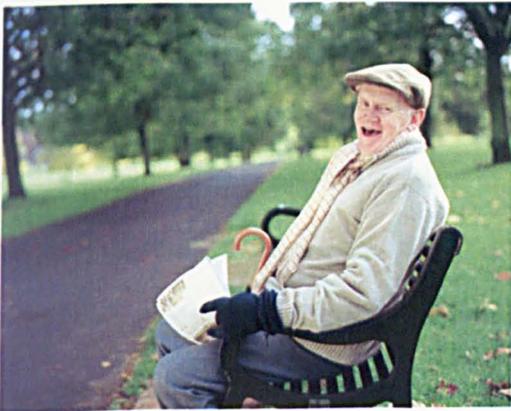
Prior to the merger of ACE and HTA to form Age UK, which is now the largest charity representing the needs of older people in the UK, differences in how the charities present themselves and the older people they represent were observed alongside differences in the amount they receive in donations. According to Hibbert and Horne (1996) individuals, as a group, are the largest contributor to charities. In the UK 80% of the total amount donated to charity is given by individuals and about 80% of adults will make some kind of donation to charity (Burnett, 1993). In 2006, HTA earned over £18.676 million in donations and grants compared to £8.965 million earned by ACE (Charities Aid Foundation, 2007). Given that both charities have similar agendas and policy concerns, the observed difference in the amount of money raised from donations raised the question as to what was causing the discrepancy in support from individuals. Putting investment in marketing aside, this study explores whether the way the charities represent older people could go some way to explain differences in donations from individuals. From the charity's perspective it is imperative that fundraising campaigns are designed to maximise the contribution from the individual donor.

Therefore, this study investigates how the images used to represent older people influences willingness to donate to either charity.

Table 9.1 *Example of ACE and HTA Marketing Materials*

Example of ACE Images

Example of HTA Images



The stereotype content model (SCM: Fiske, Cuddy, Glick & Xu, 2002) provides a framework that defines how individual and social groups are evaluated and how these evaluations relate to different emotional responses. It therefore provides a framework for evaluating images of older people. It states that generally older people are predominately categorised as 'dodderly but dear', this is a stereotype with mixed content. Evidence suggests that older people are evaluated as warm (positive) but also incompetent (negative), because they are seen as powerless, relatively low status and not competing for main stream resources (Fiske et al., 2002). These evaluations evoke feelings of pity, which contribute to a more paternalistic form of prejudice, where older people are patronised or ignored.

The SCM also provides a framework for evaluating sub-types of older people. Brewer et al., (1981) defined three subcategories of old people; the grandmother, representing a family-oriented older woman; the 'elder statesman' representing the image of a respected, high status and distinguished conservative elderly man and the senior citizen, representing the isolated, inactive elderly person likely to be in residential care home. Cuddy and Fiske (2002) propose these subtypes of elderly people fall into one of the following classifications: the 'grandmother' most closely mirrors the incompetent and warm categorisation reflected in feelings of pity because she is nurturing but ineffectual; the 'senior citizen' lacks both competence and warmth due to perceived laziness; and the 'elder statesman' is seen as competent but cold reflecting feelings of respect. Therefore, the SCM model provides stereotype dimensions that define differences between the types of images that ACE and HTA use. Furthermore, the feelings associated with viewing the images of older people, for example pity or disgust, may go some way to explain choices to donate to one charity over another.

Research shows that emotions are one of the most powerful drivers of whether or not an individual decides to giving to charity (see Liu, 2001 for review). Sargeant's (1999) model of charitable giving suggests that emotions such as pity, guilt and empathy are particularly important in determining giving. However, emotions should be considered in the context of other factors that determine whether or not individuals give to charity, these factors include; inputs (e.g. images used, type of appeal); extrinsic determinants, such as demographic characteristics of the giver; intrinsic

determinants, (e.g. emotions as well as the need for self-esteem or social justice); perceptual reactions refer to how the charity fits with self and finally, processing determinants such as past experiences or judgement criteria that influence decisions. However, little quantitative research has attempted to address how evaluations of the inputs or marketing materials are associated with emotions in a systematic way to influence charitable giving.

This study uses the SCM as a framework to link evaluations of images of older people which the charities use, with emotional reactions that may inform decisions about charitable giving. The aim is to examine the extent to which images used by two different charities can be evaluated in terms of age stereotypes and explore these evaluations in relation to participant's willingness to donate to each charity. In accordance with SCM older people who are depicted in line with age stereotypes, in other words perceived as warm but as lacking competence, should evoke more pity in participants. Pity is an intrinsic determinant of charitable giving (Sargeant, 1999) and therefore, participants should give to the charity whose images evoke more pity. In sum, this study uses the SCM to test whether there are legitimate differences between the marketing images used by two charities that represent older people and then explores whether these differences influence a person's willingness to support or donate resources to the charities. In line with the observation that HTA raised more money in donations than ACE in 2008, it is predicted that participants will be more likely to give money to the HTA. To explain this choice, it is predicted that the HTA images will elicit more pity and be evaluated more strongly in terms of age stereotypes; they will be seen as less capable and more incompetent.

Method

In a between subjects design 51 participants aged between 18 and 40 (M age = 23 years, SD = 3.4, just over half of participants were female, $n = 30$) evaluated either 30 HTA or 30 ACE images (see Appendix B for images used). The images from HTA were collected from HTA websites and current marketing campaigns at the time. The ACE images were chosen at random from a database of images the charity used for marketing purposes. Images varied in size, colour and quality. Effort was made to keep quality and size of the images similar across charities. The use of colour was not

controlled for as this may influence evaluations and the aim was to use the real images the charities used. Effort was also made to ensure that the same older people did not appear in more than one image (i.e. different people in each image). The images representing each charity were arranged on one A3 display, which was printed and laminated.

Participants were tested individually by a female experimenter. After informed consent had been obtained they were presented with either the images from ACE or HTA and given a questionnaire to fill out. The questionnaire asked participants to evaluate the images. Participants were then presented with the images of the charity they did not evaluate so they could see both charities' images. They were then asked to decide which charity they would give a hypothetical £5 to and which charity was more representative of older people, see Table 9.2 for questionnaire items.

Table 9.2 *Items and Response Scales included in Questionnaire*

Item	Response
Evaluation of Images	
Thinking about the images you just saw, were they mostly negative or positive?	-3 = 'almost all negative' to +3 = 'almost all positive'
To what extent do you view these people...	1 = 'completely disagree' to 7 = 'completely agree'
...as capable	
...as friendly	
...with admiration	
...with pity	
...with contempt	
...with Disgust	
...with envy	
...as incompetent?	

Cont.

Item	Response
Charity Preference	
If you had £5 to give to ONE charity, which one would it be?	HTA or ACE
In general, which charity would you say is more representative of older people?	
Which charity would you say is more representative of older people's voices, opinions and concerns?	
Which charity would you take more seriously as caring for the needs of older people in the UK?	

Results

Evaluation of Images

Half of the participants evaluated the HTA images ($n = 25$) and half the ACE images ($n = 26$). The images were rated in relation to 8 stereotype content items and a general measure of positivity. A MANOVA tested whether evaluations of the charities' images differed on these items. The results revealed a multivariate effect of charity $F(9, 41) = 13.531, p < .001 \eta^2 = .748$. Univariate analyses revealed the effect of charity was significant for all items except the evaluations of contempt and disgust. In general the ACE images were evaluated more positively, the older people were evaluated as more capable, less incompetent, more friendly and were viewed with more admiration, less pity, and more envy compared to HTA. These effects of charity and mean evaluations are shown in Table 9.3 on the next page.

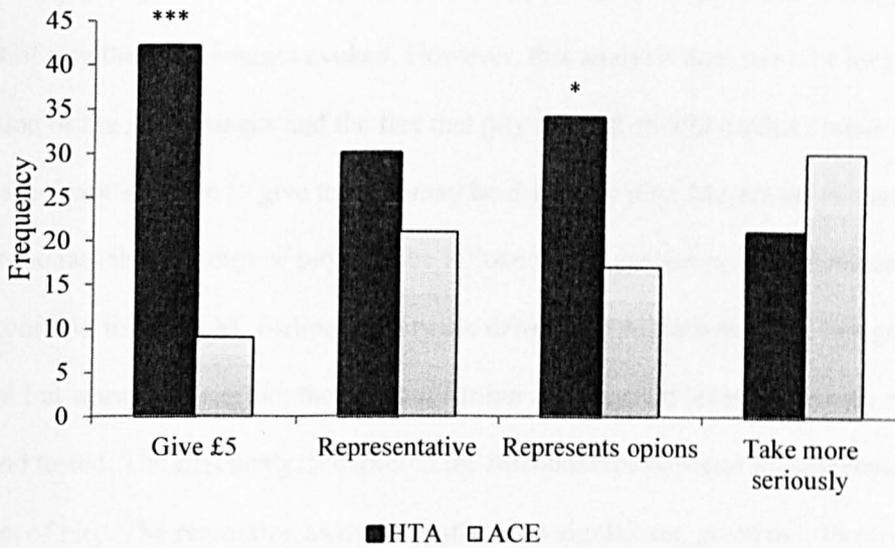
Table 9.3 Means, Standard Deviations in Parenthesis and Significance Tests for Differences between Charities

	HTA	ACE	<i>F</i> (1, 49)	<i>p</i>	η^2
Positive	-1.08 (1.87)	2.88 (0.33)	113.49	<.001	.698
Capable	3.96 (1.46)	5.96 (0.82)	36.835	<.001	.429
Incompetent	3.32 (1.86)	1.81 (0.85)	14.075	<.001	.223
Friendly	4.62 (1.04)	6.46 (0.65)	40.881	<.001	.455
Admiration	4.28 (1.57)	5.19 (1.17)	5.584	.022	.102
Pity	3.76 (1.83)	2.23 (1.24)	12.255	.001	.200
Contempt	2.44 (1.71)	1.85 (1.38)	1.874	.177	.037
Disgust	1.76 (1.20)	1.27 (0.83)	2.911	.094	.056
Envy	1.36 (0.49)	2.23 (1.27)	10.211	.002	.172

Charity Preferences

At the end of the questionnaire participants were asked to choose a charity to give a hypothetical £5 to. Then three items assessed which charity was more representative of older people, which was more representative of older people's voices, opinions and concerns and which charity they would take more seriously as caring for the needs of older people. Participants had to choose either HTA or ACE charity. The distribution of the decisions (frequencies) were tested by chi-square analysis against a null hypothesis that participants should choose equally between the two charities (expected $n = 25.5$). Analysis revealed that the majority of participants decided to give their hypothetical £5 to HTA, observed $n = 42$; 82.4%; $\chi^2 = 21.353$, $p < .001$ and also felt that HTA was more representative of older people's voices, opinions and concerns observed $n = 9$; 17.6%; $\chi^2 = 25.667$, $p = .017$, see Figure 9.1 on the next page.

Figure 9.1 Participant's Charity Preferences.



Note: Significant differences between charities are indicated *** = $p < .001$, * = $p < .05$

To assess whether the participants were influenced by the charity's images they evaluated, the effect of charity was tested on the four items in a MANOVA. The analysis revealed no multivariate effect of charity $p = .913$, and no univariate effects on the individual items.

Can Choice of Charity be explained by Evaluation of Images?

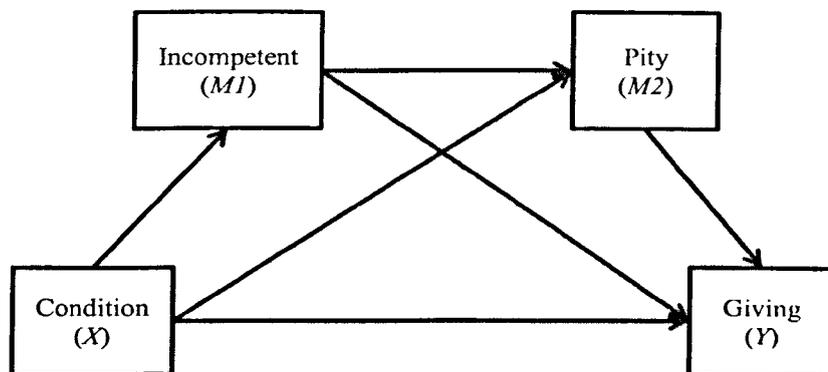
The nine evaluations of the images were entered as independent variables into a regression analysis predicting the charity participants chose to give £5 to. The analysis was conducted separately for the evaluation of ACE and HTA images. The dependent variable was re-coded to reflect choice to give to one charity. Thereby evaluations of ACE predict giving to ACE charity and evaluation of HTA images predict whether or not the participants give to HTA. The evaluation of the ACE images did not significantly predict participants donation choice $p = .917$, $R^2 = .136$, none of the predictors were significant. However, evaluation of the HTA images revealed a significant effect of the evaluation of pity $\beta = 1.074$ $t(15) = 2.254$, $p = .040$, demonstrating that the more pity the HTA images evoked the more likely they were to choose to donate money to HTA.

Examining the Mediating Role of Incompetence and Pity in Giving to Charity

This analysis provides an initial indication that the choice to donate to HTA is predicted by the amount of pity the HTA images evoked. However, this analysis does not take into consideration the evaluation of the ACE images and the fact that pity in itself should predict choice of charity. For instance, participant's choice to give to ACE may be driven by pity. Moreover, this analysis does not account for the fact that feelings of pity may be influenced by evaluating the characteristics of the images. According to the SCM, feelings of pity are driven by evaluations of the out-group as incompetent but warm. To explore these issues further a moderated series mediation model was proposed and tested. The first analysis explored the relationships between incompetence and warmth as predictors of pity. The regression analysis confirmed a significant, positive effect of incompetence $\beta = .815$ $t(48) = 8.250$, $p < .001$, but no effect of warmth $p = .618$. The overall model was significant $F(2, 48) = 40.851$, $p < .001$ $R^2 = .630$. Given the effect of incompetence on pity but not warmth, warmth was not tested as a possible mediator of giving to charity.

The hypothesised model, see Figure 9.2 on the next page, proposes that evaluations of the images as incompetent leads to feeling pity which influence participant's choice to donate to HTA or ACE. Because participants only rated one set of images, evaluations of the images should be influenced by condition to reflect the between-subjects effect of condition on evaluation of images described earlier. The DV, choice of charity, was re-coded to reflect the participant's choice of whether or not they decided to give to the charity they had evaluated. In sum, this model tests whether participants' choice to give to either charity was influenced by perceptions of competence and pity, and whether this is moderated by condition. An effect of condition would be expected on the choice of charity given that the majority of participants chose to give to HTA charity, this means that it is likely that the majority of participants who saw the ACE images decided to give to HTA.

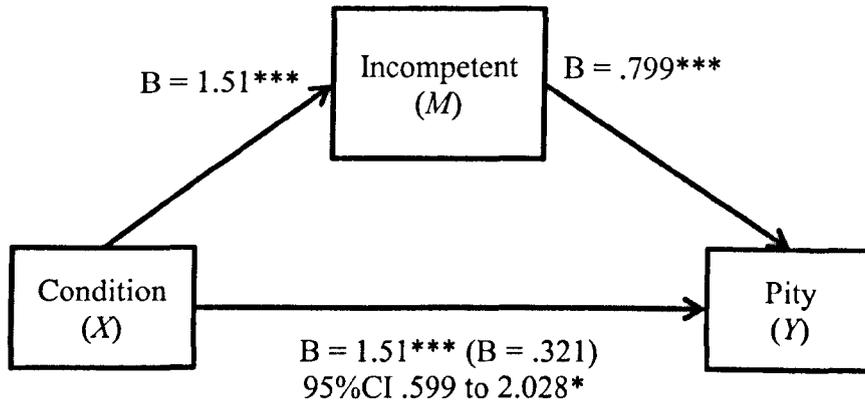
Figure 9.2 *Proposed Moderated Series Mediation: Examining the Mediating Role of Incompetence and Pity in Giving to Charity.*



Note: Hayes (2012) Process Model 6

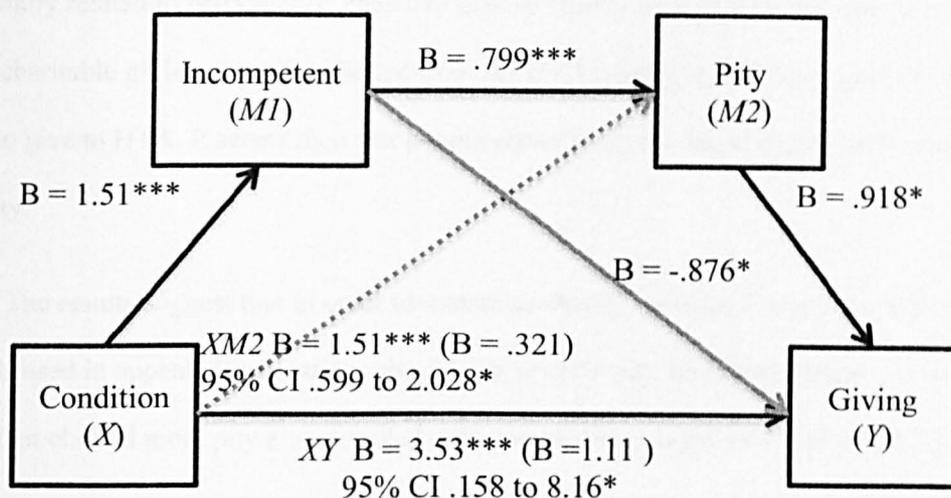
This model was tested in two phases. The first analysis tested the mediating role of incompetence (M) in the relationship between condition (X) and pity (Y) see Figure 9.3 on the next page. The analysis was tested using Hayes (2012) Process procedure in SPSS, with 1000 bootstraps and 95% confidence intervals. The analysis confirmed an effect of condition on incompetence $B = 1.51, t(48) = 3.752, p < .001$, an effect of incompetence on pity $B = .799, t(48) = 7.559, p < .001$, and a total effect of condition on pity $B = 1.51, t(48) = 3.501, p = .001$, the direct effect of condition was not significant $p = .348$, however the indirect effect was confirmed to be significantly different from zero, with 95% CI .599 to 2.028. The analysis shows that the effect of condition on evaluating the images with pity is fully mediated by participant's evaluation of the older people in the images as incompetent.

Figure 9.3 *Model One: The Mediating Role of Evaluating Images of Older Adults as Incompetent on Feeling Pity*



The second analysis tested the full model as pictured in Figure 9.4 on the next page. The analysis confirmed findings tested in model one. There was a significant effect of condition on incompetence and a significant effect of incompetence on pity, as the previous analysis. Importantly, the second analysis confirmed a significant effect of incompetence on giving $B = -.876, t(48) = -1.964, p = .05$, a significant effect of pity on giving $B = .918, t(48) = 2.277, p = .023$, and a significant effect of condition on giving $B = 3.535, t(48) = 3.637, p < .001$. The model tested three indirect pathways, the first tested the effect of condition on giving mediated by incompetence, and this pathway was not significant (95% CI 12.296 to .175). The second pathway tested the effect of condition on giving through the two mediators, incompetence and pity (condition \rightarrow incompetence \rightarrow pity \rightarrow giving) this pathway was significant (95% CI .158 to 8.16), the final pathway tests the effect of condition on giving mediated by pity, this pathway was not significant (95% CI -.296 to 3.54).

Figure 9.4 *The Mediating Role of Incompetence and Pity in Giving to Charity, Moderated by Condition.*



Note: Figure demonstrates the significant condition \rightarrow incompetence \rightarrow pity \rightarrow giving pathway.

Discussion

This study investigated whether the images of older people that two charities use to represent themselves can be evaluated as distinct from one another and whether any observed differences in evaluation influences participants decision to give money to one charity over another. The SCM was used as a framework to test these hypotheses. Specifically, in line with the SCM it was hypothesised that images deemed to be more stereotypical of older people, in other words evaluated as more incompetent, should elicit more pity. This in turn should influence participant’s choice to give money to that charity.

In line with the observation that HTA raised more money in donations than ACE in 2008, the results showed that the majority of participants preferred to donate money to HTA. Over 82% of participants chose HTA over ACE. The SCM was used as a framework to explain participants’ choice of charity and why participants prefer to give to HTA over ACE. Results showed that there were distinct differences in the evaluations of the charities along the majority of the stereotype content dimensions. HTA images were evaluated more negatively and in line with predictions, the older

people in the images were evaluated as less capable, more incompetent and with more pity. Pity is an intrinsic determinant of charitable giving therefore, it was predicted that evaluations of pity should be significantly related to participants' choice to give to charity. In line with this, pity was shown to predict charitable giving. The pity elicited from the HTA images significantly predicted participants choice to give to HTA. It seems then that people prefer to give to the charity who's images evoked more pity.

The results suggest that in order to maximise charity donations from individuals, marketing materials used in appeals for donations should aim to elicit pity from individuals. However, the images that elicited more pity also depicted older people more negatively and showed older people as more incompetent, less capable and less friendly. Therefore, images that elicit pity towards older adults also reinforce negative age stereotypes that older people are less capable. These images may perpetuate negative age stereotypes of older people in society, which once internalised can be damaging for older people (Levy, 2009). Indeed the images used by HTA were also evaluated as more representative of older people's opinions and concerns.

The study was limited in the amount of emotional responses it evaluated. Previous research has suggested that empathy, sympathy and guilt also play a role in determining charitable giving. These emotional reactions to the images were not evaluated in this study because they are not part of the SCM framework. However, evaluations of empathy, sympathy and pity are closely linked and therefore, evaluations of pity are enough. It is assumed that the choice to give money represents an evaluation of one charity as more deserving than the other, although a direct measure of deservedness was not included.

This study has direct implications for organisations and for attitudes to age in terms of perpetuating negative images of older people. A large proportion of charities' and non-profit organisations' income is generated by individual donations, therefore charities spend the majority of their marketing budgets on fundraising campaigns. Charities representing older people may purposely seek to promote or over exaggerate negative images of older people in order to encourage donations.

Of course, these strategy may serve to reinforce negative stereotypes of older people in society, which can be damaging to people as they age (Levy, 2009) and to older people themselves (Abrams et al., 2006; 2008).

Chapter Twelve.**Evidence of Ageism****Abstract**

Despite the pervasiveness of negative old age stereotypes (Cuddy et al., 2005), there is little observational evidence of discriminatory behaviour towards older people. Moreover there is little observational research that attempts to demonstrate how age stereotypes result in discriminatory behaviour, such as exclusion from a social group. The next study investigates the existence of ageism towards older contestants in a high stakes TV game show 'The Weakest Link'. It provides direct observational evidence of the existence of ageism by demonstrating how voting decisions by contestants can disproportionately exclude those aged 60 and over. This effect remains even after accounting for a number of factors that influence voting decisions, such as performance, hesitations and the perceived attractiveness of contestants. It also attempts to explain the ageist behaviour in terms of how contestants are perceived and evaluated by others in terms of appearance and traits.

Study 10. Observational Evidence of Ageism in The Weakest Link

‘The Weakest Link’ has also been used previously to investigate economic decision making processes, such as deciding when to bank money (Haan, Los, & Riyanto, 2010) and to test economic theories of discrimination (Antonovics, Arcidiacono, & Walsh, 2005; Levitt 2004). Economic theories of discrimination distinguish between two types of discrimination. These are taste based or preference based discrimination and information or statistical discrimination. In taste based models those who discriminate do so because they do not like the group an individual belongs to. In information or statistical based models those who discriminate do so because they perceive the individuals in the group to be less qualified.

Although Levitt’s analysis was focused on race and gender discrimination and on distinguishing the strategic nature of voting behaviour, it revealed potential evidence of discrimination against older people. Levitt states that people over 50 attract a 30 – 40% increase in votes compared to the ‘average’ contestant and that older players continue to attract excess votes in the final round. In addition, Levitt’s analysis reveals that both younger and older players were more likely to vote against older competitors. However, these findings should be interpreted with caution as the analysis only showed that people over 50 were significantly more likely to receive votes in the middle rounds of the show, not consistently throughout. The paper also states the estimate for predicting the extent to which older players vote for other older players is not reliable because there were only a small number of cases where older players had the opportunity to face other older players.

Using a different analytical technique to Levitt (2004), Antonovics et al., (2005) focused their investigation on determining who discriminates against whom. Specifically they focused on gender bias, finding that women showed a tendency to vote against and eliminate men, thereby showing a preference towards playing the game with other women. Together, Levitt (2004) and Antonovic’s et al., (2005) demonstrate the potential to capture discriminatory behaviour using observational data. Yet, both fail to explore the role of perceptions, such as perceived attractiveness or stereotypic perceptions of competence and warmth in influencing decisions to exclude and eliminate

players. The present study aims to provide more substantial and reliable evidence of age discrimination by including a larger sample of older players. It also builds on previous work by Levitt (2004) by disentangling the role of perceived attractiveness from age in voting decisions.

The Weakest Link

The Weakest Link is a television game show broadcast by the British Broadcast Corporation (BBC), where nine contestants compete against each other to take a prize they cumulatively contribute to. In each timed round contestants take turns in answering general knowledge questions, which when answered correctly build a chain. One correct answer corresponds to a link in the chain beginning at zero and climbing to £1000 in nine consecutive steps. Once the chain begins to build, contestants have the opportunity to bank the money into the collective prize pot and the chain begins again. Otherwise the chain can be broken and money is lost when a contestant gives a wrong answer. At the end of the round, any money on the chain that has not been banked is lost. When the time is up at the end of each round, the players have the opportunity to vote off a contestant. Each round the number of contestants is reduced by one until two players are left to compete for the prize money. The aim of the first few rounds is to secure as much prize money as possible, thus emphasis is on voting off weaker contestants who answer questions wrong breaking the chain, or those that hesitate reducing the number of questions that can be asked in any one round. In later rounds voting strategies reverse as contestants pick players to compete for the prize money with. Here it is more advantageous to play against weaker contestants therefore stronger players are more likely to be discriminated against and voted off.

The Weakest Link provides a unique opportunity to study discrimination because it provides multiple opportunities for contestants to vote against fellow players, whilst simultaneously controlling for a number of external factors and individual differences that also have the potential to affect decision making, for instance individual differences in ability. The prize money involved provides an incentive for players to vote in a way that maximises their chances of winning. In economic terms this is a 'logical' way to behave, which benefits the individual the most. Contestants should be incentivised to vote off weaker players who are not performing well in the early and middle rounds of

the game in order to build prize money. When players reach the final stage and are competing for the prize the strategy reverses and the incentive is to vote off stronger players, maximising the contestants chances of winning. Accordingly contestants' performance should be a consistent indicator of voting decisions and deviations from this strategy demonstrate a tendency to discriminate beyond the players' self-interest. In line with previous research, we test whether contestants discriminate on the basis of age by showing a tendency to vote off older players. In addition, we are able to test this effect controlling for individual differences in performance. This is particularly important because in real situations, where older people are likely to experience discrimination, such as the labour market, it is harder to determine whether inequalities arise because of discrimination or because of individual differences in productivity.

Primarily we expect performance indicators to be related to voting behaviour. In earlier rounds the norm is to vote off the weakest link because the aim of these rounds is to build up the prize money. Weaker players are those who wrongly answer questions, lose money, hesitate or fail to bank. However, as rounds progress the questions increase in difficulty, thus in the first round it is not uncommon for all the contestants to provide correct answers. Under these circumstances we are interested in how contestants decide who to exclude from the game. Considering there is little time to make voting decisions, we assume these decisions are implicit based on salient information available to them. Such information might be based upon appearance or perceived personality.

Method

100 episodes of the British version of the weakest link that were broadcast on the BBC between 2009 and 2010 were coded and analysed using SPSS. Recorded information included characteristics about the contestants, performance based information and voting decisions.

Information about Contestants

At the beginning of each episode contestants take turns to introduce themselves, they each state their name, age, occupation and the region they live in. This information is recorded alongside contestant's gender and ethnicity. Each contestant was given an identification number from one to

nine, which corresponded with their position on stage and the order they introduced themselves. During the introduction phase screen shots were taken of each contestant, which were later rated by 4 separate coders on aspects of personality and appearance. These included attractiveness, height, and weight, perceptions of competence and friendliness which correspond to stereotype content dimensions. Ratings were recorded on 5 point Likert scales, from not very to very much. Coders were asked to estimate the contestant's age.

Performance Based Information

In the first round the first question was directed towards the contestant who was first alphabetically. In subsequent rounds the first question was directed towards the strongest player (the strongest link) in the previous round. Questions were always asked sequentially clockwise. The sequence contestants were asked questions were recorded, as well as the number of questions posed to each contestant alongside whether the question was answered correctly and incorrectly. Coders were asked to make a judgement on whether contestants hesitated or paused before answering the question, which included if contestants asked for the question to be repeated. From this information the proportion of correct answers for each contestant for each round was computed. Additional information such as the number of incorrect answers, number of hesitations was available.

Voting Decisions

After each round, contestants are given the opportunity to vote another play off. They have a few moments to write down the name of the person they are voting off, while the commentary reveals to the viewers which contestant performed the best (e.g. the strongest link) and which contestant performed the worse (e.g. the weakest link). The quiz master then asks the contestants to reveal who they have given their vote to from the left to right sequence. (The quiz master then chooses two or three people to explain why they have voted for the contestant they have. This happens after the quiz master exchanges banter with the contestant with the view to being impolite and embarrass the player in front of the others). The voting decision of each contestant was recorded by noting which contestant they had voted off. In addition, the number of votes each contestant received from other

players was also recorded in a matrix. This allowed for specific information about which contestants voted for which players.

Two dependent variables reflecting voting decisions were created. The number of votes received corresponds to how many votes the contestant receives which is specific to each round. The more votes received the more likely it is that that contestant is voted off the show. In tie break situations the strongest link from the round decides which player is excluded. A second dichotomous variable corresponds to whether or not contestants were actually voted off the show. If the contestant left the show that round they are assigned a 1, if they remained in play they were assigned 0.

Results

Descriptives

100 episodes were coded providing a total of 4309¹ observations of voting behaviour. There were slightly more male contestants (55.7%, $n = 2398$) than female (44.1%, $n = 1911$). The majority of the contestants were White (96.8%, $n = 4170$), 1.9%, ($n = 82$) were Black, 0.8%, ($n = 33$) were Asian and 0.6% were mixed ethnicity ($n = 24$). Contestant's age ranged from 18 to 85, with a mean age of 42 years ($SD = 15$), 17.3% of the sample were aged over 60 or over.

Preliminary Analysis

Voting decisions were recorded in two ways; the number of votes received and whether or not participants were voted off the show. The analyses presented are for the outcome of the voting decisions, which is whether or not the contestant was excluded from the game. As expected, the two dependent measures were significantly positively correlated $r(4307) = .699, p < .001$. Analyses repeated using the number of votes received as the dependent variable revealed similar results.

The first analysis investigated whether age, gender, or ethnicity predicts whether or not contestants are voted off the show after controlling for performance. The performance indicator

¹ 4309 observations due to one episode consisting of first 3 rounds only.

variables were entered in the first block of a logistic regression. Contestant's age, gender and ethnicity were entered in block two. The overall model was significant, $\chi^2(5, N = 4.309) = 1042.898$, $p < .001$. Three of the five performance indicator variables in block one, significantly predicted whether contestants were voted off the show. These were, proportion of questions answered correctly, hesitating before answering questions and being the weakest link. The overall model for block two was also significant, $\chi^2(8, N = 4309) = 1055.508$, $p < .001$. In block two, only the contestants' age significantly predicted whether contestants were voted off the show $B = .011$, $Wald = 11.909$, $p < .001$ (see Table 10.1 for statistics). A one year increase in age was associated with a 1.012 times increase in being voted off the show.

Table 10.1 *Logistic Regression Predicting being Voted off the Weakest Link*

Block One				
Variable	B	Wald	Odds Ratio	<i>p</i>
Proportion Correct	-2.581	195.463	0.076	.000
Weakest Link	1.6	192.838	4.954	.000
Strongest Link	-0.265	1.782	0.767	.182
Hesitation	0.221	11.666	1.247	.001
Bank	0.08	1.479	1.083	.224
Nagelkerke $R^2 = .372$				
Block Two				
Variable	B	Wald	Odds Ratio	<i>p</i>
Gender	-0.097	0.924	0.908	.337
Ethnicity	0.089	0.31	1.093	.578
Age	0.011	11.909	1.012	.001
Nagelkerke $R^2 = .376$				

As expected, the preliminary results show that contestant's performance is an important indicator of whether or not they are voted off the show. However, once contestants' performance has

been statistically accounted for, contestants' age also significantly predicts whether or not they are eliminated from the show. Gender and ethnicity were not significant predictors in the regression models and were therefore dropped from subsequent analysis².

Evidence from Round One

Given the presence of voting strategies and the opportunity for retaliation voting strategies which may build throughout the show, the main analysis focuses on data from round one only. Using data from the first round only removes potential biases in voting behaviour such as retaliation, (e.g. voting for someone because they voted for you previously). It is also less likely that performance indicators influence voting decisions because questions in the first round are relatively easy. In the first round, it is more likely for contestants to answer their questions correctly. Under these circumstances, when there is no explicit indication of contestants' ability, given that they may perform equally well, it is more interesting to see whether voting decisions are based on arbitrary factors, such as contestant's age. The aim is to replicate the preliminary findings that contestant's age is a significant predictor of determining who is eliminated from the show, after controlling for a number of performance indicators.

First, contestant's age was categorised into two age groups as this research is specifically interested in the voting decisions that affect older contestants. In accordance with previous research on age group categorisation, the average perceived start of old age in the UK is considered to be 59 (see Abrams et al., 2011 and Study 1). Therefore contestants were classified belonging to the 59 or under category or the 60 and over. Of the 900 contestants, 724 (80.5%) were aged 59 and under and 175 (19.5%) were aged 60 and over, data for one contestant was missing because they refused to give their age.

Logistic regression was used to test the effect of age group on being voted off the show, controlling for performance. The performance variables were entered in to the first block of a logistic

² The significant effects in this analysis were replicated for the number of votes received.

regression model while age group was entered in a second block. The overall model was significant, $\chi^2(5, N=900) = 144.37, p < .001$. Three of the five performance variables in block one (Table 10.2) significantly predicted whether contestants were being voted off the show. The overall model for block two was also significant, $\chi^2(6, N=900) = 159.26, p < .001$. Contestants' age had a significant effect on whether contestants were voted of the show $B = 1.07, Wald = 15.66, p < .001$, see Table 10.2. Results revealed that being aged 60 or over is associated with a 2.9 times increase in being voted off the show. This means that even after contestant's performance is accounted for, contestants aged over 60 were almost 3 times more likely to be voted off in round one.

Table 10.2 *Logistic Regression Predicting being Voted off the Weakest Link in the First Round*

Block One				
Variable	B	Wald	Odds Ratio	<i>p</i>
Proportion Correct	-3.359	39.918	0.035	.000
Weakest Link	1.342	20.451	3.827	.000
Strongest Link	-0.579	0.835	0.56	.361
Hesitation	0.531	4.809	1.701	.028
Bank	-0.307	1.013	0.736	.314
Nagelkerke $R^2 = .295$				
Block Two				
Variable	B	Wald	Odds Ratio	<i>p</i>
Age over 60	1.07	15.663	2.914	.000
Nagelkerke $R^2 = .323$				

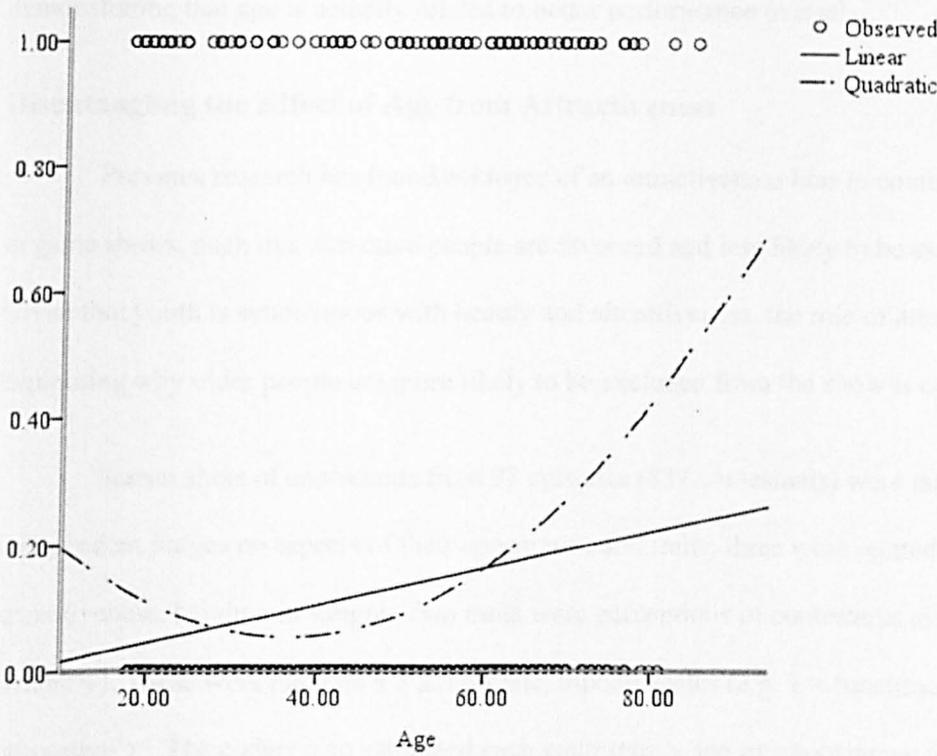
This analysis was repeated for all the following rounds, the analyses revealed no further effects of age. This suggests that the effect of age is confined to round one only despite the preliminary analysis showing contestant's age to be a significant predictor of being voted off the show on the combined data for all rounds. However, after round one only 16.7% of contestants were aged over 60, perhaps leaving a too small sample to be able to test the effect of age reliably.

Curvilinear Relationship

Given that age discrimination is a relative experience and can be experienced by both younger and older adults, it was decided to test the possibility that the relationship between age and being voted off the show is curvilinear, affecting both younger and older adults. Both the linear and the curvilinear (quadratic) effect of age were modelled as predictors of being voted off the show on the data for round one. The linear effect of age revealed a significant positive relationship between age and being excluded from the show ($\beta = .150, p < .001$). However, the quadratic effect of age was also modelled as a significant predictor (age $\beta = -.723, p < .001$, age² $\beta = .903, p < .001$). The 'U' shape curve revealed a slight tendency for the youngest participants, up to the age of 20 to be voted off the show, but a stronger tendency, with a much steeper increase of those over the age of 60 to be voted off the show as shown in Figure 10.1 on the next page.³

³ The analysis for all rounds only revealed a significant quadratic effect of age ($\beta = .523, p < .001$).

Figure 10.1 *Quadratic and Linear Effect of Age on Being Voted off the Weakest Link in the First Round*



The Relationship between Age and Performance

The previous analysis shows that contestants' performance is an important factor in determining whether or not they are voted off the show. The next analysis investigates further the relationship between contestants' age and performance by considering whether older contestants might simply be performing worse on the show, and therefore more likely to be excluded. Correlation analysis tested the relationships between contestant's age and three performance indicators shown to be related to voting behaviour, these are proportion of questions answered correctly, being the weakest link and hesitation. For round one data only, contestant's age was not significantly related to the performance indicators, suggesting no age differences in performance. However, data for all rounds showed that there was a significant positive relationship between contestant's age and the proportion of questions answered correctly $r(4206) = .093 p < .001$. There was also a significant negative relationship between contestant's age and being the weakest link $r(4304) = -.033 p = .03$. As for round one, there was no relationship between contestant's age and hesitation $r(4304) = .005, p$

=747, suggesting that older players are no more likely to hesitate, pause or be slower answering questions than younger players. Together, these analyses strengthen the previous findings. They rule out the possibility that older people are excluded from the show because they perform worse by demonstrating that age is actually related to better performance overall.

Disentangling the Effect of Age from Attractiveness

Previous research has found evidence of an attractiveness bias in contestants voting behaviour in game shows, such that attractive people are favoured and less likely to be excluded from the game. Given that youth is synonymous with beauty and attractiveness, the role of attractiveness in explaining why older people are more likely to be excluded from the show is considered.

Screen shots of contestants from 93 episodes (837 contestants) were taken and rated by 4 independent judges on aspects of their appearance and traits, three were related to appearance; attractiveness, height and weight. Two traits were perceptions of contestants as competent and warm (friendly). These were rated on a 5 point scale, bipolar scales (e.g. 1 = 'unattractive' to 5 = 'attractive'). The coders also estimated each contestant's age by choosing an age group category. Age categories spanned 5 years, from 25 to 80 plus, except for the first age category from 18 to 24, this gave a total of 13 categories, from youngest to eldest.

For each dimension the ratings from the four coders were computed into a mean score. The average measure intraclass correlation coefficient (ICC) was used as the index of the consistency of the ratings, these are presented in Table 10.3 over page. The ratings of the coders were reliable with average measure ICC's > .69 for all aspects except perceived competence.

Table 10.3 *Consistency of Average Measure Intraclass Correlation Coefficient (ICC) for rated items*

	Average Measure ICC
Attractiveness	.826
Height	.712
Weight	.807
Warmth	.698
Competence	.436
Estimated age	.918

Preliminary analysis showed that perceptions of the contestants were significantly related to contestant's age see Table 10.4. With age, perceptions of contestant's attractiveness, height, competence and warmth decreased, while perceptions of contestants' weight increased. Perceived attractiveness and warmth were both significantly negatively related to being voted off the show.

Table 10.4 *Correlations between Variables*

	Voted off	Attractive	Height	Weight	Competence	Warmth	Estimated age
Age	.150***	-.663***	-.296***	.194***	-.250***	-.345**	.875***
Voted off		-.111**	.010	.019	-.036	-.069*	.101**

Note: Analysis on round one data only. Significance levels indicated *** = $p < .001$, ** = $p < .01$, * = $p < .05$.

In order to test the robustness of the effect of age on being voted off the show, the perceptions of the contestants were entered into block two of the logistic regression model alongside contestant's age. Estimated age was not entered into the analysis due to multicollinearity with contestant's age. The analysis revealed a significant effect of attractiveness ($\beta = -0.703$, $p < .001$), where contestants who were rated as more attractive were less likely to be excluded from the show. However, the effect of age remained significant, although reduced ($\beta = 0.674$, $p = .041$). Therefore, even after controlling

for contestant's performance and the perceived attractiveness, contestants' age still significantly determines whether or not they are voted off the show.

Who Votes Off Who

The next analysis explores voting decisions further by analysing voting patterns across age groups. The aim is to establish whether contestants are more or less likely to vote for others belonging to a particular age group. A variable that represents the age of the contestant who receives a vote was computed. This was then entered as the dependent variable into an ANOVA and the categorical age variable was entered as the independent variable. Analysis revealed a significant effect of age $F(1, 896) = 11.01, p < .001, \eta^2 = .012$. Contestants aged 59 and under were more likely to vote for older contestants ($M = 47, SD = .68$) than were contestants aged 60 and over ($M = 42, SD = 1.38$). This analysis demonstrates that the younger contestants under 59 are disproportionately inclined to vote off older contestants. Note that the mean age of contestants is 42, demonstrating that younger contestants are more likely to vote for others above the average age of contestants.

Discussion

This research is concerned with understanding how and why contestants' age can influence decisions that lead to exclusion. Exclusion is one of the most powerful forms of discrimination and contributes to inequalities that exist in society (Abrams & Houston, 2006). A number of recent surveys have demonstrated the prevalence of ageism, yet evidence of discrimination within particular domains, such as the labour market or health and social care are often anecdotal and hard to prove. In addition, because of the social stigma associated with discrimination, self-report measures may underestimate the incidence of ageism. This research demonstrate the subtle nature of age discrimination by showing how voting decisions can disproportionately effect older people, resulting in exclusion and how this age discrimination can seemingly go unnoticed by players.

These findings provide direct observational evidence of ageism. Using the voting decisions obtained from the TV game show, the Weakest Link, the findings show that older contestants aged 60 and above, are more likely to receive votes and therefore be excluded from the show. Contestants' age

has the strongest impact on voting decisions in the first round, where players aged 60 and over are 3 times more likely to be excluded from the show. This result could not be explained by or accounted for by contestants' performance, nor could it be fully explained by an attractiveness bias or the perceived competence of older players. The findings also show that it is younger, rather than older contestants who have a tendency to vote for and exclude older players. This suggests that contestants have a preference for playing with others of a similar age.

Performance indicators such as the proportion of questions answered correctly, statistically being the weakest link and hesitating before answering questions did influence voting decisions. However, the results show that independently of performance older people were more likely to be excluded. Moreover, contrary to societal stereotypes denoting incompetence, when taking all rounds together, older contestants were more likely to perform better. This rules out the possibility or the assumption that older people are excluded because of poor performance.

The finding that contestants' age influences voting decisions is highlighted in the context of the first round. The analysis specifically focused on data from the first round in order to control for possible retaliation voting strategies that are likely to occur in further rounds. In the first round, the emphasis is on excluding the weakest, poorest performing player. It is, therefore surprising that older contestants are 3 times more likely to be excluded given that there is no evidence they perform worse. Further, it is actually more likely that all the contestants are able to answer their questions correctly and perform equally as well in the first round because the questions are relatively easy. In circumstances like this, how are voting decisions made? Our results suggest that old age seems to be used as a criterion to exclude players from the game, providing a clear demonstration of age based discrimination and additional support for previous research by Levitt (2004).

The findings extend Levitt's (2004) research by testing a more legitimate categorisation of old age, as 60 years or over compared to 50 years and over. We were able to do this because our database specifically consisted of episodes that included at least one contestant aged 60 or over. Therefore, we were able to extend the findings to those aged 60 and above. Further, Levitt's (2004), analysis was

restricted due to a small sample of older contestants; only 7% of contestants were over the age of 50 compared to 17.3 % aged over 60 in this study. Beyond Levitt's analysis, the present study examined the processes that lead to voting behaviour and age discrimination by ruling out the possibility that age discrimination can be accounted for and explained away by attractiveness bias, otherwise known as the beauty premium.

Previous research has found that perceived attractiveness plays a role in judgements of exclusion, where we are less likely to exclude those perceived to be attractive. Age and attractiveness are somewhat aligned, so this research tested the extent to which age based discrimination can be explained by this attractiveness bias. Although the results show that the perceived attractiveness of players can predict exclusion from the game, contestants' age remained a significant predictor of whether or not contestants were voted off the show. Therefore, although attractiveness plays a role, supporting previous research by Belot et al., (2008), it is not the whole story and does not completely account for the relationship between contestants' age and being voted off the show.

Limitations

This research attempted to explore the role of stereotypes in voting decisions to exclude older players from the game. Screen shots of contestants were rated on aspects of competence and warmth by four independent coders, which allowed us to test the hypothesis that perceptions of older people as less competence might explain the increased likelihood they are voted off the show. However, the analysis revealed that perceived competence was not a significant predictor of whether or not contestants were excluded, therefore the analysis cannot show that stereotypes are responsible for the underlying processes of discrimination. Perceptions of competence might not have been a significant predictor in the model because the ratings of competence had low convergence and low reliability. This might be partly due to the different ages of the independent coders. Moreover, we cannot be sure that the coder's ratings correspond with contestants' judgements of each other, given they are in the context of the game.

The effect of contestants' age is constrained to the first round. However, analyses of effects of age beyond round one may be restricted due to low numbers of contestants over 60 beyond round one, preventing reliable estimates.

One argument is that older contestants are voted off the show because they are perceived to be a threat. However, this argument is contrary to the aim of building up prize money in early rounds, for which you need strong players.

In summary, in order to understand age discrimination and how it leads to inequality, it is important to understand when age discrimination occurs and why. This research attempts to address both these issues, by examining voting decisions that lead to exclusion in a real world situation. The research builds on the emerging literature on age discrimination by providing a powerful demonstration of age discrimination against older adults in a real world setting. It shows the subtle and implicit nature of age discrimination by revealing that age discrimination can occur where it is least expected/ or in situations where it is not explicitly obvious. Interestingly, age discrimination could not be explained away by a preference for attractive players. However, further research is required to determine / confirm the role of stereotyping in discrimination.

Chapter Thirteen. Ageism and Subjective Well-Being**Abstract**

Both economic and demographic pressures contribute to the challenge of sustaining older people's well-being. Subjective well-being (SWB) has important implications for health and longevity and is particularly important in later life when age related changes may affect SWB. However, the paradox of well-being suggests that despite the existence of negative age stereotypes, the existence of ageism and age related changes in an individual's circumstances, such as health and income, some older people are able to maintain SWB in later life. This research uses the 2008-2009 European Social Survey to test the hypothesis that societal attitudes towards older adults, particularly the perceived competence and perceived status of people over 70 affects the paradox of well-being, i.e. the relationship between age and SWB. After accounting for numerous other psychological, individual and country differences, a multilevel analysis revealed that perceived status disproportionately affects the well-being of older people, such that the "paradox of well-being" is only maintained in countries that perceive the status of people over 70 to be higher.

Study 11. The Impact of Ageism on Subjective Well-Being: Multilevel Analysis of the 2008-2009 European Social Survey

The economic, health, practical and social challenges posed by aging populations are pressing policy concerns for both developed and under-developed nations (Borsch-Supan, 2008; Lloyd-Sherlock, 2000; Tinker, 2002). Many contend that maintaining, promoting and improving well-being should be at the heart of any policy objective (Layard, 2010; Lepper & McAndrew, 2008; Michaelson, Abdallah, Steuer, Thompson, & Marks, 2009; Stiglitz, Sen, & Fitoussi, 2008; Scaford, 2011). This is partly due to increasing recognition that people's health and longevity are affected substantially by their subjective well-being (SWB), i.e. their satisfaction with life and happiness. Indeed, Diener and Chan's (2011) comprehensive review of evidence from economically developed nations, concluded that differences in SWB can account for as much as 10 years difference in life expectancy.

A great deal of research has shown that the SWB of an individual is affected by both the objective circumstances of the individual and the country in which they live (Diener & Suh, 1998; Diener et al., 1999). For instance, separate studies have shown that marital status, an individual's income and the wealth of a country positively correlate with SWB (Diener, Diener, & Diener, 2009; Diener et al., 1999; Rentfrow, Mellander, & Florida, 2009). Interestingly, research examining SWB throughout the life course questions the extent to which objective conditions of the individual necessarily influence evaluations of SWB, demonstrating that life satisfaction does not decrease with age, despite age related changes in an individual's circumstances, such as a decline in income or health (Diener & Suh, 1998). This phenomenon is referred to as the 'paradox of well-being' (Krauss-Whitbourne & Sneed, 2002; Kunzmann, Little, & Smith, 2000; Mroczek & Kolarz, 1998) and refers to "the presence of subjective well-being in the face of objective difficulties or other socio demographic or contextual risk factors that intuitively should predict unhappiness" (Mroczek & Kolarz, 1998. p.1333).

Such risk factors include not being married, unemployed, having poorer subjective health, lower income and belonging to a lower status group which is the target of discrimination, all of which can be confounded with age (Diener et al., 1999, Inglehart, 1990, Ellison, 1991, Warr et al., 2004, Diener et al., 2010; Garstka, Schmitt, Branscombe, & Hummert, 2004; Pascoe & Smart Richman, 2009). However, when research analysing the relationship between age and SWB has controlled for some of these factors, SWB has been found to increase, rather than decrease, with age (Inglehart, 1990, Wilson, 1967, Diener & Suh, 1998).

To date, no research has investigated whether this paradox exists across different European countries. Research is also needed to explore how differences between countries might influence people's ability to maintain well-being in later life. It is not known yet whether differences between countries have an impact on the extent to which this paradox holds across different countries, as the majority of research demonstrating the paradox of well-being has been conducted in typically richer countries (Krauss-Whitbourne & Sneed, 2002), which may have similar attitudes towards older people. Therefore, the present research examines how differences in societal attitudes towards older adults, specifically the endorsement of negative age stereotypes regarding older adult's competence and the level of status afforded to older people affect the relationship between age and SWB.

Previous research shows that negative age stereotypes that devalue older people are damaging to older people (Abrams et al., 2006; Levy, 2003), they also form the basis of ageist attitudes that can result in age discrimination. Moreover, research indicates that being a member of a low status group or a group that is the target of prejudice and discrimination in society can have a detrimental impact on well-being (Garstka et al., 2004; Pascoe & Smart Richman, 2009). Therefore, it is hypothesised that individuals' ability to maintain SWB in later life may be compromised in countries where negative attitudes to age are prevalent. Indeed, longitudinal research by Levy and colleagues has shown that the existence of negative attitudes to age at the societal level impact on individuals' longevity (Levy, Slade, Kunkel, & Kasl, (2002) and health behaviours (Levy, Slade & Kasl, 2002). Despite this, research has not yet systematically tested the impact of negative societal attitudes on individual's ability to maintain SWB in later life, which is the aim of this study.

Given the detrimental impact of negative societal attitudes on SWB, it is hypothesized that SWB should be maintained in later life in countries with less negative stereotypes and those that afford more status to people over 70. Conversely, age seems more likely to be associated with declining SWB in countries that endorse negative age stereotypes and perceive the status of people over 70 to be lower. The first analysis tests the impact of age and experiences of ageism on the two components of SWB, happiness and life satisfaction separately. Experiences of ageism are tested alongside the effect of age in order to confirm previous research that shows age discrimination has a negative impact on SWB. The second tests the robustness of these effects by controlling for a host of individual level differences that have been shown previously to correlate with SWB. The third analysis considers the effect of negative age stereotypes and status of people over 70 on SWB and separately tests whether they influence the relationship between age and SWB. Separate models test the cross-level interaction between age and perceived competence of people over 70 and age and the perceived status of people over 70. It is expected that SWB in later life will be maintained in countries with more positive attitudes to age.

Method

The 2008- 2009 European Social Survey (ESS) data provides a unique opportunity to test whether differences between societal attitudes towards people over 70 influences the extent to which SWB is maintained in later life. The data comprise of 53,773 respondents in 27 countries (Norwegian Social Science Data Services, 2008). The ESS draws random (probability) samples from the eligible residential populations aged 15 and over in 32 countries across the European region. The ESS offers an ideal evidence base because the data span a diverse set of countries but with rigorously validated cross-national measurement. The dependent variables are the standard measures of life satisfaction and happiness.

Analytic Strategy

Multilevel modelling is used to test these hypotheses. Multilevel modelling can be applied to data that is 'nested' (e.g. individuals within countries) and allows for the simultaneous testing of differences between countries and differences between individuals within countries. The analyses

were conducted in three steps. The first analysis tests a model in which respondent's age and experiences of ageism are entered as predictors of life satisfaction and happiness (respectively).

A second model tests the robustness of any effects of age and experience of ageism on SWB by including a number of individual variables that have been shown to significantly relate to SWB (life satisfaction or happiness) in previous research. The aim is to see whether effects of age and experiences of ageism remain after controlling for objective circumstances of the individual. The variables included as covariates in this model are the ESS measures of respondents' educational level, marital status (Diener et al., 1999), and religiosity (Ellison, 1991) (all of which relate positively to SWB in previous research). They also include gender (Lucas & Gohm, 2000), employment status (Warr et al., 2004), subjective income (subjective poverty) (Diener et al., 1999; Rentfrow et al., 2009) social support and subjective health (Diener, 2000; Kunzmann et al., 2000). Included in these models were also items measuring experiences of sexism and racism, in order to test whether experiences of ageism has an impact on SWB independently of other experiences of discrimination, see Table 11.1 for variables included in the analyses. See also Appendix C for additional tables presenting means and standard deviations of individual level predictors and means of country level predictors.

The final analyses tested the effect of societal attitudes towards people over 70 on SWB and the hypothesised cross-level interaction with age. For each country a mean score of the perceived competence of people over 70 and the perceived status of people over 70 were computed from the individual-level responses. The models were analysed using HLM 6.0 (Raudenbush, Bryk, & Congdon, 2004), all variables were grand mean centred and the ESS design weight was applied to level one data.

Table 11.1 *Items and Response Scales from ESS Included in the Analysis*

ESS	Item	Response
Subjective well being		
B24	All things considered, how satisfied are you with your life as a whole nowadays	0 = 'Extremely dissatisfied' to 10 = 'extremely satisfied'
C1	Taking all things together, how happy would you say you are	0 = 'Extremely unhappy' to 10 = 'Extremely happy'
Experiences of prejudice		
	how often, in the past year, anyone has shown prejudice against you or treated you unfairly because of ...	0 = 'never' to 4 = 'very often'
E35	... your age	
E36	... your sex	
E37	... your race or ethnic background	
Country-level variables		
	Think about those aged over 70. Please tell me how likely it is that most people in the UK view those over 70	
Mean_E20	... as competent	0 = 'not at all likely be viewed that way' to 4 = 'very likely to be viewed that way'
Mean_E6	How most people view the status of people in their 40s	0 = 'extremely low status' to 10 = 'extremely high status'
Mean_E7	How most people view the status of people over 70s	0 = 'extremely low status' to 10 = 'extremely high status'
Other information about respondents		
I10	Gender	This variable was dummy coded as '0' = male '1' = female.
Education	What is the highest level of education	'0' = Not completed primary education, '01'

Cont.

ESS	Item	Response
(F6)	you have achieved	= Primary or first stage of basic, '02' = Lower secondary or second stage of basic, '03' = Upper secondary, '04' = Post secondary, non tertiary, '05' = First stage of tertiary, '06' = Second stage of tertiary.
Marital status (F62)	What is your current legal marital status?	'01' = Married, '02' = In a civil partnership', '03' = Separated (still legally married), '04' = Separated (still in a civil partnership), '05' = Divorced, '06' = Widowed, '07' = Formerly in a civil partnership, now dissolved', '08' = Formerly in a civil partnership, partner died, '09' = Never married and never in a civil partnership.
<p>These categories were dummy coded so that '0' represents a marital status with no partner (categories three to nine) and '1' represents a marital status with partner (categories one and two).</p>		
Religious (C21)	Regardless of whether you belong to a particular religion, how religious would you say you are	'00' = not religious at all' to '10' = very religious

Cont.

ESS	Item	Response
Employment status (F8c)	Which of these descriptions best describes your situation (in the last seven days)?	'01' = In paid work (or away temporarily) (employee, self-employed, working for your family business), '02' = In education, (not paid for by employer) even if on vacation, '03' = Unemployed and actively looking for a job, '04' = Unemployed, wanting a job but not actively looking for a job, '05' = Permanently sick or disabled, '06' = Retired, '07' = In community or military service, '08' = Doing housework, looking after children or other persons.
		These categories were dummy coded so that '0' reflects that respondents' main activity in the last seven days involved no paid employment (categories two to eight) and '1' that their activities involved some paid employment.
Subjective poverty (F33)	Which of these descriptions comes closest to how you feel about your household's income nowadays?	'01' = Living comfortably on present income, '02' = Coping on present income, '03' = Finding it difficult on present income, '04' = Finding it very difficult on present income.
Social support (C2)	How often do you meet socially with friends, relatives or colleagues	1 = 'never', 2 = 'less than once a month', 3 = 'several times a month', 4 = 'once a week', 5 = 'several times a week' 6 = 'every day'
Subjective health (C15)	How is your health in general	1' = very good, '2' = good, '3' = fair, '4' = bad, or '5' = very bad'.

Results

The variance components model for happiness and life satisfaction revealed an intra-class coefficient of .1432 for happiness and .1907 for life satisfaction. This translates into 14.32% of the variation in happiness and 19.07% of the variation in life satisfaction is due to differences between countries.

Model One

The first and the simplest model tested the impact of age and experiences of ageism (as fixed effects) on happiness and life satisfaction in separate analysis. The analysis revealed a significant negative effect of age and age discrimination on evaluations of happiness and life satisfaction.

Model Two

An extended model re-tested these effects of age and experiences of ageism while controlling for other individual level variables that have been associated with SWB in previous research. These variables were; subjective health, gender, marital status, working status, level of religiosity, education, subjective income and social activity. It also included items measuring experiences of sexism and racism, in order to test whether experiences of ageism has an impact on SWB independently of other experiences of ageism. For happiness, the effect of ageism and the effect of age remained negative and significant. For life satisfaction, the effect of ageism remained negative and significant while the effect of age was reduced to non-significance. At the individual level a similar pattern of results emerged for both life satisfaction and happiness where all but one of the individual-level predictors was significant. Models for happiness and life satisfaction revealed significant negative effects of health, gender, employment status and subjective income, and significant positive effects of marital status and religiosity. In summary, having better subjective health, being female, married, religious, feeling comfortable with your income, and being classified as not working are independently related to higher levels of life satisfaction and happiness. Evaluations of life satisfaction are not necessarily related to age once the other variables have been accounted for, see Table 11.2 for multilevel statistics.



Figures 11.1 and 11.2 (over page) show the effects of ageism on SWB on people of different ages. Both figures show that experiences of ageism result in decrease in SWB. The decrease in SWB attributed to experiences of ageism is the same for older and younger people, in other words the experiences of ageism do not disproportionately affect older people, they affect people of all ages the same. Experiences of ageism produce the same decrements in SWB for people at all ages.

Figure 11.1 *The Effect of Experienced Ageism on Happiness by Respondent's Age*

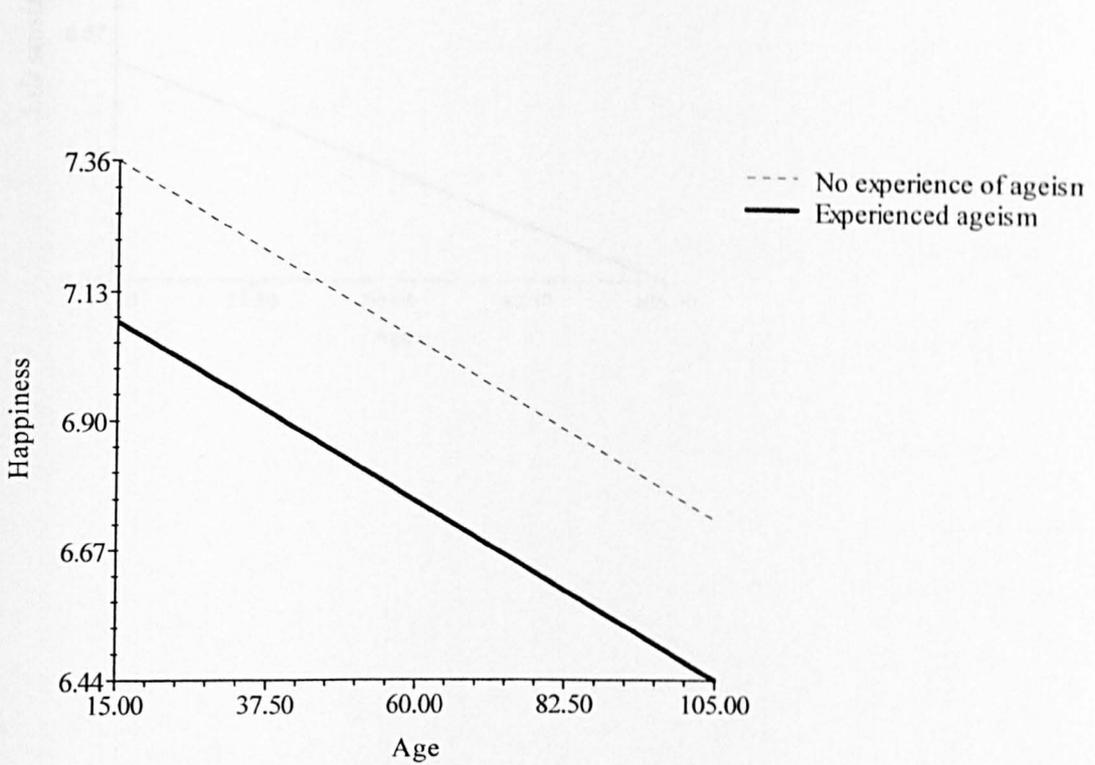


Figure 11.2 *The Effect of Experienced Ageism on Life Satisfaction by Respondent's Age*

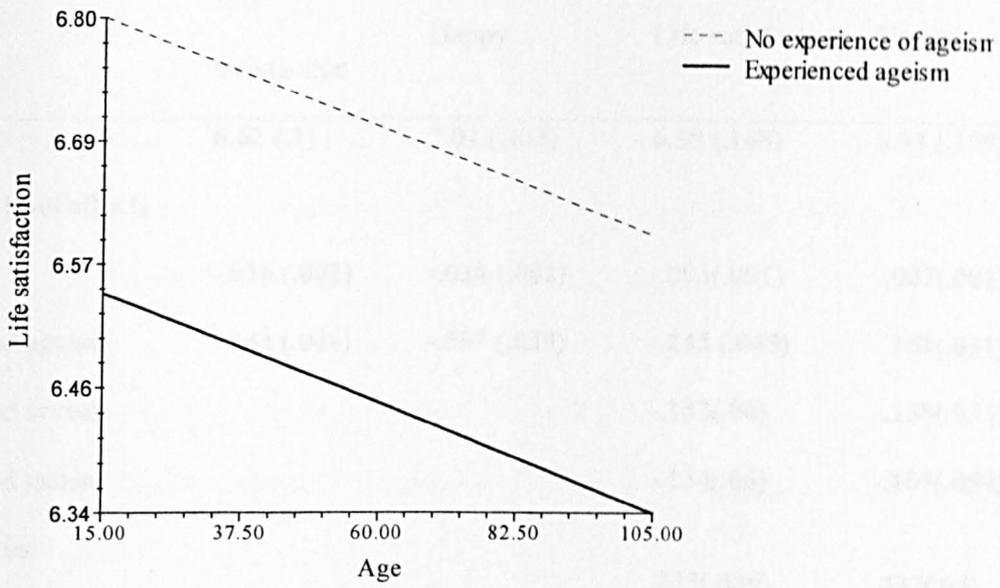


Table 11.2 *Multilevel Regression Models Predicting Life Satisfaction and Happiness*

	Model 1		Model 2	
	Life satisfaction	Happy	Life satisfaction	Happy
Intercept	6.62 (.2)	7.01 (.153)	6.58 (.148)	6.97 (.109)
Individual-level effects				
Age	-.016 (.002)	-.018 (.002)	-.003(.001)	-.007(.001)
Experienced ageism	-.533 (.046)	-.557 (.039)	-.243 (.045)	-.261(.031)
Experienced sexism			-.132(.06)	-.138(.034)
Experienced racism			-.134(.06)	-.107(.054)
Marital status (partnership)			.233(.039)	.437(.04)
Education			.016(.013)	.025(.016)
Females			-.1 (.030)	-.108(.03)
Paid work			-.141(.027)	-.11(.023)
Religiosity			.058(.007)	.047(.006)
Poor subjective health			-.6 (.028)	-.521(.027)
Subjective income			-.434(.044)	-.312(.033)
Social activity			.144(.008)	.173(.009)
Percent of variance explained				
Within countries	3.01	4.49	16.59	18.20
Degrees of freedom				
Within countries	54323	54291	50349	50362
Between countries	27	27	26	26

Note: Significant predictors, $p < .05$ are indicated in bold.

Model Three and Four

The next analyses test the impact of societal attitudes towards older people on SWB, but more specifically on the relationship between age and SWB. It is hypothesised that older people should be able to better maintain SWB in later life in countries that have less negative attitudes about people over 70. Perceived competence of people over 70 and the perceived status of people over 70 were the two measures of societal attitudes that are tested in the model. Due to limiting degrees of freedom at the country level, the cross-level interactions were tested in separate models. Model 3 tested the effects of perceived competence and status of people over 70 and the interaction between perceived competence and age. Model 4 tested effects of perceived competence and status of people over 70 and the interaction between status and age. All other level-one variables included in model 2 remained in model 3 and 4.

The analyses showed that perceived competence of people over 70 was not a significant predictor of happiness or life satisfaction and there was no significant cross-level interaction between perceived competence and respondent's age. However, model 4 revealed a significant effect of perceived status of people over 70 and significant perceived status by age cross-level interactions for happiness and life satisfaction, see Table 11.3 for multilevel statistics. The main effect shows that perceiving people over 70 with status was positively related to the SWB measures. Moreover, in line with the hypothesis the interaction shows that SWB is maintained in countries that perceive people over 70 to be higher status.

Model Five

The main effect of status shown in model 4 suggests that people of all ages, even younger people are benefiting from perceiving people over 70 as high status. However, it should be the case that only older people should benefit from the perceived status of people over 70 as they are the ones who belong to the age group. Perhaps it is the case that societies that value status and attribute more status in general to all age groups report higher SWB. In order to test this, the mean level of perceived status of those in their 40s for each country was added as a covariate at level 2. Therefore, model 5

tests the effect of perceived status of people over 70 on SWB, and the cross-level interaction with age, controlling for the perceived status of those in their 40s. It is expected that the main effect of status over 70 should not be significant, but the cross-level interaction should remain. The perceived competence of people was dropped from this analysis because it was not a significant predictor in model 3, however as models 2, 3 and 4, the same individual level predictors are entered.

The analysis revealed a positive main effect of perceived status of people in their 40s, such that the higher perceived status people in their 40s is associated with higher levels of life satisfaction and happiness. As expected the main effect of perceived status of people in their 70s is reduced to not significant. Importantly, the cross-level interaction between perceived status of those in their 70s remains significant, for multilevel statistics see Table 11.3. The Figures 11.3 and 11.4 below, show that there is a sharper decrease in happiness and life satisfaction with age in countries that view people over 70 as low status. However, there is only a slight decrease in happiness and a slight increase in life satisfaction with age, for those living in countries that view people over 70 as higher status.

Figure 11.3 *The Effect of Age on Happiness by Perceived Status of People Over 70, Controlling for Perceived Status of People in their 40s*

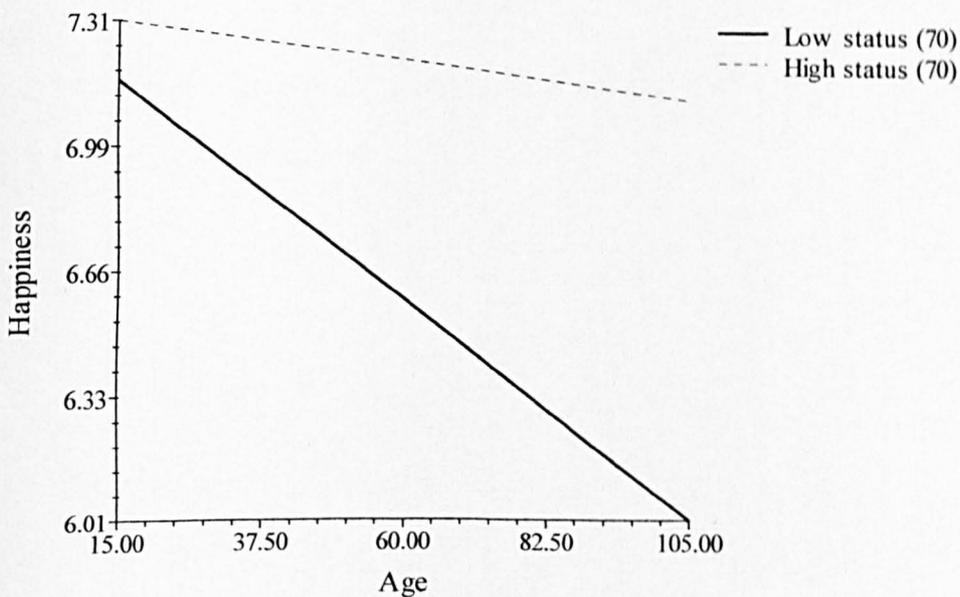


Figure 11.4 *The Effect of Age on Life Satisfaction by Perceived Status of People Over 70, Controlling for Perceived Status of People in their 40s*

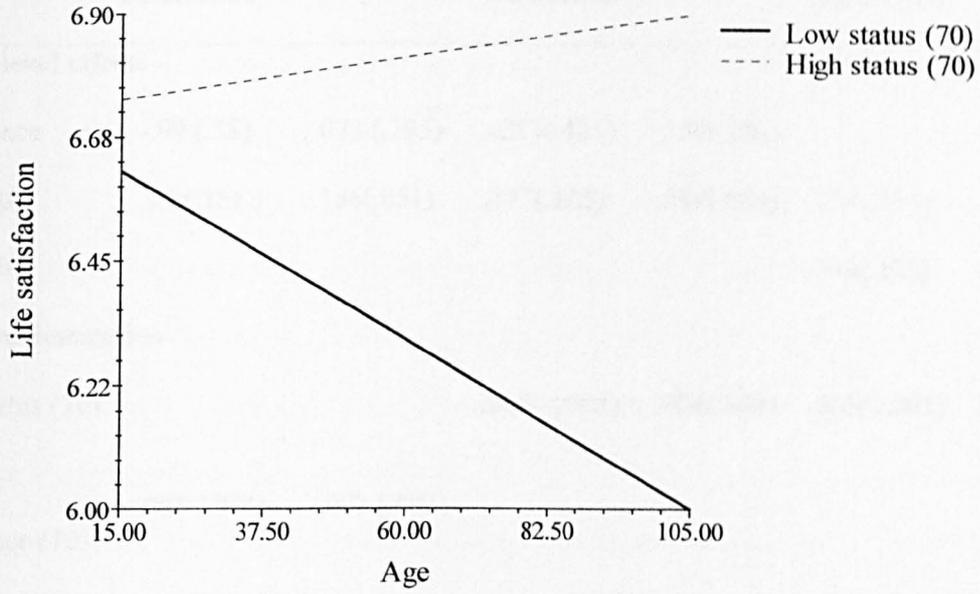


Table 11.3 *Multilevel Regression Models Predicting Life Satisfaction and Happiness*

	Model 3		Model 4		Model 5	
	Life satisfaction	Happy	Life satisfaction	Happy	Life satisfaction	Happy
Country-level effects						
Competence	-.09 (.38)	.073 (.295)	-.217(.421)	.156(.282)		
Status (70)	.24 (.15)	.136(.051)	.377(.133)	.299(.084)	.124(.154)	.143(.096)
Status (40)					.740(.162)	.436(.144)
Cross-level interaction						
Age x Status (70)			.003(<.001)	.004(.001)	.003(<.001)	.004(.001)
Age x competence (70)	.003 (.004)	-.002 (.003)				
Percent of variance explained						
Within countries	16.59	18.20	16.59	18.20	16.59	18.20
Between countries	57.38	58.42	59.13	62.96	72.06	73.89
Degrees of freedom						
Within countries	54323	54291	50349	50362	50346	50359
Between countries	25	25	25	25	25	25

Note: Intercept and Individual level effects as previous model, see Table 11.2. Significant predictors, $p < .05$ are indicated in bold.

Discussion

This study does two things, first it confirms that experiences of ageism have a detrimental impact on SWB, second, it explores the role of societal attitudes to age in maintaining SWB in later life. The first and most basic model shows that age and experiences of ageism are negatively related to SWB. SWB declines with age and with experiences of ageism. In relation to the paradox of well-being the second model shows that the effect of age on SWB is not attributable to objective circumstances of the individual that are known to affect SWB. In line with previous research, people who felt healthier, were married or in a partnership, more religious, felt comfortable living on their income and had better social support were both happier and more satisfied with life. However, in contrast with previous research our analysis failed to find a significant effect of education and found that those classified as not working were happier and had higher life satisfaction. Importantly, the effect of age and ageism on SWB remained significant and negative despite controlling for these individual differences in the relationship between age and SWB.

The final analyses tested the role of societal attitudes to age in terms of the perceived competence and status of people over 70 to SWB and in maintaining SWB in later life. The analyses showed that the perceived status of those over 70 was a positive influence on SWB. Furthermore, it demonstrated that SWB in older people may be maintained in countries that perceived the status of older people as higher. Despite evidence that demonstrates the detrimental impact of negative age stereotypes on older people, the hypothesised relationship between perceived competence and SWB and the cross-level interaction with age were not confirmed.

A number of mechanisms at the individual and psychological level have been proposed to explain whether and how SWB can be maintained in later life. These include the ability to cope with negative life events, manage problems and psychologically adapt to changes in circumstance (Krauss-Whitbourne & Sneed, 2002). As circumstances change with age, so can standards of comparison, aspirations and expectations surrounding goal achievement, which form the basis of subjective evaluations of well-being. For instance, older people may lower aspirations (Campbell, Converse &

Rogers., 1976), adjust personal goals in relation to resources and competencies (Brandstadter & Greve, 1994; Rapkin & Fisher, 1992) and use social comparison mechanisms to bolster subjective evaluations (Heidrich & Ryff, 1993). It seems then that there are two pathways to maintaining SWB in later life. The first would be to minimize age related changes in objective circumstances, the second would be to change expectations and comparisons that well-being is evaluated against.

The finding that amount of status attributed to people over 70 is positively related to SWB is not surprising given that status may be one social comparison dimension that can bolster evaluations of the in-group and accordingly individual's self-esteem. A second avenue by which status of social groups may influence SWB is through experiences of prejudice and discrimination. Evidence shows that low status groups in society are often subjected to prejudice and discrimination which can restrict individual's freedoms and SWB.

Limitations

Because the evidence is drawn from the European Social Survey, the results are of particular relevance to Europe. The fact that many European countries share at least some common legal frameworks makes them a meaningful set of countries for comparison of the effects of other factors. Ageism and age discrimination is now an important focus of social research and policy across Europe (e.g. Abrams, Vauclair & Swift, 2011). Indeed European level decisions that affect age discrimination of particular countries will have a bearing on differences in the well being of older people across this set of countries. Moreover, it is particularly valuable that the ESS has an extremely rigorous common measurement framework and instrument across all of the participating countries, ensuring that the data are of consistent and high quality. Although we cannot extrapolate directly to other continents, negative attitudes to age prevail in many other countries and these too are facing population aging and therefore the present evidence is relevant to their future circumstances.

While comparisons across Europe are meaningful, the limited number of countries restricts the analysis at level-two due to the limited degrees of freedom. The analyses in this study only use two items to represent the societal attitudes to age, although more indicators of attitudes towards older

people are available, the analyses are restricted by level-two degrees of freedom. This also means that the robustness of the effect of status was not tested against other country-level differences that have been shown to impact on evaluations of SWB.

In sum, this study provides a more complete picture than previously available of the relationship between age and SWB by combining both individual and country level effects in one analysis. The analysis showed that the perceived status of people over 70 has a stronger impact on individuals' psychological well-being as they age. Given the now widely accepted impact of well-being on a host of other important outcomes such as health, productivity, longevity and suicide (Diener, 2000; Diener & Chan, 2011; Lyubomirsky, King, & Diener, 2005; Mastekaasa, 1995), it is of concern if the well-being of any section of a population is disproportionately affected by societal attitudes towards one social group, namely older people.

Chapter Fourteen.**General Discussion****Abstract**

This chapter discusses the theoretical and policy implications of the empirical chapters. It provides a review of the chapters and discusses the theoretical implications in relation to three core themes; societal attitudes to age, the effects of age stereotypes and ageism. The policy implications are discussed in relation to Age UK's key priorities for policy change that are outlined in the 2012 Agenda for Later Life. Limitations of the research are addressed and future directions for research on ageing are discussed. The theoretical and policy implications are discussed in relation to the social, psychological and behavioural consequences of ageism.

14.1 Review of the Chapters

The theoretical part consists of Chapters 1 to 6. Chapter 1 introduced ageism, the meaning and importance of age and the political and societal context for research into ageism. It described how the meaning of age is socially constructed and embedded within the social structures of society, institutions and organisations. Age UK play a key role in influencing government strategies surrounding age, ageing and older people. The work of Age UK was introduced alongside their key policy document, the Agenda for Later Life. Two core themes emerged from the review of Age UK's policy priorities that are relevant to the work in this thesis, the first is the focus on ageism and changing negative attitudes to age, the second is reducing fear of crime.

Chapter 2 demonstrated the prevalence of ageism in society by reviewing evidence of ageism in the media, in employment and in health and social care. It also demonstrated how ageism is manifested at different levels within society, either directly through interactions between individuals or indirectly through the structure and organisation of society. Chapter 3 explained how ageism is a unique form of prejudice because, unlike other forms of prejudice, it is form of prejudice against a social group that people hope to belong to. This means that negative attitudes to age, which are embedded within society, are internalised and then become relevant to the self as people get older. Moreover, because ageist attitudes are embedded in society that favours youth, people are more likely to accept ageist attitudes as normal. Together these chapters provided an insight into the extent to which ageism exists in society and what makes ageism different from other forms of prejudice.

Chapter 4 provided an overview of the components of ageism by exploring the psychological basis of ageist attitudes. It explained how ordinary processes of categorisation that help organise our perception of the social world inadvertently form the basis of prejudiced attitudes via stereotyping. The review found that old age and older people are associated with positive and negative age stereotypes although negative stereotypes, denoting incompetence, prevail. It also explored the importance of belonging to age groups, to individuals, and describes how ageing and older people may pose certain kinds of threat to individuals, through mortality awareness, and to society, in terms of economic cost.

Chapter 5 reviewed the existing research on the consequences of age stereotypes, both for those who hold age stereotypes and for older people who are the target of age stereotypes. The research reviewed used a range of methods to explore these consequences. Experimental research demonstrates that negative age stereotypes have a detrimental impact of on older people (Abrams et al., 2006; 2008), whilst longitudinal research demonstrates the detrimental impact of negative age stereotypes on individuals as they age (Levy, Slade & Kasl, 2002; Levy, Slade, Kunkel & Kasl, 2002).

A second issue relevant to Age UK and older people is fear of crime. Fear of crime is important because, like ageism, it can lead to the social exclusion of older people. Chapter 6 explored the psychological basis of fear of crime and the use of fear of crime as a form of social control. It introduced the idea that age stereotypes may play a role in older adults' fear of crime responses.

Chapters 7 through to 12 present the empirical investigations of the consequences of ageism, age stereotypes and fear of crime. Chapter 7 introduced core aspects of attitudes to age in the UK. Study 1 presented a series of analyses investigating age and gender differences in attitudes to age using the UK sample from the 2008-2009 European Social Survey. Chapter 8 investigated the effects of both positive and negative age stereotypes on older people. Study 2 established specific domains in which older people are expected to perform well compared to younger people. On the basis of Study 2, Study 3, an experiment – used the stereotype threat paradigm to investigate the effect of positive and negative (stereotypical) expectancies on older people's performance in different task domains. Chapter 9 extended the consequences of stereotype threat effects on older adults by showing that older people can be threatened on tests of physical ability, as opposed to mental capabilities which have been tested more widely.

Chapter 10 presented Studies 5 through 8 which investigated particular aspects of fear of crime. Study 5 used Age UK survey data to investigate older adults' (aged 50 and over) fear of crime and the extent to which older adults believe they are more likely to be victims of crime. Study 6 investigated fear of crime in the UK using the 2008-2009 European Social Survey. It provided a more

robust analysis of age and gender differences in fear of crime responses. Study 7 investigated age based assumptions and expectations in fear of crime to show that people expect experiences of fear of crime to differ according to people's age. Together, these studies established that older people are expected to be more fearful of crime compared to other age groups. Based on the findings from Study 5 to 7, Study 8 investigated the extent to which age and gender expectations (stereotypes) guide older people's evaluations of their fear of crime. The findings support previous research by showing that gender stereotypes influence expressions of fear of crime when participants are asked to present themselves in a socially desirable way.

Chapter 11 presented Study 9, which investigated how real marketing images of older people influence people's willingness to donate to charity. It showed that images that portray older people as more incompetent evoked more pity in participants, which subsequently influenced participant's choice to donate. Participants were more likely to give to the charity who's images evoked more pity. Chapter 12 presented a second study that used 'real' materials, but this time to provide evidence for age discrimination (Study 10). This study (Study 10) is a replication and extension of previous research that investigated age discrimination in the TV game show *Weakest Link*. It showed that contestants over the age of 60 were three times more likely to be excluded from the show after the first round, even after controlling for contestant's performance on the game show.

The final empirical chapter, Chapter 13 presented Study 12 - a multilevel analysis of the 2008-2009 European Social Survey to investigate the impact of age discrimination on well-being, whilst controlling for country level variation. It also showed that perceptions of older people's status influenced the relationship between age and well-being.

14.2 Main Conclusions and Theoretical Implications

The empirical studies provide some interesting results with important theoretical, practical and policy applications. In exploring the social, psychological and behavioural consequences of ageism, this thesis has developed research from different domains using a range of research methods. It has used large scale representative surveys to explore societal attitudes to age, experiences of

ageism and fear of crime. Experimental research has explored the consequences of negative and positive age stereotypes for older people, it has also investigated the consequences of representing older people stereotypically in marketing materials. Applied observational research has provided evidence for ageism and multilevel analysis techniques have explored how ageism and other societal attitudes to age impact on older people's well-being. The next section presents the main conclusions and implications of the research in relation to societal attitudes to age, effects of age stereotypes and ageism.

14.2.1 Societal Attitudes to Age

“Ageing means change, but change does not mean decay”

- Ellen Langer

Attitudes to age are ambivalent. Study 1 showed that people's attitudes to age consist of both positive and negative components. On the one hand people express more positivity than negativity towards people over 70 and they evaluated them as warm, friendly and moral. On the other hand, they are perceived to be low status, less competent, contributing little to the economy and are seen as a burden on health care resources. Such a mixed valance of attitudes towards older people reflects the fact that these attitudes are held about a social group that, while being an out-group, is one that all people, if they live long enough, will belong to. According to Packer and Chasteen (2006), the mixed content of attitudes serves two different psychological purposes. The negative attitudes towards older people serve social identity needs by providing positive distinctions that exaggerate differences between age groups or differentiate age groups, which favour younger and middle aged people. However, realising that one day people will become old themselves they maintain some positive expectation about old age.

The study confirms this by showing that attitudes to age become more positive with age, as people become psychologically closer to the older age group. This may be the reason why people are less willing to directly express negative attitudes to age and why younger people express negative

attitudes to age more strongly. It also infers that reducing the psychological distance between age groups should improve attitudes to age.

The meaning of old age. This thesis aimed to shed some light on the meaning of age, given the somewhat ambiguous definitions which were introduced in Chapter 1. For example, the Oxford dictionary states that age is ‘the state of being old’, ‘to appear old or older’, ‘to behave in a manner appropriate to someone of one’s age’ or ‘being old enough to be able or expected to do something’. Although these appear useful definitions of age it is unclear what it means to appear older or what age-appropriate behaviour consists of. Study 1 sheds some light on these issues by exploring boundaries that define the end of youth and beginning of old age. It showed that on average, people in the UK are considered old when they reach 59, and that people over 70 are viewed as more warm and friendly than competent. It also showed that people consider it more acceptable for a person under the age of 30 to occupy a status position such as being a boss, than people over 70.

Study 2 provided an insight into domains in which older people are expected to be competent compared to other age groups and which traits they are expected to possess. It showed that older people (target age 75 and older) were expected to be more polite, better at settling arguments, understanding other’s viewpoints, solving crossword puzzles, making financial decisions and have a healthy diet. In contrast, they were expected to be least competent driving, being creative, taking enough exercise, learning new skills and using the internet to buy something (those under 25 were expected to be the most competent in these areas). As with Study 1, the findings suggest that associations with older people are not all negative; in accordance with previous research older people are assumed to have greater interpersonal problem solving skills (Blanchard-Fields, 2007). Study 7 explored, for the first time, age-expectations regarding older adult’s fear of crime. It demonstrated that people of all ages evaluate people over 70 as being more fearful of crime (all crimes except sexual assault) and that people over 70 are viewed as more vulnerable, fearful and dependent than people under 30.

Together these studies show that people have expectations about the competencies of people of different ages. However, it is still not yet known how people deal with these expectations, how important they are or how they guide decisions and behaviours of people as they age. In addition, aspects of fear, vulnerability and dependency are not explored in the SCM and it is not clear how these attributes relate to evaluations of incompetence and warmth or what type of prejudice they inform.

Positive societal attitudes to age maintain well-being in later life. Study 11 used the 2008-9 European Social Survey to explore whether societal attitudes to age in terms of the perceived competence and status of people over 70 are associated with well-being. Specifically it tested whether these attitudes influenced the extent to which well-being is maintained in later life. The Study showed that older people are able to maintain core aspects of subjective well-being, happiness and life satisfaction, in countries that have more positive view of older people by viewing them as higher status. In other words the perceived status of people over 70 has a stronger impact on individual's psychological well-being as they age. Given the now widely accepted impact of well-being on a host of other important outcomes such as health, productivity, longevity and suicide (Diener, 2000; Diener & Chan, 2011; Lyubomirsky, King, & Diener, 2005; Mastekaasa, 1995), it is of concern if the well-being of any section of a population is disproportionately affected by societal attitudes towards one social group, namely older people. This study has considerable implications for strategies to enhance well-being in later life by suggesting that enhancing the perceived status of people over 70 should be able to buffer against declining well-being in later life.

14.2.2 Effects of Age Stereotypes

Negative age stereotypes form the basis of ageist attitudes and are therefore an important focus of this thesis. Studies 1, 2 and 7 explored the content of age stereotypes in the UK, while Studies 3 and 4 explored experimentally the consequences of age stereotypes on older adult's cognitive and physical performance. Study 9 explored how stereotypical representations of older people influence people's decisions to give to charity.

There are positive and negative age stereotypes. Study 1, Study 2 and Study 7 provided an insight into societal beliefs about older adults. Previous research has shown that older people are predominately negatively stereotyped as incompetent (Fiske et al., 2002) and Study 1 confirmed this. However, older people are also stereotyped positively in terms of experience, wisdom and knowledge which are assumed to increase with age. In line with this, Study 2 showed that older people are expected to perform well at crossword tasks. Stereotypes in relation to older adult's fear of crime were also explored. Study 5 showed that older people self-stereotype, agreeing with the perception that older people are more likely to become victims of crime, despite the fact that older people are actually less likely to be victims of crime. Study 7 provided preliminary evidence of a societal stereotype that older people are more fearful and vulnerable to crime by demonstrating that people of all ages expect those over 70 be more fearful than younger and middle aged people of all crimes (except sexual assault). Together these studies provide additional avenues for future research to explore the consequences of age stereotypes. It is not yet known the role fear of crime stereotypes have on older people's evaluations of fear and their perceived vulnerability to crime. It seems important to explore further whether age stereotypes distort fear, given the impact fear of crime has on older people's quality of life.

Positive age stereotypes can boost older adult's performance on 'matched' task. In recognition of the fact that age stereotypes are mixed, Study 3 set out to test the consequences of negative and positive age stereotypes within the same testing situation. Importantly it also demonstrated how positive age stereotypes can be a vehicle for performance boost on tasks that are consistent with the stereotype. The research showed that there may be two routes for optimizing their performance in test situations or situations involving comparisons with younger people. One is to directly tackle the anxiety that arises from threat so that there is less interference with performance. The other is to identify positive expectations in conjunction with stereotypically positive task domains.

Negative age stereotypes can undermine older adult's cognitive performance. In line with Abrams et al., (2006; 2008) Study 3 demonstrated how stereotype threat harms older people's

cognitive performance, an effect partially mediated by anxiety. Consistent with Schmader and Johns, (2003) and Ben-Zeev et al., (2005) stereotype threat impaired performance even on a task that potentially offered a stereotypical advantage to older people. It seems that a negative social comparison that highlights a group's overall lower status is sufficient to produce anxiety related underperformance among older people even when the task domain favours them. This shows that the harmful scope of negative age stereotypes extends beyond just the dimension that is directly related to the stereotypes (cf. Meisner, 2011).

Negative age stereotypes can undermine older adult's physical performance. Study 4 extended the stereotype threat paradigm by demonstrating that social comparisons with younger people can lead older adults to underperform on tests of physical ability. It provided further evidence for the negative consequences of social comparisons for older adults, moreover, it provided evidence that the general age stereotype denoting incompetence can refer to physical capabilities as well as cognitive capacity of an individual. It established a new application of stereotype threat theory (Steele, 1997) to older people. It showed that stereotype threat through social comparisons can affect performance on an objective measure of strength that is used in the clinical assessment of older people. Consistent with stereotype threat theory, both strength and persistence on the hand-grip task were significantly worse as a result of stereotype threat, even after controlling for other potentially contributory variables.

Age charities that represent older people in line with negative age stereotypes receive more money. Study 9 explored whether differences in the amount two charities raise from donations could be explained in terms of the way they represent older people in their marketing campaigns. It found that the majority of participants preferred to donate money to the charity that represented older people more negatively, as more incompetent and less friendly. It also revealed that the decision to donate money to this charity was driven by feelings of pity elicited by the images of older people. The findings reveal that charities wishing to maximise donations should use images that elicit pity. However, this may cause charities representing older people to perpetuate negative stereotypical images of old age, which are damaging to individuals and society as a whole.

14.2.3 Ageism

Experiences and prevalence of ageism in the UK were explored in Study 1, while Study 11 explored the impact of age discrimination on older people's well-being across Europe. Study 10 provided observational evidence for ageism against older people in the UK.

Ageism is a considerable societal problem. Study 1 revealed that in total, 45% of UK respondents in the 2008-2009 European Social Survey said they have experienced at least one form of ageism, in terms of experiencing age prejudice, being treated badly or being treated with lack of respect, making it a considerable societal problem in the UK.

Ageism has a multidimensional impact. The exploration of age differences in experience of ageism in Study 1 demonstrated the multidimensional impact of ageism by showing that it can be experienced by people at all ages. The findings actually showed that younger people reported experiencing more ageism with experiences of ageism decreasing with age, therefore, ageism is a problem for young and old alike. Moreover, because categorisation of age is continuous, experiences of ageism are relative and context dependent. They depend on the age of the attitude holder and the age of the target of the attitude, consequently an individual could be perceived as young, while another person sees that individual as old. This multidimensional impact of ageism has implications for how it should be managed in society (see later section on policy implications).

Ageism can be subtle and may go unnoticed. Study 10 demonstrated the subtle almost implicit nature of age discrimination, by showing how age can be used as a criterion for exclusion without people recognising or realising it. By examining the voting decisions of contestants in a TV quiz show, the study revealed that people over the age of 60 were 3 times more likely to be voted off the show after the first round. The study provided a powerful demonstration of age discrimination against older adults in a real world setting where it is not explicitly obvious that it is occurring.

Ageism is harmful to well-being. Using multilevel analysis techniques that control for differences between countries, Study 11 showed that experiences of ageism have a detrimental impact on two core components of subjective well-being; happiness and life satisfaction. Moreover, it

showed that experiences of ageism remain negatively related to SWB even after controlling for a number of variables that have also been shown to be negatively related to SWB.

14.3 Policy Implications

Chapter 1 provided the political and societal context for research into ageism. Here, the implications of the thesis are applied back to Age UK's 2012 Agenda for Later Life. The Agenda for Later Life outlines what Age UK feels are the key issues facing central and local governments in preparing for an ageing society. It sets out Age UK's policy priorities in key areas, which support their vision to improve later life. These areas are;

- Active and equal citizens
- Preventing poverty
- Competition and choice for older consumers
- Essential services
- Health and healthcare
- Dignity in care and support
- Lifetime housing and lifetime neighbourhoods
- Global ageing

The policy implications of this thesis are summarised in relation to these key areas, and then summarised in relation to the consequences of ageism and tackling negative attitudes to age.

14.3.1 The Agenda for Later Life 2012

Active and equal citizens. People in later life should have the opportunity to participate fully in the economy and in society in whatever way they want. However, there remain significant and systematic barriers to older adult's participation in society that prevent them from participating fully and stop them from participating in the ways that suit them. Ageist attitudes that inform how older people are viewed and are treated prevent many older people engaging and participating in society. Age discrimination can prevent older people from having equal access to employment, flexible working and lifelong learning opportunities. Moreover, self-stereotyping in line with negative

attitudes might mean that older adults may not see their contribution as worthy, valued or may not feel they have anything to contribute. As Study 3 demonstrates, older adults can feel threatened by negative age stereotypes and in situations where their age may become salient. Studies have shown that this type of stereotype threat can lead to disengagement, disidentification and self-handicapping. This means that older people may feel less willing to participate, engage in events or situations in which they feel they may be judged in terms of their age, or they feel they may confirm negative age stereotypes. A way to reduce this stereotype threat is to reduce the importance of age in the situation so that older people do not feel they are being judged in terms of their age. One way to do this would be for older people to maintain relationships with others of different ages. Research shows that older adults who have close friendships with younger adults are less threatened by negative age stereotypes and are less likely to show detrimental impacts of stereotype threat (Abrams et al., 2006).

New community rights under the Localism Act are intended to give communities more power and ownership, which should be beneficial to older people who are already active within communities. However, governments must recognise that only a small minority of older adults engage with communities at the decision making level. The 2009-10 Citizenship Survey reported that only 12% of people aged 50 to 64 and 65 to 74 are engaged with communities at decision making level (e.g. being a school governor), with only 7% of people aged over 75. If the Government would like to encourage civic participation it needs to recognise how to give equal opportunities to people to participate, they also need to recognise and understand why engagement declines with age, and why some people are able to maintain participating in later life while others do not.

Preventing poverty. Age UK contend that older people should have sufficient resources and income from both the state and private sources to live comfortably. Although issues surrounding the state pension age and retirement age are not directly addressed in this thesis, particular aspects of attitudes to age that relate how people view their own ageing has important implications for encouraging people to save for retirement and for age discrimination in employment. The Government is working hard to encourage people to do more to save for later life, people are encouraged to maintain healthier life styles as well as to save financially so they are able to participate

fully in later life. Study 1 shows that the perception of the start of old age changes in accordance with people's own age, as people get older they perceive old age to begin later. This shifting categorisation of old age makes it more difficult for people to prepare for later life because they always perceive old age to begin later, people may estimate that they always have more time to save. Addressing the negative connotations associated with old age may allow people to think more constructively about preparing for later life.

A second concern is that ageism acts as a barrier to employment which may prevent older people from having sufficient income. Study 1 showed that respondents were more comfortable with the idea of having a boss aged under 30 than having a boss over 70. This finding is consistent with the idea that older people are negatively stereotyped and are seen as less competent and less capable. The experimental evidence from Study 3 and 4 shows that older people's performance on cognitive and physical tasks can be seriously impaired if they are conscious of age stereotypes that denote incompetence. Such test situations may be likely to occur even before people begin employment. Regardless of stereotypes, the wider issue that people seem to have an implicit preference for younger over older people was demonstrated by Study 10, by showing that regardless of capability, people over 60 were more likely to be targets of exclusion.

Competition, choice and essential services for older consumers. Age UK recognises that older people are often excluded from commercial markets and aim to change this so that marketplaces offer a good choice of goods and services which meet the needs of older people. Although the Government's Empowering and Protecting Consumers publication recognises the need to empower older people, it fails to recognise that there are other reasons why competitive markets do not work for older people, including age discrimination, negative stereotypes and poor information and advice for older people.

An ageing population and growing proportion of people over 60 due to the post war baby boom is changing the age structure of society and also the economy. The consumer power of those over 50 has a major impact on the shape of the UK economy. For example, a country with a larger

proportion of people under 16 may have very different demands than one where a larger proportion of the population are over 50. However, it seems that consumer markets often neglect the consumer needs of older people and by doing so they are missing significant opportunities to create new services and products that may benefit the economy as a whole.

Segmenting the consumer market on the basis of age is likely to lead to age discrimination and a narrower view of older consumers through stereotypes. Negative age stereotypes play a role because they homogenise age; they fail to recognise diversity in later life and restrict people's view about the wants and needs of older people by thinking they are all the same. Therefore there is a need to remove age based assumptions about older consumers. Moreover, upper age limits make some products and services inaccessible for the older population. Although spending habits may change as we age, this is more likely to do so with changes in income, suggesting that age may not be the most important factor in understanding consumer behaviour.

The digital divide is likely to be a major barrier for older people in the consumer marketplace. Self-stereotyping may mean that often older people think that computers, technology and the internet are not for them, and that they are not capable of learning new technologies. Study 2 demonstrates that older people recognise societal views that people over 75 are less capable of using the internet and are less capable of learning new skills. These assumptions can be damaging to older people by restricting their own views about what they are capable and inadvertently make older people exclude themselves from digital technologies.

Health, health care and dignity in care and support. Health and social care is one of the largest and most important public service domains for older people. Age UK maintain that older people should have the opportunity and support to be able to maintain health and well-being through equal access to prevention, treatment and rehabilitation. Age UK are also strong advocates of older people being treated with dignity and respect in later life. Because age discrimination is more likely to exist when there is an opportunity to favour one person over another, or when there is an opportunity to restrict or deny access to resources, it exists in health and social care. In health care

settings, negative beliefs and stereotypes about older people and the ageing process may influence not only the treatment decisions made by doctors, but also the treatment decisions made by patients. These negative beliefs link old age to sickness, dependency and illness, and depict older people as incompetent, incapable or unintelligent (Abrams, Eilola, Swift, 2009; Abrams, Vauclair, Swift, 2010; Swift, Lamont & Abrams, 2012).

In medical or health care settings a patient's age is commonly used as a proxy for risk. In many situations this is likely to be 'justified', for example, knowing that cancers are more common in people aged 70 and over should increase cancer screening in this population. However, problems may occur when age is 'unjustifiably' used in decision making process. For instance, it may be weighted above and beyond other factors which may take longer for a doctor to access such as, individual fitness, or assumptions are made about patients based on their age and associated negative age stereotypes. Furthermore, such ageist attitudes result in poor communication with patients, below standard treatments and follow up care (Adelman, Greene & Ory, 2000; Hillerbrand & Shaw, 1990 see also Nelson, 2005).

Negative beliefs about ageing can also influence patients' decisions. Studies have shown that people who are reminded of negative images of ageing are less likely to see benefits of treatment and are less willing to accept life prolonging treatments compared to those who are reminded of more positive aspects of ageing (Levy, Ashman & Dror, 1999-2000; Marques, Lima, Abrams, & Swift, in prep). The findings from Study 4 raise a particular concern for older people who are likely to undergo clinical evaluations or competency tests for medical. Previous research has shown the potential negative effects that stereotypes can have on levels of dependency in later life (Coudin & Alexopolous, 2010). One damaging consequence of an assessment that implicitly or explicitly uses 'when you were younger', or an age threshold (e.g., 'now that you are over 65') as a reference point, may be that it actively induces stereotype threat and causes older people to present as less physically able than they really are. In turn, stereotype threat could foster a cycle of increasing dependency and withdrawal from physical tasks. Even among individuals who regard themselves as physically fit, stereotype threat associated with older people's general physical decline may have adverse effects.

For example, in the present research threat affected participants regardless of whether they experienced arthritis.

Lifetime housing and lifetime neighbourhoods. This reflects the wants and needs of older people to age in place. The vision is that older people should be able to live independently in their own homes for as long as they want. This means there is a need to provide older people with suitable housing and suitable age-friendly neighbourhoods. There should be a focus on housing strategies that provide sustainable age-friendly housing that would not require adaptations as people age. Relevant to maintaining age-friendly neighbourhoods are issues surrounding older people's safety, fear of crime and policing.

Study 5 and 6 show that older people are less likely to become victims of crime than other groups, however, older people's fear of crime has been shown to be significantly higher. There are many factors which contribute to fear of crime among older people, some of these may be addressed by policy, and some may be addressed by changing older people's perceptions of themselves. For instance, Study 5 demonstrates that the extent to which older people view themselves as likely victims of crime influences the extent people express fear of crime. Study 7 provides initial evidence that there are stereotypes that denote older people as more fearful and vulnerable to crime. These stereotypes, if internalised influence how people see themselves as they age, therefore people may exaggerate perceptions of vulnerability and victimisation.

Study 6 demonstrates that older people are particularly concerned with the level of crimes committed by people in their 20s. This may be driven by a lack of trust of younger generations and also an increasing feeling of social disconnection from the community or the area in which the older person lives as communities change. Intergenerational work within communities may help in reducing fear of crime committed by younger people by creating mutual respect, understanding and trust between generations. Maintaining intergenerational friendships is also important for maintaining older people's independence in later life by providing additional avenues of social support.

Global ageing. Global ageing reflects Age UK's pledge to help older people around the world and not just those in the UK. Ageism may be a unique form of prejudice, but with its origins in categorisation processes, a fundamental process that shapes how people organise the social world, it is not likely to be a unique problem to the UK. Thus far the majority of ageing research has been conducted in fairly developed countries such as those across Europe, northern Americas, Asia and Australia, yet the global population are ageing. Globally the population aged 60 and over is expected to reach nearly 2 billion by 2050, by then 32 countries will have more than 10 million people over 60 (United Nations, 2010). However, very little is known about experiences of ageing in less developed countries. With a focus on components of ageism, this thesis provides a framework for benchmarking experiences of ageism, attitudes to age and the consequences of ageism.

14.3.2 The Consequences of Ageism

It seems that the consequences of ageism are far reaching. Ageist attitudes affect older people in a number of Age UK's priority policy areas; it prevents older people from activity engaging by restricting access to employment, health care treatments and commercial markets, it prevents older people being treated equally and fairly with dignity and respect. It is no surprise then that Age UK highlights the need to change ageist attitudes that are harmful not only to older people but to society as whole.

14.3.3 Tackling Negative Attitudes to Age

In the context of Britain's economic and demographic challenges, ageism and attitudes to ageing present significant barriers to older people. The research highlights that strategies to deal with ageism can be developed at different levels. At the psychological level it is important to change people's view of ageing and the inherent negativity attached to ageing. It is also important to recognise that age is a more important category to some people than others and will have different meanings depending on people's own age. It is important to change these beliefs when they are negative because people's age based assumptions and expectations can influence a person's judgements about others' ability, their health or even their rights to services, thereby leading to age

discrimination. Moreover, these beliefs also influence people's own ageing as they become relevant to self.

The extensive literature on intergroup contact theory provides one avenue for changing people's views of older people. It contends that providing opportunities for people to create and nurture intergenerational friendships can tackle negative attitudes to age by providing more positive view of older people. According to intergroup contact theory, intergenerational contact can be facilitated by institutional support which can be something that policy can address by promoting an inclusive society for people of all ages.

At the societal level, Study 11 shows the benefits of having more positive attitudes to older in terms of viewing them as higher status. The findings showed that the perceived status of people over 70 has a stronger impact on individuals' psychological well-being as they age, and therefore suggest that enhancing the status of people over 70 is one avenue to maintain well-being in later life. In accordance with the stereotype content model one way to enhance the status of older people is view them as more capable, thereby removing negative stereotypes that denote incompetence. A second way could be to recognise and value the many ways older people contribute to society.

The research also shows that there are some challenges to changing negative attitudes to age. The finding from Study 1 that people do not necessarily see themselves as prejudiced towards older people means that it may be harder to change attitudes of people who do not necessarily recognise there is a problem or recognise different ways ageism can be manifested. Further challenges are highlighted in Studies 8 which acknowledges that negative attitudes to age and negative age stereotypes may be beneficial to other age groups in society by functioning to maintain the status quo. System justification theory contends that stereotypes serve to maintain the existing social, political, and economic and in this case, age structures within a society. Therefore, stereotypes that denote incompetence are advantageous to dominant groups within society, so they may be motivated to embrace and reinforce stereotypes for their own gain. The social justification function of age stereotypes is likely to make them harder to change.

The findings of Study 9 also highlight how representing older people in negative ways may inadvertently be beneficial for charities that represent older people. It showed that respondents are more likely to give to a charity that represents older people in line with negative age stereotypes, as more incompetent because this induces feelings of pity, which predicts charitable giving. Negative representations of older people appear double edged, they may benefit certain age groups and sections of the population in the short term, but they have negative implications for all people in the long term.

At the policy level, age presents special challenges because of the difficulty in defining particular age ranges or boundaries at which particular policies should apply. Age is a continuous attribute and categorisations such as 'old' are dependent because age can be judged differently depending on the comparisons between specific people within specific situations. To a certain extent this means that preventing age discrimination must go beyond policies and must also take a more general approach to tackle negative attitudes.

14.4 Limitations and Future Directions

A number of limitations have arisen during the research process. These limitations are set out below and are considered in relation to future research directions.

Attitudes to age may only be meaningful in the context of comparison to attitudes to other age groups. Study 1 focused on age and gender differences to older targets. However, some of these attitudes may only be meaningful in comparison to perceptions of other age groups and younger people. Meaningful comparisons between age groups may be even more difficult given the arbitrary bases for age categorisation. Inevitably, more research is now needed to understand when age categorisations become meaningful to individuals and how they influence interactions within society. In addition, there seems to be a call for research to make distinctions within the category 'old', recognising that with increasing longevity the term 'old' may encompass and treat the 'young-old' and the 'old-old' the same.

Survey data may not capture the true extent to which older people experience ageism. Attitudes to age are ambivalent. The mixed views of older people as incompetent (negative) but also

warm (positive) means that for older people experiences of ageism are paternalistic or patronising. Experiences of ageism in this form may be harder for older people to recognise. The wide acceptance of ageist attitudes means that older people feel it is an enviable part of ageing and may feel helpless and powerless in preventing it and therefore less willing to report ageism. Future research should consider the possibility that older people may not always recognise more subtle forms of age discrimination and should consider further the different ways that ageism can manifest in order to provide a clearer picture of experiences of ageism.

Survey data may not capture the true extent to which people hold ageist attitudes. The evidence from Study 1 shows that experiences of ageism contrast with expressions of direct negativity and prejudice towards older people. The findings show that very few respondents express negative attitudes towards older people yet older people still report experiencing ageism, which begs the question, if so few respondents express negative attitudes how is it that so many experience ageism? The thesis shows that unlike more traditional forms of prejudice, such as racism, which is often hostile, ageism towards older people appears more subtle. Direct questioning about prejudice is also prone to various response biases as people may be motivated not to express negativity explicitly. This means that capturing more subtle forms of prejudice like ageism may be even more difficult given these attitudes are ambivalent and the wide acceptance of ageist attitudes. There is an additional problem that respondents may not be aware of their own prejudices or aware they are being ageist. Future research should employ a range of methods for assessing ageist attitudes. Future surveys on attitudes to age should consider more indirect measures of capturing prejudice.

Variation in age categorisations. Across the studies different age boundaries are used to define target groups of 'older' people. For instance, Study 1 asked questions about target's aged 70 and over, while Study 2 referred to older targets as 75 years and over. Age boundaries for respondent's age groups also differed across studies depending on the type of study or type of survey being used. Although no one study is weakened by the particular age boundary used, it is important to note that inconsistencies across studies may weaken conclusions and generalisations made to and about 'older' age groups. The use of different age boundaries is a general problem for ageing

researchers and highlights the particular issue of compatibility between studies in ageing, not only within countries but also between countries. The decision to use particular age boundaries should be well theorised and should not be chosen on some arbitrary basis. Previous research has been used to support the use of particular age boundaries for the studies in this thesis, where possible.

Expanding domains for effects of positive age stereotypes. Study 2 provides other domains that older people are perceived to excel in, it would be interesting to see whether older people benefit from these positive age stereotypes in applied settings. The study shows that older people are perceived to make better financial decisions and have better interpersonal skills. It would be interesting to see whether and in what situations older people can benefit from these positive age stereotypes. For instance, in certain employment situations older people should benefit from these age stereotypes as they portray useful skills, yet the review of the evidence in Chapter 2 shows that ageism in employment is paramount, perhaps suggesting that general negative stereotypes of incompetence prevail over positive age stereotypes. It would be interesting to explore how and when positive and negative stereotypes prevail.

Subtle vs blatant social comparisons for positive and negative age stereotypes. In line with Shih and colleagues (2002) who demonstrated that targets of positive stereotypes only benefit from performance boosts when the stereotype is activated subtly, the boost manipulation in Study 3 did not refer to the crossword task explicitly. However, this more subtle boost manipulation was enough to produce a performance boost and, therefore, strengthens confidence in the boost effect. These findings suggest that there may be different pathways for threat and boost effects. Future research could explore further the boundaries of awareness that surround these effects.

Mediators for boost effects. An intriguing problem is to discover mediators of boost effects. Rahhal et al., (2001) showed that self-efficacy beliefs about performance can be affected by how a task is framed. When older and younger adults were asked to rate how well their age group would perform on a 'test of memory', older adults predicted their performance to be significantly worse than younger adults did. But when asked about a 'test of knowledge', there was no significant difference in

how older adults and younger adults rated their age group's ability. In light of this, it would be interesting to explore the role that these variables play in the explanation of positive self-stereotyping effects. Other avenues to explore are whether positive age stereotypes change perceptions of the self, perceptions of the in-group and out-group and whether these have any implications for older adult's performance.

Expanding domains for effects of negative age stereotypes. The majority of research investigating stereotype threat effects on older adults has concentrated on cognitive and memory performance. Study 4 extends the stereotype threat paradigm by demonstrating for the first time how social comparisons with younger people can impair older adults' ability to perform a test of physical competence. Future research could expand research even further by testing other domains in which older people are perceived to be more incompetent. For instance, Study 2 finds that there are societal expectations that older targets aged 75 and over are expected to be less competent than younger targets aged under 25 at driving, being creative, taking enough exercise, learning new skills, and using the internet. Therefore, older adults may be susceptible to stereotype threat effects in these domains. If this is the case, underperformance in these domains would have serious implications for older adults, in terms of health, employment, learning, training and for maintaining independence in later life. Investigating stereotype threat effects in these domains would provide additional evidence for the negative consequences of age stereotypes for older adults, it would also expand the implications of stereotype threat for older adults.

Moderators and mediators of physical threat effects. Moderators of physical threat effects were not explored in Study 4. Further research is needed to establish whether some circumstances, or individual differences enable older individuals to resist stereotype threat in the physical domain, and why this might be. For example, it would be useful to know whether social integration and support (e.g. Heidrich & Ryff, 1993), and varying levels of day to day engagement with younger people (Abrams et al., 2008) may moderate effects of stereotype threat on older people's physical ability. It is also important to explore possible mediators of the physical threat effect to establish more clearly the presence of a threat and how the threat manipulation is operating to decrease performance. It could be

that the threat effect is a product of automatic processing, whereby the category 'old' is made salient and the subsequent behavioural outcome (acting in line with the stereotype) is produced without the participant knowing. Or it could be that the threat effect is regulated by motivational processes, such as effort. It is important to know how the threat is operating in relation to physical outcomes in order to prevent it in future situations.

Effects of age stereotypes in fear of crime. Study 8 could not provide evidence that age stereotypes influence fear of crime responses. Although, it does not rule out the possibility that age stereotypes may guide and inform older adult's evaluations of fear of crime. There seems to be several ways in which age stereotypes may influence older adult's expressions of fear of crime and future research is needed to explore these. Research is needed to explore how older adults who express more or less fear of crime are evaluated by others, in order to see whether those that express fear in line with the stereotype are evaluated more positively than those who do not express fear, thereby deviating from the negative age stereotype. This research would provide an insight into whether older people are implicitly rewarded for conforming to age stereotypes that sanction their freedoms and contribute to age hierarchies. Secondly, more research is needed to explore further older adult's motivations for expressing fear of crime, particularly in the expression of fear and feeling threatened by younger people, in order to see whether this is an expression of prejudice. If so, then this should be addressed by prejudice reduction strategies such as increasing intergenerational contact.

Ageism in the Weakest Link could not be linked to age stereotypes. Study 10 tested the hypothesis that perceptions of older people as less competent might explain the increased likelihood they are excluded. However, the analysis revealed that perceptions of competence was not a significant predictor of exclusion, therefore the analysis cannot show that stereotypes are responsible for the underlying processes of discrimination. Perceptions of competence might not have been a significant predictor in the model because the ratings of competence had low consistency, which might be partly due to the different ages of the independent coders. However, this does not detract from the fact that this novel study provides a powerful demonstration of ageism in a real world setting. Future research should use similar research methods to provide evidence for the subtle ways

ageism may be manifested. This is especially important given that ageist attitudes may be so embedded within society that subtle forms of ageism go unnoticed.

Ageism, well-being and successful ageing. Study 11 used the European Social Survey to investigate how age discrimination and societal attitudes to age impact on well-being. While comparisons across Europe are meaningful, the limited number of countries restricts the analysis by limiting the number of level-two predictors due to the limited degrees of freedom. The analyses in this study only use two items to represent the societal attitudes to age, although more indicators of attitudes towards older people are available. This also means that the robustness of the effect of status was not tested against other country-level differences that have been shown to impact on evaluations of well-being.

Future research should use multilevel modelling techniques to explore further the role of other country level differences in maintaining well-being in later life. For instance, previous research suggest well-being is affected by the wealth of a country, such as a country's Gross Domestic Product, which reflects the total value of goods and services produced in a country in a given year (European Commission, 2011). In addition to GDP, political rights, cultural values of individualism and equality have been shown to be significant predictors of well-being (Diener, et al., 1995). Multilevel modelling also provides a platform for testing the impact of different policy strategies for ageing populations on older people. For instance, it seems reasonable to expect that how much a government invests in health care services has implications for well-being, particularly the well-being of older people who are more likely to be using health care services. The impacts of these could be tested and provide policy makers with a more informed evidence base of policy outcomes.

14.5 Concluding Comments

“Age is just a state of mind, if you don't mind, it doesn't matter”

This thesis contributes to the existing research on ageism, and wider research on prejudice, stereotyping and discrimination. It provides an insight into the prevalence of ageism in the UK and demonstrates how ageism and attitudes to age can form considerable barriers to older adults'

participation in society. Using real world data, it adds to evidence on the existence of ageism by providing a demonstration of how people being judged on the basis of age can be socially excluded. This research showed that people over 60 are particularly vulnerable to discrimination and exclusion on the arbitrary basis of their age.

It extends evidence on the consequences of ageism by building on research investigating the behavioural and social outcomes of age stereotypes. It shows how stereotypes that refer to older people as incompetent have a detrimental impact on older people's cognitive ability. When facing a negative social comparison that evokes a threatening stereotype of older people, older people underperform. Underperformance in cognitive tasks is partly attributable to anxiety. It extends research investigating stereotype threat by demonstrating that age stereotype can have an impact beyond cognitive ability. Research shows that it can have a detrimental impact on older adult's physical ability causing older people to present as less physically able than they really are.

It also demonstrates that the consequences of age stereotypes are not all negative because age is associated with both negative and positive traits. The thesis presents research that shows for the first time, how positive age stereotypes can lead to a performance boost, enhancing older adult's performance on a task that is positively stereotyped. Moreover, it provides further insight into the types of tasks in which people of different ages are assumed to excel, demonstrating that people have clear expectations about the specific competencies of different age groups. Aspects of the thesis also provide an initial investigation into the impact of age stereotypes in fear of crime, a previously un-researched area that has wide implications for older adults' quality of life.

The research in the thesis is of considerable relevance to policy makers who wish to improve well-being in later life. The research suggests that strategies for successful ageing should be applied at a number of levels. It seems at the policy level that legislation to tackle age discrimination can only go so far. The entrenched negative attitudes will be harder to tackle and pose a substantial challenge. However, the fight must continue to ensure that experiences of ageism are not an inevitable part of ageing.

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Appendix A: The Social Desirability Scale-17 (SDS-17)**Instruction**

Below you will find a list of statements. Please read each statement carefully and decide if that statement describes you or not. If it describes you, check the word "true"; if not, check the word "false".

Items

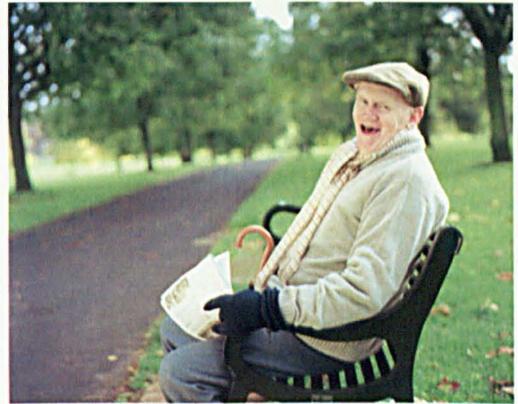
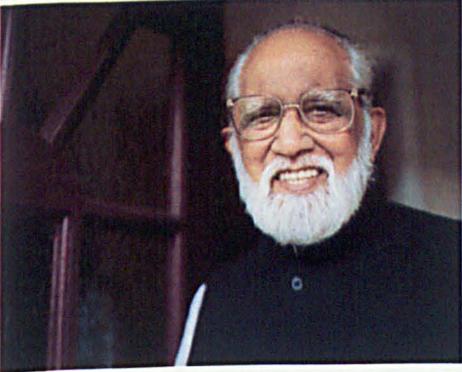
-
- 1 I sometimes litter.
 - 2 I always admit my mistakes openly and face the potential negative consequences.
 - 3 In traffic I am always polite and considerate of others.
 - 4 I have tried illegal drugs (for example, marijuana, cocaine, etc.).
 - 5 I always accept others' opinions, even when they don't agree with my own.
 - 6 I take out my bad moods on others now and then.
 - 7 There has been an occasion when I took advantage of someone else.
 - 8 In conversations I always listen attentively and let others finish their sentences.
 - 9 I never hesitate to help someone in case of emergency.
 - 10 When I have made a promise, I keep it--no ifs, ands or buts.
 - 11 I occasionally speak badly of others behind their back.
 - 12 I would never live off other people.
 - 13 I always stay friendly and courteous with other people, even when I am stressed out.
 - 14 During arguments I always stay objective and matter-of-fact.
 - 15 There has been at least one occasion when I failed to return an item that I borrowed.
 - 16 I always eat a healthy diet.
 - 17 Sometimes I only help because I expect something in return.

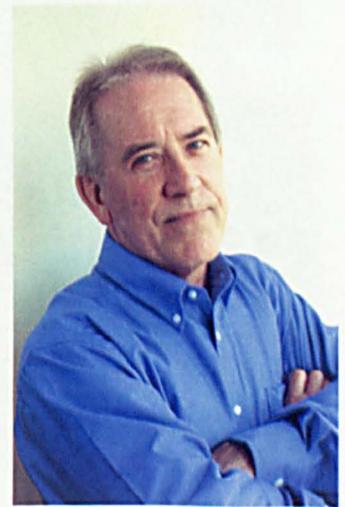
Note: Answer categories are "true" (1) and "false" (0). Items 1, 4, 6, 7, 11, 15, and 17 are reverse keyed. Item 4 was deleted from the final version of the SDS-17.

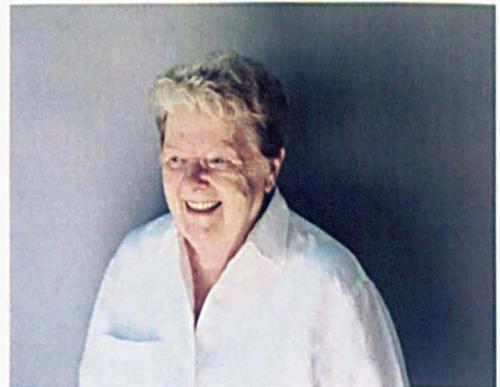
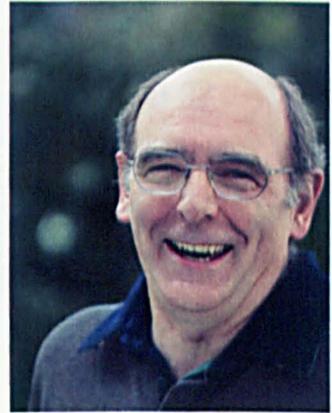
Appendix B: Stimulus Materials for Study 9

Images used by the charity Age Concern England, now Age UK



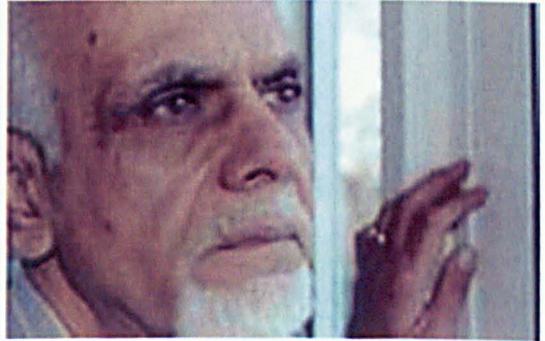


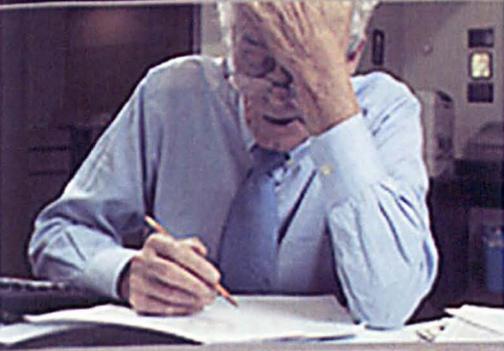


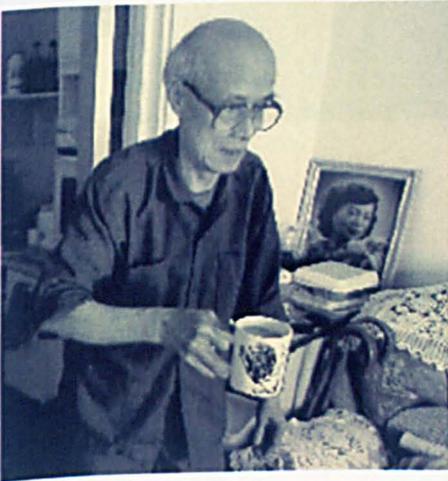
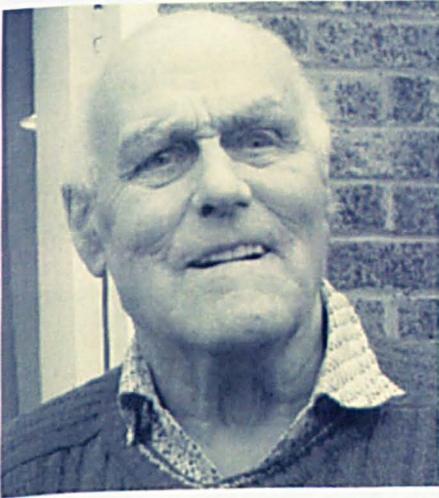




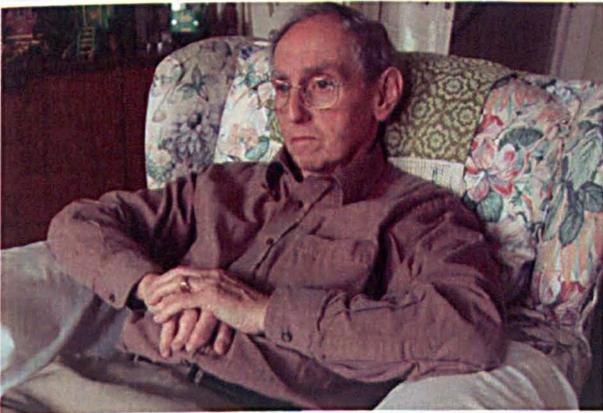
Images used by the charity Help the Aged, now Age UK











Appendix C: Supplementary Results Tables for Study 11

Table C.1 Means and Standard Deviations of Individual-level Indicators, part 1

	Life satisfaction		Happiness		Subjective health (poor)		Religiosity		Education		Age	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Belgium	7.27	1.90	7.65	1.61	2.06	0.79	4.77	3.02	3.18	1.42	46.46	18.73
Bulgaria	4.31	2.59	5.22	2.65	2.46	0.99	4.26	2.64	2.92	1.18	51.84	17.66
Switzerland	7.91	1.75	7.94	1.56	1.87	0.79	5.03	3.01	3.32	1.18	48.59	18.34
Cyprus	7.00	1.87	7.48	1.64	1.75	0.91	6.60	2.15	3.06	1.43	44.81	17.79
Czech Republic	6.57	2.08	6.85	1.90	2.34	0.98	2.38	2.79	3.07	0.79	47.10	17.34
Germany	6.84	2.25	7.19	1.94	2.34	0.88	4.02	3.08	3.65	1.12	48.96	17.43
Denmark	8.52	1.42	8.37	1.34	1.92	0.89	4.13	2.62	3.47	1.17	49.26	18.07
Estonia	6.20	2.23	6.70	1.96	2.60	0.89	3.76	2.80	3.29	1.21	47.78	19.24
Spain	7.26	1.82	7.63	1.63	2.22	0.94	4.51	2.89	2.20	1.55	46.83	19.16
Finland	7.94	1.54	8.02	1.43	2.20	0.84	5.17	2.74	3.14	1.48	47.97	18.76
France	6.25	2.45	7.10	1.78	2.24	0.89	3.61	2.89	3.04	1.55	48.65	18.72
Great Britain	7.02	2.13	7.44	1.90	2.07	0.93	4.05	3.01	3.33	1.35	49.15	18.57
Greece	5.98	2.31	6.67	1.93	1.74	0.87	6.27	2.54	2.80	1.38	45.04	16.75
Croatia	6.43	2.34	6.81	2.08	2.31	1.08	6.15	2.72	2.63	1.41	47.31	18.26
Hungary	5.31	2.56	5.94	2.41	2.56	0.99	4.29	3.21	2.43	1.32	47.78	19.07
Israel	7.40	2.21	7.54	2.02	1.99	1.06	4.86	3.46	3.17	1.55	45.42	19.10
Latvia	5.88	2.41	6.41	2.06	2.69	0.85	4.04	2.82	3.50	1.18	48.32	18.57
Netherlands	7.62	1.55	7.71	1.36	2.16	0.73	4.85	3.02	3.11	1.36	49.31	17.78
Norway	7.89	1.66	7.98	1.51	1.96	0.86	3.73	2.70	3.65	1.19	45.76	17.85
Poland	6.87	2.30	7.15	2.05	2.38	0.93	6.41	2.38	2.73	1.37	44.64	18.96
Portugal	5.60	2.28	6.43	2.06	2.60	0.91	5.95	2.49	1.84	1.45	52.75	19.96
Romania	6.02	2.54	6.09	2.15	2.48	0.95	6.76	2.25	2.84	1.17	46.08	17.67

Cont.

	Life satisfaction		Happiness		Subjective health (poor)		Religiosity		Education		Age	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Russian Federation	5.34	2.49	6.04	2.22	2.88	0.85	4.50	2.68	3.60	1.22	47.21	19.00
Sweden	7.86	1.72	7.83	1.60	1.97	0.83	3.39	2.78	3.30	1.44	47.60	19.27
Slovenia	6.93	2.14	7.23	1.92	2.44	0.90	4.66	2.92	2.56	1.41	46.56	18.91
Slovakia	6.37	2.24	6.62	1.92	2.47	0.90	6.08	3.17	3.13	0.93	50.09	17.15
Turkey	5.52	2.88	5.50	2.67	2.32	0.79	7.08	2.20	1.71	1.37	39.61	16.49
Ukraine	4.03	2.63	5.35	2.43	2.96	0.87	5.16	2.77	3.70	1.40	48.84	18.68

Table C.2 Means and Standard Deviations of Individual-level Indicators, part 2

	Subjective income		Social support		Gender (females)		Marital status (partnership)		Employment Status (paid)		Ageism		Sexism		Racism	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Belgium	1.93	0.93	5.16	1.44	0.49	0.50	0.59	0.49	0.50	0.50	0.54	0.49	0.31	0.46	0.17	0.37
Bulgaria	3.05	0.87	4.87	1.76	0.44	0.50	0.61	0.49	0.45	0.50	0.43	0.37	0.17	0.37	0.16	0.37
Switzerland	1.73	1.05	5.22	1.28	0.45	0.50	0.48	0.50	0.55	0.50	0.42	0.49	0.21	0.41	0.12	0.32
Cyprus	2.21	1.06	4.25	1.60	0.50	0.50	0.63	0.48	0.57	0.50	0.32	0.46	0.13	0.34	0.10	0.31
Czech Republic	2.32	0.90	4.74	1.53	0.49	0.50	0.50	0.50	0.55	0.50	0.69	0.46	0.42	0.49	0.26	0.44
Germany	1.94	0.85	4.71	1.41	0.53	0.50	0.57	0.49	0.52	0.50	0.48	0.50	0.19	0.39	0.09	0.29
Denmark	1.44	0.97	5.42	1.26	0.50	0.50	0.59	0.49	0.57	0.50	0.39	0.48	0.20	0.40	0.07	0.25
Estonia	2.31	0.94	4.54	1.67	0.42	0.49	-	-	0.54	0.50	0.44	0.49	0.24	0.43	0.21	0.41
Spain	2.04	0.93	5.35	1.52	0.47	0.50	0.58	0.49	0.52	0.50	0.36	0.48	0.26	0.43	0.22	0.42
Finland	1.93	0.76	5.09	1.38	0.49	0.50	0.49	0.50	0.53	0.50	0.55	0.49	0.31	0.47	0.08	0.27
France	1.86	0.79	5.22	1.43	0.45	0.50	0.49	0.50	0.51	0.50	0.48	0.49	0.27	0.44	0.17	0.37
Great Britain	1.93	1.03	4.99	1.57	0.46	0.50	0.48	0.50	0.51	0.50	0.45	0.49	0.24	0.43	0.15	0.36
Greece	2.60	0.95	4.21	1.60	0.45	0.50	0.58	0.49	0.57	0.50	0.43	0.49	0.20	0.40	0.16	0.36
Croatia	2.22	1.12	5.45	1.53	0.43	0.50	0.56	0.50	0.39	0.49	0.36	0.48	0.19	0.39	0.12	0.33
Hungary	2.65	0.97	3.76	1.77	0.45	0.50	0.50	0.50	0.41	0.49	0.45	0.49	0.14	0.34	0.09	0.28
Israel	2.39	1.32	5.22	1.54	0.46	0.50	0.61	0.49	0.50	0.50	0.41	0.49	0.28	0.44	0.35	0.48
Latvia	2.88	1.11	4.69	1.61	0.38	0.48	0.47	0.50	0.45	0.50	0.39	0.49	0.19	0.39	0.21	0.41
Netherlands	1.70	0.93	5.42	1.25	0.46	0.50	0.53	0.50	0.52	0.50	0.53	0.49	0.35	0.47	0.17	0.37
Norway	1.48	0.75	5.48	1.34	0.52	0.50	0.49	0.50	0.63	0.48	0.41	0.50	0.21	0.40	0.08	0.27
Poland	2.26	0.83	4.28	1.61	0.47	0.50	0.57	0.50	0.47	0.50	0.39	0.49	0.16	0.36	0.06	0.23
Portugal	2.61	0.97	5.39	1.76	0.39	0.49	0.55	0.50	0.40	0.49	0.25	0.43	0.14	0.34	0.11	0.31
Romania	2.87	1.45	3.81	1.75	0.45	0.50	0.60	0.49	0.43	0.50	0.52	0.50	0.31	0.46	0.25	0.43
Russian Federation	2.91	1.16	4.38	1.76	0.39	0.49	0.47	0.50	0.52	0.50	0.57	0.49	0.30	0.46	0.22	0.41
Sweden	1.52	0.80	5.38	1.28	0.50	0.50	0.46	0.50	0.61	0.49	0.44	0.49	0.27	0.44	0.09	0.29

Cont.

	Subjective income		Social support		Gender (females)		Marital status (partnership)		Employment Status (paid)		Ageism		Sexism		Racism	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Slovenia	1.81	0.93	4.49	1.62	0.46	0.50	0.62	0.49	0.46	0.50	0.44	0.49	0.22	0.41	0.12	0.32
Slovakia	2.40	0.97	4.57	1.68	0.38	0.49	0.55	0.50	0.46	0.50	0.59	0.49	0.26	0.44	0.17	0.37
Turkey	2.68	0.98	4.67	1.72	0.47	0.50	0.68	0.47	0.24	0.43	0.41	0.49	0.28	0.43	0.22	0.41
Ukraine	3.18	0.98	4.52	1.65	0.37	0.48	0.53	0.50	0.41	0.49	0.53	0.50	0.20	0.40	0.14	0.35

Table C.3 Country Level (Level -Two) Indicators

	Status of people in their 40's	Status of people in their 70's	Perceived competence of people over 70
Belgium	7.05	5.61	2.51
Bulgaria	6.18	2.39	2.60
Switzerland	7.35	5.61	2.47
Cyprus	7.89	7.22	2.25
Czech Republic	7.02	3.78	2.10
Germany	7.13	5.09	2.27
Denmark	7.69	4.75	2.52
Estonia	7.27	4.41	2.80
Spain	6.79	5.11	2.64
Finland	7.41	5.12	2.71
France	6.68	5.16	2.45
Great Britain	7.07	5.19	2.35
Greece	7.28	5.69	2.06
Croatia	6.21	3.72	1.93
Hungary	5.29	3.93	3.02
Israel	7.13	5.55	2.17
Latvia	6.98	4.26	2.79
Netherlands	7.25	5.93	2.52
Norway	6.62	5.24	2.67
Poland	6.58	3.65	1.87
Portugal	6.22	5.09	2.58
Romania	6.29	4.20	2.48
Russian Federation	6.52	3.35	2.71
Sweden	7.62	4.63	2.53
Slovenia	7.08	5.43	2.03
Slovakia	6.81	3.44	2.15
Turkey	6.36	4.65	2.24
Ukraine	6.46	3.08	2.57